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Behavioral Confirmation in the Assessment Process: The Effects of Clinicians' Expectancies on Tat Card Selection and Perceptions of Tat Protocols

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BEHAVIORAL CONFIRMATION IN THE ASSESSMENT PROCESS:
THE EFFECTS OF CLINICIANS' EXPECTANCIES ON TAT CARD
SELECTION AND PERCEPTIONS OF TAT PROTOCOLS

by

Robert Jeffrey Jackson

A Dissertation Submitted to the Faculty of the Graduate School
of Loyola University of Chicago in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Philosophy

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1987

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VITA

Robert Jeffrey Jackson was born on April 23, 1955 in Bitburg, Germany. He was the second son of Richard and Janet Jackson.

He received his elementary and secondary education in the public school system of three different states. In 1973 he graduated from a Chicago area high school, Naperville Central. In the fall of that same year he entered Duke University. Four years later--in May, 1977--he graduated with honors. After an hiatus in his formal education lasting almost three years, he began graduate study in clinical psychology at Loyola University. He completed his Master of Arts in 1984.

Several months after receiving this degree he accepted a clinical internship at the Wilford Hall Medical Center. This year of professional training complemented his academic endeavors, for during this same period he began his dissertation research. Upon completion of the internship, he continued with his research project while concurrently serving as a psychologist in the United States Air Force.

In addition to these academic and clinical experiences, he has co-authored one published article. This work is entitled Looking, laughing, and smiling in dyads as a function of intimacy motivation and reciprocity and is published in the 1984 Journal of Personality.

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INTRODUCTION

Accuracy in the appraisal process is a significant concern for those who make clinical judgments, particularly mental health professionals. Unfortunately, diagnostic classification and the validity of the methods used to arrive at such decisions are not infallible. There are obvious, and sometimes embarrassing, accounts of such limitations scattered throughout the clinical literature (Chapman & Chapman, 1967; 1969; Goldberg, 1959; Masling, 1965; Meehl, 1959; Rosenhan, 1973; Temerlin, 1968). For example, Rosenhan (1973) found that "sane" confederates were extremely successful in gaining admission to psychiatric facilities on the basis of a single, unusual complaint which resembled an auditory hallucination. In studies of psychometric validity, Goldberg (1959) reported that secretaries could use the Bender-Gestalt test to discriminate brain damage as well as trained clinicians and Chapman and Chapman (1967; 1969) found that clinicians were using test signs which were not associated with the syndromes being investigated.

Although this type of research is frequently viewed as discrediting the practice of clinical psychology, perhaps it should not be so surprising that professional judgments are sometimes flawed. In defense of clinicians, the practitioner is often confronted with an unreliable informant and a limited amount of data from which to make a decision. Paramount to this, clinicians are at risk for the same type of systematic biases which affect all individuals in their day-to-day

social judgments (Jones, 1977). That is, the prejudices, stereotypes, expectancies, and other information processing errors which are frequent in routine interpersonal interactions may also enter into the clinical encounter.

Of the various information processing problems, expectancies appear particularly likely to influence person perception in both social and professional settings. Indeed, the research being generated by the relatively new area of cognitive social psychology has rather consistently reported that initial expectations have a significant biasing effect on impression formation (Darley & Fazio, 1980; Langer & Abelson, 1974; Masling, 1965; Snyder, 1981). These studies indicate that an initial impression or expectancy can influence the course of the ensuing interaction in terms of both behavior and perception. That is, the perceiver is said to initiate a search/evaluation strategy and then process the subsequent observations according to the initial expectation. Such an expectation based approach to the gathering and processing of information about others typically skews the perception of a given individual in the direction of the initial impression. As a result, the judgment about the target person is based on such a selective and constraining appraisal of their characteristics that the expectancy is almost inevitably confirmed. This type of bias, called behavioral confirmation, potentially exists in any situation where judgments about others are made.

Although distortions arising from expectancy effects appear to be highly probable in everyday social interaction, behavioral confirmation of this sort is not expected to occur in the evaluation setting. It is

clear that the impact of an erroneous impression in the social context is markedly different than what may be a diagnosis in the professional environment. Despite the significance of practitioner's judgments, clinicians are still likely to be vulnerable to random errors (e.g. "blind spots") as well as the systematic confounds of expectancies. One of the frequent methods by which psychologists attempt to minimize errors (from whatever source) is to routinely utilize one or more of several psychological tests. The use of such standardized procedures, however, does not assure the veridicality of the psychodiagnostic process. Among other problems, testing has been shown to have varying degrees of reliability and validity (Anastasi, 1976; Brown, 1976). Perhaps of greater relevance, some research (Chapman & Chapman, 1967; 1969; Masling, 1965) has demonstrated that these measurement devices are equally vulnerable to expectancy effects. In essence, whether information about an individual's psychological functioning is gathered and processed through the use of a clinical interview or more substantiated psychometric techniques, there still appears to be some potential for error.

The research on clinical judgment, and testing in particular, seems to have clearly documented the limitations of the appraisal process. In this regard, these investigations have served a valuable regulatory function by monitoring the shortcomings in clinical judgments. Very little research, however, has addressed these limitations from the perspective of expectancy effects. It may be beneficial to apply the cognitive social psychology research paradigms and findings to the issues of diagnostic accuracy. Specifically, the

research on the phenomena of expectancy effects and behavioral confirmation has a bearing on person perception in the mental health setting. By applying information about this type of bias to the diagnostic task faced by clinicians, it may be possible to learn more about accuracy and inaccuracy in social and professional impression formation. Certainly the degree to which psychologists are susceptible to the normal experience of expectancy based processing errors seems to be a very important issue.

The research proposed here endeavors to examine the impact of the expectancy effects reported in the social psychological literature within the context of psychological assessments. It is evident that expectancies influence the course of social interactions, and that psychological tests--and the clinicians who use them--are not infallible. Combining the observations of these areas of study in an operational manner, the purpose of this research is to examine the influence of specific expectancies given to clinicians on their use of a widely employed psychological measure, the Thematic Apperception Test (TAT). More specifically, the purposes are: 1)to determine if clinical psychologists preferentially select TAT cards which are likely to elicit hypothesis confirming information; 2)to ascertain whether an expectancy creates a bias in the evaluation of a specific characteristic; and 3)to evaluate the degree to which an expectancy influences the accuracy of perception. The broader goals of such a project are: 1)to increase the awareness of behavioral confirmation as a potential vulnerability to clinical psychology; 2)to discuss the importance of monitoring the practice of this specialty area; and 3)to demonstrate the usefulness of

applying the results from the disparate areas of psychology to one another.

REVIEW

Historical overview

It has long been recognized that perceivers are not free of observational bias and that expectancies and a priori beliefs influence—even alter—social behavior and judgment. However, it has only been in the last two decades that research has really begun to elucidate the mechanisms mediating bias of this type. Earlier studies tended to be anecdotal and descriptive, reporting, but not comprehensively specifying, the processes by which judgments might go awry.

One of the earliest reports of the expectancy bias was the case of Clever Hans (Pfungst, 1911). Hans was a horse belonging to a German mathematics teacher named Von Osten, who developed quite a reputation for his alleged capacity to perform basic mathematical operations. It seems that Hans could consistently tap with his hoof the correct response to simple problems requiring addition, subtraction, multiplication, or division. While this amazed most observers, Pfungst was able to discern that the less clever critics were "looking for in the horse, what should have been sought in the man". That is, Hans was only accurate when the questioner was visible and cognizant of the proper response. The questioner was unwittingly cueing the horse through a combination of subtle and obvious nonverbal and auditory signals. Because questioners expected Hans to be accurate, they were unintentionally communicating when Hans should stop tapping, and then

interpreting this as evidence of Hans' computational skills.

It took several decades before this type of phenomenon assumed a common label. In the 1940's the sociologist Merton (1948; 1968) coined the term the "self fulfilling prophecy" to describe those instances in which erroneous beliefs create reality. Although he was commenting on what was felt to be a sociological issue, his argument has been regarded as equally germane to smaller units of behavior. The most pertinent points abstracted from his thesis are:

...definitions of a situation (prophecies or predictions) become an integral part of the situation and thus affect subsequent developments. ... The self-fulfilling prophecy is, in the beginning, a false definition of the situation evoking a new behavior which makes the originally false conception come true. The specious validity of the self-fulfilling prophecy perpetuates a reign of error. For the prophet will cite the actual course of events as proof that he was right from the very beginning (Merton, 1968. p. 477).

Merton's treatise made rather clear reference to the extensive social ramifications that expectancies can exert. In fact, his discussion was potentially alarming, particularly in consideration of the growing body of research supporting expectancy effects and experimenter artifact (see Rosenthal, 1966; Rosenthal & Rosnow, 1969 for reviews). It was little wonder then that the empirical testing of this type of bias in a classroom setting stirred such interest and controversy.

Rosenthal and Jacobson (1968), a psychologist and an educator, examined the effects of teachers' expectancies on pupils' performance. They led teachers to believe that certain students would be expected to show marked achievement gains based on their scores on a new aptitude test. They found that the randomly selected students who had been

described as "late bloomers" made greater academic gains than all other students. Subsequent replication (Meichenbaum, Bowers, & Ross, 1969) of this Pygmalion in the classroom phenomenon supported the finding that teachers' expectations do effect student performance, and also demonstrated that this academic change was mediated by some operation other than increased teacher attention.

Clinical psychology and the "self-fulfilling prophecy"

During the same period of time that Rosenthal's Pygmalion studies were receiving so much public attention, research in clinical psychology was supporting the contention that expectancy biases were influential in contexts involving clinical practices. Several investigations had found that judges in clinical or evaluation situations showed a propensity toward being effected by initial suggestions (Larrabee & Kleinsasser, 1967; Masling, 1965; Marwit & Marcia, 1967; Temerlin, 1968; Temerlin & Trousdale, 1969). Indeed, it had been found that the users of psychological assessment tools were apparently vulnerable to the self-fulfilling prophecy when using objective tests--Stanford-Binet, WISC (Larrabee & Kleinsasser, 1967; Hersh, 1971) and projective measures--DAP, inkblots (Chapman & Chapman, 1967; 1969; Masling, 1965; Marwit & Marcia, 1967). Thus, the test scores, number of responses, or types of responses between groups of clinicians differed as a function of what was expected to occur--and always in the direction of the initial expectation.

Perhaps the more dramatic findings were those involving diagnostic judgments based on clinical interviews. Studies by Temerlin (1968; Temerlin & Trousdale, 1969) showed that clinicians and

clinicians-in-training who listened to a tape-recorded interview of a normal man tended to view the man as psychotic if they had previously been told by a prestigious person in their field that "the patient looked neurotic, but actually was quite psychotic" (Temerlin, 1968, p. 350). In contrast, controls were not biased by this pre-evaluation information. Equally alarming, Rosenhan (1973) found that confederates posing as psychiatric patients were readily admitted to inpatient facilities. Furthermore, these pseudopatients were kept in the hospital even though they behaved normally (appeared asymptomatic) after admission.

Although the field of clinical psychology had previously not been the most prolific in terms of generating empirical research on the self fulfilling prophecy, the effects of expectancies have historically been at least implicitly recognized by clinical psychologists. In fact, it was the clinician Albert Moll in 1898 who is credited with observing that "the prophecy causes its own fulfillment" (Rosenthal, 1966, p. 132). Furthermore, many of the clinically based theories acknowledge that an individual's behavior and attitudes can not be separated from the interpersonal interaction. Thus, there is widespread support for the idea that one's mental processes influence social perception and behavior.

This concept is rather clearly conveyed in the theories of most schools of personality and psychotherapy. Psychodynamic theorists and clinicians use the terms transference and countertransference to indicate that social distortion occurs because of the inappropriate application of prior experience to the present situation (Gill, 1981;

Greenson, 1981; Langs, 1982; 1976; Reid, 1980). Although they use technical terminology, the essence of this point of view is that significant aspects of social reality are distorted due to unconscious expectations and pre-existing beliefs.

In a somewhat similar manner, the proponents of systems approaches and family therapy, especially Minuchin and Fishman (1981), maintain that a person's behavior is determined/restricted by the attitude of the perceiver. Certain aspects of a person's entire repertoire are elicited by the contextual structure, while other features are constrained. Those aspects that the perceiver expects to observe are likely to be the very characteristics elicited.

The impact of beliefs, attitudes, and expectancy and suggestion effects on interpersonal processes is a common theoretical factor also observed in cognitive theories of personality and therapy. Bandura (1977; 1982a; 1982b) is probably the most explicit author for advancing a framework which illuminates the intra- and interpersonal influence of cognitions and expectations. Vital to his approach are the issues of efficacy and outcome expectations. These concepts are felt to be the major factors effecting human behavior and perception.

Obviously many theories and studies in both clinical and social psychology have considered interpersonal expectancies and their social impact. While they have contributed significantly to an understanding of social behavior, they have not been without their shortcomings. With the exception of more recent work, much of the earlier research did little to specify the operations effecting social judgment and behavior. Thus, precision regarding the cognitive and interpersonal processes

influencing interpersonal impressions was lacking. Furthermore, these studies and clinical approaches to treatment appeared to be remiss in not applying the developing understanding of expectancy based pitfalls toward improving--or at least monitoring--their own professional performance. Clinical behavior was reported to be vulnerable to the effects of prior expectations, yet there was little evidence that these results directed a marked change in clinical attitudes.

Current conceptualization of expectancy based social errors

Person perception is currently viewed as a constructive process demanding active participation by the perceiver to select, sample, categorize, and interpret the behavior of the stimulus person in order to achieve a sense of interpersonal prediction and understanding (Crocker, 1981; Darley & Fazio, 1980; Schneider, Hastorf, & Ellsworth, 1979). This viewpoint represents a departure from the tradition of investigating information processing in relatively static circumstances. Instead, the emphasis has been on examining the dynamic interplay between social perception and social interaction (Christensen & Rosenthal, 1982; Snyder, 1981; Swann & Ely, 1984; Swann, Guiliano, & Wegner, 1982). Investigators with this orientation maintain that it is imperative to study the complex relationship between social interaction and social information processing. They tend to support the argument that the:

strategy of abstracting the person perception process from the interpersonal context in which it is ordinarily embedded has led researchers to paint an incomplete--and in some respects misleading--picture of the person perception process (Swann, 1984, p. 457).

The projects which endorse this interactive perspective typically

report that the perceiver's cognitive processing strategy, as well as his/her ensuing behaviors, are involved in the creation of information about others (Alloy & Tabachnik, 1984; Darley & Fazio, 1980; Nisbett & Ross, 1980; Snyder, 1981; Swann et al., 1982). This position suggests that the perceiver's a priori knowledge structures, expectancies, and goals channel the course of the social interaction sequence, and thereby influence all stages of the impression formation task. Due to the influence of this bias, there is concern that social judges are reporting and responding to their own expectancy based perceptual creations rather than to a more objective reality.

This formulation is essentially what Darley and Fazio (1980) have outlined in their model of the social interaction sequence; which is:

- (1) Either because of past observations of the other or because of the categories into which he or she has encoded the other, a perceiver develops a set of expectancies about a target person.
- (2) The perceiver then acts toward the target person in a way that is in accord with his or her expectations of the target person.
- (3) Next, the target interprets the meaning of the perceiver's action.
- (4) Based on the interpretation, the target responds to the perceiver's action, and
- (5) the perceiver interprets the target's action (p. 868).

The authors also suggest a sixth stage, in which the target person interprets the meaning of his/her own behavior. However, this step, as well as those concerning the processes of the target (step 3 and to an extent step 4) are beyond the scope of this paper.

This model is similar to other frameworks which offer a conceptualization of the interpersonal and information processing relationship. However, the proposed model is felt to be the most comprehensive due to the recognition of both the interactional and cognitive components of social behavior and social evaluation. Other

models seem to emphasize either the cognitive component (e.g., Crocker, 1981; although her discussion is clearly consistent with this model), lack specificity regarding the social psychology of the interaction (e.g., Merton, 1968;), or examine fewer steps in the model (e.g., Masling, 1965; Rosenthal, 1966; Temerlin, 1968). Nevertheless, these works contribute to the understanding of the entire sequence. Because they are essentially embedded within the context of the broader model, their points will be considered within the parameters of this conceptualization.

Elaboration of the social interaction sequence

According to the model of the social interaction sequence, the particular manner in which each of the separate steps unfolds is contingent upon the preceding process(es). Therefore, the categories or expectancies initially activated in response to the stimulus person are critical in directing the development of the interaction. Some form of expectancy appears to be a ubiquitous phenomenon, for it is rare for any situation to be approached without being processed through preexisting schemas and abstracted knowledge (Nisbett & Ross, 1980). The expectancy can be activated or derived directly, such as through a continuing sequence of behavior or an (un)representative sample of the target's actions, or indirectly, from stereotypic classification or information obtained from third parties (Alloy, 1985; Christensen & Rosenthal, 1982; Darley & Fazio, 1980). Whatever the source, it is generally agreed that whenever perceivers wonder about particular attributes or judgments of others, they essentially have formed hypotheses about these people. In effect, impression formation is a

hypothesis generating and evaluating process.

The initial hypotheses, or impressions, are then tested in subsequent social interaction; interaction in which behavioral evidence is collected to evaluate the initial impression (Crocker, 1981; Snyder, 1981; Snyder & Swann, 1978b). The perceiver is generally regarded as the partner who gathers the relevant information, for the perceiver is considered to be the participant who "has the power to impose his or her definition of the situation on, or affect the life course of, the other individual" (Darley & Fazio, 1980, p. 868). Since the perceiver's behavior is reportedly influenced by the hypothesis already formed, this expectancy will channel the course of the perceiver-target interaction.

On the basis of this expectancy, the perceiver may choose to actively avoid or enter into an interaction with the stimulus person. If the interaction is avoided or prematurely terminated, then the end result of such expectancy-guided behavior is the maintenance of the perceiver's initial impression of the target (Darley & Fazio, 1980). If the interaction continues, the perceiver, as noted, can use the ensuing social behavior to test the hypothesis about the target.

It has been postulated that the testing of these hypotheses may take one of several forms (Beyth-Marom & Fischhoff, 1983; Crocker, 1981; Skov & Sherman, 1986; Snyder 1981; Snyder & Swann, 1978b; Snyder & White, 1981; Trope & Bassok, 1982; 1983; Trope, Bassok, & Alon, 1984). In what is called the confirmatory hypothesis testing strategy, the perceiver may preferentially solicit behavioral evidence whose presence would confirm the hypothesis in question. In contrast, the disconfirmatory hypothesis testing strategy would solicit evidence to

reject the hypothesis. The third strategy is not a preferentially biased means of social information gathering, but is regarded as an equal opportunity approach. Crocker (1981) views this, in ideal terms, as a randomized procedure, where every instance has an equal chance of being selected. The fourth, and final type of information testing strategy, is a more exact variant of the equal opportunity approach. The diagnosing strategy maintains that expectancies do not bias social evaluation; instead judges attempt to maximally distinguish between the presence and absence of a given characteristic. Consequently, the resulting impression is said to be based on a methodical, efficient, and objective exploration and interpretation of features about the target person.

Although each of these strategies is plausible, there is rather consistent evidence indicating that perceivers tend to solicit behavioral evidence which would confirm their initial judgment of the target (Beyth-Marom & Fischhoff, 1983; Fazio, Effrein, & Falender, 1981; Skov & Sherman, 1986; Snyder, 1981; Snyder & Campbell, 1981; Snyder & Swann, 1978a; 1978b; Snyder & White, 1981; but see Swann & Ely, 1984 for limits of this expectancy effect). However, behavioral confirmation may not be the only kind of hypothesis testing approach utilized. There are indications that perceivers frequently use components of the diagnosing strategy, sometimes to the exclusion of soliciting hypothesis consistent information (Beyth-Marom & Fischhoff, 1983; Skov & Sherman, 1986; Trope & Bassok, 1982; 1983, Trope et al., 1984). Nevertheless, the widespread observation that perceivers preferentially seek hypothesis consistent information when gathering information about others suggests that

perceivers are acting in accord with their expectation of the target person. As a result, the perceiver appears to be creating an interaction in which the expectancy will be behaviorally supported by the actions/responses of the target person. Put differently, the response repertoire of the target is potentially constrained by the direction imposed by the perceiver.

The target's response, which becomes behavioral evidence, is a process involved in the fourth step of the social interaction sequence, after the target person has interpreted the perceiver's action. In accounting for the perceiver's behavior, there are four possible categories of attribution which the target person may utilize (Darley & Fazio, 1980). The target may understand the perceiver's behavior in terms of: 1) the dispositional characteristics of the perceiver; 2) the features of the situation; 3) self-attributions; or 4) complex attributions--those explanations which involve the interaction of these three components, such as person by situation attributions.

These attributions, or interpretations of the perceiver's behavior, according to Darley and Fazio (1980), are relevant to the manner in which the target responds. If the perceiver's actions are understood as dispositional or as a response to the particular circumstances, the target is likely to reciprocate. Similarly, if the target finds the perceiver's expectation accurate, then he or she may act to maintain that impression. Therefore, the behavior of the perceiver and subsequent interpretation by the target may dictate the response of the target in a way that provides support--in terms of actual evidence--for the hypothesis under consideration (Snyder, 1981).

The response of the target person will obviously have implications for the perceiver's impression. This step of the social interaction sequence involves an interpretation of the response of the person in question. This final interpretation is really a covariation judgment (Alloy, 1985; Alloy & Tabachnik, 1984; Kayne & Alloy, in press). Such an assessment is based on the interaction between prior beliefs or expectations and currently available situational information. As articulated by the model, social information processing involves expectancy based behavior by the perceiver and subsequent situational information in terms of the target's response. When a priori beliefs are relatively insignificant, the available information becomes quite influential in the eventual judgment. Conversely, highly charged prior expectations vitiate situational data. This latter set of circumstances may create a biased judgment which results from a narrowed search strategy.

While the accuracy of judgments based on either expectations or situational information may vary, at least the perceiver is processing relatively consistent information. This is not the case when the perceiver is confronted with relatively credible data from both generalized beliefs and situational information, but these data are divergent in their causal attributions. Resolution of this cognitive dilemma seems to involve a process in which initial expectations are retained while the situational data is discounted as unreflective of the target's true behavior (Alloy, 1985; Darley & Fazio, 1980; Ross, 1977). Consequently, covariation judgments, or interpretations of the target's behavior, are likely to be in the direction of the expectation.

This model of the social interaction sequence obviously describes a rather complex interpersonal process which is highly susceptible to preexisting information and implicit judgments about others. Individuals are not seen as unique, but are understood in comparison to some preexisting information or prototype. From this knowledge structure, some form of expectation or hypothesis about the person is generated, and this, in turn, influences the interaction. Once both perceiver and target have acted and/or reacted, the perceiver's interpretation is likely to be highly colored by the initial hypothesis. Thus, expectations are influential as potential sources of bias at the perception, action, and interpretation phases of the impression formation process.

Methods of investigation and empirical support for the social interaction sequence

Although perceiver expectations have a significant impact on each of the five steps in the model, the research in this area has been quite varied in terms of the number of these processes being investigated. Many of the explorations on hypothesis testing strategies and expectancy effects have explicitly addressed only the expectation and the perceiver's judgment--steps one and five of the model (e.g., Hersh, 1971; Langer & Abelson, 1974; Masling, 1965; Meichenbaum et al., 1969; Rosenhan, 1973; Rosenthal & Jacobson, 1968; Temerlin, 1968; Temerlin & Trousdale, 1969). In fact, all of the studies reviewed involving clinical judgment and expectancy effects have employed this experimental procedure. Thus, these investigations have induced an expectancy and have subsequently measured the effects of these expectations. Such

research lends inferential support to the social interaction sequence, but does not specify the mechanism by which these changes occur.

Investigations in the areas of social and cognitive psychology have been more systematic in approaching this issue. Snyder and his colleagues (Snyder, 1981; Snyder & Campbell, 1980; Snyder & Cantor, 1979; Snyder & Swann, 1978a; 1978b; Snyder & White, 1981; Swann, 1984; Swann & Ely, 1984; Swann et al., 1982), in their work on behavioral confirmation, have created perceiver expectancies, observed the effect of such expectations on the behavior of the perceiver vis-a-vis the target, and have appraised the target's action through interpretations from both the perceivers asking the questions and those naive perceivers observing some aspect of the interaction.

Advocates of the diagnosing strategy have also attempted to be more comprehensive in their experimental approaches (Beyth-Marom & Fischhoff, 1983; Skov & Sherman, 1986; Trope & Bassok, 1982; 1983; Trope et al., 1984). Typically these investigations provide characteristic information and probability data about a certain population to perceivers and subsequently evaluate the extent to which subjects utilize a biased or diagnostic information gathering strategy.

While there have been very few studies which examine expectancy effects on clinical judgment, and virtually none from the past decade, those that do exist address impressions and decisions derived from both formal and informal assessments. Thus, this modest collection of research surveys the impact of the expectancy bias in situations involving psychological testing as well as diagnostic interviewing. Regardless of the assessment technique, initial hypotheses appear to

distort information processing regarding the target.

In an examination of the effects of expectancies on the results of an objective test, Hersh (1971) randomly assigned two pupils to each of several graduate students serving as examiners. Half of the students were referred under the positive referral condition (a hand written note emphasizing the child's high academic ability and general social skillfulness) and half were in the negative referral condition (a letter reporting on the student's poor class standing and lack of social skill). The results of subsequent testing with the Stanford-Binet revealed that the students from the positive referral condition obtained an overall higher IQ than students in the negative condition. Furthermore, the effect was quickly apparent, for the "gifted" students started each of the subtests at higher year levels.

The impact of perceiver expectancies was similarly evident when the interaction was structured through the administration of a projective test. Masling (1965) trained two groups of graduate students in the administration of the Rorschach. One group of clinicians-in-training was led to believe that experienced clinicians elicited more animal than human content. The other group was given the opposite expectancy. Analysis of the obtained test protocols indicated that the expectancy effect was supported in the predicted direction. It appears that although the test itself was a standardized stimulus, the examiners were behaving in some way which elicited responses consistent with their expectations.

Just as prior expectations appear to effect the outcome of psychological testing, they appear to have a similar influence on

judgments or decisions arising from clinical interviews. This has already been described in the results of Temerlin's studies (1968; Temerlin & Trousdale, 1969), where the opinion of a respected colleague prompted other professionals to see the interview from the perspective of the preceding diagnostic impression. These results are quite similar to those more recently reported by Langer and Abelson (1974), who also found that a label attached to an interviewee had a major impact on how clinicians perceived that target person. These researchers had two groups of clinicians (behaviorists and analytically oriented therapists) view a videotape in which the interviewee was described as either a job applicant or patient. The behavior therapists held a consistent judgment of the target regardless of the label, but the analytic therapists reported that the "patient" was significantly more disturbed than when the same interviewee was presented as a job applicant. For this latter group of therapists, the label seems to have served as a category which structured the input and differentially determined what would be attended to in the interview. This may be what occurred in Rosenhan's (1973) study, where the pseudopatient's complaint which resembled a first rank symptom of psychosis--even in the absence of other supporting data, appeared sufficient to make practitioners recommend admission to a psychiatric facility. Thus, the expectation of emotional or psychiatric problems typically results in a conclusion consistent with the initial hypothesis.

Studies of this sort demonstrate that professionals in person perception, just as lay individuals, are vulnerable to this type of expectancy bias. However, as noted, these studies do not really specify

just how this distortion occurs. Fortunately, many studies in other areas of psychology have creatively elucidated the processes by which such an effect occurs in everyday interaction. Many of these investigations typically report that the expectations of the perceiver channel the social interaction so that the solicited behaviors of the target person conform to, and therefore provide evidence for, the initial expectancy.

Snyder, Tanke, and Berscheid (1977) found that males who had cleverly been led to believe that they were interacting with attractive females actually engaged in more positive conversation than those speaking with "unattractive" females. Furthermore, the "attractive" women who were being treated nicely responded by acting in a much more positive manner than those not participating in the positive conversation. Thus, the women provided behavioral confirmation of the belief that the men held.

The same effect was demonstrated in a same-sex interaction involving a two-person game (Snyder & Swann, 1978a). In this situation the perceiver was informed that the interaction would include either a hostile or nonhostile individual. Labeling perceivers, when confronted with a reputedly hostile individual, used higher intensity noise levels--which were aversive--as a game playing strategy. Consequently, these targets responded with higher levels of noise than did targets whose perceivers viewed them as nonhostile persons. The targets thus appeared to behaviorally reciprocate the hostile or nonhostile overtures of the labeling perceivers. In so doing, however, the targets came to behave in accordance with their label, and as a result, the perceivers

seemed willing to interpret the behavior they generated in the target in terms of dispositions of the target person.

Following this line of experimental inquiry Snyder and Swann (1978b) and subsequent colleagues (Snyder & Campbell, 1980; Fazio, Effrein, & Falender, 1981; Snyder & White, 1981; Swann & Ely, 1984) developed a method to determine the extent to which perceivers will utilize the confirmatory strategy. In these studies the subjects in the role of perceiver were provided with hypotheses to test about the personalities of the targets. The hypotheses were that the target person was either an introvert or an extravert. These individuals then prepared to test their hypothesis by choosing certain questions from a larger set which were to be used in the ensuing interview with the target person. The primary dependent variable was the type of question selected. Each selected question was then coded according to the category by which it was classified: (a) extraverted question, (b) introverted question, or (c) neutral question.

The results of these studies consistently show that perceivers have a strong preference for hypothesis confirming questions. When evaluating a target for the trait of extraversion, they selected most of their questions from the extraverted category. Similarly, when evaluating introversion, there was a marked preference for questions addressing introverted behaviors. This confirmatory hypothesis testing strategy appeared to be robust under a variety of conditions. Whether perceivers were challenged to be as accurate as possible, given monetary incentive, provided with base rate data, or presented with information about the trait being evaluated and its opposite, they persevered in

their tendency to choose questions which would be likely to elicit behavioral confirmation. In fact, only two exceptions were found to this pervasive strategy--and one of these is actually not an exception.

In a study by Snyder and White (1981) perceivers were given the task of determining the extent to which the target was not the type of person whose personality was described in the experiment. They found that if the task was one of falsification, perceivers did not preferentially use questions which would solicit behavioral confirmation of the trait being assessed. However, by paradox, this itself is a biased strategy, for the subjects demonstrated a clear bias toward selecting questions which would prove the hypothesis false. Therefore, the only legitimate exception occurred when perceivers were not presented with an initial either/or hypothesis (Snyder, 1981). In this case perceivers came close to using a non-biased/equal opportunity strategy.

The evidence for behavioral confirmation does not end with the biased search strategy, for there are results which show that this type of data collecting approach actually does elicit behaviors supporting the expectation. Thus, a second dependent variable in the Snyder and Swann (1978b) study was to examine the degree to which targets would provide evidence in favor of the perceiver's hypothesis. Naive judges were used to evaluate the interview based on the questions the perceivers selected and the responses of the target person. These judges viewed the target in terms consistent with the trait being investigated; judges observing "extraverted" targets rated these individuals as extraverted, and "introverted" targets were perceived as

introverted.

Although these findings were subsequently replicated by Fazio et al. (1981), more recent research is not quite as supportive of this phenomenon. Swann and Ely (1984) were interested in the effects of expectations on ongoing interactions, and used their experiment to test the limits of the hypothesis confirming strategy. In doing so they made some procedural changes, including making adjustments in the original questions. Their rationale was that the original questions were so constraining that they would almost inevitably generate confirmation. They also manipulated the certainty of the perceiver's expectation and the target's self conception. What they found was that when perceivers were highly certain of their expectations and targets were uncertain of their self-conceptions, behavioral confirmation tended to occur. Thus, just as described in covariation judgments, high prior expectations and little contrary situational evidence resulted in appraisals in the direction of the expectancy. However, when self-conceptions of the target were high, the expectations of perceivers were consistently modified in the direction of the targets perspective. Thus, behavioral confirmation did not occur in other conditions; in fact, over the course of the three consecutive interviews the targets self-conceptions clearly prevailed and expectations were abandoned.

These findings provided preliminary evidence which suggested that the confirmatory hypothesis testing strategy may not be as pervasive as originally thought. This observation derives additional credence from the research conducted by those well versed in the diagnosticity of information gathering strategies. Investigators in this area have

presented data which indicate that the type of biased search strategy discussed by Snyder and his colleagues has significant limitations (Beyth-Marom & Fischhoff, 1983; Skov & Sherman, 1986; Trope & Bassok, 1983; 1982; Trope et al., 1984). In fact, in contrast to the results reported from studies on the hypothesis confirmatory strategy, these researchers uniformly report that perceivers tend to be very discriminating in collecting information about others. Their conclusions are derived from studies which have eliminated the limitations of studies on behavioral confirmation and have required perceivers to use either a diagnostic or hypothesis confirmatory strategy, or some combination of both.

The major criticism launched toward the methods employed in the studies on the hypothesis confirmatory strategy is that the questions are unduly constraining. In particular, Trope et al. (1984) argued that the original questions "would inevitably trap people in perpetual confirmation of any hypothesis they would happen to test" (p. 91). To avoid this problem, these experimenters presented subjects with descriptive narratives of both introverts and extraverts and the task of freely formulating questions that would assess whether the person to be interviewed was an extravert, introvert, or either an extravert or an introvert. Contrary to the behavioral confirmation strategy, they found that the subjects typically generated questions which were classified as bidirectional and open-ended. It appeared to be quite clear that subjects preferred discriminating questions when they could freely create questions to ask prior to a social engagement.

In an earlier study, Trope and Bassok (1983) had examined the

effects of informational factors on the social information gathering procedure. They varied the boundary of the trait being measured (extreme or intermediate) and the trait itself (polite-impolite and introversion-extraversion). In the intermediate condition, subjects tended to utilize a diagnostic information gathering tendency. Thus, they inquired about features which were both congruent and incongruent with the trait being evaluated. This same strategy appeared to be evident, but to a lesser extent, in the extreme condition. An initially surprising finding which was seen only in the extreme condition was that subjects demonstrated a preference for questions which addressed features consistent with the hypothesized trait. Although this seemed to suggest that the hypothesis confirming strategy was in effect, the authors proposed an alternative interpretation. They regarded this as evidence of diagnosticity, arguing that perceiver would have to ask such questions in order to make a discriminating judgment when evaluating the extreme features of a trait.

While such research has generated evidence that perceivers utilize an objective and discriminating evaluation strategy, these studies do not clearly assess the diagnostic skill of the interviewer. Three other, independent studies, did examine the ability of lay interviewers to function as "intuitive statisticians". These projects provided perceivers (subjects) with base rate and conditional probability data about certain characteristics and group membership. They then asked subjects to use this statistical information to learn more about a fictional Mr. Maxwell (Beyth-Marom & Fischhoff, 1983), inhabitants of the planet Zada (Skov & Sherman, 1986), and analytic vs. intuitive

personality types on the basis of handwriting analysis (Trope & Bassok, 1982). Although very different in the target being examined, a consistent finding which emerged from each of these studies was that perceivers showed a preference for information which would discriminate between the presence and absence of a given characteristic. The diagnosing strategy, in this respect, was supported. However, these studies also found that the interviewers would select many questions which were directly pertinent to the hypothesis being evaluated. Although this evidence for the hypothesis confirming strategy was less significant, it nevertheless suggested that information gathering may not be guided by a singular strategy. That is, the tactics employed by those collecting information about others may involve both discriminating and hypothesis confirming components.

This was not exactly the conclusion reached by Beyth-Marom and Fischhoff (1983). These researchers attempted to systematically identify the diagnostic procedures that are used in different stages of information gathering. In a series of experiments, they found that subjects were not very efficient in seeking appropriate information, and tended to most frequently inquire about information consistent with the hypothesis. With further exploration they discovered that although subjects frequently sought relevant information, they could not explain the reasons for using such data. In another experiment, still within their series, the authors reported that when the appropriate base rate and conditional probabilities were selected and organized for them, they were able to use it to aid in the quality of their judgments. Thus, when the relevant information was available for use (such as in the

studies by Skov & Sherman, 1986 and Trope & Bassok, 1982), subjects appeared to utilize the diagnosing strategy. In contrast, under the more usual circumstances of having to gather information based on just a piece of information, subjects tended to ask questions which would increase the probability of behavioral confirmation. Thus, these results indicate that the type of information gathering strategy utilized is contingent upon the situation.

Shortcomings and synthesis of the literature

The results of these studies and their guiding theoretical structures provide general, but not unequivocal support for the proposed model of the social interaction sequence. Although the vast majority of the research indicates that social perceivers typically utilize a biased search and evaluation strategy, a few studies maintain that judges approach data collection in a very discerning fashion. Many of these latter studies, however, appear to have important shortcomings in their experimental designs. Consequently, this limits the extent to which such research challenges the findings regarding behavioral confirmation.

Specifically, there appear to be three problems with the research on diagnosticity--in addition to the report that perceivers do poorly when the appropriate information is not selected and organized for them. First, their research on person perception typically involves an assessment of discrete rather than continuous traits, many of which have little (or nothing) to do with personality. For example, one can sometimes act either introverted or extraverted, but one can not have webbed feet if this is not an innate characteristic. Consequently, the use of discrete features significantly minimizes the possibility of an

hypothesis confirming strategy, and is likely to artificially inflate the likelihood of a diagnostic data gathering approach. A second criticism, and one with more meaning in light of the above, is that these researchers consistently found that perceivers assumed a confirming as well as diagnosing search strategy. Thus, even with less ambiguous variables, perceivers continued to inquire about traits which would be more likely under the hypothesis. Third, even if perceivers did use a diagnostic information gathering approach, this would not guarantee that the processing of such information would lead to an unbiased judgment. Bias can occur at different stages in the social information processing sequence (Berman, Read, & Kenney, 1983; Cantor & Mischel, 1979), and does not occur only in what would be the interview phase. The fact that these investigations did not examine this aspect of social judgment is a very significant limitation.

The studies on the diagnosing strategy appear vulnerable to some critical observations. The research on the self-fulfilling prophecy/behavioral confirmation seems more valid in light of the extant knowledge. However, as previously mentioned, many of these studies have been criticized for their use of constraining questions. This is an important issue which, by virtue of experimental artifact, would make behavioral confirmation more likely to occur. Despite this apparent limitation, many other studies without this type of experimental procedure have reported results consistent with the model of the confirmatory hypothesis testing strategy. Thus, behavioral confirmation appears to be a rather robust phenomenon.

Even though there are some limitations in the existing literature

on the expectancy bias, especially as it applies to clinical judgment, this review indicates that behavioral confirmation is a rather pervasive phenomenon. The impact of expectancy effects is consistent in terms of the historical documentation of this process throughout the psychological literature. It is reported to occur in a wide variety of contexts, from the professional to the social situation. Whether it is the lab, the classroom, the clinic, or the casual encounter, the course of the interaction is typically influenced--significantly or minimally--by prior information. Furthermore, the social perceivers in these different environments all show some susceptibility to the biases which result in behavioral confirmation. Thus, professionals and lay individuals all show a tendency toward influence which potentially distorts their judgments.

An additional, but indirect source of support for this expectancy effect is seen in an overview of the reported literature. Focusing on just the hypothesis and the results, without consideration for the specific content of each study, it is interesting to note that all of the reported investigations find support for the hypothesis being evaluated. While this could be a function of editorial selection, it may also reflect the type of experimenter artifact which Rosenthal (1966) described two decades ago. This in itself is a strong example of a self-fulfilling prophecy.

Despite the overarching support for expectancy effects, there do appear to be some conditions which moderate the degree of bias. High prior expectations, a finite set of questions from which to choose, and a situation involving an interpersonal interaction appear to be

variables which are related to the diminution of objectivity. Conversely, an assessment removed from the social encounter involving the spontaneous generation of questions with knowledge of the relevant conditional probabilities appear to represent a set of circumstances which enhances the accuracy of interpersonal judgments. This type of situation, however, does not occur with nearly the frequency as those instances involving all the demands of a personal relationship. Consequently, the potential for some degree of bias is relatively high under normal circumstances.

Psychological assessment and expectancy effects

It is evident that there is a substantial amount of empirical support indicating that one's expectancies trigger a chain of events that channel the social interaction in such a way that causes the target to provide some form of evidence justifying the perceiver's impression. This cognitive processing phenomenon is obviously not limited to everyday attempts to understand others, but occurs in many professional activities, including the work of clinical psychology and psychiatry (Snyder, 1981). These professions certainly should not be regarded as immune from such bias. In fact, they should be scrutinized even more because of the subjective nature of their conclusions and the far reaching ramifications of their interpersonal judgments. Consistent with this potential for bias, Cook (1979) has pointed out that psychiatrists assume that anyone who presents himself for examination must have significant problems. He argues that most of the problems with the psychiatric interview lie with the clinician for "forgetting to ask about things, drawing the wrong conclusions from what he sees and

hears, and adding up his data incorrectly" (Cook, 1979, p. 143).

While "errors" in interviewing somehow seem more excusable because of the subjective nature of the technique, the results of psychological testing are expected to be far more rigorous. However, psychological testing, particularly projective assessment, has been criticized for its unsatisfactory psychometric properties. Nevertheless, these methods have maintained widespread acceptance in clinical settings. Even ignoring the difficulties with reliability and validity, there are examiner effects and information processing errors that can lead to distortion in the appraisal of the target. While these expectancy effects have already been described for the Rorschach and DAP (Chapman & Chapman, 1967; 1969; Marwit & Marcia, 1967; Masling, 1965), another popular projective measure has escaped evaluation. Consequently, one is left wondering how the Thematic Apperception Test (TAT) fares in terms of the bias arising from the self-fulfilling prophecy.

Characteristics of the TAT

The TAT is one of those projective devices that has been remarkably popular in clinical settings, always ranking in the top ten among tests used by practitioners (Dana, 1985; Exner, 1976; Harrison, 1965). Originally conceived as a measure of fantasy, Murray (1943; Murray & Morgan, 1981) regarded the TAT as presenting ambiguous human situations which individuals interpreted according to their past experiences and current desires. The subject was thus forced to project his/her own fantasies into the material and in so doing reveal some of the more pressing needs, dominant drives, emotions, sentiments, complexes, and conflicts of personality. Murray (1943) therefore

claimed that "as a rule the subject leaves the test happily unaware that he has presented the psychologist with what amounts to an X-Ray picture of his inner self" (p. 1).

The TAT consists of 30 pictures, most of which show people in implied action, and one blank card. The cards are divided so that the examiner can select groupings according to the age and sex of the subject. Originally, Murray recommended that the full set of 20 cards be administered to the subject in two sessions, and that the subjects devote approximately five minutes to each card. Most test users, however, have found this administration to be too time consuming and have adopted the general practice of giving just eight to twelve cards in a single session with no restrictions on time (Dana, 1985; Bellak, 1975; Exner, 1976; Hartman, 1970). However, with the large number of variations in procedure, Harrison (1965) has emphatically stated that the TAT should not be considered a test at all, but merely a technique analogous to the clinical interview. As he argues:

The TAT is in no sense standardized--in the number or kind of pictures, in the mode of administration or instructions, in the method of analysis, or in the uses to which it is put (p. 564).

In addressing the clinical practice of using an abbreviated version of the TAT, Hartman (1970) attempted to develop a basic set of eight cards frequently used by highly experienced psychologists. These cards, in rank order, are 13MF, 1, 6BM, 4, 7BM, 2, 3bm, and 10. Two subsequent investigations (Irvin & Woude, 1971; Newmark & Flouranzano, 1973) indicated that these cards were highly productive in the number of themes they elicit. Thus, Hartman's rationale was cogent: There was a strong need for standardization of the presented pictures; clinicians

were already using shorter TAT sets; and the shorter set could be sufficiently productive. Furthermore, according to Hartman, this version of the TAT was brief enough to allow for supplementary card choices according to individual circumstances. The hope was that after completing the basic eight-card series the psychologist would be free to add cards without affecting the special contributions yielded by the standard set. Bellak (1975) espouses a similar view. In his words:

To these basic nine pictures should be added those specific one, two, or three others which are necessary to the understanding of the particular person, as far as can be judged from the case history (which should, ideally, be available or very briefly taken). If the patient comes with a marital problem, we will want to include all the pictures likely to elicit problems of male-female relationships. If the patient comes with a depression, all the pictures related to aggression and suicidal themes should be included. If it appears to be a reactive depression to the death of a closely related person, 15 is indispensable; 12M may also possibly elucidate that theme. If a male patient seems to have primarily homosexual fears, 9BM, 10, and 18BM may be included. Other problems can be handled in a similar manner with flexibility and some economy (p. 48).

Implications of behavioral confirmation for an abbreviated TAT series

The option of selecting among the 31 TAT cards is potentially problematic. The selection of particular cards allows the examiner to project clinician related contents into the testing situation (Dana, 1985; Masling & Harris, 1969). This practice heightens the probability of bias, for the needs, personality, and expectations of the psychologist "have been shown to influence the administration, scoring and interpretation, and eliciting of responses to psychological tests" (Masling & Harris, 1969, p. 166; see also Chusmir, 1983; Haynes & Peltier, 1985; Siskind, 1973; Turner & Coleman, 1962). Because of the potential for this type of bias, the TAT test user can be conceived as

being very similar to a subject in one of Snyder's experiments on behavioral confirmation. Rather than selecting questions which seek to determine if the target is an introvert or extravert, the psychologist may preferentially use those cards with the prepotencies to confirm the initial hypothesis/impression. Therefore, if Bellak's instructions reflect a common practice of specific card use, then psychologists may be susceptible to making distorted judgments.

The prepotencies, or "pull", of each card is one of the few TAT topics about which there is unanimity (Harrison, 1965). Pull refers to the tendency of the test stimuli to evoke or predispose certain cognitive and affective responses in the subject based upon the actual content of the test material (Peterson & Schilling, 1983). Since the cards actually elicit common themes or stories, it is possible to have a normative frame of reference for understanding the individual's perception of the pictures. Holt (1978) has compiled the most updated guide for the normative use of the TAT. Limiting the focus to those cards which elicit dysphoric mood or suicidal tendencies, Holt describes seven such cards, 3BM, 3GF, 10, 12BG, 14, 15, and 17GF. Bellak (1975) also considers many of these pictures useful for exploring depression and its attendant symptoms, stating for card 3BM that "it is obvious that this picture is a must with depressed patients" (p. 56, emphasis in original) and of 14, "again it is an absolute must when one suspects suicidal tendencies (p. 56). Furthermore, he adds card 9GF, noting that "it is very important in cases in which one suspects depression and suicidal tendencies" (p. 53).

In addition to clinical experience, several of these cards have

been empirically rated as the saddest in the TAT series. Dollin and Sakoda (1962) had subjects rank the TAT cards for their affective pull. They found that the seven saddest cards were 3GF, 3BM, 6BM, 12M, 15, 18GF, and 18BM. Two of these cards (3BM, 6BM) are found in the recommended basic set of cards and two others (12M, 18GF) were ranked in Hartman's top ten. Thus, four cards considered to be sad are included in the ten most preferred pictures for use by clinical psychologists. In contrast, only one card considered happy (10) is included, and this card is described by Holt (1978) as eliciting stories of loss and consolation in nearly one-third of the cases. Therefore, it can be seen that the basic set proposed by Hartman is negatively tone. In fact, the TAT series as a whole is more sad in mood than neutral (Dollin & Sakoda, 1962).

Although card pull can have significant impact in eliciting certain themes, very little has been written about TAT card selection with respect to a normatively guided interpretation. In general, there seems to be reference made to this important issue, but with little or no elaboration. Garfield, Blek, and Melker (1952), over three decades ago, stated that "some normative frame of reference is essential for the most efficacious use of the test. This is particularly important since the test is being used in an extremely subjective fashion" (p. 140). More recently, Harrison (1965) and Peterson and Schilling (1983) have echoed this caveat, noting that a "good" tester should be aware of the prepotencies of the cards and their probable weight in the response process before undertaking the task of interpretation. However, Harrison (1965) goes on to say:

While the examiner should develop sophistication about stimulus effects, there is a tendency in some quarters to overstate the role of the stimulus and underestimate the role of personality projection. Under ordinary conditions of administration, more story variance is accounted for by projection or expression of personality than by the stimulus complex (p. 568).

This implies that the psychologist discount the influence of the stimulus material while generating more dispositional than situational interpretations. Furthermore, this seems to justify the inclusion of "pull" cards in individual circumstances, with the cards contingent on the hypothesis being entertained by the examiner. The consequence of this type of TAT practice, according to Snyder and Swann (1978b), is this: Soliciting hypothesis confirming instances by implementing such a search strategy will generate a sample of data in which confirming evidence is over-represented and in which disconfirming evidence is under-represented. Of course it will be on the basis of this sample of data upon which the psychologist will decide to accept or reject the "hypothesis". Accordingly, the impression may be accepted more readily than the real "data" of the target's life may warrant.

Summary of TAT use and implications

Although the TAT has remained quite popular in clinical settings, the current practice of using this assessment tool has departed significantly from the author's instructions. As a result, the TAT is certainly not a standardized psychometric device. In fact, it is more accurately conceived of as a clinical technique than a psychodiagnostic test. Thus, the limitations in psychometric properties render the TAT an instrument of questionable validity.

One factor which undermines the accuracy of this measure is that card selection is not a standardized aspect of test administration.

Instead, examiners are free to select cards with a wide variety of stimulus pull. While some clinicians have minimized the impact of card prepotency, preferential selection of cards introduces a heightened potential for bias which could result in erroneous diagnostic (and therefore treatment) decisions. In other words, the lack of standardization may systematically bias the themes elicited from the patient. Unfortunately, these stories will form the basis for the clinician's judgments.

Overall recapitulation and formulation of problem

While the literature on expectancy effects is not entirely consistent, there is general support for behavioral confirmation. There appears to be considerable evidence which has demonstrated that a perceiver's expectations channel the social interaction sequence according to the initial impression. These stages unfold in an almost predictable manner contingent upon the expectation held by the perceiver. By examining clinical psychologists use of the TAT from this social psychological perspective, it seems highly plausible that clinicians distort their assessment as a result of the behavioral confirmation bias. This is not to suggest that the distortion is intentional or of gross magnitude, but this common cognitive processing error--which effects everyday person perception--also effects professional judgments.

Like all perceivers, clinicians appear susceptible to the effects of initial impressions or to those expectations which have been activated by other sources of information. Based on this expectation, these clinicians may conform to the prediction delineated in Step 2 of

the model for a social interaction sequence; they will act toward the target individual according to their expectation. In terms of the TAT use, this suggests that clinicians will select cards which oversample the characteristic being evaluated. Concretely, this means that they will show a preference for a set of cards with the prepotency to elicit the suspected theme. When investigating depression, those cards which elicit stories of sadness, loss, and/or suicidal ideation may comprise a disproportionately large segment of the TAT series.

Although it is postulated that psychologists will oversample certain characteristics according to the initial expectation, it is conceivable that card selection does not constitute a significant bias in the assessment process. Bias may occur, not as a result of oversampling, but of overresponding to the first impression. This means that psychologists will interpret the patient's behavior/test data from a perspective influenced by prior information (Step 5). Consequently, a cognitive set may be established which alters the perception of mood states in the TAT stories. That is, the salience of themes or selected phrases is changed as a result of initial expectancy. This conceivably colors the interpretation of test data in a less than objective direction.

The extent or degree to which TAT interpretation may be effected by such a cognitive process is unknown. Thus, the potency of the initial expectancy is unquantified. It has yet to be determined exactly what impact initial categories (Step 1) have on TAT administration (Step 2) and on test interpretation (Step 5). Two studies are conducted in an attempt to understand with greater clarity both the process and the

degree to which an information processing error can influence the assessment process of professional psychologists. Both investigations apply the findings of the behavioral confirmation literature to the practice of TAT use by psychologists, it may be possible to learn more about this issue. The first study generally seeks to examine the effect of a diagnostic suggestion on the behavior of the psychological examiner. The second study assesses the impact of the initial expectancy on the final perception of the target (the TAT narrator).

The specific hypotheses to be subjected to empirical scrutiny are:

1)Psychologists will show a preference for those cards recommended by prestigious clinicians for use with depressed patients.

2)Psychologists will more frequently indicate a predilection for those cards which have a prepotency or "pull" for dysphoric/dysthymic themes.

3)TAT users will construct the TAT series to include more depressive pull cards when expecting to evaluate depression than when evaluating an affectively neutral issue. That is, they will "stack the deck" to elicit depressive themes when they expect the patient to be depressed.

4)As a correlary, the TAT series will be composed of more happy cards when evaluating those patients referred for affectively neutral issues.

5)When expecting to assess the level of depression, psychologists will construct a TAT series which has an overall negative tone. That is, they will prefer an hypothesis confirmatory strategy to a diagnostic approach.

6)This bias will be mediated by experience with the TAT. Psychologists with the most experience with this projective device will utilize more of an equal opportunity/diagnostic assessment approach.

7)Psychologists will perceive the patient as being more depressed when they have been led to expect depression than when they have been informed otherwise.

8)In addition to describing the patient as being more depressed (when expecting depression), psychologists are more likely to entertain a DSM III psychiatric diagnosis which involves depression than any other disorder.

9)Psychologists will respond to TAT stories narrated by a "depressed" patient with interpersonal attitudes similar to those acutally interacting with a depressed individual. That is, psychologists who review a TAT stories allegedly obtained by a depressed patient will regard themselves as having been interpersonally impacted by a depressed individual.

STUDY ONE

Method

Subjects

Following the procedure used by Hartman (1970) in developing a basic set of TAT cards, 250 psychologists were asked to complete surveys to provide information about their use of the TAT. The psychologists serving as subjects were randomly selected from the Directory of the American Psychological Association if they met the following criteria: 1) held the Ph.D. degree; and 2) identified themselves as clinical psychologists by membership in Division 12 of the APA.

Of the initial criterion group, 160 psychologists responded to the survey. This sample was comprised of 45 subjects who indicated that they do not use the TAT, and 115 psychologists responding to questions about TAT preferences. This latter group of 115 constituted the final sample size for the data analysis.

Procedure

Each psychologist received a questionnaire requesting information about their professional practice and preferences for TAT cards. More specifically, subjects were asked to indicate which of the 31 TAT cards they would include in their evaluation battery. The precise instructions to subjects were as follows:

Select those TAT cards from the total Murray set of 31 that you judge would be most universally applicable, most productive clinically, and provide the greatest range of significant clinical and personality data (for the evaluation of depression). Assume

that this will apply to adults (over 17) and in all situations in which the TAT is likely to be utilized.

Half of the psychologists received the information about evaluating depression and half did not receive this additional piece of data. This difference in instructions constituted the experimental manipulation, the purpose of which was to vary the initial expectancy. In the expect depression condition subjects were asked to list their card choices for evaluating individuals referred with a dysthymic mood. In the expect neutral condition no expectancy was generated regarding the patient's mood state. Thus, psychologists serving as subjects were assigned the task of card selection with one of two different expectations.

Included in the surveys were Murray's (1943) descriptions of each of the cards in the TAT series. This was to provide psychologists with clear information about the stimulus value of each card. Additionally, psychologists were asked to give information about their demographic characteristics, professional experience, and experience with the TAT, including current pattern of use.

Since it was important to have as many subjects as possible in both of the conditions, psychologists were contacted up to three times to invite participation. Approximately one month after the initial contact a follow-up survey was mailed encouraging subjects to respond. For those who did not respond to this request, a third questionnaire was sent. Again, ample time was allowed for psychologists to respond. The cover letters, as well as the entire questionnaire, are reproduced as Appendix A.

Measures

Card choice: The individual cards that clinicians elect to use were ascertained merely by asking subjects to endorse cards of their preference in each of the evaluation conditions. As was described in the instructions to subjects, clinicians were to choose from the full set of 31 the specific TAT cards they frequently use.

Mood ratios: While individual card choices are interesting, the more meaningful variable was the composition of these cards within the TAT series, particularly when evaluating different referral conditions. With regard to an expectation about mood, cards were empirically and theoretically/clinically clustered according to their affective pull. The cards were empirically organized into three different mood groups by using the findings of Dollin and Sakoda (1962). The sad/depressed group consisted of cards 3BM, 3GF, 6BM, 12M, 15, 18BM, and 18GF. The neutral cards were considered to be cards 1, 5, 7BM, 7GF, 11, 13B, and 19. Finally, the cards comprising the happy group were 6GF, 8GF, 9BM, 10, 12BG, 13G, and 17BM. The cards were theoretically clustered according to the recommendations of prestigious TAT clinicians. Both the Holt and Bellak clusters contained cards 3BM, 3GF, 12BG, 14, 15, and 17GF. Additionally, Holt recommended the use of card 10 in the assessment of depression, whereas Bellak endorsed a preference for card 9GF. The cards were also hypothetically organized according to the interpersonal cues in the stimulus materials. Cards which pictured more than one person were considered interactive, whereas cards featuring only one or no human figures were regarded as intrapsychic/isolated. Because these are mutually exclusive and

exhaustive sets, only a variable for the latter type of cards was created.

To make these clusters statistically meaningful and credible, the number of cards clinicians endorsed within each cluster was divided by the total number of cards used. That is, a proportion was calculated by dividing the number of cards in each of the clusters by the number of cards in the battery.

Mood index: The final variable was calculated to assess the affective tone of the entire battery. By using the empirically derived clusters and subtracting the happy from the sad cards, it was possible to measure the affective pull of the card series. Again, this figure was divided by the number of cards in the battery. As a result, high, positive scores indicate a depressive tone, negative scores suggest euphoric pull, and scores around zero indicate offsetting mood cards or neutrality.

Results

Card choice

Although the expectancy condition appeared to exert an effect on psychologists' preferences for particular cards, *t*-tests indicate that this influence reached a significant level for only five cards (see Table 1). Of these, only cards 3BM and 15 were clearly related to depression, and were significant at $t(114) \geq 1.95$, $p < .05$ and $t(114) = 2.38$, $p < .05$ respectively. Thus, psychologists expecting to evaluate a depressed individual were significantly more likely to select these cards than when evaluating an individual with no prior information about mood.

TABLE 1

PER CENT TAT CARD USE BY CONDITION

CARD	CONDITION	
	NEUTRAL	DEPRESSED
1	98.2	93.3
2	65.5	76.7
3BM	61.8	78.3*
3GF	45.5	56.7
4	87.3	73.3*
5	47.3	36.7
6BM	74.5	73.3
6GF	60.0	50.0
7BM	65.5	56.7
7GF	74.5	55.0*
8BM	54.5	73.3*
8GF	29.1	28.3
9BM	12.7	13.3
9GF	27.3	23.3
10	41.8	41.7
11	10.9	16.7
12M	50.9	56.7
12F	30.9	26.7
12BG	9.1	3.3
13MF	76.4	80.0
13B	34.5	28.3
13G	5.5	8.3
14	61.8	51.7
15	14.5	33.3*
16	29.1	31.7
17BM	29.1	35.0
17GF	18.2	30.0
18BM	21.8	33.3
18GF	29.1	36.7
19	10.9	8.3
20	14.5	26.7

* $p < .05$

N=115 (60 dep, 55 neut)

While only two of the predicted cards were associated with statistically significant results, close inspection of the data shows that the vast majority of the cards which pulled for dysthymia were in the predicted direction. Of Dollin and Sakoda's seven cards, six were in the expected direction. Nearly two-thirds (4 of 7) of Bellak's recommended cards were favored in the direction of the hypothesis, and four of the seven cards suggested by Holt were more frequently selected for use in evaluating depression than for assessing a neutral mood state. This suggests a rather apparent tendency toward bias in the behavior of psychologists.

Mood ratios

Since the TAT series that a psychologist uses is made up of more than one card, the affective tone of the set is a paramount issue. To test this, the various mood ratios were subjected to t-tests, with rather interesting results (see Table 2). Psychologists expecting to evaluate depression organized their series of TAT cards to include more empirically derived depressed cards, $t(114) \approx 3.31$, $p < .01$, and more of Holt's theoretically suggested cards, $t(114) \approx 1.97$, $p < .05$. The results regarding Bellak's recommended cards and the set of cards focusing on interaction/isolation were not significant, and therefore unaffected by condition.

Since psychologists in the expect neutral condition use a smaller proportion of depressed cards in their series, it was expected that they would complete their battery by using a greater proportion of happy cards. This, however, was not the case with $t(114) \approx 1.08$, $p > .10$. What appeared to happen was that the remainder of the battery was composed of

Table 2

Mean proportion of depressive pull cards in the TAT series
by expectancy condition

TAT card series	Expectancy Condition			
	Neutral		Depressed	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Sad				
Empirical	.22	.10	.27	.08*
Bellak	.18	.09	.21	.11
Holt	.19	.10	.23	.11**
Isolated	.35	.10	.37	.13
Happy	.14	.09	.12	.09
Neutral	.27	.10	.22	.08*

* $p < .01$

** $p < .05$

affectively neutral cards. In fact, those with no expectancy regarding mood have a significantly higher proportion of neutral cards in their set than those expecting depression, $t(114) \approx 2.77$, $p < .01$. Integrating this data with the previous finding indicated that psychologists administer a battery of TAT cards with a higher stimulus pull for depressive themes when evaluating depression than when examining just clinical or personality issues.

While there appeared to be a difference between the groups based on condition alone, it was important to determine if variables associated with professional practice might moderate these findings. The examination of additional independent variables, of course, created a factorial design. The specific variables and levels analyzed were expectancy condition by years of experience (2 x 3), expectancy condition by frequency of TAT use (2 x 3), and expectancy condition by theoretical orientation (2 x 4).

The results of ANOVAs for the empirically derived cluster of sad TAT stories indicated that neither years of clinical experience, $F(2, 109) \approx .38$, $p > .10$, frequency of TAT use, $F(2, 107) \approx .01$, $p > .10$, nor theoretical orientation, $F(3, 103) \approx 1.72$, $p > .10$, moderate the main effect of the initial expectancy on the proportion of depressive cards in the battery. That is, the main effect for expectancy condition appeared robust, for it was statistically significant at $F(2, 109) \approx 8.56$, $p < .01$, $F(2, 107) \approx 5.36$, $p < .05$, and $F(3, 103) \approx 6.95$, $p < .01$ for each of these variables respectively.

The effect of expectancy condition appeared to have a rather strong, direct effect on the proportion of empirically derived cards in

the battery. This was not the case for Bellak's recommended cluster of cards. There was a significant interaction effecting the relationship between expectancy condition and professional practice with his clinical battery, $F(2, 109) \geq 4.90$, $p < .01$. Specifically, clinicians with a vast amount of experience appeared to behave differently than clinicians with some or considerable experience (3-30 years). This latter group of clinicians constructed their battery of Bellak's TAT in a manner consistent with behavioral confirmation; those expecting depression included more depressive cards than those without this expectation. However, there was a crossover for clinicians with the most experience, particularly for those without an expectation about mood. Strangely, this group actually used a higher proportion of Bellak's cards than any other set of clinicians.

A similar, but reversed pattern was seen in the relationship between expectancy and frequency of TAT use. In this instance, those administering/interpreting fewer TAT records constructed a different set than those using the TAT more frequently. The ANOVA for this analysis resulted in $F(2, 107) \geq 4.04$, $p < .05$. Interestingly, the clinicians without an expectation about mood who give the TAT less than once weekly actually use a higher proportion of Bellak's depressed cards than a similar group expecting depression. For the other groups, those expecting depression had a higher proportion of Bellak's cluster than those without this expectation, regardless of the number of TATs given.

These results show that only the proportion of depressive cards in Bellak's cluster are effected by variables associated with professional practice. Neither years of experience nor frequency of TAT use

significantly effect any other cluster of cards.

Mood index

The mood tone of the entire battery provides the best indication of any bias in the affective pull of the TAT series. Analysis of this factor indicated that the mood index was strongly effected by the expectancy condition. The results of t-tests showed a very significant difference between clinicians expecting depression and those without this expectation, $t(114)=2.82$, $p<.01$. The psychologists who anticipated evaluating a depressed patient had a much more negatively toned TAT series than those who were uninformed about the patient's mood state ($M=1.6$ and $M=0.8$).

Expectancy condition appears to be the strongest predictor of the mood index. The ANOVA results indicated only a main effect for condition, and no interaction for years of experience or theoretical orientation, $F(1,109)=6.12$, $p<.05$ and $F(1, 103)=5.56$, $p<.05$ for these main effects respectively. The same analysis for expectancy condition and frequency of TAT use was nonsignificant for interaction and main effects. These results indicate that the expectancy condition, and not factors relevant to professional practice, is the only variable which helps to predict the composition of the affective tone in a TAT series.

STUDY TWO

Method

Subjects

Participants in this phase of the project had to be psychologists who were either currently using the TAT or experienced with this instrument. Therefore, those respondents who indicated that they were TAT clinicians in study one were recruited for participation in this phase. A total of 52 subjects from the available pool of 115 provided useful data. This represented an adequate response rate of 45%.

Procedure

Subjects were mailed questionnaires in which they were asked to apply their clinical skills to the interpretation of a TAT record. The TAT stories were in response to Hartman's (1970) basic set of eight cards, and were told by either a depressed patient or a psychiatric control. That is, the stories actually recorded by a depressed patient and a psychiatric control were used as the stimulus materials (see Appendix B). These stories had previously been determined to be significantly different in level of depressive content by a panel of clinical psychologists. Half of the psychologists in this study were randomly assigned to receive the depressed stories, and half received the control responses. Additionally, as in the first part of this project, the clinician's initial expectancy was manipulated. In the depressed condition, half the psychologists were informed that the individual telling the stories had been referred for depression. In the

control or neutral condition, subjects were apprised that the referral was for a general personality evaluation. Therefore, there were two levels to the variable story (depressed vs neutral) and two levels of expectation (depressed vs neutral).

Subjects were instructed to peruse and analyze the stories as they would in a clinical situation. Once they had formed an impression of the patient, they were to complete the Impact Message Inventory, the Global Assessment Scale, and a final questionnaire with mood ratings and diagnostic impressions (see Measures). Upon completion of this task, they were to return the surveys in the stamped and addressed envelope which had been provided.

Since it was important to have as large a sample as possible, those subjects not responding to the initial request were recontacted after approximately six weeks. This follow up survey again invited participation in the research project.

Measures

Impact Message Inventory: The Impact Message Inventory (IMI), in its short form, is a 36 item measure designed to assess the momentary, transitory, and immediate effects of one person's interpersonal behavior on another person (Kiesler, 1985). This interpersonal scale epitomizes a state measure, and addresses twelve social styles. These styles can be collapsed into four clusters, Friendly (agreeable, nurturant, affiliative), Hostile (hostile, mistrustful, detached), Submissive (abusive, submissive, succorant), and Dominant (dominant, competitive, exhibitivistic). When the scores are summed they indicate the overall impact of the interaction (Howes & Hokanson, 1979).

Theory and research have addressed the impact of interacting with a depressed individual. Based on current conceptualizations of depressive symptoms, Kiesler (1980) has suggested that depressed individuals should have the greatest impact on all the subscales of the submissive cluster, and on the hostile and detached subscales of the hostile cluster. Research by Howes and Hokanson (1979) provided support for this contention, and further indicated that the depressed person is regarded as less friendly in all its elements--less agreeable, nurturant, and affiliative.

It was predicted that those expecting to review a TAT record generated by a depressed individual would be impacted in a manner consistent with the theory and research on the IMI.

Global Assessment Scale (GAS): The GAS was developed to provide a single rating of the overall functioning of an individual on a continuum from psychological or psychiatric sickness to health (Endicott, Spitzer, Fleiss, & Cohen, 1976). It is a reliable and valid measure with a broad range of 1 (representing mental illness) to 100 (indicating mental health). The scale is subdivided into ten equal intervals, with behavioral descriptors serving as criteria for each interval. The authors state that the information needed to make a rating can come from any source.

Final Questionnaire: The final measures addressed specific items regarded as important in evaluating the impact of expectancies on clinician's perceptions of TAT protocols. The paramount variable was a single, five point Likert scale addressing depression. The last important variable was the diagnostic impression created by the story or

expectancy. Subjects were asked to indicate the DSM III category which seemed to best fit the story teller. There were no specific instructions regarding which axis/axes to consider.

Results

Manipulation check

Although the TAT stories used in this study were previously evaluated as being significantly different, it was necessary to determine if they were similarly perceived by this sample of clinical psychologists. In fact, these subjects rated the stories as being quite dissimilar in level of depression, $t(40) \approx 2.85$, $p < .01$. Thus, one set of stories was clearly regarded as more depressed than the other. Furthermore, the stories were not perceived as being different in the level of anxiety conveyed, $t(40) \approx 0.84$, ns.

IMI scores and expectancy effects

It was postulated that psychologists expecting to review a depressive record would register higher scores on those subscales and clusters linked to interpersonal depressive behavior. The data generated from a 2 X 2 analysis of variance provided virtually no support for this proposition. Those expecting depression and those without this expectancy were far more similar than dissimilar in the way they were interpersonally effected by the TAT protocols. The only exception was for a trend in the rating of abasement. When depression was expected, clinicians perceived more humility in the record, $F(1, 45) \approx 3.31$, $p \approx .075$. No other main effects and no interactions approached significance.

Since it was possible that the absence of significant findings was

due to the power of the TAT story rather than the expectancy, the effects of the story were examined. The results indicated that the type of story did not mitigate the expectancy effects. As noted, there were no significant story by expectancy interactions, and only two main effects were apparent for story condition. Clinicians reviewing the depressed record sensed more submissiveness, $F(1, 45) \approx 6.25$, $p < .05$, and less mistrust, $F(1, 45) \approx 3.96$, $p \approx .053$, than those evaluating the protocol of the psychiatric control. Thus, the type of story was not such a powerful variable that it vitiated any contribution of the initial expectancy as measured by the impact on clinicians.

GAS and expectancy condition

The manipulation of the initial expectancy did not lead clinicians to rate the TAT narrator differently in terms of overall functioning. The results of a t-test showed that the group means on the GAS were not significantly different, M depressed condition ≈ 57.60 vs M neutral condition ≈ 60.67 , $t(37) \approx 1.00$, ns. Clinicians expecting to review a depressed TAT protocol did not rate the patient as significantly less functional than those not expecting a deflated mood. This finding was not moderated by the inclusion of type of story in the analysis. The two-way analysis of variance did not produce a significant main effect or interaction term, $F(1, 34) \approx 0.85$, ns and $F(1, 34) \approx 0.66$, ns respectively.

Final variables and expectancies

Since a central question of the project was whether an expectancy would effect the evaluation of depression, clinicians were asked to make an assessment of mood on a 5-point Likert scale labeled depression. The

pattern of means (see Table 3) and ANOVA results (see Table 4) were both interesting and significant, $F(1, 37)=5.67$, $p<.05$. As can be seen from the tables, there was a meaningful relationship between expectancy condition and type of story. The expectation of depression appeared to enhance the perception of dysthymia in stories which were actually depressed, whereas the same expectation predicted a lower depression score when the stories were told by a non-depressed patient. Clearly the expectation of depression had an impact far more significant than not having this type of preparation regarding mood. To the extent that this generates distortion, there is bias in the assessment. Nevertheless, the results favorably indicated that clinicians can discount a priori information if it is inconsistent with the real data.

An additional attempt to determine if expectancies would effect perceived depression was to have psychologists render a diagnostic impression based on the TAT. In general, psychologists were hesitant to offer an impression from such limited information. One fourth of the subjects provided no diagnostic impression (blank), and 21% deferred judgment. Consequently, the remaining 28 impressions were thinly distributed across many categories. Nevertheless, a liberal statistical approach was taken and the amenable impressions were pooled into either Axis I or Axis II categories. Even with this procedure, Pearson's chi-square did not indicate a significant association between type of story and diagnosis, $\chi^2=2.39$, ns, or between expectancy condition and diagnostic category, $\chi^2=0.01$, ns.

The results were reanalyzed using Fisher's exact test with only the essential diagnostic categories of depression and personality

TABLE 3

Mean depression rating by expectancy condition
and type of story

Expectancy	Story			
	Depressed		Neutral	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Depressed	3.50	.71	2.18	.60
Neutral	2.88	.64	2.75	1.06

TABLE 4

Analysis of variance summary table for depression rating
by expectancy condition and type of story

Source	df	Sum of squares	MS	<u>F</u>
Expectancy	1	0.01	0.01	0.01
Story	1	5.22	5.22	8.30*
E X S	1	3.57	3.57	5.67**
Error	37	23.26	0.63	

* $p < .01$
** $p < .02$

disorder included. Again, although the pattern of frequencies suggested a meaningful relationship, the results were not statistically significant for story or expectancy condition. Thus, neither level of these variables, when independently evaluated, contributed to the prediction of depression in terms of DSM III categories. This should not be particularly surprising, since the preceding analysis indicated an interaction between both of these variables in terms of mood rating.

DISCUSSION

The results of these investigations provided general support for the conceptual aspects of the social interaction sequence as applied to the clinical use of the TAT. Consistent with the model, it appeared that prior information acted as an initial expectancy which influenced the cognitive processing strategies and assessment behaviors of psychologists. In particular, there was considerable support for the effect of expectancies on clinicians' selections of TAT cards. As propounded in Step two, psychologists acted toward the target/patient in accord with their expectation. The psychologists expecting to evaluate a patient for depressive symptomatology demonstrated a preference for those cards which would elicit dysthymic themes. In contrast, the absence of a mood related expectation was associated with a more neutral evaluation approach.

There was considerably less support for Step five of the model. The expectancy condition effected only one aspect TAT interpretation. An interaction was observed between the actual affective content of the stories and the cognitive expectation on the rating of the patient's mood. Clinicians receiving both dysthymic content and a depressive expectation perceived the most depression, while the discrepancy between a depressive expectation and a neutral TAT record resulted in a low overall rating of depressed mood.

Expectations and the assessment approach

According to the model, the first observable effect of an

expectancy would be on clinicians' behavior. In this regard, it was predicted that clinicians would utilize different TAT cards as a function of the initial expectation. The first six hypotheses addressed many of the different ways in which a referral question of depression might promote behavioral confirmation in this type of testing situation. Specifically, hypotheses one and two proposed that clinicians preparing to assess depression would show a biased preference for those TAT cards which were either recommended for use in evaluating this mood or had been empirically shown to elicit sadness. Although this preference was statistically significant for only cards 3BM and 15, there was a pronounced trend for most of the other cards with a prepotency for depressed mood to be strongly favored. Thus, there was mild statistical support as well as a strong trend to indicate that clinicians selected those individual cards which would increase the likelihood of generating stories consistent with the referral question.

Although there was some evidence of bias in the selection of individual TAT cards, a more meaningful examination of the confirmatory hypothesis testing strategy would consider the effect of an expectancy on the composition of the entire series. Illumination of this important issue was the specific goal of the third hypothesis. The results indicated that psychologists expecting to see a depressed patient constructed a TAT series with a higher proportion of pull cards for depression than those without such an expectancy. This was true in terms of the proportion of Holt's recommended cards and the proportion of the empirically derived cluster of sad cards in the evaluation battery. Thus, psychologists did in fact "stack the deck" with cards which

activate cognitive, relational, emotional, and behavioral correlates of sadness when planning to use the TAT with a target/patient suspected of experiencing depression. This was not the case for those with no expectation about mood.

In addition to using a higher proportion of dysthymic cards in their battery, clinicians evaluating a referral question of depression used a smaller proportion of happy cards. Since happy cards did not have the same chance of inclusion in the series as did sad cards, it was evident that these professionals were not utilizing an equal opportunity hypothesis testing strategy. In fact, this support for the fourth hypothesis (the low proportion of happy cards) and the propensity of clinicians to use a higher percentage of dysthymic cards, made these psychologists appear to be quite biased in terms of organizing a depressive tone to their TAT series. That is, based on the normative stimulus pull of the cards, it would be expected that such a TAT series would have several sad, but few happy, stories.

Although the first four hypotheses provided considerable support for the confirmatory hypothesis testing strategy, none directly examined the overall mood of the TAT series. The affective tone of the TAT, as indicated by the ratio of happy to sad cards, would provide the most precise information about the emotional slant of the battery. Since the results indicated that this mood index was far more negative when expecting depression than when having no mood expectation, a discriminating assessment strategy was not used. That is, because clinicians used a smaller proportion of happy cards relative to cards which pull for sadness, the affective tone of the entire series was much

more likely to elicit a mood consonant with the expectation. Clearly, the mood index indicated more opportunities to confirm as well as create the presence of depression than to disconfirm its existence. In this respect, the evaluation approach appeared to be hypothesis confirming and not diagnostic.

This expectancy bias appeared rather robust in terms of orienting clinicians toward behavioral confirmation. Consequently, professional experience generally did not moderate the effect of an initial expectation. In fact, contrary to the sixth hypothesis, clinicians with different levels of experience and different patterns of TAT use typically employed a biased assessment approach. This was uniformly true in terms of the empirically derived cluster of cards, and generally true with the set recommended by the experts. There were, however, two exceptions. These were evident only with Bellak's recommended set of cards and only in two specific situations.

In both of these instances, clinicians with no mood expectation actually used a higher proportion of Bellak's depressive cards than did clinicians who expected to evaluate a depressed patient. Specifically, the group of clinicians with over two decades of experience and those psychologists who practice the TAT less than once a week utilized a very high proportion of Bellak's depressed cards when no expectation about mood was given. Although these psychologists did not demonstrate the predicted bias, the remainder of the clinicians in both of these conditions continued to show evidence of behavioral confirmation. While there appeared to be no obvious explanation for this, it may be that the highly experienced professionals as well as those who seldom use the TAT

had learned to look for latent depression in patients referred for testing.

Regardless of the reason why they utilized more of Bellak's cards, they resembled those clinicians who had been given an expectation of depression in terms of oversampling this mood state. Thus, although the behavior of these specific groups departed from the prediction, their TAT series would still not assess a representative sample of the patient's functioning. Consequently, taken as a whole, variables related to professional practice had virtually no effect in terms of moderating the impact of initial expectancies.

Synthesizing these findings from the perspective of the model, there was a preponderance of evidence to indicate that these clinical psychologists used a hypothesis confirming strategy to evaluate the referral question when given initial information about a patient's mood state. Regardless of whether the unit of analysis was the individual card, the cluster of affectively related cards, or the mood index of the battery, TAT users employed a biased evaluation strategy when assessing depression. These professionals approached the appraisal task with a set of stimulus materials which would amplify the probability of soliciting confirming evidence. This strategy bore no resemblance to a disconfirming approach, was far from an equal opportunity style, and did not seem to be a diagnostic testing strategy.

While the interpretation of the results in terms of the social interaction sequence seems highly tenable, there may be an alternative explanation. By considering the behavior of psychologists from a clinical framework, their strategy may have been more diagnostic than

initially evident.

When clinicians are asked to evaluate a patient/client for depression, the referral source ostensibly has some basis for making a referral of this nature. Furthermore, the purported disturbance in mood would probably not be readily apparent or understandable by clinical observation alone. Given these preconditions to the testing situation, it seems plausible that the assessing psychologists no longer defined the task as one of ascertaining the presence or absence of depression. Instead, they assumed the referral question was valid, and construed the goal of testing as one of evaluating the magnitude of the probable symptoms. To accomplish this goal, they focused on the depressive cluster by using an increased proportion of depressive pull cards as sort of a psychodiagnostic microscope. By narrowing the focus of the evaluation to an intense study of these features, the psychologists provided ample opportunity for depressive symptoms to become evident. Thus, rather than being a biased search strategy, the use of sad cards for this purpose actually allowed a thorough examination of depressed features and potential.

This same type of testing of the limits approach was observed in the assessment of a personality feature (Trope & Bassok, 1982). Thus, whether investigating character features or depression, perceivers may have been using an evaluation strategy which would promote maximum differentiation of the trait being investigated. Since such a strategy was intended to obtain discriminating information, it would not necessarily be consistent with behavioral confirmation. However, this argument loses some strength when considering that a truly diagnostic

approach would not only attempt to gather discriminating data by comprehensively assessing confirming aspects of the trait being measured, but would also make a significant effort to examine instances of disconfirmation. Nevertheless, there is a reasonable argument to be made for the diagnostic strategy. There is perhaps a slightly stronger case to be made for behavioral confirmation.

Both of these rival hypotheses are tenable and do not permit a firm conclusion to be drawn about the type of hypothesis testing strategy being used. One conclusion that does seem clear, however, is that regardless of the intended evaluation approach, the level of depression obtained is likely to be amplified by the cards which had been used. Consequently, it is critical to examine the perception phase as a means of understanding the behavioral strategy, for psychologists must interpret the mood state in the perspective of the stimulus materials and in the broader context of the individual's life in order to avoid bias.

Expectancy effects and clinical interpretation of the TAT

In addition to effecting behavior, the model of the social interaction sequence predicts that an initial expectation will bias the perceiver's ability to form objective impressions. However, clinicians did not show a pervasive susceptibility to this bias in their interpretations of actual TAT records. Thus, there was little expectancy based distortion in the overall appraisal of the patient.

The primary concern about bias in perception was whether an expectation of depression would lead clinicians to report this mood state as more evident than when they had no such expectation. The

results did not support this type of direct bias. High levels of depression were evident only when clinicians had both an expectation of depression and a negatively toned TAT series. Thus, the combination of dysthymic information and a depressive expectation was the only condition which predicted relatively higher ratings of sadness. Somewhat surprisingly, the same depressive expectation combined with a more neutral TAT protocol was associated with a very low assessment of depression. This was contrary to the prediction that the expectation of dysthymia would generate more evidence for a dysthymic affective state.

When no mood expectation was provided there was very little variation in the perception of depression. Even though the two TAT protocols were previously shown to be quite dissimilar, psychologists in this expectancy condition rated the depressed record as only slightly more depressed than the neutral series. Thus, without a pronounced expectation, the stories were viewed as being similar in terms of the mood they conveyed. In contrast, when the expectation was clearly defined, as in the expect depression condition, wide differences were seen in the rating of depression.

The fact that an interaction was observed between the type of story and the expectancy condition was consistent with Alloy's (1985; Alloy & Tabachnik, 1984; Kayne & Alloy, in press) model of covariation judgments. This model maintains that impressions are based on the joint influence of situational and a priori information. It further posits that consistent information leads to clinical accuracy, whereas conflict between situational information and the expectation results in an expectancy based judgment. In the context of TAT use, it was predicted

that an expectation of depression would effect clinical judgment by inflating the degree to which this mood was reported. The data, however, provided only mixed support for this idea.

When clinicians expected a patient/client to be depressed, but reviewed a neutral TAT record, they did not perceive the story teller as being sad. In fact, the predicted influence of an expectancy bias was not observed in this condition, for psychologists did not report more depression. This lack of concordance with the model may have occurred for two major reasons. First, the TAT stories did not match the expected prototype of the depressed patient/client. Consequently, the discrepancy between the expectation of these features and the reality of the stories heightened the salience of the nondepressed aspects of the record. Second, the expectation was provided by an anonymous third party with no established reputation. As a result, the psychologists were dealing with two external sources of information, one obtained from a known psychological measure and the other from an unknown referral agency. Furthermore, the former source of information provided a much more extensive data base. Therefore, clinicians weighed the TAT information as much more significant than the expectancy. Although the ability to discount the expectation seemed contrary to past research (Swann et al., 1982), the fact that the TAT data were so inconsistent with the referral question, in combination with the focus on depressive features, virtually eliminated the cognitive dilemma usually created by an expectancy.

The same factors which contributed to this low appraisal of depression may have actually enhanced the rating of depressed mood when

clinicians had both a dysthymic expectation and a sad TAT series. However, since psychologists in this condition perceived much more depression than any other group of clinicians, the effects of the cognitive-perceptual set induced by the expectancy must have been working in the reverse direction. In contrast to the neutral TAT record, stories in this condition were much more comparable to the depressive prototype. As a result, the TAT actually provided some justification or support for the referral question. Consequently, these psychologists may have regarded themselves as having two pieces of consistent information. The expectancy, in this case the referral question, appeared to be considered as an external data source. As an additional source of evidence for depression, it was readily incorporated into the final rating of mood. This would certainly be consistent with the report that such information becomes construed as conjectural evidence for the appraisal (Swann et al., 1982). Thus, the joint presence of these convergent sources of "real" data may have had two important effects on clinicians. They may have made them more aware of the depressed aspects of the TAT and more certain of the pervasive nature of the symptoms. Therefore, the combination of these factors had a marked impact on these clinicians' ratings of depression.

Although it appeared that clinicians expecting depression and reviewing a dysthymic TAT record were somewhat biased in over-reporting depression, it was conceivable that they were actually accurate. That is, in comparison to the group receiving the same stories but no mood expectation, those who had consistent information may have been accurate while clinicians with no mood expectancy were under-reporting this mood.

However, it may be that both groups were inaccurate in their ratings of depressed mood. Those with consistency in the expectation and the TAT record over-reported for the reasons just cited. Those with no expectation but a sad series of cards indicated less depression because of a perceived lack of convergence in the information. This group was almost certainly aware of the dysthymia conveyed in the stories. However, since this depression was not "seen" by the referral source, these clinicians may not have been able to identify the condition as being pervasive. Consequently, without the support/guidance of an expectation consistent with the data, they may have slightly under-reported the depression conveyed in the stories.

This interpretation of the results indicated that an expectancy had a subtle tendency to direct the magnitude of clinicians' judgments. This tendency resulted in a lack of precision about the extent of the feature, but no gross errors in the appraisal of this mood state. Depressed records were perceived as depressed, and non-depressed protocols were, by and large, reported as non-depressed. Therefore, the potential for behavioral confirmation in terms of the perception of mood did not seem particularly alarming. The highest condition of risk was when depression was conveyed in both the expectation and the content of the stories. It was only this specific condition which provided a modicum of support for the seventh hypothesis. This was indeed an encouraging finding regarding clinical judgment.

Although the rating of depressed mood did not appear to be significantly compromised by an expectancy bias, it was still possible that other features pertaining to the depressive cluster could be

distorted by such information. To examine the likelihood of such distortion, the defining features of the depressive syndrome were studied. Since a diagnosis of depression is based on the report or observation of a predominantly downcast mood and impairment in social and/or occupational functioning (DSM III, 1980), it was important to determine how the evaluation of the individual's overall functioning, interpersonal characteristics, and diagnosis would be effected by the initial expectation.

It was predicted that an expectation of depression would lead clinicians to be more prone toward entertaining DSM III Axis I conditions with depressive features. Although this type of information would have been useful for further exploring the relationship between bias and perception, the psychologists were hesitant to even speculate about a diagnosis. Apparently, the amount of information on which to base a diagnostic opinion was regarded as insufficient. Consequently, few cases were available for the data analysis, and those which were did not produce significant differences. Thus, the initial expectation did not appear to influence the diagnostic category selected by clinicians. However, another plausible explanation would be that the complex interaction between the expectancy and type of story contributed to the absence of significant findings. Unfortunately, these rival possibilities could not be adequately addressed with the available information.

For a number of reasons (insufficient information, complex interaction, or no effect) an initial expectancy of depression did not induce clinicians to differentially diagnose this syndrome in two

different story conditions. Although the expectancy did not have the anticipated effect on the perception of this diagnostic category, it was still possible that the evaluation of the separate symptom components could be effected by a cognitive bias. The data, however, did not support this idea.

One of the features of depression, in fact, a general symptom of psychiatric disorders, is an impairment in work performance and/or social relationships. If a patient was expected to be depressed, it was conceivable that these clinicians would perceive such an individual as less functional (i.e., more disturbed) than clinicians without such an expectation. Clearly this notion had previously been witnessed in the work of Langer and Abelson (1974) and Temerlin (1968; Temerlin & Trousdale, 1969). Nevertheless, in this study, the expectancy did not exert the predicted effect in comparison to another psychiatric patient. The TAT narrators were rated as being extremely similar by clinical psychologists, regardless of the expectancy or story condition.

This pattern was also evident in terms of the patient's perceived interactional style. The expectation of depression did not influence the awareness of social characteristics frequently associated with depression. That is, merely informing clinicians that they would be evaluating a dysthymic patient did not sensitize them into reporting more submissive or hostile traits, nor did it generate the perception of fewer affiliative qualities. Thus, the final hypothesis was not supported.

In terms of professional practice, it was somewhat comforting to see that the expectation generally did not produce the predicted bias.

There was only one specific condition in which an expectancy appeared to enhance the rating in the direction of the expectation. However, even with this apparent distortion, the bias did not seem to be of sufficient magnitude to alter the perception of other features. Thus, these clinical psychologists did not report a higher degree of impairment when they expected depression, nor did they indicate that the patient would be more dysfunctional or self-defeating in interpersonal relationships. Further, of great significance in treatment planning, the final diagnostic impression was not vulnerable to the expectancy bias. Consequently, referral questions, as expectations, did not lead clinicians to overstep their data base and form erroneous impressions.

Although this was a favorable outcome for the practice of psychology, there are other explanations as to why the expected differences did not emerge. The fact that the information in both conditions was provided by psychiatric patients may have made the TAT records difficult to discriminate on dimensions not directly addressing depression. This issue really addresses two points. Unlike many other studies, the patient was compared with another patient and not a normal control subject. Additionally, while patients may differ in their mood state, they may not necessarily differ on attributes or characteristics not related to their emotional state. Thus, to an extent, some of the measures addressed Axis II or personality functioning as much or more than Axis I features. This investigation, however, only controlled the differences in depression, which related to Axis I functioning. Finally, and especially in conjunction with the above, the expectancy manipulation was not as potent as that used in other experiments (e.g.,

Langer & Abelson, 1974; Temerlin, 1968; Temerlin & Trousdale, 1969). The expectancy was induced by unobtrusively including it in the referral question. Although this may not have made it as salient as in other studies, it was typical of requests for psychological testing.

In sum, the likelihood of an initial expectation of depression erroneously increasing the perception of this condition in TAT records appeared limited to that condition in which the measure was directly related to the expectancy and was relatively simple. Conditions involving more complex judgments which required considerable clinical information (diagnosis, rating of functioning, interactional style) were not differentially effected by an expectation about mood. Thus, only the direct rating of depressed mood was effected by the expectancy condition. Regarding the mood rating, when psychologists reviewed a TAT which was congruent with the expectation, a depressed expectancy appeared to act as a secondary source of information in the clinical decision. When the TAT was incongruent with this expectation, the clinicians reported little depression. Therefore, the expectation clearly influenced the rating of depression by modifying the perception that would have resulted if no prior information had been provided. However, the expectancy did not have the same effect on other features associated with depression. Since the clinical impression was not significantly effected by the expectancy, the examination of expectancy effects on the perception of TAT protocols has more conceptual than clinical importance.

Integrating the model and results: Implications for appraisal

These two studies investigated the effect of a specific

expectation on different and critical operations in the social interaction sequence. To carefully assess the impact of the expectancy on these operations, the different functions of the perceiver--behavior and perception--were independently examined. While this permitted a precise exploration of these steps, the drawback of such an approach was that the results could not be directly incorporated back into the model. Unfortunately, it could not be assumed that the results would have been the same had the sequence been continuous. The fact that the five step interaction process was interrupted may be the most significant limitation of this research. Nevertheless, meaningful inferences can still be drawn about the clinical practice of the TAT within the context of the social interaction sequence.

The most important issue to address would be how the results of Study one, addressing Step two of the model, would be integrated with the results of Study two, the perception of the TAT narrator. It would seem almost inevitable that the effects of the psychologists' assessment behavior, that of endorsing the use of depressive pull cards when expecting depression, would result in a TAT record which contained a relatively high proportion of sad stories. Obviously these clinicians were narrowing their search strategy to depression, and would normatively elicit stories congruent with the stimulus value of the pictures. While a high ratio of depressed stories would be a necessary condition for behavioral confirmation, this situation might not be sufficient for perceptual bias to occur. Therefore, it would be essential that clinical perception be examined. The critical question would be whether the clinicians failed to consider how they "stacked the

deck", or if they would be able to place the story content into the broader context of the entire situation. Although this question can not be definitely answered by this research, the combination of relevant sources of information would suggest that a biased judgment about mood would be the more likely outcome. A large body of prior research has indicated that perceivers do not account for the constraining aspects of their behavior when making judgments. More specific to this situation, it has appeared that a referral question, when supported by the situational information, has helped to guide the judgment toward confirmation. In further support of this rather discouraging possibility, clinicians have recently been chided for insufficiently considering the role of the environment, including the assessment situation, in effecting the responses of the patient/client (Wright & Fletcher, 1982).

Despite the increased probability that behavioral confirmation would occur in the appraisal of one's mood state, the probability of distortion should not be overgeneralized. Depressed mood is a single component of a broader syndrome, and other features did not appear to be similarly effected by the expectancy condition. Specific symptoms of depression, including somatic functioning, cognitive processes, social behavior, and TAT process variables either were not, or would not be expected to be, significantly influenced by an expectation. Therefore, it would appear that the subject's mood, a relatively transient and variable state, would be the symptom most sensitive to any bias arising from an expectancy.

This suggests that the overall validity of the appraisal would

not be grossly compromised. Since several aspects of depression were not influenced by the expectation, one piece of inflated information would not grievously impact on the overall impression. In this regard, the appraisal would be useful for understanding the individual's behavior in a variety of circumstances, including situations involving different environments, people, and points in time. However, the responses and behaviors of the patient/client would also have been mildly influenced by the expectancy bias, thereby making the accuracy of the impression highest in situations similar to the testing conditions. Consequently, the TAT based impression would have both global and circumscribed accuracy.

While circumscribed accuracy is useful for certain purposes, it becomes problematic when this type of occasion validity is interpreted as global accuracy (Swann, 1984). That is, if the clinician has narrowed the evaluation or search strategy to the point of obtaining only information about specific functioning (such as when the patient encounters a dysthymic situation), it can be a severe mistake to conclude that this is typical of that individual's functioning. Although this problem of generalizability is an inherent issue in all forms of clinical appraisal, it could be unnecessarily accentuated when the psychologist becomes an unwitting victim of expectancy effects. While expectancy based distortion--in terms of the clinicians' perceptions--did not occur to a clinically significant extent in this research, an important implication of the findings was that there is an increased probability that the psychologist could make an expectancy based impression rather than a data based conclusion. Consequently,

when behavioral confirmation occurs, the psychologist has a greater chance of accepting the idea that a patient/client is significantly depressed when s/he is not.

The problem of accepting the conclusion that an individual is depressed when s/he is not has different theoretical than clinical implications. At the conceptual level, it indicates that the judgment has been effected by an expectancy bias. As a result, inaccuracy exists in social information processing. While such knowledge is important in developing greater social accuracy, this attitude can have serious ramifications if the quest for accuracy alone is applied to the clinical task. In a situation involving a patient/client and the issue of depression, it is an acceptable practice to have a decision rule which includes false positives in order to eliminate false negatives. More specifically, since most evaluations of depression have an implied message about suicidal risk, it is a more parsimonious strategy to risk erroneously identifying a patient/client as depressed and suicidal than to fail to identify an individual whose commitment to life is, at best, ambivalent. Thus, the clinical strategy would be more tolerant of an evaluation approach which contains this measured level of bias. In contrast, the conceptual approach has considerably less risk in seeking accuracy, and can experiment with global and circumscribed precision with impunity.

Even though the clinical strategy and the theoretical approach employ a different decision rule and emphasis, the recommendations for minimizing bias tend to be quite similar. In terms of the TAT, the clinician would be advised not to vary the cards within the clinical

series. The test user should adhere to some standardization with the test materials, even when using an abbreviated set. Such advice could not be considered new, for this was what Hartman (1970) recommended nearly two decades ago. Although his advice has evidently not been strictly followed, perhaps there are some important reasons for lack of compliance. First, his rationale only implied that distortion might occur; he was not able to present empirical support for this possibility. Second, his request may have been rather quixotic in terms of asking all clinicians to use the same basic set of cards. A more pragmatic, as well as effective, suggestion for reducing behavioral confirmation would be to encourage the individual clinician to consistently use their preferred set, and to develop personal standardization by not deviating from this practice. As has become evident, varying the stimulus materials changes the reality demands of the situation, and can influence the perception of the patient. In the event that the protocol must be changed, the optimal strategy would be to include any additional cards in a second testing session and to offset the stimulus value of the extra cards with pictures which elicit the opposite trait. The subsequent visit would be expected to effectively reduce the influence of an expectancy (Swann & Ely, 1984) and to promote a maximally diagnostic approach.

Although the recommendation of standardization was specifically intended for reducing the risk of bias with the TAT, it reflects what can be viewed as a guiding principle for minimizing distortion from behavioral confirmation. That is, regardless of the assessment situation, for global accuracy the clinician must avoid constraining the

responses of the patient (Swann, 1984). Whether through psychological testing or interviewing, it behooves the clinician to collect, through non-directive observation, significant clinical material. As has been stated of the interview, "it is frequently possible to obtain a considerable amount of information about a patient and his suffering merely by listening" (MacKinnon & Michels, 1971). The pitfalls of not doing this, in the form of directing the process, have been frequently documented. When more specific direction is required, as it frequently is, a diagnostic assessment strategy is vital. The clinician should regard instances of disconfirmation as tantamount to information about confirmation, and therefore should attempt to rule out symptoms as well as to verify others. This idea is nicely expressed by MacKinnon and Michels (1971); "An interview that is centered on understanding the patient provides more valuable diagnostic information than one that seeks to elicit psychopathology" (p. 7).

Future directions

A general goal of this research has been to examine clinical judgment, or professional person perception, from the relatively new perspective of cognitive social psychology. Essentially, this has involved taking a new or different look at an old issue. While it was found that some degree of behavioral confirmation did occur, and that under certain conditions this could effect the clinician's perception, this project has merely provided an example of what can be done by integrating these psychological domains. However, it would be premature to make sweeping generalizations or firm conclusions about the practice of clinical psychology based on these findings. Nevertheless, this

research does contribute to the current conceptualization of social information processing in general, and specifically to professional appraisals within clinical psychology.

In broad terms, yet particularly addressing the area of social psychology, this research has further demonstrated the importance of examining both behavior and perception in impression formation. To focus solely on behavior would be misleading, for the evidence indicated that behavioral confirmation, in terms of distorted judgements, would not necessarily occur. Conversely, restricting attention to only the cognitive/perceptual processing stage omits a vital element in forming judgments and fails to portray the complexity of the social evaluation process. Therefore, as previously stated (Swann, 1984), such research indicates that similar investigations in the future must consider the complex interplay between social behavior and perception.

This research has generated a similar implication more specific to the practice of clinical psychology. That is, those in a position to render judgments of others must consider the influence of the evaluation process on the responses of their patients/clients. Although this project does provide an empirical example to support this recommendation, the study does not erase the ambiguity about how expectations actually effect clinical practice. Since clinicians were found to be neither completely impartial judges nor totally free from making erroneous evaluations, further research is needed to more fully comprehend the impact of the expectancy bias. Such studies definitely need to examine the full, uninterrupted process of the social interaction sequence. In addition to examining the complete process of

the sequence, it would be interesting to study a psychiatric symptom (e.g., anxiety) or personality feature (e.g., dependency) which does not have such a high weight assigned to false negatives. This would begin to address the specific factors under which the expectancy bias would be more or less likely to occur. Furthermore, future studies could examine different aspects of clinical behavior (other forms of testing, interviewing, etc.), the impact of expectancies on different evaluators (e.g., psychiatrists, paraprofessionals), and the effect of an interaction between an expectancy and different amounts of clinical information on psychological judgments. Even if the results indicate that clinicians are not perfect, the mechanisms by which the judgment are distorted will help to bridge the gap between the science and the art of this area. This will contribute to the overall goal of understanding the individual as accurately as possible so that any professional decision rendered is fully informed, and not based on bias.

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APPENDIX A

(Loyola University letterhead)

Dear Clinician,

We are conducting a survey of the current practice of TAT use by clinical psychologists, and are asking for your participation in this research endeavor. Your cooperation in this phase of the investigation will serve two general purposes: 1)it will be instrumental for the completion of the principal investigator's doctoral dissertation in clinical psychology; and 2)in a directly related manner, it will provide the data base for an empirical contribution to the field. You have been selected for inclusion in this project on the basis of your Ph.D. in clinical psychology and your membership in Division 12 of the American Psychological Association. Having met these criteria you were randomly chosen from the membership roster as listed in the 1985 Directory.

As you are probably aware, the amount of professional activity dedicated to personality assessment has declined somewhat over the past few years. This has been paralleled by the more judicious selection of cases for individual appraisal. As a result of this trend it is exceedingly important for test users to be well informed with respect to the administration and interpretation of psychological measures. To this end we are asking practicing psychologists to provide some information about their use of tests, which we may then impart to clinicians-in-training. Thus, we are asking that you take a few moments to complete the attached questionnaire so that we can disseminate this clinically relevant knowledge and maintain the high standards of an empirically based professional practice.

Specifically, we are asking questions pertaining to your use of the cards which comprise the TAT series. Since few clinicians have continued Murray's practice of administering the full set of twenty cards, we would like to know the specific cards that you prefer to use when evaluating a certain type fo patient/client or answering a specific referral question. Therefore, this is a brief task which only requires that you list the cards you would include in your particular battery. It is anticipated that your participation will involve only about ten minutes of your time.

You can be assured that the data will be ethically managed; only the principal investigators will have access to the name-number correspondance and raw data. Once data collection has been completed the master sheet with identifying names will be destroyed, thereby guaranteeing anonymity and confidentiality.

Your assistance in this research project is greatly appreciated.

Sincerely,

Jeff Jackson
Principal Investigator

Dan McAdams, Ph.D.
Faculty Sponsor

Dear Clinician,

Several weeks ago you were sent a questionnaire designed to survey the current use of the TAT among practicing psychologists. For whatever reason, we have yet to receive your response. Because information about your clinical work is of such importance to this investigation, we are sending you the complete questionnaire and a sincere request for your participation in this research.

Since psychological assessment is a significant component of the profession of psychology, an investigation of this type is warranted in order to monitor trends in the appraisal process and to keep clinicians well informed about the use of tests. While we believe that the goals of this research are clinically important, the results must be based upon a high percentage of respondents to be considered valid. Thus, to insure a representative sample of clinical psychologists and to compile results which actually reflect the use of the TAT among clinicians, your participation in this brief survey is very important.

We realize that the completion of this survey makes an additional demand on your time. For that reason, the questionnaire has been designed to be as brief as possible. Please take the five or ten minutes necessary to complete the enclosed forms and assist in the meaningful completion of this research project.

Thank you very much for your assistance.

Sincerely,

Jeff Jackson
Principal Investigator

Dear Clinician,

Several weeks ago you were sent a questionnaire designed to survey the current use of the TAT among practicing psychologists. We have not yet received your response. Because information about your clinical practice is central to the goals of this research, we are asking that you please complete the enclosed questionnaire. If you do not use the TAT, complete only the final page.

We realize that participation in this survey makes an additional demand on your time. For that reason the questionnaire has been designed to be as brief as possible. Please take the few minutes necessary to complete the enclosed forms and assist in the meaningful completion of this research project.

Thank you very much for your assistance.

Sincerely,

Jeff Jackson
Principal Investigator

Select those TAT cards from the total Murray set of 31 that you judge would be most universally applicable, most productive clinically, and provide the greatest range of significant clinical and personality data. Assume that this will apply to adults (over 17) and in all situations in which the TAT is likely to be utilized.

Indicate your preferred cards by placing a check mark next to the card number of your choice. (Murray's descriptions of the TAT series have been included on the following page for your use).

- 1
- 2
- 3BM
- 3GF
- 4
- 5
- 6BM
- 6GF
- 7BM
- 7GF
- 8BM
- 8GF
- 9BM
- 9GF
- 10
- 11
- 12M
- 12F
- 12BG
- 13MF
- 13B
- 13G
- 14
- 15
- 16
- 17BM
- 17GF
- 18BM
- 18GF
- 19
- 20

Please turn to the last page when you have finished.

Select those TAT cards from the total Murray set of 31 that you judge would be most universally applicable, most productive clinically, and provide the greatest range of significant clinical and personality data for the evaluation of depression. Assume that this will apply to adults (over 17) and in all situations in which the TAT is likely to be utilized.

Indicate your preferred cards by placing a check mark next to the card number of your choice. (Murray's descriptions of the TAT series have been included on the following page for your use).

- 1
- 2
- 3BM
- 3GF
- 4
- 5
- 6BM
- 6GF
- 7BM
- 7GF
- 8BM
- 8GF
- 9BM
- 9GF
- 10
- 11
- 12M
- 12F
- 12BG
- 13MF
- 13B
- 13G
- 14
- 15
- 16
- 17BM
- 17GF
- 18BM
- 18GF
- 19
- 20

Please turn to the last page when you have finished.

Please provide information for the following questions about your professional activity.

APA status: Member Fellow

Are you licensed/certified: Yes No

If yes, which state(s): _____

Sex: M F

Year Ph.D. granted: _____

Primary theoretical orientation: _____

Proportion of time devoted to personality assessment (Circle most accurate response):

10% or less 25% 33% 50% 66% 75% 90% or more

How important is personality assessment to you in your clinical practice (Rate on a 1 - 7 scale):

1	2	3	4	5	6	7
Not at all important						Extremely important

How important is personality assessment to the profession of psychology (Rate on a 1 - 7 scale):

1	2	3	4	5	6	7
Not at all important						Extremely important

Estimate the number of TAT sessions in which you would be directly involved (e.g., administering, directing, etc.) in a one month period:

Are you involved in the teaching of the TAT: Yes No

Thank you very much for your time and cooperation. Please return these materials in the enclosed stamped and addressed envelope.

APPENDIX B

(Loyola University letterhead)

Dear Clinician,

You recently participated in a survey asking about your use of the TAT. That survey is one part of a larger, two-phase study concerning the administration and interpretation of the TAT. Your participation in that part of the research was extremely helpful. We are now conducting the second part of this investigation, and again, are asking for information about your TAT practice. As you may recall, we previously wanted to know about your selection of TAT cards. Our present interest is in the interpretive process. Since both administration and interpretation are important, and related components of a psychological evaluation, we are now directing our efforts toward exploring test interpretation.

This phase of our research attempts to clarify certain test attributes which may contribute to the accurate understanding of the individual being evaluated. With the TAT, story content has been regarded as one of the most informative attributes. Certainly there are other, perhaps more subtle, clues about the person that are communicated in his/her stories. One of the aspects we have been concerned with is the impact that the stories have on the psychologist. That is, your reaction, feeling, interpersonal attitude, and "gut" impression possibly contribute to your perception of the test-taking subject. If this is a part of the interpretive process, how significant a part does it represent? We suspect that this would vary for different examiners. However, it is an empirical question for which we need your help to answer.

For you to assist us in studying this issue we have enclosed an actual TAT and a few questionnaires. We would like you to approach the TAT as you would in an assessment situation (or as you would do if you are not currently using the TAT). Once you have developed your impression about the person, or have generated hypotheses about what he is like, please complete the three brief measures which follow the TAT narratives.

We anticipate that this procedure will take about thirty minutes of your time. In return we hope that you found this to be a stimulating task, and perhaps one which allowed you to reflect upon your clinical use of the TAT. Your participation will certainly be helpful for the completion of a doctoral dissertation.

The test data will be managed in an ethical fashion. All information is strictly confidential and anonymous. As you will note, the data sheets are coded by number, with no identifying name. When data collection has been completed the master code sheet with name-number correspondance will be destroyed.

Finally, your cooperation in this applied clinical research is sincerely appreciated. Thank you for your assistance.

Jeff Jackson
Principal Investigator

Dan McAdams, Ph.D.
Faculty Sponsor

(Loyola University letterhead)

Dear Clinician,

I have previously contacted you about a research project I am conducting on the clinical use of the TAT. This study is an investigation of both TAT administration and interpretation. As you are aware, the study has been divided into two parts. I appreciated your help with the first part of the study, and am again asking for your support with the data collection phase of the second part.

The second phase addresses the issue of the interpretive process. While we know that TAT story content is a very important variable in developing an understanding of the story teller, there has been far less examination of other variables. It may be that even subtle factors from the TAT, such as immediate impressions of the patient/client, "gut" reactions, or an affectively toned response in the psychologist, act as sources of information for some clinicians. That is, it is conceivable that: a)TAT narratives have this type of interpersonal impact on practitioners; and b)that this could be an additional piece of clinical information which psychologists may differentially utilize. These are empirical questions which can only be answered with your assistance. Therefore, I urge you to help with this project by completing the enclosed survey.

Since a specific goal of this research is to illuminate the impact of the TAT stories on the perception of the test-taking subject, we would like you to review the enclosed TAT protocol and complete some questionnaires. The TAT stories were told by a patient/client as part of a psychological evaluation. Please approach the TAT as you would do in an assessment situation (or as you would do if you are not currently using the TAT) and then complete the Impact Message Inventory, the Global Assessment Scale, and the final questionnaire.

Our work with pilot testing indicates that this task will require almost thirty minutes of your time. We have modified the measures to be as brief as possible while still providing the information we seek. Please share some of your valuable time so that we can generate clinically meaningful results from this study.

As before, the data will be managed in an ethical fashion. All information is strictly confidential and anonymous.

Your cooperation in this applied clinical research is sincerely appreciated. Thank you very much for your assistance.

Jeff Jackson
Principal Investigator

The eight TAT stories below were obtained from a young, adult male referred for psychological testing. The referral question asked the psychologist to evaluate his personality functioning.

Please review these stories and then complete the Impact Message Inventory, the Global Assessment Scale, and the final questionnaire on the basis of your impression/perception of the story teller. Once you have finished all measures, please return them in the enclosed, stamped, self-addressed envelope.

TAT Case A

Card 1

Lets see. The boy, he, hes been worried about his grades and stuff. Hes been thinking about studying and trying to make his parents happy, so hes studying so he can please his parents and get a good grade on his report card and stuff. I think he'll get a good grade on his report card. Right now he feels like he hasn't, you know, been letting his parents down and stuff. Maybe he feels his parents are ashamed of him.

Card 2

OK, here I see a young girl who wants to be on her own, to be herself. She doesn't want to end up like her mother, just have babies and be married. She wants to go off on her own, be dependent on herself. But shes afraid to leave, so she ends up staying around and getting married and having babies too.

Card 3BM

OK, this person...looks very worn down. Lets say their father just got killed or something. And they're very depressed, hurt, you know. And...they'll get over it I guess. Thats it. They're thinking, why did it have to be him?

Card 4

Here I see the, the man trying to run away from something and the woman is trying to hold onto him. But he wants to get away and not feel that hes being trapped or whatever. But the woman doesn't want him to go because she loves him, but he has to go out and try on his own for awhile. And so he leaves and, for awhile, and then he finds himself back to where he was in the first place, feeling trapped. So he runs again. I don't know what led up to this, maybe hes seen it before, getting stuck in one certain pattern, and later when you want to change it its too late to change it.

Card 6BM

Here is a mother and son type thing. And the son is trying to tell his mother that its time to move on, that hes got his own life to live. And she can't understand, and so she just turns her back on him. I

don't know. Shes feeling rejected and he feels guilty. He'll probably stay.

Card 7BM

Here I see a father-son type of thing and the father wants the son to join in his business, lets say. And the son doesn't want to, but he feels he has to because he doesn't want to hurt his father. But he doesn't like doing what his father does so he leaves.

Card 13MF

This guy has been cheating on his wife and now hes really ashamed of himself for it. But he'll go back to his wife anyway and pretend nothing ever happened.

Card 8BM

Maybe this boy has seen something, or has been leading a life that doesn't, doesn't please his parents or something, but he does it in secret because he likes to do it. And he keeps on doing it, behind a certain, uh, society's back. Its something to do with violence maybe. Maybe hes got to prove something to somebody, prove hes not a wimp or something. Or maybe revenge, maybe hes got something to prove to somebody. Maybe hes used to having everything he wants in life, maybe something happened that he just got totally rejected.

The eight TAT stories below were obtained from a young, adult male referred for psychological testing. The referral question asked the psychologist to evaluate his personality functioning.

Please review these stories and then complete the Impact Message Inventory, the Global Assessment Scale, and the final questionnaire on the basis of your impression/perception of the story teller. Once you have finished all measures, please return them in the enclosed, stamped, self-addressed envelope.

TAT Case B

Card 1

OK, lets see, a little boy was given a violin for Christmas. Hes waiting in class for his violin teacher. Hes just puzzled by the whole thing. And an end to the story, his violin teacher comes in and starts the class.

Card 2

I'm trying to put together some relationship between the people in the picture. I suppose the little girl would be something. Another day for these people in the life of the farm. The girl on the outside is trying to find some way, perhaps fulfilling her education rather than the other girl who appears pregnant and satisfied with the way things are going. The gentleman in the story appears to be plowing the field. An ending to the story...I suppose would be, the man continues working the field, the pregnant lady over here has her baby and goes on living, the girl goes on to school, and, I want to say, leaves her mark, but adds something to society or whatever. The young lady looks dissatisfied maybe. The gentleman looks, I'm not sure but hes busy, hes intent in what hes doing. And the pregnant lady, she looks almost content.

Card 3BM

I'm not sure what this is on the floor right here. It looks almost like a pistol. I could say the boy began playing, he pointed the pistol at someone, maybe his father, and he was scolded for it. Now hes kneeling down crying. The end, he could have gone over it in his head, the reason he was scolded, because maybe you shouldn't point guns.

Card 4

I've got some ideas but I'm not quite sure. The man looks like hes being drawn away, something catching his attention. He doesn't look very enraged. The beginning would be hes visiting his lady friend. I've got to figure out what could be drawing him away because she doesn't look very distraught and doesn't look very upset so I'm wondering what could be drawing him away. Theres some meat overcooking on the grill maybe. So he goes over and deals with the meat and then

rejoins and they do whatever they were doing.

Card 6BM

Lets see...this lady's son came to visit her. Shes feeling bad about the way things are, and he feels hurt because he wishes there was something more he could do. Oh, lets see, they explain their feelings to each other and they come to some sort of understanding, and he goes on about his business. What led up to it could be any number of, fast paced world, him not spending enough time with his mother, she could be ill, she could've lost a loved one.

Card 7BM

Oh, a son asks his father for advice. His father gives him some advice. And they discuss the situation. I guess the son goes on about his business or something. Maybe he was getting married. His father looks like hes got one of those "atta boy" attitudes on his face, the son just looks like hes in question. Is he ready to get married yet.

Card 13MF

The gentleman's wife,...has been ill, and quite seriously ill. And she looks like she may have passed away. He seems to be standing in a lot of grief. I suppose he calls the authorities, and thats the end. Why, hes thinking, I just, well, why did this have to happen?

Card 8BM

I'm not quite sure how to put that one together. The boy's position in the picture is whats throwing me. The boy goes to a health sciences museum. Hes standing in front of a picture of an antique surgical operation, procedure. The boys standing at a weird angle. Hes got a very solemn look on his face. The boys in awe of how far technology has gone. And yet how many similarities there still are.

The eight TAT stories below were obtained from a young, adult male referred for psychological testing. The referral question asked the psychologist to evaluate his degree of depression.

Please review these stories and then complete the Impact Message Inventory, the Global Assessment Scale, and the final questionnaire on the basis of your impression/perception of the story teller. Once you have finished all measures, please return them in the enclosed, stamped, self-addressed envelope.

TAT Case A

Card 1

Lets see. The boy, he, hes been worried about his grades and stuff. Hes been thinking about studying and trying to make his parents happy, so hes studying so he can please his parents and get a good grade on his report card and stuff. I think he'll get a good grade on his report card. Right now he feels like he hasn't, you know, been letting his parents down and stuff. Maybe he feels his parents are ashamed of him.

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TAT Case B

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Card 2

I'm trying to put together some relationship between the people in the picture. I suppose the little girl would be something. Another day for these people in the life of the farm. The girl on the outside is trying to find some way, perhaps fulfilling her education rather than the other girl who appears pregnant and satisfied with the way things are going. The gentleman in the story appears to be plowing the field. An ending to the story...I suppose would be, the man continues working the field, the pregnant lady over here has her baby and goes on living, the girl goes on to school, and, I want to say, leaves her mark, but adds something to society or whatever. The young lady looks dissatisfied maybe. The gentleman looks, I'm not sure but hes busy, hes intent in what hes doing. And the pregnant lady, she looks almost content.

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Card 8BM

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Please provide additional information about your impression of the individual narrating the preceding TAT stories by answering the following items.

Based on the eight TAT stories you have just reviewed, make a judgment about the following characteristics of the story teller. Circle the corresponding number which provides the most accurate rating/description.

<u>Degree of:</u>	None	Mild	Moderate	Severe	Extremely Severe
Anxiety	1	2	3	4	5
Depression	1	2	3	4	5
Somatization	1	2	3	4	5
Irritability/ Anger	1	2	3	4	5
Intelligence	1 (Lo)	2	3	4	5 (Hi)

Next please rate how helpful you found each story to be in arriving at your understanding of this person's psychological functioning. Again circle the number which best applies using this five point rating scale.

<u>Card Number:</u>	Not at all helpful				Extremely helpful
1	1	2	3	4	5
2	1	2	3	4	5
3BM	1	2	3	4	5
4	1	2	3	4	5
6BM	1	2	3	4	5
7BM	1	2	3	4	5
13MF	1	2	3	4	5
8BM	1	2	3	4	5

What other card(s), if any, would you have added to the basic set, given the information that you now have? _____

Primary DSM III working diagnosis (if Deferred, please indicate):

Differential or "Rule out" diagnosis: _____

Thank you very much for your assistance

APPROVAL SHEET

The dissertation submitted by Robert Jeffrey Jackson has been read and approved by the following committee:

Dr. Dan P. McAdams, Director
Associate Professor, Psychology, Loyola

Dr. Alan S. DeWolfe
Professor, Psychology, Loyola

Dr. Marvin W. Acklin
Assistant Professor, Psychology, Loyola

The final copies have been examined by the director of the dissertation and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the dissertation is now given final approval by the Committee with reference to content and form.

The dissertation is therefore accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

12/10/87
Date

Dan P. McAdams
Director's Signature