HEROIN ADDICTS' OPENNESS, NEED FOR APPROVAL, AND PEER INFLUENCE ON AN OBJECTIVE AND A PROJECTIVE PERSONALITY TEST

A Thesis in Partial Fulfillment of the Requirements for the Degree of Master of Arts

by

Christine Sexton

September, 1974

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A dissertation submitted to the Faculty of Graduate Studies of the University of Manitoba in partial fulfillment of the requirements of the degree of

MASTER OF ARTS

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Acknowledgements

I would like to express my sincere appreciation to my major advisor, Dr. Seymour Opochinsky, for his support during the completion of this thesis, and especially for his special efforts when difficulties were encountered in the process. I would like, also, to thank the members of my advisory committee, Dr. Morgan Wright and Dr. John Matas, for their apt comments and criticisms which greatly improved the reporting of this research.

My debt to staff and participants in the Drug Rehabilitation Program of St. Boniface General Hospital is considerable. I would like to thank Dr. Matas, Director of the Program, Mrs. Leona Holms, members of the medical staff, and all the program participants who co-operated in serving as subjects.

Abstract

The present investigation studied the responses of heroin addicts to the Marlowe-Crowne Social Desirability Scale (MC-SDS), and to the Thematic Apperception Test (TAT), in the presence of test administrators who were either addicts known to addict Ss or volunteer undergraduate psychology students. Aims of the study included: (a) comparison of the openness vs. defensiveness of addicts with peer group members or strangers presented as "apprentice" psychologists; (b) comparison of addicts' responsiveness to the situational influences of different types of test administrators on an objective personality test and a projective test; (c) evaluation of the importance of need for social approval as an intervening variable helping to account for the influence of addicts on each other; and (d) investigation of need for social approval as a predictor of defensive behavior in response to a projective test. Subjects were 33 male and female participants or former participants in an outpatient methadone treatment program who were tested individually by one of four trained methadone program participants or one of three advanced undergraduate psychology students. Hierarchical analyses of variance of the five dependent measures in this randomized hierarchical design indicated that type of examiner did not influence either MC-SDS or TAT responses, although specific examiners obtained TAT responses differing significantly on one of four dependent measures of openness ($p < .05$). Results further indicated that: (a) addicts are more similar in need for social approval to psychiatric patients than to criminals, with whom they are traditionally compared, and are significantly lower in MC-SDS

scores than either criminals or college students ($p < .001$); (b) the MC-SDS was not predictive of defensiveness of TAT responses; and (c) the Transcendence Index (Weisskopf, 1950) as a measure of openness revealed differences in Ss' openness with different examiners, while the Hamsher and Farina (1967) "openness rating," verbal productivity on the TAT, and average time per TAT card did not indicate any differences in openness. Implications of these findings for the interpretation of the MC-SDS, for the usefulness of openness as an explanatory construct, and for theories of peer group influence processes in addiction and its treatment were discussed.

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Introduction

Historically, as well as currently, the problems of drug dependence and addiction have been a stimulus for considerable intellectual and scientific effort. Both speculation and research on these topics have had as either implicit or explicit aims the discovery of causal factors in drug dependence, often with the idea that knowledge of causes would provide effective cures. Refinements in the process of this search have resulted in a generally accepted definition of drug dependence, proposed by the World Health Organization Expert Committee on Drug Dependence (1969), as:

> ... a state, psychic, and sometimes physical, resulting from the interaction between a living organism and a drug, characterized by behavioral and other responses that always include a compulsion to take the drug on a periodic or continuous basis in order to experience its psychic effects, and sometimes to avoid the discomfort of its absence (Wikler, 1971a, p. 377).

Since the characteristics of the drug dependent state differ according to the drug of dependence, the present discussion and investigation will be limited to drug dependence states specific to heroin.

Wikler (1971) has distinguished three basic types of dependence on drugs: psychic dependence, in which habitual drug abuse depends on interaction of pharmacological properties of the drug with "non-drug-engendered organismic variables"; physical dependence, in which compulsive drug use appears to depend solely on the drug's suppression of the physical effects of drug abstinence ("withdrawal symptoms"); and social dependence, in which the drug is used to the point of addiction to gain or maintain social acceptance within a

particular social group. Much of the drug addiction research does not maintain these distinctions, but the use of the terms "drug dependence"or "addiction" in the literature to be cited in this review refers to some combination of these factors. The present author's preferred definition of drug addiction is the combination of physical, psychic, and social dependence on drugs. However, the three types will not be treated independently in either the formulation of the research problem to be presented, nor in the experimental investigation of it, since neither past research literature nor presently available methodology makes this separation entirely possible.

Personality Variables in the Etiology of Addiction

The observation that individuals who have attained physiological independence from a drug to which they had been addicted, following a period of abstinence, frequently relapse to habitual use of the drug has encouraged belief in the hypothesis that "true" addicts have a particular, distinctive set of personality characteristics which encourage psychological dependence on the drug of their choice. This is particularly evident in the earlier scientific literature on drug addiction. Kolb (1925), for example, delineated several categories of drug addicts according to personality: individuals "of nervous constitution (p. 306)" who become addicted during medical treatment with drugs; pleasure seekers with basically unstable personalities; some kinds of neurotic individuals; and psychopaths. Zimmering, Toolan, Safrin, and Wortis (1951) found that the 22 adolescent heroin addicts they studied characteristically

used "withdrawal, inhibition, and passive-dependent strivings (p. 28)" as a means of coping with frustration. However, they considered that not this characteristic alone, but its interaction with certain social and economic factors accounted for heroin addiction. In a further study, the same investigators (Zimmering et al., 1952) expanded their personality description of adolescent addicts to include: tenuousness in maintaining interpersonal relationships; unusually close relationships with mothers or mother surrogates; nonagressiveness; intolerance for interpersonal conflict; and verbal adeptness. Among early studies, the concept of deviant personality configurations of addicts was further supported by Gerard and Kornetsky (1954), who identified a particular family structure in the backgrounds of addicts: poor relationship between the parents with parental characteristics conducive to serious adjustment problems in the children. They also identified a common core of characteristics in their sample of addicts: dysphoria, disturbances in sexual identification, and inability to become involved in close personal relationships.

More recent investigations of intrapsychic correlates of drug addiction using the Minnesota Multiphasic Personality Inventory (MMPI) as opposed to earlier case studies, have yielded contradictory evidence on the two major questions with which they have been concerned: whether addiction occurs primarily with or without measurable psychopathology; and whether an "addiction-prone" personality exists. Hill, Haertzen, and Glaser (1960) and Sheppard, Fracchia, Ricca, and Merlis (1972) have concurred in estimating that approximately six per cent of each of their addict samples were psychologically normal according to their MMPI profiles, with the

remainder demonstrating a variety of psychopathological conditions. Investigations comparing addicts with other populations have provided less clear results, however. Hill, Haertzen, & Davis (1962), for example, found that significant personality abnormalities predominated among the alcoholics, criminals, and drug addicts of their sample, but there appeared to be no distinguishing characteristics peculiar to the addict group. Comparison of addicts to normal individuals has indicated greater and more widespread psychopathology among addicts than among normals (Gilbert & Lombardi, 1967; Greaves, 1971). However, Greaves also discovered that his differentiation of drug abusers and non-users by MMPI responses did not extend to differentiation of hospitalized drug users from hospitalized non-drug using adolescents, a finding which questions the validity of using the MMPI differences between addicts and the normal population as evidence of "addiction-prone" personalities. The lack of congruent results in these studies of addict psychopathology is emphasized by the distinctly contradictory findings of Gendreau and Gendreau (1970), who found no significant differences in MMPI profiles between addict and non-addict prisoners, and Lombardi, O'Brien, and Isele (1968), who were able to identify 19 critical MMPI items that differentiated between institutionalized addicts and a sample consisting mainly of non-addict prisoners.

The search for specific personality characteristics rather than general patterns of personality that might differentiate between addicts and non-addicts has yielded similarly discrepant findings. The psychopathic deviate (Pd) scale has appeared to receive the greatest experimental validation as a significantly elevated MMPI scale score most typically obtained with addict samples (Hill et al.,

1962; Gilbert & Lombardi, 1967; Pittel, 1971). Pittel (1971) has also found differences on MMPI subscales other than the Pd subscale: female addicts in his sample obtained high scores on the Hysteria (Hy), Paranoia (Pa), and Schizophrenia (Sc) scales as well as on the Pd scale, while male addicts obtained significantly elevated scores only on the Hypochondriasis (Hs) and Depression (D) subscales. Gilbert and Lombardi (1967), similarly, found differences between addicts and non-addicts on MMPI subscales other than the Pd scale, in addition to confirming other investigators findings of a significant Pd scale difference. Their study indicated that addicts scored higher than non-addicts on Schizophrenia, Hysteria, Masculine-Feminine, and Psychopathic Deviate scales. However, addicts' scores in this study were not in the abnormal range on the Hysteria and Masculine-Feminine scales, despite their significant difference from non-addicts on these scales. The latter finding is difficult to interpret, since an underlying assumption of studies comparing addicts with non-addicts is that the difference will indicate specific psychological abnormalities which might help to account for addiction. This series of MMPI studies is further hindered in the interpretability of its results by the fact that no two investigators have found the same pattern of differences, as indicated by the contrast between Pittel's findings and those of Gilbert and Lombardi cited above. Although a further study (Berzins, Ross, & Monroe, 1971) has confirmed differences between addicts and non-addicts on the Sc and D scales, this same study has also disconfirmed the dominant trend of the other MMPI investigations to date, that addicts' most elevated scores and also addicts' subscale scores most discrepant from non-addicts tend to be the Pd

scale scores.

Further studies delineating addicts' traits by means of multivariate analyses of objective personality measures have indicated the importance of additional variables. Mukherjee and Scherer (1970), for example, have noted that heavy drug users in a college student sample demonstrated higher self-ideal discrepancies in self-concept than either moderate drug-users or non-users, and also had the lowest self-concepts with regard to their flexibility or emotional stability compared to the less heavy drug-users or to the non-users. Heavy drug users in this study were defined as individuals whose use of marijuana or hashish had exceeded a total of forty experiences and/or who had taken LSD or any of its derivatives, amphetamines, or barbiturates more than five times. Berzins, Ross, & Monroe (1971) have found major differences between groups of civilly committed, voluntarily committed, or prisoner addicts on the Lexington Personality Inventory (composed of some items from the Minnesota Multiphasic Personality Inventory, in addition to other items), with the volunteers having the least degree of "pressure" experienced in obtaining treatment, the least degree of adoption of aspects of the traditional addict subculture, and the greatest likelihood of responding well to individual psychotherapy.

Although these more conclusive and sophisticated studies indicate some progress toward identifying dimensions of addicts' personalities that may be useful in understanding the development of addiction or in treating addicts, a number of investigators have questioned the validity of studying individual personality characteristics in isolation from environmental influences as etiological factors in addiction. Environmental factors, therefore, also require consideration.

Environmental Variables in the Etiology of Addiction

Two major emphases are discernible among those who stress the importance of environmental influences: those who emphasize social environmental factors alone in attempting to understand the development of addiction, and those who stress the interaction of the social environment with the personality of the potential addict.

Empirical support for the former view is provided by a number of questionnaire, interview, and participant observation studies. Bruun (1959) has observed the major effect of small group norms on the drinking behavior of males, a finding which suggested to other investigators the possible significance of this peer group pressure for the behavior of drug users. The degree of support from the social environment proved to be significantly correlated with drug user, despite respondents' denial of friends' influences on their drug-taking behavior, in a questionnaire study of North American college students (Sadava, 1971). Among actual heroin addicts, as opposed to semi-alcoholics and occasional drug users, Brown, Gauvey, Meyers, and Stark (1971) have conducted an investigation of 218 addicts' responses to a structured questionnaire requiring descriptions of critical incidents in the addicts' drug-taking history. In Brown et al.'s sample, 51.4% of female addicts, and 65.8% of juvenile male addicts cited friends' influences as the major reason for their first use of heroin. Adult male addicts in this study also gave "friends" as the second major reason for first use of heroin. Brown's study also showed that juvenile male addicts attributed friends' influence to be the second most influential reason for the failure of their first attempts to withdraw from heroin, and that friendship group pressure was seen by three subgroups of users

(adult males, adult females, and juvenile males) as the third or fourth most powerful influence toward committing initial illegal acts other than narcotic abuse.

Although Rosenberg (1968) discounts pressure from friends as a major instigator toward heroin use, noting that most of the young Australian addicts in his sample actively sought out drugs prior to their initial addiction, he also found that friends influenced addiction-producing behavior to some extent, in that acceptance by a drug-taking subcultural group appeared to provide the addicts with a sense of belonging and relief from feelings of insecurity characteristic of their relationships with non-drug-taking individuals. Levine and Stephens (1971) support this interpretation of peer group influences on the maintenance of addiction, in their identification of components of addicts' role behaviors expected by addict peers, such as "conning" behavior, expressing anti-society viewpoints, and conforming to a "cool cat" image. They conclude that: "Heroin abuse ... cannot be viewed apart from consideration of subcultural variables and alternative life styles (p. 591)." Observation and recording of addicts comments and behavior in group psychotherapy during institutionalization for treatment purposes has suggested that membership in neighborhood groups positively disposed toward the use of narcotics precedes the occurrence of addiction in a majority of heroin addicts (Weech, 1966). The influence of the "street," the "geographically ill-defined area of a neighborhood largely determined by peer group interaction (p. 300)" on the development and maintenance of addiction occurs largely through providing potential and confirmed addicts with a sense of identity, a set of values, and a means of giving meaning to life, according to Stephens and Levine (1971), Proctor (1971), and Weech (1966).

The strength of peer group influence is given further theoretical support by the application of Cohen's analysis of delinquent gang culture to addict groups (O'Donnell, 1967, p. 74). Providing a solution to common, shared adjustment problems is a powerful support for identification with a group, according to Cohen; and the utilitarian function of addict peer groups in obtaining narcotics for the fulfillment of a literal physical need suggests to O'Donnell that drug addiction encourages the development of a distinctive subculture more effectively than most other kinds of deviant behavior do. Thus, a normatively deviant individual who is an addict is more likely to be involved with other addicts than is a "deviant" individual who is not an addict with a group of individuals of similar societally deviant habits. An empirical measure of the degree of "addict identification," using addicts' responses to a true-false inventory comparing respondents' self-concepts with their concepts of addicts in general, cross-validated on a sample of 250 male addicts, has indicated that high identifers with the addict subculture relapse to drug use more readily after a period of abstinence; that high identifiers obtain higher scores on the Psychopathic Deviate subscale of the MMPI; that high identifiers are more socially maladjusted; and that high identifiers tend to have used drugs for a longer period of time (Monroe & Astin, 1961). Rettig and Pasamanick (1964) criticize the Monroe and Astin addict identification inventory as unrelated to the actual process of subgroup identification occurring "on the street." However, they have found further support for the hypothesis that subcultural addicts, those whose addiction was strongly associated with peer group influences of an addict group, typically maintain their addiction for longer periods of time than non-subcultural addicts. Rettig and Pasamanick

also found that age of onset of addiction was earlier in subcultural addicts than in non-subcultural addicts (19 years of age compared to 25 years of age), and that the time interval between first use of an addicting drug and actual addiction to the drug was significantly shorter for subcultural than for non-subcultural addicts. The combination of these empirical studies and their theoretical bases, therefore, generously supports the idea that subcultural identification and peer group pressure are salient variables in the addiction process.

The influence of group pressure on addiction to narcotic drugs has also been recognized by investigators concerned with the treatment and rehabilitation of addicts. Volkman and Cressey (1963), for example, applied Sutherland's theory of differential association (in Volkman & Cressey, 1963, p. 129), that contact with deviant, criminal subgroups and their deviant values produces criminals, to the activities of Synanon, a non-professional self-help rehabilitation program for addicts. The willingness of successfully rehabilitated former addicts to have submitted themselves to cohesive anti-addiction group pressure towards conformity with the attitudes, values, and behavior of members of the anti-addiction group, followed by the rewarding consequences of acceptance by the group, was found to be the critical, basic process essential to successful rehabilitation of addicts. Just how critical the peer influence process is has been strongly indicated by more recent evaluations of Synanon's "graduates " (Brecher, 1972), of whom 90% relapse to drug abuse within two years of leaving their Synanon community. Without strong peer support, apparently, even the intensive Synanon rehabilitation program does not enable former addicts to remain ex-addicts. In a similar vein, Whitehead's

(1973) description of a self-help addict rehabilitation program, which included some professional persons, designated the capacity of ex-addict peers "to 'get to' the person sooner and with more credibility (p. 84)" as a factor integral to the success of the treatment program.

Integration of Personality and Environmental Variables

Neither personality characteristics nor social environment alone have adequately seemed to explain the occurrence of drug addiction, however, nor have either of these consistently differentiated addicts from non-addicts. Chein, Gerard, Lee, and Rosenfeld (1964) clearly demonstrated both these conclusions in their study of heroin addiction among adolescents of different neighborhoods in New York City, in which only some individuals in heroin-using neighborhood groups or gangs used heroin and others did not. This finding would suggest the primacy of personality variables, were it not for the further observation of these investigators that in high heroin use neighborhoods the availability of information and contact with other drug users was much more extensive than in low heroin use neighborhoods, which suggests that environmental factors also have a determining influence. Interviews and psychological testing of a stratified sample of their original adolescent sample led Chein et al. to conclude that, although the attitudes of the community and of the peer group affect the probability of an individual's experimenting with narcotics, the likelihood of becoming a drug addict depends on the functions served by addictive use of narcotics for that individual, including both

intrapsychic and interpersonal functions.

Additional attempts to integrate personality and environmental factors as causal agents in drug addiction have most strongly supported the view that inadequacies in addicts' capacities for interpersonal relationships encourage both the use of addictive drugs and membership in a group of addicts. This view of addiction corresponds to several of the possible explanations for addictive drug use provided by Cahoon and Crosby (1972): that the use of drugs may be only secondarily reinforced by the user's social group; or, that drug use may act to reduce the influence of aversive environmental stimuli as, for example, those provided by unsatisfactory relationships with non-addict others. In fact, a number of studies indicate that identification with a drug addict subculture can provide a more easily obtainable sense of belongingness and feeling of security than that provided by more difficult but more normally occurring relationships with non-addict others (Blum, 1969; Hartmann, 1969; Rosenberg, 1968). Schoolar, White, and Cohen (1972) hypothesize further, on the basis of MMPI and Leary Interpersonal Check List comparisons of 80 multi-drug habituated individuals with psychiatric non-drug-involved patients, that drug abusers are unconventional in their thinking as a result of needing to define themselves by being obvious in their nonconformity. A similar comparison of drug abusers with applicants for psychotherapy by Cohen, White, and Schoolar (1971) using the same instruments yielded the conclusion that membership in a peer group of other addicts provides addicts with validation for their feelings of alienation from others and from the rest of society. A further finding integrating personality and environmental peer group influences is provided by Hekimion and

Gershon (1968), whose intensive interviewing and observation of 112 hospitalized drug abusers revealed that the heroin users were almost uniformly individuals classifiable as having sociopathic character defects, who at sometime had come into contact with the addict subculture. However, the conclusions of the latter study must be regarded as suggestive only, since they are based on post hoc psychiatric interviews with a small sample of hospitalized addicts on a single occasion.

Most investigators combining personality and environmental variables in accounting for drug addiction have neglected to present an inclusive picture of the addiction process in that they have failed to integrate environmental, physiological, and personality variables in a coherent model. In an attempt to provide an inclusive model, Paschke (1970) has proposed a theory based on learning principles which combines psychological, sociological and physiological variables. This theory assumes that the totality of physical, emotional and social influences impinging on an individual in a given moment determine the perception that an act of drug abuse is greater or lesser in benefits to him than in dangers. Initial use may occur as a function of peer group pressure or as a combination of other pressures, but subsequent maintenance and development of addiction depends on the totality of reinforcing consequences of each act of drug abuse. The physiological explanation of addiction, in which physical sensations appreciated by the addict during early use develop into a physiological need state where continued ingestion of the drug is necessary to maintain a relatively normal physiological condition, is subsumed under Paschke's model. Paschke proposes that as the reinforcing consequences of drug ingestion for reduction of the physiological tension and pain of

abstinence in an addict strengthens the likelihood of acts of drug abuse, so the reinforcing consequences of approval from a group of peers for drug taking also increase the tendency toward future drug-taking behaviors.

Paschke's (1970) model, encompassing these various possible influences on the development of addiction in an individual, also provides a means for specifying the nature of social influences on the addiction process. If the primary psychological reward in a peer group situation is obtaining the group's approval, and Paschke assumes that this is true, then illicit drug use within a drug-taking peer group derives secondarily reinforcing properties from the addict's associated experience of the group's approval. The peer group's importance during early drug use, even where the peer group has not served as an instigator to drug use, is objectively demonstrable by the fact that obtaining drugs, knowledge of how to use them, and sufficient reinforcement to overcome some of the initially noxious effects tend to occur mainly through association with other drug-using individuals. Throughout the remainder of the addiction cycle, the communication maintained between the addict and his peer group provides for the transmission of the group's norms, attitudes, and behavior patterns to the individual member (as well as providing access to supplies of drugs), also allows for the reciprocal influence of the member on the group. The stages in the addiction cycle of first reinforcement, sporadic use, the development of tolerance, regular use, and finally heavy regular use, in the context of peer group relations, are reinforcing to the user beyond merely the physical effects, since feedback to the group from the member

about his condition elicits a strong positive reaction from the group.

The critical influence of the peer group on addiction is most clearly pointed out by Paschke (1970) in the later stages of addiction, possibly after a treatment intervention or after self-initiated withdrawal with the intention of quitting the drug habit. Involvement in an alternate peer group with non-drug-using norms could break the addiction cycle at this point, Paschke suggests. However, association with an addict peer group begins the addiction cycle over again, since addicts appear to have difficulty integrating themselves into other peer groups. As a result, treatment interventions tend to have little lasting effect for the majority of addicts. Rather than postulating psychopathological personality variables as the basis for initial and repeated addiction, then, this Learning Theory- Peer Group model would suggest the importance of personality variables critical to social interaction processes.

Conceptualization of the Present Investigation

Experimental Investigation of a Dimension of Addicts' Relationships With Others

Paschke's Learning Theory - Peer Group model extends theorizing about the effect of social influence processes on addiction beyond simply recognition of their existence to speculation on the mechanisms by which this influence occurs and to the suggestion of new personality variables for the study of addiction, specifically those personality characteristics relevant to social interaction patterns. The literature reviewed above emphasized the strength of influence of the peer group process on individuals'

development of a drug habit, thereby implying differences in the quality of relationships between addicts and other addicts and between addicts and non-addicts. The investigation of differences or similarities in the kinds of relationships addicts maintain with each other as opposed to their relationships with non-addicts is a focus of attention in this area in the continuing attempt to discover how and why addicts become addicts. Since little information on addicts' relationships with others has been empirically obtained to date, an aim of this study is to provide experimental evidence on a selected dimension of addicts' relationships with others.

Openness versus defensiveness of addicts' interpersonal communications. The dimension of addict relationships selected for investigation is openness versus defensiveness of interpersonal communication, or the extent to which addicts reveal themselves verbally to others. Reasons for choosing this variable for investigation include the fact that one of the major problems in treatment of addicts is frequently their lack of openness and their manipulative or "conning" verbal behavior with treatment personnel, which often prevents the formation of effective therapeutic relationships (Levine & Stephens, 1971). A related major reason for investigating the extent of personal revealingness of addicts' communications is the possible importance of this variable as an indicator of addicts' capacity or motivation for involvement with others. Some theories of addiction hypothesize that addicts are unable or unwilling to enter into and to maintain relationships that are not drug-centered ones (Pittel, 1971; Proctor, 1971; Weech, 1966). A mutually satisfying interpersonal relationship would be expected to include some degree of mutual self-disclosure. The failure to communicate personal information in a context structured for self-disclosure could

indicate support or contradiction of the theorists cited above by demonstrating whether or not addicts have difficulty in verbally disclosing themselves to others.

The inadequacy of addicts' relationship capacities postulated by some theorists would predict the difficulty for addicts of engaging in very personal communication with anyone. It is arguable whether addicts might be expected to have greater difficulty in communicating verbally with other addicts or with non-addicts. Theories of the extensive influence of addict peer group members on each other would suggest that addicts are open, at least to some extent, in their communication with each other. Aspects of addicts' life styles also support this idea of more communication between addicts than between addicts and non-addicts, since the illegal nature of drug-taking activity and the frequent dependence of addicts on each other as sources of drug supply would seem to require a degree of regular exchange of personal information. On the other hand, it is also possible that communication between addicts and non-addicts may be facilitated to a greater extent than between addicts and other addicts if addicts perceive particular non-addicts as sufficiently distant and uninvolved that they need not fear immediate consequences to their daily lives from them. Considering both these possibilities, it would seem difficult on an a priori basis to predict the direction of the hypothesis of differences in the openness of addicts' communications with each other, as compared to their openness with the non-addicts of this study.

A context in which both personal communication and communications indicating avoidance of personal revealingness are possible, and for which a number of measures of the interaction process are

available, is the projective testing situation. The context of administration of a projective personality test provides a focused task requiring considerable interaction between the participants, in which results obtained from the test are frequently extremely sensitive to the influence of the relationship between the test administrator and the respondent (Barnard, 1968; Masling, 1960; Sarason, 1954; Turner & Coleman, 1962). The typical test respondent's experience of apprehension over the consequences for him of being psychologically evaluated (Lefcourt, 1969; Rosenberg, 1969) further insures that the respondent invests considerable personal involvement in his test responses, either toward greater self-disclosure or toward actively defending against revealing himself through the test responses. These considerations combine to ensure that a projective testing situation is a context in which a relationship between the tester and the testee emerges over the duration of the session. The projective testing situation, therefore, provides one context in which an aspect of addicts' relationships with others may be investigated.

The selection of the Thematic Apperception Test (TAT) (Murray, 1943) as the projective test of choice for the present investigation was based partly on the ease with which inexperienced individuals may be trained to administer it to a minimum level at least, and partly on the availability of a number of TAT response measures for the assessment of the openness-defensiveness of test respondents, where openness refers to relatively free or unrestricted communication of personal information. These considerations were the reason for the selection of the TAT as opposed to other projective techniques as the experimental

paradigm for the present investigation. The TAT was selected in preference to a structured non-test interview for a number of reasons. First, the findings of the present study can be most readily compared to prior research on addiction if similar methods are used, and a number of psychological studies of addicts use projective techniques. The present study, therefore, also has as a secondary aim validation of the utility of prior research on addicts' responses to projective tests. Secondly, a structured non-test interview situation devised for the purposes of this investigation alone would not only provide findings which would be difficult to compare with previous research but would also be subject to difficulties in the interpretation of results. Any interpersonal situation is influenced by a complex interaction between many variables. The widespread clinical and research use of the TAT has identified and described the influence of many of these, while the same cannot be said for any unstructured interview that could have been devised for the purposes of this study. Since any interpersonal interaction in an experimental setting obviously differs from the interpersonal interactions of addicts' daily lives, it was considered highly necessary to select as an experimental interaction a focused task for which many of the variables influencing the interactants are known, to permit specification of some of the ways in which the experimental findings can or cannot be generalized to addicts' real-life interactions. These considerations are the major reasons for choice of the TAT as a model for investigation of addicts' interactions with others in this study.

The length of TAT stories, the time taken to provide and

to elaborate a story in response to TAT pictures, and the latency from picture presentation to the subject's first response are typically used in clinical psychological assessment as indications of the degree of willingness and degree of difficulty experienced in responding to TAT cards. Although a number of influences preclude the interpretation of story length as direct evidence of openness or defensiveness, these measures are frequently indicative of the extent of the respondent's desire to communicate through the test materials. In addition, these measures have been shown to be indispensable in the interpretation of other TAT response measures obtained in experimental settings. Lindzey and Silverman (1959), for example, found verbal fluency and numerous other TAT response variables to be highly correlated, to the extent that statistical control for the verbal fluency factor entirely accounted for some of the obtained correlations and lowered the additional ones. These investigators cautioned that research findings of correlations between TAT variables are frequently mistaken in accepting evidence of a relationship without determining the contribution of verbal productivity to each of the variables being correlated. For these reasons, average story length, average time per card, and average latency of response to card presentation have been included as dependent variables in the investigation of the openness of addicts' TAT responses in the present study.

A "direct" measure of openness in responses to the TAT is provided by Hamsher and Farina (1967) who have developed a reliable five-point rating scale of "openness". Their investigation of TAT responses of college Ss under instructions requesting differing degrees of "openness" indicated that respondents can vary

the degree of revealingness of their responses to the TAT cards. Openness is operationally defined in the present study, as in the Hamsher and Farina investigation, as judges' ratings of openness based on a manual of openness developed by Hamsher and Farina (1967a). The Hamsher and Farina rating of openness will subsequently be referred to as the Openness Index.

A further dependent variable related to the openness or defensiveness of TAT responses is a measure of the extent to which verbalizations to the TAT proceed beyond what is objectively present in each TAT picture (Weisskopf, 1950). Weisskopf has considered such a measure, giving the number of elements per card per subject beyond the objective features of the card, which she has entitled the "Transcendence Index," as indicative of amount of fantasy production. However, fantasy material, more so than objective description and minimum elaboration of themes suggested by TAT cards, may be extremely sensitive to the degree to which a respondent wishes to be open with a test administrator. This observation has been experimentally verified by Kenney (1954), who obtained a strong correlation between the "Transcendence Index" and Q-sorts of "revealingness of personality" in TAT stories. An investigation by Hartmann (1970) has also demonstrated a correspondence between the Transcendence Index and rankings by experienced psychologists of the clinical usefulness of TAT stories, which presumably would also be based on the degree of personality revealingness of the TAT responses.

In summary, then, a major purpose of the present investigation is to compare the degree of openness of addicts in the presence of other addicts, as indicated by the Openness Index and

the Transcendence Index of responses to TAT cards, with addicts' degree of openness in the presence of non-addicts.

Investigation of addicts' relationships in a non-institutional setting. Most investigations of addicts' influences on each other or of degree of addicts' identification with the addict subculture have been conducted in institutions where addicts are full-time residents for a period of time (e.g. Berzins & Ross, 1972; Berzins, Ross, & Monroe, 1971; Haertzen & Hooks, 1969; Monroe & Astin, 1961; Rettig & Pasamanick, 1964; Senay & Renault, 1971). A disadvantage of such settingsfor investigating addict peer group members' reciprocal influences on each other is that residence in an institution changes the typical activity pattern of addicts and changes their pattern of association with each other. Out-patient treatment, on the other hand, provides accessibility to addicts as research subjects while the addicts maintain a life style and natural pattern of peer associations less dissimilar to their pre-treatment patterns. The choice of setting for the present investigation was, therefore, an out-patient methadone treatment program, in which the majority of heroin addicts on the program appear daily at the same location to receive their prescribed methadone dosages. In addition to the unavoidable contacts due to participation in the methadone program by the addicts in the population being investigated, further assurance exists of the considerable interaction and degree of acquaintanceship among the addicts comprising the sample for the present study, since the heroin addict group of the urban area from which the subjects are drawn is small enough that almost all the addicts are known to each other. The population under investigation, therefore, particularly lends itself to the study of some aspects of addicts' interaction with other addicts.

Evaluation of Validity of Addicts' Responses to Projective and Objective Personality Tests

A further consideration, in noting addicts' responses in a psychological assessment situation, is the implication of possible differential responding to different kinds of examiners for the interpretation of past research and current assessment techniques used with addicts. A number of studies have relied on addicts' responses to projective instruments or their responses in personal interviews for their hypotheses or conclusions regarding the etiology of addiction (Zimmering et al., 1951; Zimmering et al., 1952; Gerard & Kornetsky, 1954; Chein et al., 1964; Rosenberg, C. M., 1968; Rosenberg, C. M., 1969; Proctor, 1971). A considerably larger number of investigations have based their hypotheses and research conclusions on the assumption of the validity of addicts' responses to objective personality inventories or questionnaires. Furthermore, data obtained in clinical psychological assessment procedures, used for treatment decisions in programs to rehabilitate addicts, frequently are based on both objective and projective instruments. Yet addicts are known to engage in manipulative interactions with treatment personnel (Stephens & Levine, 1971). There is, therefore, reason to question whether addicts' psychological test responses reflect response sets other than those which permit valid test interpretation, such as attempts to create a certain impression or a desire to mislead the test evaluator. Extreme differences in addicts' responses with different kinds of examiners would suggest the presence of behaviors ressembling "conning" in interview situations, where the object of the interaction process is to avoid honest self presentation (Stephens & Levine, 1971).

Stephens (1972) has investigated the truthfulness of a sample of addicts following their stay in an institutional treatment centre, by mailing questionnaires to the ex-addicts asking about their drug-taking history and reactions to the residential treatment experience. Based on the illegality of addicts' drug related activities, addicts' tendencies toward "conning" behavior, and the "ordinary human need to justify their faults and shortcomings (p. 550)," Stephens hypothesized that untruthful responding would be characteristic of many of the returned questionnaires. Instead, the addicts' answers to the questionnaires showed a high degree of agreement with similar questionnaires on each addict completed by the addicts' drug counselors, and by a relative of each addict. However, there are a number of limitations to Stephens' study. A major one is the degree to which the reports of the drug counselors or the addicts' relatives were based on evidence other than the addicts' self-reports is not clear from the study. A second possible limitation is that only 100 of the 236 questionnaires mailed were returned, which raises the possibility of a systematic difference between those addicts who replied and those who did not on the dependent variable being investigated.

An additional feature of the Stephens (1972) study which undermines the applicability of its results to face-to-face psychological testing situations is the fact that Stephens' addict subjects did not expect feedback from the experimenter concerning their responses to the questionnaires. Individuals given psychological tests in clinical assessment settings typically expect some information on the results of their tests. These differing expectations can affect individuals' test performance (Rosenthal, 1966), often by increasing the degree of the respondent's involvement with the

tasks requested of him. In preparation of the subjects for the present study, the availability of feedback based on subjects' test responses was stressed. The greater involvement of subjects in this study as a result of encouraging feedback expectations is an advantage over Stephens' study contributing toward greater confidence in the validity of the experimental manipulations and in generalizability of the results to clinical assessment contexts.

A further objective of the present study, therefore, is to compare the responses of addicts on an objective and a projective personality test, in the presence of different kinds of examiners. To the extent that projective tests present the possibility of greater personal involvement and revealingness, the present investigation proposes to examine the differences in responses to different examiners between addicts' responses to a projective as compared to an objective personality test. An additional reason for the comparison between projective and objective tests is the greater complexity in the administration and the interpretation of projective as compared to objective tests in their use as psychological assessment tools. Less situational influences on objective test responses as compared to the effects of situational influences on projective test responses would support the use of objective tests in the clinical and research assessment of addicts for reasons other than ease in administration and interpretation.

Investigation of Addicts' Need for Approval

The objective test selected for the present investigation is the Marlowe-Crowne Social Desirability Scale (MC-SDS) (Marlowe & Crowne, 1960), since, in addition to fulfilling the minimal

requirement of being an objective test for the purposes of comparing addicts' responses to a projective and an objective test, the theoretical rationale for the MC-SDS is relevant to the issue of how addict peers can contribute toward an individual's becoming or remaining an addict. Crowne and Marlowe (1964) found, in a series of investigations, that MC-SDS scores predicted behaviors in a wide variety of experimental situations where approval was a possible consequence. These situations had the common characteristic of eliciting conformity to the opinions of peers, even when such conforming responses required the denial of evidence from clear visual and auditory cues. High MC-SDS scorers appeared to be influenced to a much greater extent than low MC-SDS scorers to change their judgments due to the presence of age peers expressing different judgments in the experimental setting. Theorists in the addiction literature discussed above, such as Paschke (1970), and Wikler (1971b) have suggested that peer group pressures and addicts' vulnerability to them are potent influences in the lives of addicts. One possible explanation for the hypothesized magnitude of peer influences on addicts is that high need for social approval is a personality characteristic of addicts which, given exposure to a peer group of addicts, predisposes them to addiction.

This possibility of high need for social approval as an explanation for drug use has been investigated. Scherer, Ettinger, and Mudrick (1972) administered the MC-SDS and a questionnaire requesting information on frequency of drug use, drug type, and initiation to drug use to 66 college undergraduates, and found significant differences in MC-SDS scores between non-users, users of soft drugs and users of hard drugs. The hard drug users obtained the highest MC-SDS scores, with non-users scoring in

the intermediate range, and soft drug users scoring in the low range on the MC-SDS. In addition, 82% of the hard drug users reported initiation to drug use through friends, while friends were initiators to drug use for only 42% of the soft drug users. Scherer et al. suggest that the high MC-SDS scores of hard drug users may indicate an abnormal desire to be socially approved and accepted.

The hard drug users in the Scherer, Ettinger, and Mudrick (1972) investigation were defined as those who, in addition to using marijuana and/or hashish had taken various hard drugs (not including heroin). The present study attempts to determine whether the Scherer et al. findings of high need for social approval among college student users of these various drugs hold true for heroin addicts. Similar results from a heroin addict sample would provide support for need for social approval as a personality characteristic of addicts accounting for their susceptibility to the influence of addict peers.

A related theoretical issue with which the present study is also concerned is determining the limits of validity of the need for approval motive for behavior prediction in the psychological testing situation. Crowne and Marlowe (1964) have suggested that defensiveness is an integral component of the need for approval motive, and that, therefore, MC-SDS scores are also predictive of defensive behavior. This element of Crowne and Marlowe's theory has been investigated in the projective testing situation, where individuals are hypothesized to be highly conscious of the possibility of providing revealing information about themselves. Lefcourt (1969), for example, found that those of his undergraduate student subjects scoring high on the MC-SDS gave significantly fewer "movement" or "M" responses to the Barron Ink Blot Test than did subjects scoring

low on the MC-SDS. The MC-SDS thus proved predictive of defensive behavior in response to a projective test, since "M" responses are characteristically free, imaginative responses unconstrained by the stimulus characteristics of the blots and therefore representing more of the respondent's own contribution. A study by Tutko (1964), with psychiatric patients rather than college students, found that MC-SDS scores discriminated accurately between groups of patients differing in the personal revealingness of their responses to the TAT. High MC-SDS scorers were found to be less revealing than were low MC-SDS scorers.

These two studies, therefore, have indicated support for Crowne and Marlowe's (1964) application of the need for approval motive, as measured by the MC-SDS, to the prediction of defensive behavior in the projective testing situation. However, one of the two measures of defensiveness used by Tutko was productivity in response to the TAT, which Norman (1963) found did not differ for TAT responses of college student subjects obtaining high scores on the MC-SDS as opposed to those obtaining low MC-SDS scores. The prediction of defensive behaviors on the basis of the MC-SDS may be further questioned by the fact that Lefcourt's results included the observation that "M" responses to the Barron Ink Blot Test are not optimal indicators of what is meant by the concept "defensiveness."

The present study provides an occasion for more precise investigation of the extent to which defensiveness may be related to the approval motive. Hamsher and Farina (1967) define openness as the opposite of defensiveness, or "free, unrestricted communication of personal information(p. 526)." The Openness Rating Scale for TAT responses devised by them would, therefore, be expected to correlate highly with MC-SDS scores, if the Crowne and Marlowe (1964) theoretical description of need for approval as including

defensiveness is correct. On the basis of the Crowne and Marlowe hypothesis, it is predicted that high MC-SDS scorers in the present investigation will obtain lower ratings on the Openness Rating Scale than will low MC-SDS scorers.

The present investigation, therefore, has several purposes in obtaining the responses of addicts to the Marlowe-Crowne Social Desirability Scale: (a) to lend support or to diminish support for the hypothesis of addicts' susceptibility to peer group influence by investigating addicts' responses to an objective personality test considered indicative of susceptibility to the influence of others, and by comparing their responses with norms published in the literature (Crowne & Marlowe, 1964); (b) to provide a measure for the comparison of addicts' responses to an objective test with their responses to a projective test; and (c) to determine whether need for social approval, as measured by the MC-SDS, predicts defensiveness in a projective testing situation.

Hypotheses

The following hypotheses are, therefore, proposed for the present investigation:

1. The openness of addicts' responses to the Thematic Apperception Test administered by addict testers will differ from the openness of addicts' responses to the Thematic Apperception Test administered by non-addict testers.

2. Addicts' responses to an objective personality test, the Marlowe-Crowne Social Desirability Scale, administered by addict testers will differ from the responses of addicts to the test as administered by non-addict testers.

3. Addicts' responses to the MC-SDS will indicate high need for social approval in comparison to Crowne and Marlowe (1964) norms.

4. Respondents obtaining high scores on the Marlowe-Crowne Social Desirability Scale will give responses to the Thematic Apperception Test that are lower in "openness" than will respondents obtaining low scores on the MC-SDS.

Method

Subjects

Subjects were 26 heroin addicts and 7 former addicts who were voluntary participants or former participants in a methadone treatment program administered through St. Boniface General Hospital, Winnipeg.

Subjects (Ss) in the sample included: 19 male and 7 female addicts receiving methadone through the program; 5 male and 2 female former participants in the program, whose last treatment contact with the program was no longer than 12 months prior to Ss' participation in this study. Former male recipients of methadone through the program serving sentences for criminal offences at either Stony Mountain Institution or Headingley Correctional Institution were also studied, although unknown differences in these Ss as a function of institutionalization and the lack of a sample sufficient in size to permit statistical comparison with the hospital Ss did not permit their inclusion in the results of this investigation.[1]

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[1] The author would like to thank Mrs. Leona Holms, R. N., Co-ordinator of Medical Services of the Drug Rehabilitation Program, St. Boniface General Hospital, for her extensive and generous help in obtaining the co-operation of the past and present methadone program participants who served as subjects. The author would also like to thank Mr. J. Cartwright, of the Medical Staff of Headingley Correctional Institution, and Mr. O. Chaudry, Director of Classification at Stony Mountain Institution, for enabling the participation of former methadone program participants at these Institutions in this research.

The ages of Ss included in the analysis of data ranged from 18 years to 36 years, with a mean age of 25 years, 2 months, and a standard deviation of 5 years, 6 months.

This sample of outpatient Ss included all participants in the program who attended the hospital regularly for their prescribed methadone. All Ss agreed early in their period of association with the program to participate in any psychological assessment procedures which might be requested of them. However, any member of the program might have refused to participate in the study without repercussions to his or her status on the program or to his or her methadone treatment. Participants were aware of this fact. The participation of former methadone program participants who had completed the program or who were inmates at either of the correctional institutions at the time of the study was entirely voluntary. It is characteristic of addict populations, however, that they find it difficult to engage in behavior that has few immediately gratifying consequences (Hill, 1962; Zimmering, 1951). Consequently, Ss' participation in the study, although at least nominally voluntary, was not expected to be highly motivated. However, informal observation, responses to post-experimental questionnaires, and participation in the feedback and debriefing sessions indicated that the majority of Ss were both co-operative and interested in those aspects of the study in which they participated. The co-operativeness of the Ss, however, raises the question of the representativeness of this addict sample, since addicts' are not typically very co-operative as research Ss.

Measurement of Dependent Variables

The Marlowe-Crowne Social Desirability Scale (hereafter referred to as the MC-SDS) (Marlowe & Crowne, 1960), contained in Appendix I,

which contains 33 statements requiring true-false answers, was used to assess the need for social approval. Although originally devised as a measure of social desirability independent of psychopathology, subsequent research has demonstrated its predictive validity for approval-seeking behaviors both within and beyond the psychological testing situation (Crowne & Marlowe, 1964; Marlowe & Crowne, 1960). The statements of the Marlowe-Crowne Scale were selected on the basis of being true of virtually everyone or false for virtually everyone. Therefore, the higher the number of statements marked true that are false for most people and the higher the number of statements marked false that are true for most people, the higher the MC-SDS score and the higher is the inferred need for approval of the respondent.

The selection of test administrators occurred as a result of research literature documenting the importance, as discussed earlier, of the mutual influences of members of the addict subculture on each other for the development and maintenance of the drug habit (e.g. O'Donnell, 1967; Paschke, 1970; Rettig & Pasamanick, 1964; Weech, 1966). This relationship of addicts to other individuals in similar circumstances during the period of transition in life style represented by participation in treatment programs has also been previously noted (Monroe & Astin, 1961; Stephens & Levine, 1971; Volkman & Cressey, 1963). Selection of test administrators who were themselves on the methadone program was, thus, intended to provide an interaction situation permitting generalization to addicts' interactions with other addicts. Since the addicts participating in the program from which Ss were obtained were all known to each other, choosing test administrators from the same program approximated interaction between peers more closely than the use of addict testers who were not known to the Ss and who were identified as University students taking advanced courses in psychology. For

this reason, participants in the methadone program under investigation were selected to serve as some of the test administrators for the present study.

The choice of University undergraduate students as test administrators for comparison with addict test administrators was based on the identifiability of students as a subcultural group distinct from the addict group, on the accessibility of student volunteers for participation in the study, and on the assumption that advanced undergraduate students would not be greatly different in age from the majority of addicts participating in the methadone program. The actual age means of the student Es, 22.5 years, differed, however, from the mean age of addicts on the program, which was 25.6 years.

The Thematic Apperception Test (TAT) was selected as the projective test of choice, since it was felt that the opportunity for experimenter-subject interaction despite the minimal training possible for the test administrators in this study was greater with this test than with many other projective techniques. In TAT administration, E is frequently required to prompt S to complete his description of each of the TAT cards according to the instructions given, but the comments required to prompt S without introducing excessive variability into the E-S interaction do not require any considerable theoretical or practical expertise within the limits imposed by the directions used.

The TAT variables for each S used as measures of Ss' degree of openness included measures of verbal productivity, response time, openness ratings, and transcendence measures. Average latency of response between presentation of a TAT card and the S's first verbal response to it, although intended as a supplementary measure of openness, proved to have insufficient reliability when

obtained from tape-recordings of TAT administrations to permit its inclusion as a measure and was therefore abandoned. The average number of words given in response to each TAT card was used as the measure of verbal productivity. Response time measures were based on the mean time taken by each S in responding to each TAT card.

The most direct measure of openness used was the Openness Index, obtained by averaging the ratings of openness for each card according to a manual for rating openness developed by Hamsher and Farina (1967). The Hamsher and Farina Openness Rating Scale is presented in Appendix VII. The following description summarizes the characteristics of TAT stories assigned each of the ratings:

> 1. Rejection or mere description of the card; stories stilted, stereotyped, unelaborated to a marked degree.
> 2. Above features to a more limited degree; frequent suggestions of a desire to communicate.
> 3. Equal proportions of indicators of openness and guardedness.
> 4. Apparent identification with story characters and personalization of theme. Stories freely elaborated, with some involvement with plot development. Some indications of reservation, holding back.
> 5. Stories clearly personalized and fully elaborated; lack previous defensive signs (Hamsher & Farina, 1967, p. 526).

As can be seen from this summary, the higher the rating, the greater was the inferred openness of the story. The openness rating for each S was the average rating obtained from all of an S's stories given in response to the set of TAT cards, using the Hamsher and Farina specifications and several additional criteria compiled by the present investigator (also contained in Appendix VII).

The measure of transcendence, as a further indicator of openness, was the Transcendence Index, obtained by averaging the number of comments per picture which extended beyond objective description of the card (Weisskopf, 1950). Criteria used for measuring transcendence were taken from an unpublished scoring manual (Prola, 1970) (contained in Appendix VIII), based on an unpublished manual compiled by the originator of the index (Weisskopf, 1950), in addition to a minimal number of scoring criteria specified by the present investigator (included in Appendix VIII).

The criteria added by the present investigator for both transcendence and openness were checked for reliability, along with Prola's criteria for the Transcendence Index and Hamsher and Farina's Openness Rating Manual and proved satisfactory (see below).

The measures of verbal productivity, the Openness Index, and the Transcendence Index were obtained from transcripts of the TAT portion of the tape-recorded experimental sessions. Average time per card was obtained by noting exact elapsed time per card for each S from the original tape recordings of the sessions, and subsequently averaging these.

Although all dependent measures used in the data analysis were rated by the present investigator, a random sample of 30 TAT stories from the more than 300 stories obtained were re-rated by two volunteer graduate students in psychology.[2] Each of the raters

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[2] The author would like to thank George Bednarczyk and James Milord for their assistance in rating samples of Thematic Apperception Test stories.

received brief training and practice trials on stories other than those randomly selected for the reliability checks, prior to rating the 30 stories independently, using the rating manuals only. The Pearson product-moment correlation coefficient for inter-rater reliability obtained for the Openness Index was .75 ($p < .05$), while the Pearson product-moment reliability coefficient for the Transcendence Index was .91 ($p < .01$).

Experimental Design

The design of this investigation was a two-factor completely randomized hierarchical design, with two levels of subcultural identification of the examiner (addict vs. non-addict) and seven examiners, four within the addict examiner condition, and three in the non-addict examiner condition. This design applied for all of the dependent variables under investigation, since each S responded on all dependent measures in a single session during which the same examiner presided throughout.

Procedure

Selection of test administrators. Four individuals from the methadone treatment program were selected to serve as experimenters (Es) by the Co-ordinator of Medical Services of the program. The criteria used for selection of the Es were, mainly: willingness to participate as test administrators, availability of time to participate, and acquaintanceship or being known to all members of the program, as well as presumed capacity to carry out the tasks of the experimental sessions. In addition, choice of Es was restricted to males only. Since sex of the examiner may influence projective test responding (Masling, 1960), the decision was made

to use examiners of the same sex for all Ss, and since males were more available, males were chosen.

The individuals selected for participation were approached with a brief, general explanation of the project (contained in Appendix II). Additional information given to the test administrators at this time included only specification of the time involved in participation, without further indication of the exact nature of the project. The first four individuals asked to participate were willing to do so and served as the addict Es.

Students in an advanced undergraduate psychology class were presented with the same information and asked to volunteer. The first four male volunteers were accepted.[3]

Preparation of test administrators. The two groups of Es, psychology student test administrators and the methadone program test administrators met separately three days and four days respectively before the first day of testing, since it was not possible to arrange a time suitable for all test administrators to attend the same training session. However, the two sessions were identical in the structure and content provided. Briefly, during the

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[3] The author would like to thank the four methadone program participants, the volunteer E at Stony Mountain Institution, and psychology students Lorne Gibson, Larry Morris, Michael Riley, and Terry Stephens for their time and conscientious efforts in serving as test administrators for this study. Although credit is due to all of the test administrators, the names of the methadone program testers are not included here, since all methadone program participants were assured that their names would remain confidential.

training sessions, Es were given a rationale for the study as an investigation of achievement motivation among addicts, and as a means to provide new and useful kinds of information for the methadone treatment program participants about themselves. Es were also provided with brief descriptions of the tests, description of the behaviors required of them in the experimental sessions, and brief practice with the administration procedure (see Appendix III).

On the day of their first test administration, Es also received practice in using cassette tape recorders for recording of TAT responses, and practice in reading instructions to Ss. Also, Es completed brief pre- and post-experimental questionnaires (contained in Appendix V) immediately before their first contact with an S, and again after their last contact with an S, asking them to rate their own involvement in the project, their hypotheses about the nature and purpose of the project, and their reactions to their experience as test administrators. Analysis of Es' replies to the post-experimental questionnaire and discussion in post-experimental debriefing sessions with Es indicated that, although some Es suspected that differences between the administrators were being studied, no E felt that this was the single major hypothesis, or guessed its exact nature.

Preparation of subjects for research participation. During the week prior to the study, a brief announcement of the project (see Appendix II) was displayed at the main location of the methadone program, where all participants receive their methadone. The announcement specified further details of Ss' participation. Former program participants, who were asked to volunteer, were given essentially the same information in a telephone conversation with the Co-ordinator of Medical Services of the program.

Test administration. Of the 27 Ss on the methadone program whose responses to the tests were included in the data analysis, 24 completed their experimental participation during the four consecutive days of the first experimental period at the times of their regular appearances at the treatment centre to receive their methadone. All testing occurred in the three available rooms immediately adjacent to the location where participants received their methadone regularly. Ss were assigned randomly, in order of appearance, to a methadone program test administrator or to a psychology student test administrator. At least two test administrators, one from each group, were available to conduct the experimental sessions with Ss, at any one time, except for a brief, unavoidable period when only one E was available and, therefore, tested two sequential Ss. However, although most Ss appear daily at the treatment centre, they do not frequently appear at the same time of day. As a result, all Es did not test equivalent numbers of Ss, although the number tested by the methadone program and the psychology student test administrators was approximately equal (n=18, and n=15, respectively).

All former participants (n=7) in the methadone program who agreed to participate and who appeared for the sessions were tested during the two consecutive days of the second experimental period, approximately one week after the program participants who were then current had been tested. These Ss were also randomly assigned in order of appearance to a methadone program test administrator or a psychology student test administrator.

Prior to each testing session, a brief note on each S was obtained from the nurse on duty at the time of testing, stating whether, to the best of her knowledge, the S was at the time experiencing any drug effects other than those of methadone and

whether S had been involved in any unusual situation which might affect his or her behavior at the time, such as a major interpersonal or other environmental event, which might result in inattentive or unwilling participation in the testing session. No S appeared to be in any physical or psychological state markedly different from his or her usual condition at the time of testing. Each test administrator who was also a methadone program participant was also rated on these same criteria at the beginning of each day's testing session, and they similarly did not seem to be behaving noticeably differently than usual during the days of testing.

After S had received his or her regular dosage of methadone, S was given a slip of paper on which an identifying number was printed, to be given to the tester at the beginning of the session. The S was then escorted to the appropriate experimental room by the principal E. The tester then conducted the experimental session with the aid of an explicit set of procedure notes (see Appendix IV) and a set of answers, printed for the convenience of the E and for purposes of standardization, to the questions that it was expected would be most commonly asked by Ss.

On S's entry into the testing room, E introduced himself if he was not already known to the S, and identified himself as a methadone program participant or as a University student in psychology. The S was reminded of the confidentiality of the test results, and of the fact that he would receive feedback concerning his performance on the tests, and told that he could ask any questions about the testing program either following the experimental session or at the feedback session.

Subjects were then given the Marlowe-Crowne Social

Desirability Scale, and, subsequently in the same session, the Thematic Apperception Test. TAT responses were recorded both manually by the Es and mechanically by cassette tape recorders. The TAT cards administered were: 1, 2, 3BM, 4, 6BM, 8BM, 13MF, 14, 16, and 20, in that order.

Following S's response to the last TAT card, S was asked not to discuss the tests or the testing sessions with other individuals being tested, in order to maximize the usefulness to each person of the information which the tests could provide. The S was then asked to complete a post-experimental questionnaire and rating scale of his or her interest and involvement in the tests (contained in Appendix VI).

Immediately following the experimental session, E completed a similar rating scale of S's interest and involvement (see Appendix V), intended to heighten E's attention and motivation for subsequent sessions by providing him with an opportunity to present his own evaluation of an S's performance, and also for the more limited purpose of screening out any Ss who may have shown total lack of motivation to participate. No Ss were eliminated from inclusion in the analysis of the results on this basis.

Debriefing and feedback sessions. Individual feedback sessions were conducted by the principal E, and were arranged for all project participants who wished to have them, with the majority of debriefing sessions held between one and two weeks of the S's date of testing. Feedback provided from the TAT contained mainly a general description of Ss' need for achievement, and the summary information given them from the MC-SDS was presented as receptivity to external influences or independence of personal judgments. All items of feedback were presented positively. All feedback

sessions were brief, lasting approximately 15 minutes on the average, and attempted to provide S with some information about himself or herself that might be useful and satisfactory to S without creating a necessity for the discussion of clinical material. All questions asked about the project, except for the nature of the hypotheses, were also answered during these sessions.

Post-experimental sessions were also conducted with both groups of test administrators, in order to expand the information originally provided to them about the tests used and the nature of the research. Since Eswere particularly interested in the TAT, some interpretations of two substantially different protocols of hypothetical persons were presented to them, as examples of the clinical use of the TAT.

Results

Subsample Comparability

The data were initially analyzed for differences between subgroups of Ss varying in age, sex, or current program versus non-program status (at the time of the study) on each of the dependent variables. The error of assuming no differences between these subgroups if differences were the case was considered a serious error leading to possible misinterpretation of the results of the study. Therefore, the probability of this Type II error occurring was reduced by accepting a liberal alpha level of .25 as the criterion for failing to reject the hypothesis of no differences between the subgroups of Ss differing in age, program participation, or sex. Analysis of variance for sex and current program participation (Ss "on" versus those not "on" the methadone program at the time of their participation in the experiment) provided no indication of differences between subgroups differing in these characteristics on any of the dependent variables, as summarized in Table 1. However, analyses of variance for age of Ss at the time of participation indicated significant differences in MC-SDS scores ($F=4.90$, $df=1/32$, $p < .05$), average verbal productivity on the TAT ($F=2.84$, $df=1/31$, $p < .25$), and average time for TAT responses ($F=1.50$, $df=1/31$, $p < .25$) between two groups of Ss distinct from each other in terms of the total age distribution of all Ss. The mean age of the group containing the majority of Ss ($n=30$) was 25 years, 1 month, while the mean age of the group of four considerably older Ss was 50 years, 3 months. The older addicts obtained higher mean scores on the MC-SDS (where higher scores indicate greater need for social approval), were more verbally productive on the TAT and took more time to

respond to TAT cards than did the younger addicts comprising the majority of the sample. As a result of these differences, the four older Ss were not included in further analyses of the data.

Table 1

Summary of Analyses of Variance for Subsample Differences in Age, Program Participation, and Sex for MC-SDS and TAT Measures

	F				
	MC-SDS	Average words	Average time	Open-ness	Transcen-dence
Age	4.90**	2.84*	1.50*	.65	.04
Program participation	.26	.04	.13	.00	.37
Sex	.01	.54	.00	.36	.57

Note:- For F values obtained from Marlowe-Crowne Social Desirability Scale scores, df=1/32; for all other F values, df=1/31.

F values in all columns other than the MC-SDS column refer to those obtained from TAT response measures.

* $p < .25$

** $p < .05$

Addict Versus Non-Addict Identity of Test Administrators (Hypotheses 1 and 2)

The combined data from male and female Ss "on" or "off" the methadone program at the time of the study were analyzed by means of hierarchical analyses of variance (see Table 2) for each of the dependent

variables (Kirk, 1968; Myers, 1966). Four examiners were included within the addict E condition and three examiners within the non-addict E condition, due to the unavoidable circumstance that one of the four psychology student examiners was able to test only one S, and since comparison Ss for this E were, therefore, not available to examine the possibilities of differences in the dependent variable measures which might have occurred as a result of this specific E rather than the experimental condition, the E and the S whom he tested were not included in analyses of the data.

Hierarchical analysis of variance of MC-SDS scores indicated that the addict or non-addict identity of the tester did not affect MC-SDS scores. The means obtained by the addicts tested in each of the two conditions were 9.0 for addicts tested by an addict tester and 13.3 for addicts tested by a non-addict. Specific examiners within each tester identity condition similarly did not appear to affect Ss' MC-SDS scores. Results of the hierarchical analysis of variance (ANOVA) for MC-SDS scores are presented in Table 2.

Table 2

Analysis of Variance of MC-SDS Scores
by Addict versus Non-Addict Identity of Testers
and Specific Examiners

Source	df	MS	F
Addict/non-addict identity of tester (A)	1	.99	.04
Specific examiner (B within A)	5	28.12	1.00
Error	23	28.23	

Results of the hierarchical ANOVA for the number of words Ss' provided in response to TAT cards are presented in Table 3. Subjects in the addict tester condition responded with an average of 51.7 words per card, while Ss in the non-addict tester condition averaged 62.1 words per TAT card. The ANOVA indicated, however, that both the addict or non-addict identity of the tester and specific examiners within each of these conditions did not result in significantly different verbal productivity between the groups of addicts tested by different test administrators.

Table 3

Analysis of Variance of Average Number of Words per TAT Card by Addict versus Non-Addict Identity of Testers and Specific Examiners

Source	df	MS	F
Addict/non-addict identity of tester (A)	1	3,286.48	2.96
Specific examiner (B within A)	5	1,109.40	2.38
Error	22	472.73	

Average time per TAT card did not differ significantly between Ss who were administered the TAT by an addict tester, as compared to Ss who were presented with TAT cards by a non-addict tester (see Table 4). Subjects with addict testers averaged 58.8 seconds of response time per TAT cards, while Ss in the non-addict tester condition took 72.1 seconds on the average to respond to each TAT card. Specific examiners, regardless of their addict or non-addict

identity, also did not significantly influence average response time per TAT card. Results of the hierarchical ANOVA of response time per TAT card are shown in Table 4.

Table 4.

Analysis of Variance of Average Time per TAT Card by Addict versus Non-Addict Identity of Testers and Specific Examiners

Source	df	MS	F
Addict/non-addict identity of tester (A)	1	4,463.53	2.36
Specific examiner (B within A)	5	1,892.11	1.81
Error	22	1,043.43	

The Openness Index provided further results contrary to the experimental hypotheses, since significant differences on the Openness Index were not found between addicts tested by an addict as opposed to addicts tested by a non-addict tester. The results of the hierarchical ANOVA for the Openness Index are presented in Table 5. The mean value of the Openness Index for addict Ss tested by an addict was 2.49 on a scale of "1" to "5" where "5" indicates maximum openness, and the mean value of the Openness Index for Ss tested by a non-addict was 2.46. Different testers also did not receive TAT responses differing in the degree of openness as measured by the Openness Index.

Table 5

Analysis of Variance of Openness of TAT Responses by Addict versus Non-Addict Identity of Testers and Specific Examiners

Source	df	MS	F
Addict/non-addict identity of tester (A)	1	0.28	.74
Specific examiner (B within A)	5	0.38	1.89
Error	22	0.20	

Hierarchical analysis of variance of the Transcendence Index again indicated, similarly to other TAT measures and to MC-SDS scores, that addicts tested by addict examiners did not differ from addicts tested by non-addict testers (see Table 6). The mean on the Transcendence Index obtained by Ss tested by addicts was 6.51, while the mean for Ss tested by non-addicts was 6.20. However, in contrast to other TAT measures, specific examiners, regardless of their addict or non-addict identity did obtain TAT stories differing significantly on the Transcendence Index, as shown in Table 6. Individual differences between testers, then, significantly influenced the amount of verbal material given by Ss in response to TAT cards that extended beyond mere objective description of the cards.

Table 6

Analysis of Variance of Transcendence of TAT Responses by Addict versus Non-Addict Identity of Testers and Specific Examiners

Source	df	MS	F
Addict/non-addict identity of tester (A)	1	10.90	.50
Specific examiner (B within A)	5	21.68	3.01*
Error	22	7.20	

* $p < .05$

In summary, then, the two major hypotheses of this study were not supported by the results of the experiment. The addict or non-addict identity of the tester did not influence the openness of Ss' responses to the TAT, nor did the testers' subcultural identity influence scores received by Ss on the MC-SDS. The single effect evident with regard to the "openness" variable is that individual differences between examiners influenced the degree of "transcendence" of Ss' TAT responses, as indicated by differences in the Transcendence Index of Ss tested by different examiners. A summary of results concerning the two major hypotheses is presented in Table 7.

Table 7

Summary of Analyses of Variance of MC-SDS and TAT Measures by Addict versus Non-Addict Identity of Testers and Specific Examiners

	F				
	MC-SDS	Average words	Average time	Openness	Transcendence
Addict/non-addict identity of tester (A)	.04	2.96	2.36	.74	.50
Specific examiners (B within A)	1.00	2.38	1.81	1.89	3.01*

Note:- For F values obtained from Marlowe-Crowne Social Desirability Scale scores, df=1/32; for all other F values, df=1/31.
* $p < .05$

MC-SDS Findings (Hypothesis 3)

The hypothesis of differential openness of respondents obtaining high scores on the MC-SDS as compared to addicts obtaining low scores on the MC-SDS, tested by t-test for independent samples between Ss scoring at or above the median score of 11 (out of a possible score of 33) and Ss scoring below the median, was not supported for any of the measures of openness of responses to the TAT. When extreme high and low scorers on the MC-SDS were compared, similarly by t-test for independent samples, again, no differences were found between these two groups on any TAT dependent measures. Results of the comparisons in TAT responses between high and low scorers on the MC-SDS are presented in Table 8.

Table 8

t-Tests of TAT Response Measures of High and Low MC-SDS Scorers

Comparison groups	df	*t*			
		Average words	Average time	Openness	Transcendence
Ss scoring above and Ss scoring below median[a]	27	.98	.98	.14	.72
Extreme high-scoring Ss and extreme low-scoring Ss[b]	14	1.40	1.39	.05	.48

[a] Median score on the MC-SDS was 11. The 15 Ss scoring 11 or above were considered high scorers.

[b] $n_1 = 8$, and $n_2 = 8$.

MC-SDS Score Comparisons with Previous Research

Comparison of MC-SDS scores obtained by the addict sample of the present study with available norms for the MC-SDS (Crowne and Marlowe, 1964, pp. 211-212) by *t*-tests for independent samples indicated no differences between the MC-SDS scores of the addict sample and a sample of neurotic and psychotic psychiatric patients, but did reveal a significant difference between the addicts and a sample of male institutionalized California prisoners. The norms of the California prisoner sample were used for comparison with the addict sample of this study due to the fact that all other MC-SDS norms for prisoners were available for females only, while the present sample was predominantly male. A prisoner group was selected

as one comparison group of interest since addicts are frequently compared with criminals (e.g. Hill, Haertzen, & Davis, 1962) and often have served prison terms for criminal offences related to their drug use. The MC-SDS scores obtained in the present study also differed significantly from the scores of the most comparable available sample of non-deviant individuals, University of Washington undergraduate students. The University of Washington sample was used for comparison since, of all other non-deviant sample norms available, this sample was considered closest in age, sex distribution, and conditions of test administration (specifically, the types of instructions used) to the present addict sample.

Comparison of the MC-SDS results for the Crowne and Marlowe (1964) samples with each other by means of t-tests for independent samples indicated that the California prisoners' scores (mean=16.7) differed significantly from the sample of undergraduate college students (t=2.75, $p < .01$), and from the psychiatric outpatient sample (t=2.72, $p < .01$). The psychiatric clinic outpatients' scores (mean=12.2) did not differ significantly from the scores of the undergraduate college students (mean=14.4).

The significant difference between the California prisoner sample and the psychiatric outpatient sample, and the significant difference in MC-SDS scores between the present addict sample and the California prisoners suggests, then, that addicts may be more similar to psychiatric patients than to institutionalized prisoners on the characteristic measured by the MC-SDS.

The mean score of the addicts in this study was lower in comparison to the data available on the California prisoner sample and the University of Washington sample, suggesting that addicts may have a lower need for social approval than do either of these comparison samples. A table of comparisons between

MC-SDS scores of the present sample and the scores of the Crowne and Marlowe (1964) samples with which comparisons were made is contained in Table 9.

Table 9

t-Tests of Differences Between the MC-SDS Scores of Addict Sample and Selected Crowne and Marlowe (1964) Sample Scores

Comparison group	N	Mean	SD	t
Present (addict) sample	30	11.1	5.2	
California prisoners	80	16.7	6.0	4.51*
Psychiatric outpatients	40	12.2	6.4	.46
University of Washington undergraduate students	110	14.4	5.6	10.79*

* $p < .001$

Intercorrelations Between Dependent Measures

Since the relationships between some of the selected measures of TAT openness were not known from previous research, simple correlations and partial correlations between all five dependent measures were also computed.[4] Average number of words per card on the TAT correlated significantly with average time per TAT card ($r=.72$, $p<.001$), with the Openness Index ($r=.68$, $p<.001$) and with the Transcendence Index ($r=.74$, $p<.001$). Average TAT response time

[4] The author would like to thank Philip Abrami for advice on computer execution of a program for these calculations and for adapting a computer program to carry them out.

correlated significantly ($p < .001$) with the Openness Index ($r = .60$). Also, the Openness Index correlated significantly ($p < .001$) with the Transcendence Index ($r = .75$). The correlations between all dependent variables are indicated in Table 10.

Table 10

Correlations Between Dependent Measures

	r				
	MC-SDS	Average words	Average time	Openness	Transcendence
MC-SDS	1.00	.27	.28	.01	.02
Average words		1.00	.72*	.68*	.74*
Average time			1.00	.60*	.45
Openness				1.00	.75*
Transcendence					1.00

Note:- $N = 30$.
* $p < .001$

Since computation of correlations between several measures obtained in a single investigation can spuriously inflate the obtained correlations between any two measures through the influence of additional variables which may be related to each (Hays, 1963), partial correlations between pairs of the dependent measures, which adjust for the effects of the additional variables studied, were also computed. A significant partial correlation was obtained in this study between the Openness Index and the Transcendence Index ($r = .54$, $p < .005$), suggesting, as expected, that the two indices appear to measure a common dimension in TAT responses which is not spuriously due to correlation with any of the other TAT

variables studied. The Transcendence Index was also highly correlated in the partial correlation analysis with the average number of words given in response to each TAT card ($r = .58$, $p < .002$), indicating that the greater the verbal productivity evident in a TAT protocol the more likely the S was to provide fantasy and other projected material beyond the objective features of the TAT cards. A further result of the partial correlation analysis was a correlation between average number of words and average time per TAT card ($r = .55$, $p < .004$), demonstrating that these two formal characteristics of TAT responses tend to vary together independently of the effect of other TAT response characteristics measured in this study. All partial correlations obtained between the dependent measures are presented in Table 11.

Table 11

Partial Correlations Between Dependent Measures

	r				
	MC-SDS	Average words	Average time	Openness	Transcendence
MC-SDS	1.00	.26	.13	-.16	-.14
Average words		1.00	.55**	.02	.58***
Average time			1.00	.38	-.32
Openness				1.00	.54*
Transcendence					1.00

Note:- N = 30.
* $p < .005$
** $p < .004$
*** $p < .002$

Post-Experimental Questionnaire Results

Analyses of variance of responses to each separate quantifiable item of the post-experimental questionnaire completed by Ss by subcultural identity of test administrators indicated no differential responding of Ss to different test administrators or to different subcultural identities of test administrators, as shown in Table 12, except for two items. In reply to the item: "How much new and useful information about yourself do you expect to find out from having taken these tests?," addicts with non-addict testers indicated they expected more information (mean = 2.08, on a scale from "0" to "6" where "6" represents the maximum information expected) than did Ss with addict testers (mean = 1.82). In reply to the question: "How much did you try to 'fake it' because you felt the tests would show too much about you?," Ss who had been given the tests by different examiners responded significantly differently, regardless of the examiner's addict or non-addict identity. Addicts, therefore, seemed to perceive themselves as more inclined to be open in providing information about themselves with some examiners than with others, although the value of the mean rating (.95, on a scale of "0" to "6", where "0" referred to not faking at all) in response to this item does not indicate that "faking" occurred to any great extent.

Table 12

Summary of Analyses of Variance of Subjects' Post-Experimental Questionnaire Items by Addict versus Non-Addict Identity of Testers and Specific Examiners

	F						
Source	Like-dislike	Open-ness	"Fak-ing"	Inter-est	Differ-ent E	Infor-mation	More tests
Addict/non-addict identity of tester (A)	.62	.80	.05	.15	1.48	4.35*	2.32
Specific examiner (B within A)	.24	.28	3.02**	.18	.19	.25	1.28

* $p < .10$

** $p < .05$

DISCUSSION

Openness in Addicts' Relationships with Addicts and Non-Addicts

The absence of any differences in openness of addicts' responses due to the subcultural identities of the examiners does not support the prediction of this study's major hypotheses. Although the direction of the expected difference was not specifiable from the available theory, literature on the mutual influences of addicts on each other, as indicated by similarities in value and in daily life style, suggested that differences would occur between addicts interacting with addict as opposed to non-addict examiners. The two opposing hypotheses predicting a difference were: that addicts prefer to be more open with other addicts because they share values and life styles; or that addicts might be more able to be open with someone who is a stranger uninvolved in the addict's day-to-day problems. Neither of these is compatible with the results obtained.

The unexpectedness of these results in the face of considerable theoretical support for the occurrence of differences between addict-addict and addict-nonaddict interactions suggests that possible alternative explanations of them should be carefully considered. One consideration which applies to most behavioral science research is the degree of representativeness of the subject sample. Whether heroin addicts in Winnipeg are similar in essential ways to heroin addicts in other urban area is a question that can be answered only by assumption rather than by known fact at the present time. There are several possible reasons with respect to the characteri stics of the present sample why the findings obtained in this study do not correspond with predictions from theory on addiction and why the present findings may not hold for addicts in other urban areas. The great majority of empirical studies on heroin addicts in the English language psychological literature were carried out in the

United States, with a small number carried out in Britain, and very few in Canada. The addict subculture is reactive to the laws and law enforcement agencies within each of these countries, as well as to other social conditions within them, and therefore may be different in unknown ways from one country to the next. Results obtained from Canadian addicts may not apply to American addicts. Also, since the hypotheses of this study were derived from American investigators and based on reports from studies of addicts in American drug rehabilitation institutions or programs, it may be that some elements of their theories do not apply outside the United States. A further consideration of the representativeness, or lack of it, of Winnipeg heroin addicts is that Winnipeg has an extremely small addict population compared to that of many North American urban areas. It may be that the addict subculture of a small addict population produces different values or patterns of behavior among its members than occur in a city where heroin addicts number in the hundreds or thousands. For example, if Winnipeg addicts are almost all well-known to each other, then a Winnipeg addict's reaction to another addict from Winnipeg might be based on prior information about him and possibly on shared personal experiences, rather than simply on the fact of their joint membership in the drug subculture. In fact, most of the addicts in this study (N=33) were either personally acquainted with or had heard of the addicts who served as experimenters for the study.

The fact that addict subjects were in many cases acquainted with the addict experimenters while the non-addict experimenters were strangers to them would have further supported the prediction of differences in subjects' responses to the two groups of experimenters. The lack of difference, therefore, suggests

all the more strongly that some variables not differentially assessed for the two groups influenced addicts to respond in similar ways to both addict and non-addict testers. These may have included such variables as the expectation of all Ss that they would receive feedback, the preparation of Ss for research participation, or the stimulus value of the TAT cards.

Interpretation of the results of the present study is also dependent on the degree to which the psychological testing situation of the experiment can be presumed similar to the day-to-day interactions of addicts. Barnard (1968), Masling (1960), and Rosenthal (1963), among others, have stressed the complexity of the interaction between the respondent and the administrator of a psychological test, when the tests are administered in a one-to-one interaction. The Thematic Apperception Test is particularly sensitive to qualities of the administrator, the situation, and the interaction with the respondent (Zubin, Eron, & Schumer, 1965). The TAT was selected as the context for this experiment mainly because of its sensitivity to respondent-tester interactions. This quality, however, also creates a difficulty in specifying what influences other than those hypothesized produced this study's results.

Some of the influential variables in the experimental setting were evident from the measures used. The Transcendence Index, for example, indicated that differences in Es, such as their personalities or subtle differences in their manner of conducting the interaction, produced differences in the amount of the respondents' contributions beyond mere description of TAT cards. The post-experimental questionnaire administered to Ss showed also that Ss expected to obtain more information about themselves from their test performance if they had interacted with non-addict than with addict experimenters. They may have had the idea that non-addict testers would have somewhat more knowledge about the interpretation of the tests, or they may have

thought the non-addict testers would transmit the results of their tests more completely to the "psychologist" who was to provide the test feedback.

The first of these known influences on the results obtained, the specific examiner with whom Ss' interacted, would seem generalizable from the TAT situation to more naturally-occurring situations: addicts would be expected to react differently to the different individuals they meet in daily life. The amount of personal information about themselves anticipated by addicts from their experimental participation, on the other hand, is less likely to be an influential variable in many of the addicts' usual interactions.

Other possible similarities and dissimilarities between the experimental interaction in this study and addicts' real life interpersonal interactions are less obvious to specify, since they were not included as variables in the present investigation. Previous research is not helpful in supplying information on the comparability of these two situations, since the TAT testing situation has not been compared experimentally with more usual interpersonal interactions. Future research might usefully explore the degree to which the psychological testing situation compares with other interpersonal interactions.

Another possible explanation for the lack of differences in openness of responses given to addict and non-addict test administrators is the knowledge of Ss prior to their experimental participation that feedback from their tests would be provided by the principal investigator rather than by the experimenters. Subjects may have ascribed to them only the function of transmitting the results to the person who would "analyze" them. This conclusion on the part of Ss may have attenuated the impact of the test

administrators as individuals that would provide them with an intimate knowledge of the S's psychological functioning. Any inclination on the S's part to react differently to addict as opposed to non-addict experimenters may, therefore, have been reduced by the S's knowledge that feedback would be provided by someone other than the experimenters.

Two further assumptions made by this study are also possible limitations on the confidence with which its results may be interpreted. The first concerns the extent to which the TAT situation is appropriate for the measurement of "openness," and the second concerns the degree to which "openness" may be considered an indicator of valued or preferred relationships more than of less valued relationships. The appearance of openness, as opposed to genuine desire to communicate, can be created in response to projective tests by an S's providing a great deal of material, using many words with emotional connotations, or introducing personal information very directly into responses to the test stimuli (Hamsher & Farina, 1967) The possibility of this occurrence is especially acute in the present study, since addicts have been known to present the appearance rather than the actuality of openness in psychotherapy interactions (Levine & Stephens, 1971). Additional research is needed to permit accurate differentiation between these two possibilities in future research on openness.

The second possible limitation of this study with regard to the "openness" variable is that the interpretation of openness as an indicator of preference for a relationship is an assumption rather than an established fact. Particularly among addicts, since their relating behavior is considered different in a number of ways from

the interpersonal behavior of non-deviant populations, it may be inaccurate to use openness as an index of preferred or desired interaction. Clarification of this relationship also seems to depend on future study, perhaps by research establishing under what conditions or for what groups of individuals openness may not be a desired characteristic of interactions, even in interactions which an individual enters into by choice and appears to want to continue. It is possible in this study, for example, that addicts' curiosity in interacting with individuals presented as apprentice psychologists counteracted an existing preference for revealing personal information only to their peers, to produce the results obtained.

Clarification of the issues raised by the present study, including the possible limitations discussed above, is necessary future research, since addicts' relationships with others are a major theoretical and practical concern. As discussed earlier, for example, the low success rate of rehabilitation programs is most often attributed to the powerful attraction of peer group members, even for addicts who have successfully "graduated" from such programs (Levine & Stephens, 1971; Paschke, 1970; Rettig & Pasamanick, 1964; Stephens & Levine, 1971; Volkman & Cressey, 1963). The preference of addicts for addict company is a foundation for Paschke's Learning Theory - Peer Group model of the life cycle of addicts (Paschke, 1970), in which initial addiction and later re-addictions are viewed as reactions to behavioral models provided by peer group members and to the reinforcing consequences of peer approval for engaging in similar behaviors. Further application of learning theory to addiction

has predicted that addict peers become secondary positive reinforcers for an addict by their association with the positive consequences (for addicts) of taking a drug (Cahoon & Crosby, 1972), and that, therefore, interaction with addict peers requires more reinforcement value for addicts than does interaction with non-addicts. The questions with which the present investigation has been concerned have implications for all of these theories and therefore further research using methodological refinements shown to be necessary by this study is strongly recommended.

Conceptualization of "Openness"

The finding of significant differences between test administrators in the transcendence scores obtained from their respondents, while "openness" as measured by the Hamsher and Farina (1967) scale is not differentially affected, presents problems for the interpretation of the concept of openness employed in the present investigation. The rationale for the choice of the Transcendence Index as an additional dependent measure was the assumption that respondents who reveal more of themselves in terms of fantasies and other projections of their own personalities onto the stimulus materials of the TAT cards may also be considered more open or less defensive. The concept of "openness" defined by Hamsher and Farina as lack of defensiveness is relevant to the theoretical definition on which the present investigation is based, and there is no reason to expect that the rating scale developed by Hamsher and Farina is anything other than a measure of "openness." However, the Transcendence Index was also included in this study for a number of reasons. The first of these is its conceptual relevance to the investigation of open interpersonal communication

in the projective testing situation. Secondly, the Hamsher and Farina Openness Index has not been extended in its research applications or in its theoretical basis since its initial use by these investigators, and the Transcendence Index seemed a way to add to the understanding of the Openness Index and its meaning for the hypotheses of the present study. Thirdly, the greater reliability of the Transcendence Index was considered an advantage over the Openness Index, if the usefulness of the Transcendence Index as a measure of "openness" could be demonstrated.

The present investigation has borne out the assumption that the Transcendence Index contributes uniquely to an operational definition of openness. The reasonableness of the assumption that inclusion of material beyond mere objective description of a TAT card correlates highly with openness was supported by the significant correlation of .75 obtained between the Transcendence Index and the Openness Index based on the Hamsher and Farina Openness Rating Scale. However, the two measures were derived differently by their originators, and the present study represents only an initial investigation of their relationship. The fact that their conceptual similarity is supported by the high statistical correlation between them indicates that future research on either of these measures should consider the theoretical and conceptual similarities and differences between them further, since each may contribute to refinement of the other or to the simplification of both as measures of some common element or elements. Further research is also desirable since replication of this "transcendence"-"openness" correlation would increase confidence that the present findings are not a function of some third variable peculiar to this investigation alone.

There are few clues from the present investigation to suggest why the Transcendence Index was significantly related to verbal productivity on the TAT but not to average response time, while the Openness Index was significantly related to response time but not to verbal productivity. It may be that verbal fluency greatly increased the ease with which a person can provide elaborate TAT stories that extend beyond objective features of the TAT cards, while verbal fluency is not as necessary for a person to introduce personal information into a TAT story. This would take into account the obtained pattern of relationships, since it seems plausible that an individual might need more time to decide on the desirability of responding in a revealingly personal way. Further research seems necessary, however, to determine the accuracy of this interpretation of the transcendence-response length, and openness-response time correlations.

Implications for the Use of Projective and Objective Tests with Addicts

The fact that one of the TAT dependent measures, but not the Marlowe-Crowne Social Desirability Scale score, was influenced significantly by the test administrators is evidence congruent with the body of experimental and theoretical literature in psychological assessment, which indicates that projective tests are more susceptible than objective tests to conditions in the testing situation. (Anastasi, 1968, p. 511). The situational variables to which the addicts were sensitive in the testing situation of this study appeared to be the personalities of experimenters or minor differences in the manner with which they interacted with Ss. In clinical assessment it is likely, then, that addicts' responses to projective tests would be more reactive to the situation than

are their responses on objective tests, if the respondents in the present investigation may be considered as representative of addicts. Projective techniques appear to provide more information in terms of behavioral data in response to situational conditions. On the other hand, responses to such objective tests as the Marlowe-Crowne Social Desirability Scale might be more useful when, as seems to occur frequently in the lives of addicts, there are additional situational stressors at the time of testing, and the assessor wishes to minimize their influence to obtain less situation specific information on the respondent's functioning. These considerations should be taken into account in researchers' decisions when psychological tests are to be administered to addicts, with the choice of instrument type depending on the research questions and the conditions under which testing will occur.

From the fact that addict or non-addict identity of the test administrators did not seem to affect addicts' test responses, it would seem that "conning" behavior did not occur differentially between experimental conditions. The amount of "conning" would be expected to differ according to whether the test administrator was another addict or a non-addict stranger presented as an apprentice psychologist. However, the non-addict testers were not professional psychologists, a fact which was made clear to the test respondents, In addition, it is not known to what extent the younger age of the testers in the present study, as compared to professional psychologists, might have affects respondents' tendencies toward conning behavior. Additional research comparing addicts' responses to "apprentice" as compared to professional psychologists is necessary, therefore, before it can be concluded that addicts are unlikely to attempt "conning"

behavior in response to psychological tests. Research using professional personnel as test administrators, and comparing addicts' responses to the professionals with addicts' responses to testers for whom addicts would be expected to react differently, would also be required to determine more conclusively than does this study whether previous personality research on addicts has been done with addicts' genuine co-operation or whether "conning" is a more probable response of addicts to psychological tests given in research situations.

In addition to the fact of unknown comparability of addicts' reactions to "apprentice" psychologists rather than to professional psychologists presumably used in most research studies on addiction, the results of the present study are difficult to generalize to past personality research with addicts using psychological tests for another reason. In the present study, Ss all expected to receive feedback and were probably more motivated to participate in the testing as a result. Although previous studies administering psychological tests to addicts do not mention whether their Ss received feedback, it is highly unlikely that they did, due to the numbers of Ss most of these past studies have involved. The feedback expectation may be an extremely influential variable for addicts' behavior in psychological testing situations. To the degree that its influence is unknown, the results of the present study are limited in their generalizability to other psychological testing contexts in which addicts have been studied. Research investigating the effects of feedback expectations would provide information useful to future addiction researchers, who may wish to consider the advantages of motivated participation by their Ss against the disadvantages of providing time consuming feedback

to them.

Implications for Use of the TAT

The finding of lack of differences in responses to the TAT between respondents tested by addict as compared to non-addict examiners has some implications for TAT research and clinical use other than with addicts. The present results do not entirely coincide with research indicating the critical influence of the examiner's characteristics and behavior in the context of psychological testing (e.g. Barnard, 1968; Masling, 1960; Rosenthal, 1963), since the addict and non-addict identity of the testers did not influence Ss' responses. A number of interpretations of this discrepancy are possible, in addition to those discussed earlier in connection with addiction research. It may be, for instance, that the psychological testing situation is not useful as a context for investigating openness. Perhaps all respondents in such situations, regardless of characteristics of the tester, experience anxiety from being evaluated and therefore all react with a similar tendency not to be open. Alternatively, the results obtained in this study may be attributable to some relatively uniform psychological set about the tests held by Ss. For example, Ss may have been enthusiastic about the possibility of receiving feedback from their test results, and the enthusiasm or curiosity may have been powerful enough to outweigh the effects of differences between the test administrators. Subjects' general attitude to psychological testing may have had a similar effect. Any of these possibilities may have accounted for the lack of examiner differences and thus might have provided less of a contradiction to the previously mentioned research studies on the sensitivity of test respondents to examiner influences.

Post-experimental interviews with individual Ss carefully probing their attitudes toward psychological tests or toward this experiment would have helped to determine which of these possibilities affected their test behaviors.

A further alternative explanation for the present findings may be that openness or lack of defensiveness is less subject to examiner influences than are many other characteristics of responses to projective and objective psychological tests. An extension of this interpretation is the possibility that openness as a description of verbal behavior is more appropriately categorized as a "trait" or personality variable, rather than a "state" variable whose presence is determined by characteristics of the situation (Mischel, 1968). The lack of examiner influences on many of the dependent variables in this investigation requires consideration of this possibility that "openness" as measured by the Openness Index, verbal productivity, and response time on the TAT is unresponsive to the situational influences of this experiment. Additional research would be necessary to proble this possibility before the current findings can be safely applied to psychological testing situations in general, or even to other characteristics of addicts' responses to psychological tests.

Although most of the dependent measures used in this study were not different for different experimenters, it must be noted that the Transcendence Index did indicate significant differences between Ss tested by different examiners. Differences between experimenters other than their addict or non-addict identity, such as their personalities or small variations in their manner of conducting the interaction may have produced these results, or the results may be due to characteristics of this particular subject sample. The Transcendence Index

may simply be more reactive to such subtle interpersonal variables as experimenters' differing expectancies. Specifying which characteristics of the interactions affected the Transcendence Index differently than the other measures used would require research focusing on finer aspects of the interactions than did the present study. Perhaps only by detailed analysis of behaviors in the testing interaction, such as amount of eye contact between E and S, as revealed by videotape recordings, or analysis of voice characteristics of E from tape recordings, would answer the question of what E behaviors produced differences in transcendence scores while not affecting the Openness Index, verbal productivity or response time.

Implications of MC-SDS Findings

Addicts' scores on the Marlowe-Crowne Social Desirability Scale were not indicative of high need for social approval as defined by Crowne and Marlowe (1964). This finding is only implied by the present data, however, since the results from this addict sample were not compared with samples of the same age, socio-economic and educational status, or geographic location. In addition, the norms for MC-SDS scores were obtained from group administration of the test, while the present study administered the MC-SDS to Ss individually. The reliability and validity of the Marlowe-Crowne norms for individuals differing in these respects is not known. The comparisons with the normative data for prisoners and college undergraduate students suggest that addicts may be lower in need for social approval than these groups. The finding of no significant difference in MC-SDS

scores between the present sample and a psychiatric outpatient sample, and the significant difference in MC-SDS scores between the Crowne and Marlowe (1964) criminal sample and the psychiatric patient sample, raises the possibility that addicts may be more similar in need for social approval to psychiatric outpatients, at least on this variable, than to criminals with whom they have more usually been compared. Further research will be necessary to substantiate these possibilities since, as mentioned above, the available Crowne and Marlowe norms may not be appropriate for comparisons with the present sample. MC-SDS scores of non-addicts matched in age, sex, education, economic status, and geographic location with addict subjects, and administered the MC-SDS under the same conditions, would provide a more conclusive comparison for addicts' MC-SDS scores.

The question asked in this investigation concerning addicts' need for social approval merits the additional research suggested above. The numerous theories of addiction reviewed earlier (e.g. Paschke, 1970; Wikler, 1971b) strongly indicate that addicts' relationships with others, and particularly with their addict peers, may be instrumental in maintaining addiction. A logical beginning to investigating this social influence hypothesis of addiction maintenance is to discover how addicts may differ from other individuals in their social behavior, or in their orientation toward relationships with others. The present study of addicts' need for social approval was carried out as a beginning to investigation of social orientation among addicts, and the need for approval variable was selected for study because its theoretical rationale provided some possible explanations for the influence of addict peer groups on their members. Addicts' interpersonal

relationships and their social behavior have not been investigated to any great extent. The resulting lack of empirical information and the hypotheses of recent theorists on the importance of social factors both suggest that further research in this area may provide added insight into the problems of addiction.

Although Crowne and Marlowe (1964) present the MC-SDS as a measure of need for social approval, it was originally intended to measure social desirability response tendency (Marlowe & Crowne, 1960). Marlowe and Crowne have used the two terms almost synonomously, as demonstrated by their definition of social desirability as "a need for social approval and acceptance and the belief that this can be attained by means of culturally acceptable and appropriate behaviors (Crowne & Marlowe, 1964, p. 109)." However, a number of investigators have preferred to interpret MC-SDS scores as measures of social desirability in preference to need for social approval, since there has been some speculation not yet fully answered that these two concepts are not interchangeable as predictors of behavior (Goldfried, 1964). These differences in interpreting the meaning of MC-SDS scores should be considered in future research on this variable with addicts, since these two conceptualizations of the MC-SDS provide some contradictory predictions for the behavior of addicts. Raters of TAT responses of drug abusers in a study by Helwig (1972) judged the drug abusers responses to fall significantly more often than those of a control group of psychiatric patients into rating categories representing socially undesirable behavior. Schoolar, White, and Cohen (1972) concluded, on the basis of addicts' MMPI responses on an interpersonal check list, that "fully 90% of the drug abusers have basic intentions which could

be described as socially undesirable (p. 13)." They further described the addicts in their sample as having a tendency to "engage in behavior that is considered unacceptable by the achivement-oriented society (p. 12)," referring to behaviors in addition to drug-related activity. These investigations, which would predict the low MC-SDS scores found for addicts in the present study, highlight the necessity for resolving the paradoxical predictions for MC-SDS scores of addicts resulting from lack of correspondence between the need for social approval and the social desirability interpretations of the MC-SDS as they apply to addicts.

One possible explanation for this discrepancy is the fact that the socially desirable behaviors referred to in the MC-SDS are based on values considered desirable by the dominant North American culture. For individuals socialized into non-deviant groups in North American society socially desirable responses would also tend to be responses that elicit social approval from others. The MC-SDS scores of such individuals might be interchangeable, therefore, as indicators of social desirability response tendency or of need for social approval. The behaviors of addicts that tend to be reinforced by approval from addict peers include illicit drug taking, which is certainly considered socially undesirable by the dominant North American society, and possibly a host of other behaviors, values, and attitudes hinted at by Helwig (1972) and Schoolar, White, and Cohen (1972). Further research on need for social approval of addicts would be more appropriately conducted, if objective psychological testing based on the MC-SDS principle was desired to answer the research questions, by using items referring to behaviors considered

desirable within an addict subculture. Such a scale is presently not available. If it were, the investigation of addicts' need for social approval in this study might have been more informative.

The difference between behaviors considered socially desirable by addicts and those considered socially desirable by non-deviant North American society perhaps explains the low MC-SDS scores of the heroin addicts in this study, in comparison to the high MC-SDS scores of hard drug users obtained by Scherer, Ettinger, and Mudrick (1972). The hard drug users in the Scherer et al. sample were undergraduate college students who were not addicted and were neither predominantly nor regularly users of heroin. With these characteristics, the Scherer et al. Ss presumably also subscribed to the dominant values of North American society, and therefore, for them, the MC-SDS may have been an adequate measure of need for social approval. As discussed earlier, heroin addicts are less likely to subscribe to the social value system on which the MC-SDS is based and, therefore, it is not surprising that the results of the present study were not similar to the results obtained by Scherer et al.

A further theoretical issue concerning the MC-SDS which was of interest in the present investigation was the extent to which MC-SDS scores would predict defensiveness in responses to the Thematic Apperception Test (TAT). Addicts with high MC-SDS scores, as compared to addicts scoring low on the MC-SDS, were not significantly different in the degree of defensiveness they displayed on the TAT. This finding differs from previous research in which a positive relationship between MC-SDS scores and TAT defensiveness was found. The present study has used more

direct measures of openness than have the previous studies by Lefcourt (1969), Norman (1963), or Tutko (1963). On this basis, the lack of relationship between the MC-SDS scores and TAT defensiveness in this investigation would suggest that need for social approval is not necessarily predictive of defensive behavior. It may be that this relationship does not hold for addicts, and possibly other populations, while it does hold true for college undergraduate or psychiatric patients, as indicated by the Lefcourt, Norman, and Tutko studies. Whether the discrepancy between the findings of this study and those of these previous investigators is due to differences in subject populations or differences in the measures of defensiveness used is an issue which can be resolved only by additional research.

Effects of Age of Addicts

The effect of age differences between the majority of addict Ss in the study and a small subgroup of Ss of approximately twice the mean age of the majority, on responses to the MC-SDS, is a further finding of the present study which has implications for both future research and practical applications of it in the addict rehabilitation field. Older addicts appear to be almost a different "breed," and this seems particularly true of their responses to the MC-SDS. It appears that the older addicts in this study have more of a tendency to respond in ways considered more socially desirable by society in general, than do the younger addicts in the sample. It may be that the older addicts are more aware of what is considered by the general society to be more socially desirable, or it may be that they are simply more reluctant to present themselves as deviant than are younger addicts.

Older addicts also responded at greater length and took more time to respond to TAT cards. If they attributed a desire for long responses to the experimenters, the verbal productivity of these older addicts may have been due to a tendency toward behavior they considered socially desirable in the testing situation. A further possibility is that the comparative youth of the examiners made more of a difference to these older addict Ss than to the younger addicts, and that part of the older addicts' reaction to the situation was to provide longer TAT stories. Perhaps they did so with the thought that the more detail they provided, the more of their stories would be transmitted to the "psychologist" providing feedback, and the more accurate would the feedback be as a result.

Prior to this study, subjective observations have been reported in the research literature that older addicts have different success rates during and following participation in rehabilitation programs (Methadone Maintenance Evaluation Committee, 1968). The fact that many methadone treatment programs have not duplicated the remarkable success rates for methadone treatment obtained by the first established methadone rehabilitation program (Dole, Nyswander, & Warner, 1968; Methadone Maintenance Evaluation Committee, 1968) may be due to the older age of many of the addicts in the successful program. A report of the Methadone Maintenance Evaluation Committee emphasizes this characteristic of its addict sample from the program reporting the high success rates, describing the members of the sample as "volunteers, who are older than the average street addict and (thus) may be more highly motivated (p. 2714)." The greater verbal productivity and time taken to respond to the TAT of the

older addicts in the present sample may, similarly, have been the result of higher motivation to participate in the study. The present results, therefore, support this indication of some differences between addicts in different age groups and suggest the necessity for future research on the nature, extent, and consequences for both theory and treatment of addiction of such differences.

Summary of Implications for Future Research on Addiction

The results of the present study have some implications for theory and research on the addiction problem. Perhaps the major one is that the relationship between addicts and other addicts is more complex and less predictable than available theories indicate. Need for social approval as measured by the Marlowe-Crowne Social Desirability Scale does not appear to be a relevant explanatory variable for the influence which addict peer group members are hypothesized to exert on each other, possibly because the social values reflected by the MC-SDS may be different from the value systems of the addict subculture. A more appropriate evaluation of addicts' need for approval from others using a method based on the values of the addict subculture is necessary, therefore, before need for social approval can be disregarded as a source of peer influence on addicts which contributes to the maintenance and development of addiction.

In view of the fact that all suggestions and descriptions of the reciprocal influence process of addicts are based on hypotheses derived from learning theories of reinforcement (Paschke, 1970; Wikler, 1971b) and supplemented by the theorists' reliance on first-hand but informal observations made by professionals involved in the treatment of addicts, the quality of addicts' relationships with other addicts bears considerable

further experimental investigation, prior to further theorizing. The apparent absence of such a reciprocal influence process evident in the present study suggests that further research is necessary to determine how addicts influence each other, other than by serving as sources of drug information and supply.

Appropriate consideration should be given, however, to the fact that the experimental paradigm of the present investigation has not been used previously with addicts, nor are there other available data for comparison of addicts' performance on the MC-SDS. Replications and extensions of the current findings are, therefore, recommended before the results of this study may be interpreted with greater confidence.

The experience of the author in the present investigation is encouraging, however, as support for the use of methadone treatment programs, which are currently fairly widespread, as a useful setting for research on addiction. The major advantage of accessibility to addict populations is supplemented by the non-residential nature of such programs, in which former addicts can be included as research Ss during those time periods in which they are living in their more usual surroundings. Since addicts who eventually become participants in methadone programs may differ in unknown ways from the general population of heroin addicts, the generalization of research results from methadone program participants to heroin addicts requires some caution, however. The present sample may be considered somewhat exempt from this consideration, except for possible effects of time sampling in the lives of the addicts studied, since the urban area served by the methadone program comprising the setting for this investigation is sufficiently small in terms of the total addict population for program staff to estimate that at some time nearly

all addicts in the city have participated in the program.

Many recent recommendations for the treatment of addicts have praised rehabilitation programs in which former addicts are employed as models for change and as assistants in the counseling and rehabilitation process (Senay & Renault, 1971; Volkman & Cressey, 1963; Whitehead, 1973). The results of the present study suggest that the idea of former addicts being more powerful change agents for other addicts could profit by further investigation and less unqualified acceptance. The conclusions present in some of the addiction literature that addicts as a group do not trust and will not readily provide honest personal information to non-addict professionals or other non-addict rehabilitation workers did not appear to be the case in the present study. There have been few experimental investigations of either of these relatively well-accepted pieces of information about the treatment of addicts. The unsuccessful attempt of the present study to provide independent empirical evidence of them strongly suggests that considerable further research is needed in this area to distinguish between the actualities in the lives of addicts and unverified but often fairly prevalent hypotheses concerning both the addiction process and the treatment of addicts.

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Appendices

Appendix I

The Marlowe-Crowne Social Desirability Scale

PERSONAL REACTION INVENTORY

Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statement is true or false as it pertains to you personally.

1. Before voting I thoroughly investigate the qualifications of all the candidates.
2. I never hesitate to go out of my way to help someone in trouble.
3. It is sometimes hard for me to go on with my work if I am not encouraged.
4. I have never intensely disliked anyone.
5. On occasion I have had doubts about my ability to succeed in life.
6. I sometimes feel resentful when I don't get my way.
7. I am always careful about my manner of dress.
8. My table manners at home are as good as when I eat out in a restaurant.
9. If I could get into a movie without paying and be sure I was not seen, I would probably do it.
10. On a few occasions, I have given up doing something because I thought too little of my ability.
11. I like to gossip at times.
12. There have been times when I felt like rebelling against people in authority even though I knew they were right.
13. No matter who I'm talking to, I'm always a good listener.
14. I can remember "playing sick" to get out of something.
15. There have been occasions when I took advantage of someone.
16. I'm always willing to admit it when I make a mistake.
17. I always try to practice what I preach.
18. I don't find it particularly difficult to get along with loud mouthed, obnoxious people.
19. I sometimes try to get even, rather than forgive and forget.
20. When I don't know something I don't at all mind admitting it.

Appendix I (cont'd)

21. I am always courteous, even to people who are disagreeable.
22. At times I have really insisted on having things my own way.
23. There have been occasions when I felt like smashing things.
24. I would never think of letting someone else be punished for my wrongdoings.
25. I never resent being asked to return a favor.
26. I have never been irked when people expressed ideas very different from my own.
27. I never make a long trip without checking the safety of my car.
28. There have been times when I was quite jealous of the good fortune of others.
29. I have almost never felt the urge to tell someone off.
30. I am sometimes irritated by people who ask favors of me.
31. I have never felt that I was punished without cause.
32. I sometimes think when people have a misfortune they only got what they deserved.
33. I have never deliberately said something that hurt someone's feelings.

Appendix II

Initial Verbal Introduction of the Project Given to Potential Test Administrators

We'd like to ask you to do some things with the people on the methadone program that have to do with psychology. The kind of thing we have in mind is your spending some time testing people in the program and helping them to find out new things about themselves. It would mean you'd have to spend some time getting some background and learning new things, like how to give some kinds of psychological tests. Do you think you would be interested?

Notice Provided For Subjects Prior to Their Experimental Participation

A project will be beginning next week for all participants in the methadone program. Some of the people working on the project will be: (Here the names of the test administrators who were then on the methadone program were given.) Also working on the project will be advanced psychology students from the University of Manitoba. Their names are: (Here the names of the undergraduate volunteer test administrators were given). The project will provide you with information about yourselves which should be interesting and useful to you if you want to use it.

The first part of the project will involve taking several personality tests, which should take about an hour or so. After everyone has taken the tests, a meeting will be arraged for you, if you want one, to find out what the tests showed about you, with the psychologist who arranged the project. The test results will be absolutely private between you, your tester, and the person who gives you the results. We will try to arrange that the tests will be given at the time you usually are here, so it won't be necessary to be here especially for the testing. The testing will take place: (Here the days of the week and dates of the testing were given).

Appendix III

Summary of Content of Training Sessions for Test Administrators

The experimenter training sessions, lasting approximately one hour each, consisted of several parts: presentation of project rationale, description of tests to be given, description of E's role in test administration, and practice with test administration.

The project was presented as an opportunity to provide information to methadone program participants about themselves, as an opportunity to provide the test administrators with novel information and experiences, and as research concerned with the achievement motivation of addicts, being carried out in partial fulfillment of Master of Arts degree requirements of the investigator. The reason for requesting participation of the two different groups of E's was presented as an opportunity for the different input possible to the project from the methadone program Es, who were more knowledgeable about the way of life of the addict sample subjects, and from the advanced psychology students, as having some knowledge about psychology. The Es were assured that all Ss would have individual feedback sessions following the project, if they wished to have them, and that the Es themselves could be free to ask for and receive more information about the project results and the tests once the project was completed.

Information on the origins of the main tests to be used, the TAT and the MC-SDS (described as the Personal Reaction Inventory), was provided briefly. A simple description of the rationale for the use of projective tests, as contributing stories which gave indications of the personality of the respondent, since every person's stories are different, was also given. The TAT cards to be used were then shown to the Es.

Appendix III (cont'd)

The professionality and confidentiality of individuals who typically administer psychological tests was subsequently described to the Es, with the comment that they would be acting in place of professional psychologists in the context of the experiment, although at a different level since they would not be interpreting the tests to the respondents. The confidentiality of the sessions was strongly emphasized. Testers were also instructed that an aspect of the professional role they were to assume was neutrality in their interaction with the S: Es were instructed to "try not to influence the kind of story the person gives" and "try not to let the person know your reaction to the story." The Es were also strongly cautioned to keep their interactions with Ss to the minimum required by the nature of their task, in order to permit validity of the interpretation of the tests to the Ss, as well as to provide research standardization.

Details of the procedure during experimental sessions were then described, and pairs of Es then alternated between giving their own TAT stories and writing down verbatim the stories given by their partners. The Es were then assured that they would have detailed procedure notes with them during the sessions, and that in the face of any of Ss' questions that were not listed on question and answer sheets provided, they could inform Ss that answers would be available to them from the principal investigator at the time of the feedback session.

Appendix IV

Procedure Notes for Experimental Sessions Provided to Testers

WHAT TO SAY	WHAT TO DO
	Make sure that all TAT cards are in order and are not visible to the person taking taking the tests.
	Check to be sure the tape-recorder is ready to start. Use a new side for each person.
	Wait for the person to come in to your room, and when he or she does, say:
(For psychology students): 'Hi. I'm _____ (unless they already know you). I'm a psychology student from the University of Manitoba. Have a seat.	
(For program testers:) Hi. Have a seat.	
This session should take us about an hour. I'd like to remind you that the only people who will see your test results are you and I and the person who gives you your results.	
After this session, or when you talk to the person who gives you your results, you can have any questions you like about the project answered.	
The test I'm going to give you first is the Personal Reaction Inventory. I'd like you to read each of the items to yourself and then write 'T' for true or 'F' for false beside it, according to whether you think it's true of you or not. You can have as much time to finish all the items	

Appendix IV (cont'd)

as you like.
Do you have any questions?

If there are some questions, remember that you can answer most of them by repeating in almost exactly the same words that part of the instructions that the question is about.
If you can't answer a question that way, check your question and answer sheet for an answer that fits.
When the questions have been answered, or if there are no questions, give the person the test and say:

Now I'd like you to go ahead and do the test. Let me know when you have finished.

Let the person work on the test until they have finished. Any questions that the person has during the test should be answered the same way as the questions after the instructions are handled.
When the person lets you know that he has finished, say:

Thanks. You did that pretty fast.

Take the first test away from him or her, and while handing them the two sheets for the second test, say:

Now we'll begin the next test.

Then read out the instruction sheet for the second test slowly and carefully.
Then say:

Do you understand?

If the person does not understand, go over the instructions until the person says he understands. Then say:

Go ahead with the question. Let me know when you have finished.

When the person says he is finished, take both pages of the test away from him or her, and say:

Thanks.
Now I'm going to show you some pictures one at a time and I'd like you to make up a story for each picture. Tell what is

Appendix IV (cont'd)

happening in the picture, what has led up to the situation, and tell how it turns out.

I will be writing down the stories you give, but to be sure that I get down all the things you say, I'm going to check it later against a tape recording of your stories. As you can see, the tape recorder and the microphone are over there.

The tapes will be erased as soon as the accuracy of what I write down is checked.

There are some questions about this test that I can answer now and some that I can answer only after you've taken it. Do you have any questions about it now?

If there are questions that can be answered by repeating the part of the instructions that the questions are about, use just about the same words to answer them as are in the instructions. For any other kinds of questions, check your question and answer sheet.

If there are no questions, or when the questions have been answered, turn on the tape recorder and say:

Okay, here's the first picture. Make up a story for it.

Then show the person each card, one at a time, and write down everything the person says to you after you have shown him the card.

You don't have to repeat the instructions each time - just show the cards, one at a time, in order.

Always write down the number of the card you're writing about.

Appendix IV (cont'd)

As the person is giving you the story and you are writing it down, check whether they have talked about what led up to the situation in the picture, what is happening in the picture, and how it turns out.

Ask questions about these things in about the same words as the instructions use, if the person has left them out of his his story.

When you get to the blank card, Card 16, say:

See what you can see on this blank card. Imagine some picture there, and describe it to me in detail.

If the person tries to do it and can't come up with anything, say to him:

Close your eyes and picture something.

Wait for the person to describe what he is seeing, and then say:

Now tell me a story about it.

Write the story down just as for every other card, and then do the last picture card.

When all of the cards are done, turn off the tape recorder, and say:

We've finished the tests now. You'll be able to find out how you did on them in a few minutes if you want to find out.

It's important that everybody who is (was) on the program gets a chance to get true information about themselves from the test. Sometimes the more people know about the tests in advance, the less true information the tests give about that person. So we'd like to ask you not to say anything until everyone here who has been on the

Appendix IV (cont'd)

program has taken the tests. Okay?

Wait for the person to answer, and if they disagree, remind them that it's important for each person to get results that will be helpful to them, and it's not fair if they ruin someone else's chances of getting useful results back from his test.

When the person has agreed not to talk about the tests until the testing is over, say:

Good.

Then the last thing I'd like you to do is to answer some questions about what you thought of the tests.

Read each of the questions carefully and then circle the answer you agree with most.

As you are saying this, give the person the last question sheet.

When you're sure that the person has finished answering it, say:

Thank-you. That's it, then.

If there were any questions you said you would answer after the tests were over, answer them now.

When the questions have been answered, or if there were no questions, say:

You can find out about how you did (approximate time of wait until debriefing sessions would be held was given here).

Remember not to talk about what you did in here until everyone has taken the tests.

Walk the person to the door, and then come back and fill out your own question sheet of your opinion about the person's reactions to the test.

Appendix IV (cont'd)

Remember to circle the answer you agree with most.

When you have finished., collect all the papers from that person together; write down the number that the person came in with on the back of each paper.

Then turn your tape over to the other side ready for the next person, and make sure all the TAT cards are in the right order, and that all the other sheets of paper are ready for the next person.

Sample Answers to Subjects' Expected Frequent Questions Provided for Testers

If you're asked anything you don't know about the tests, say:
"I can't tell you that, but you can find out about it in your meeting with the psychologist who will give you your test results."

If you're asked something about the tests that you do know, but that is not in the instructions for that test, say:
"I can't tell you that now, but we can talk about it after you've done the tests."

If you're asked why this project is being done, or why the tests are being given, say:
"The project is being done partly for research, but also to provide people on the metha done program with some useful information about themselves."

If the person asks why he or she has to do the tests, say:
"If you want to find out what they're like or how you do on them."

If the person asks "How do I know the tape recordings will be erased or that nobody else will find out how I did?" say:
"You'll have to take our word for it, but we've promised you that we will not say anything to anyone else about anything you said while doing the tests, and that all the answers you gave will be confidential to you and me and the person who gives you the results."

If the person asks you a question while he is doing the test that has to do with "how" to do the test, and the answer to the question isn't in the instructions, say:
"Do what you think best."

Appendix V

Pre-Experimental Questionnaire Given to Experimenters[5]

1. What do you think of the idea of having this project?
2. How much do you think you will enjoy working on this project?
3. What made you decide to work on it?
4. What about this project do you think you will like best?
5. What about this project do you think you will like least?

Post-Experimental Questionnaire Given to Experimenters

1. What aspect of your experience in working on this project did you enjoy most?
2. What aspect did you enjoy least?
3. What do you think the Personal Reaction Inventory is supposed to measure?
4. What do you think the Thematic Apperception Test (story-telling test) is supposed to measure?
5. What hypotheses or research questions do you think this study was testing?
6. Why do you think both university students and participants on the methadone program were asked to give the tests in this study?

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[5] The questions in both the pre- and post-experimental questionnaires for experimenters were presented in booklets, with a single question on each page.

Appendix V (cont'd)

Experimenter Post-Session Rating Scale of Subject's Participation

1. Rate the person's behaviour during the tests on a scale from -3 to +3, where -3 means the person seemed to dislike doing the tests very much, +3 means the person seemed to like doing the tests very much, and 0 means the person seemed neither to like nor dislike doing the tests.

   -3 -2 -1 0 +1 +2 +3

2. Rate the person's behaviour during the tests on a scale from 0 to 6,

   0 1 2 3 4 5 6

3. Rate the person's behaviour during the tests on a scale from 0 to 6, where 0 means you feel the person was not at all concerned about revealing too much and did not try to take the tests at all, and 6 means you feel the person tried to take a great deal to try to keep from being too revealing about himself (herself)?

   0 1 2 3 4 5 6

4. Rate the person's behaviour during the tests on a scale from -3 to +3, where -3 means the person seemed to find the tests extremely dull and boring, +3 means the person seemed to find the tests extremely interesting and enjoyable, and 0 means the person seemed to find them neither interesting nor uninteresting.

   -3 -2 -1 0 +1 +2 +3

5. About how many times did the person change his (her) answers to the first test?

   not at all once or twice several times more than ten times

6. If the person had the chance to take more personality tests than the ones you gave him, do you think he (she) would have taken them?
   Rate your opinion about this on a scale from 0 to 6, where 0 means the person would probably not want to take any more tests at all, and 6 means the person would probably be willing to take as many more tests as you wanted to give him (her).

   0 1 2 3 4 5 6

Appendix VI

Post-Experimental Questionnaires Given to Subjects

1. Would you rate how you feel about the tests you took on the scale below, where -3 means you disliked doing them very much, +3 means you liked doing them very much, and 0 means you neither liked nor disliked doing the tests.

   -3 -2 -1 0 +1 +2 +3

2. Did you find it hard or easy to be open and honest on the tests?
   Rate how you feel about this on a scale from 0 to 6, where 0 means you found it very easy to be open and honest on the tests, and 6 means you found it very hard to be open and honest on the tests.

   0 1 2 3 4 5 6

3. How much did you try to "fake it" because you felt the tests would show too much about you?
   Rate how much you "faked it" on a scale from 0 to 6, where 0 means you did not fake at all, and 6 means you tried to fake a great deal.

   -3 -2 -1 0 +1 +2 +3

4. How interesting did you find the tests?
   Rate how you feel about this on the scale below, where -3 means you thought they were extremely dull and boring, +3 means you thought they were extremely interesting and enjoyable, and 0 means you thought they were neither interesting nor uninteresting.

   -3 -2 -1 0 +1 +2 +3

5. How many times would you say you found yourself changing your answers to the first test while you were doing it?

   not at all once or twice several times more than ten times

6. If you had a different person giving you the tests, would you have given different answers than the ones you gave?
   Rate how you feel about this on a scale from 0 to 6, where 0 means you think you would have answered exactly the same way, and 6 means you would have given very different answers if someone else had given you the tests.

   0 1 2 3 4 5 6

   If you think you would have given different answers with a different person giving you the tests, who would you have given different answers to?

Appendix VI (cont'd)

If you think you would have given different answers with a different person giving you the tests, how would your answers have been different?

7. How much new and useful information about yourself do you expect to find out from having taken these tests?
Rate how you feel about this on a scale from 0 to 6, where 0 means you don't expect to find out anything new or useful about yourself, and 6 means you expect to find out a great deal of new and useful information about yourself.

0 1 2 3 4 5 6

8. If you had the chance to take more personality tests and to find out how you did on them, would you want to take them?
Rate how you feel about this on a scale from 0 to 6, where 0 means you would not want to take them at all, and 6 means you would want to take them for sure.

0 1 2 3 4 5 6

Appendix VII

Manual for Rating Openness

(Hamsher & Farina, 1967a)

Degree of openness in communicating: This rating attempts to reflect the degree to which the subject uses the projective as an avenue of personal communication. Each story is to be rated individually ....

1 - Responses in this category show no attempt to communicate. The clearest indication of this rating is a rejection of the card, with no story told at all. It is considered equally significant if the subject responds that it is only a picture and makes little or no attempt to do more than describe the major features. Responses of stories may still be given this rating if they are characterized by several of the following features to a marked degree: stilted, stereotyped, sparse plot; character unlike subject in every major respect ... very unelaborated.

2 - Responses in this category contain some of the features of the previous one, but to a more limited degree. They contain definite attempts at evasiveness: emphasis on description with limited elaboration; some distancing of story from person's own frame of reference; some stereotypy. Still there are infrequent indications of limited personalization and sparse suggestions of a desire to communicate meaningful information.

3 - This category contains those responses that seem to reflect to equal degrees a desire to communicate and an inability or unwillingness to do so. Responses that are equivocal, uncertain, are also given this rating.

4 - Responses in this category reflect the same degree of tendency toward openness that category 2 suggests in the direction of guardedness. That is, they are responses which give the general impression of openness, but there is some evidence of reservation and/or inability to eliminate all defensiveness. Here there appears to be identification with characters in the story, as well as personalization of the theme. Stories that are conversational, freely elaborated, and sound as if they could relate to events in the subject's own experience generally fall in this or the next category. There is apparent involvement with the story and a willingness to extract a story from the picture. There must be some

Appendix VII (cont'd)

indications of guardedness or evasiveness to obtain this rating.

5 - This category contains those records which reveal an obvious desire to communicate through the test. Responses are clearly personalized and fully elaborated. The features described in the preceding category are to be found here without the elements of defensiveness. To be given this rating, a record must suggest definite inferences about the subject himself.

Appendix VII (cont'd)

Additional Rules for Rating Openness

(Compiled by present author)

1 - card rejection or description alone
- a very extreme rating of unwillingness to be revealing

2 - minimal interpretation of events pictured on the card (usually just a single instance of interpretive comment)
- involves dealing mainly with very obvious features of the card
- often is the appropriate score for a stereotyped description of outcome, without real consideration or elaboration
- may contain some description of emotions of characters but these will be either minimal or will be a distortion of the pictorial representation of emotion given in the card
- may include some features of a "3" rating, but to be given a rating of "2" the story must be extremely brief and unelaborated.

3 - somewhat more elaborated description of the card, and somewhat less stereotyped description than that given a "2" rating
- may include some possibility that the story could occur in the person's own life
- usually includes more than one interpretive comment about some aspect of the picture
- occasionally includes those cards dealing with "heavier" in the sense of more emotional situations than those described for category "2" ratings, but the descriptions are less elaborated and more indecisive than those given category "4" ratings (i.e. there is little or no elaboration or mention of the inner life of the characters depicted, as compared to stories given ratings of "4")
- frequently, cards given this rating are missing significant parts of stories (either past, present, future, or some description of the relationship of the characters to each other, or some combination of these features, is missing)
- may be given to stories which provide evidence of a person's attitude of being involved in making up a story (i.e. may include quite a lot of description), but with definite indications of the person's wanting to keep the story at a distance from himself (herself) by means of:
  - having the story occur in a time or place likely to be unusual to S's experience
  - adding lightness or joking tone to the cards or by deliberately providing

Appendix VII (cont'd)

a ridiculous story but nevertheless a somewhat elaborated one
- responses that are extremely brief but almost entirely interpretive (going beyond mere description of the card) may be included here.

4 - provides definite indication that this card belongs to the person's personal frame of reference
- fair degree of detail is included
- considerable interpretation of the internal life of the characters is given
- some hesitation and avoidance of being completely open is present.

5 - a very extreme rating for stories indicating no doubt of the person's intent to communicate openly without reservations.

Appendix VII (cont'd)

Examples of TAT Stories Given Different Openness Ratings

Rating "1"

"I'm lost. I can't tell you nothing about this one. Okay?" (Card 2)

Rating "2"

"This is a tough one. Looks to me like a guy who took up homesteading, is working hard to make it work - and, ah .. one of these women approves and one .. the other don't approve - but I think he'll succeed." (Card 2)

Rating "3"

"In this one there's a woman and a man. The man looks like he's crying and the .. the .. the chick looks like she's, ah, dead, and, ah .. maybe he found her dead and maybe he killed her himself. Or she could have died .. died of a sickness, but I don't think so. Anyways, the guy feels really guilty about what's happened, and, ah, at the moment he can't really face it. He's probably going through a state of mind, ah, that, you know, when somebody dies, ah, you say, ah, well I've done this to them, I've done that to them, you know. I .. I guess he's, ah, kind of scared, scared for the .. the broad and scared for himself. That's about it." (Card 13)

Rating "4"

"There is a man that seems to be looking through the window of his dark home, lonely, and probably thinking what it would be like .. to have a comforting feeling of coming home and being relaxed with no worries. That's it. (E asks question). .. That he has probably had a rough life and darkness means nothing to him, an outer part of him; deeply inside of him he'd like to .. ah, in darkness, he would .. does not show his feelings on the outer part of him, but in the inner part of him would like to have a fulfillment, happy life which would be proved by having a room .. a home that was bright so that he would not think of having a room that was dark or not caring. He would care if he had something to come home to, and I guess he is contemplating how he will get his goal in life by looking out of the window and thinking deeply how he should go about it. That's it." (Card 14)

Appendix VIII

Scoring Manual for the Transcendence Index

(Prola, 1970a)

The Transcendence Index is a method of scoring descriptions of TAT pictures for the extent to which they proceed beyond what is actually present in the pictures. It consists simply of noting those statements in the TAT descriptions which are not objectively given in the picture: the total number of such elements is used as a measure of fantasy.

Fifteen different kinds of transcendence are described below, together with the rules for scoring them.

Categories of Transcendence

1. Relationship refers to the characterization of figures as related to other figures in the same picture. The great majority refer to kinship, but others, such as friend, suitor, fiancé etc., are also included. Note, however, that

a) Sequiturs should not be scored separately. In the description, "She is his mother. The son is standing behind her" only one score is given for the relationship, not two.

b) A relationship to a figure not in the picture should not be scored; both figures must be in the picture.

2. Evaluation refers to

a) The characterization of figures or objects in the picture by an evaluative statement, either aesthetic or moral. If the evaluation is made of more than one person or object simultaneously (they are ugly"), only one score is given. If the persons or objects are mentioned separately, both are scored, as in "The old woman and the young girl are ugly."

b) Statements that a figure or object in a picture, or the picture as a whole, remind the subject of a person, place, object or event in his own life. Regardless of the length of such statements, only one score is given for them.

3. Atmosphere refers to

a) The characterization of the whole or part of a picture in terms of the emotional response it elicits in the subject: "This picture looks calm and peaceful."

b) Giving a specific appellation to the setting, such as "courtroom," "jungle," "dining room," etc. Such descriptions are not scored when the

Appendix VIII (cont'd)

setting is clearly given in the picture, such as the graveyard in Card 10, for example.

4. Symbolism refers to the conscious and explicitly verbalized ascribing of a symbolic meaning to the picture: "This is climbing the ladder of success."

5. Emphasis refers to the singling out or stressing of a part of the picture: "The most important part of this picture is ..."

6. Physiological condition refers to statements attributing physical states to a figure in a picture, which cannot be represented pictorially in an unambiguous manner: "He is asleep." "She is dead." "He is sick."

7. Possession refers to comments that an individual owns an object in the picture. Statements of this kind, however, are not scored if the object is a piece of wearing apparel that is worn or carried by the figure.

8. Occupation refers to

a) The assignment of an occupation to a figure in the picture, such as "doctor," "lawyer," etc. Here also, sequiturs are not scored: "A doctor and his patient" or "A lawyer and his client" each receive only one score.

9. Quantification refers to numerical statements about the specific time of day, dates, ages, heights, etc. Such statements are scored only if they are exact and not approximation. "She is 20" receives a score, but "She is about 20" does not.

10. Spatial transcendence refers to the inclusion of events, persons, or objects which are outside the field of vision represented in the picture.

11. Speech content refers to verbal statements made by figures in the pictures. This category does not refer to statements such as "He is speaking." It is scored only if:

a) the specific content of the conversation is given, or

b) the verb used gives an indication of the content of the speech: "She is pleading." "He is arguing."

Appendix VIII (cont'd)

12. Temporal transcendence refers to the inclusion of events which occur prior to or after the event shown in the picture.

13. Intraception refers to the ascribing of emotions, desires, thoughts, fantasies, actions, movements, etc., to the figures in the picture.

a) Simple statements which meet this criterion are given one score: "He is daydreaming." "She is running."

b) If the content of the emotions, feelings, thoughts, etc., are given, give an additional score: "He is daydreaming about his girl friend."

c) The content of the intraception, as specified above, should be scored only if it is in itself transcendent. In the above example, if the girl friend is in the picture, no score is given for content of intraception.

14. Imperative refers to comments that a person in the picture "should," "must," etc., act, feel, or think in a certain manner.

15. Ability refers to statements that a figure in the picture can or is able to do something.

General Scoring Rules

1. If alternate or multiple descriptions are given, both are scored.

2. If a transcendent comment is repeated, it is scored only once if exactly the same words are used. If different words are used in the repetition, another score is given. Different forms of the same verb or noun are not considered different words. If the subject says, "He thinks" and later says "He is thinking" the second statement is not scored.

3. If a simple sentence contains more than one transcendent comment, only one score is given. For example, if one man is shown in a room, and the subject states that another man has just left the room, the statement is both a spatial transcendence and a temporal transcendence, but only one score is given.

Some Specific Scoring Problems

The following types of responses, which occur with some frequency, should not be scored as transcendent:

1. Comments about the physical aspects of the picture: "fuzzy," "grainy," "a rubbed effect," "a painting," "a sketch," etc.

2. Statements about the physical size or weight of a figure unless there is no objective basis in the picture for making such a judgment.

3. The season of the year in an outdoor picture.

Appendix VIII (cont'd)

4. References to having seen the picture before, as in a psychology textbook, for example. Note difference between this and Category 2(b).

The following types of response are also frequent, and should be scored:

1. Remarks about the intentions of the artist or photographer.
2. Comments about the historical era of the picture, or from which the clothing, hairstyles, makeup etc., are derived.
3. Description of the picture as being derived from a novel, play, movie, television program etc.
4. Description of a figure in the picture as resembling some well-known person, such as an actor, political figure etc.
5. Statement of an inability to discern the facial expression of a figure.
6. If a figure is said to be "looking for something" or "looking at something," the object looked at is scored if it is specified and is itself transcendent.
7. Indecision or ambivalence about the sex of a figure, is scored, even if it is eventually resolved.
8. Comments about the picture being unreal or surrealistic are scored.

Scoring Procedure

Read each description and simply underline all transcendent comments according to the rules given above.

Appendix VIII (cont'd)

Additional Rules for Scoring Transcendence

(Compiled by present author)

General Rules

1. "Simple sentence" refers to a subject-verb-object combination, without additional phrases. (Bracket simple sentences and underline only one transcendence in each.)

2. When a card is ambiguous or unclear in some of its features (e.g. Card 20) definite statements about undecipherable objects in it are considered "spatial transcendence."

3. When the subject's wording is ambiguous and therefore, scoring is doubtful, don't score for transcendence.

4. If the whole story concerns events in the subject's own life, score as usual, and add "one" for the category "Evaluation, (b)."

5. Events, not states, in the past, are scored for temporal transcendence.

Rules Particular to Verbs

1. Very obvious intraceptive movement or action that does not go beyond the objective features of the card is not scored.

2. "Is going to" refers to the future, so is scored as an instance of temporal transcendence.

3. Passive voice verbs are not scored for intraception.

4. Infinitives are not scored for intraceptive movement or action, but they may be scored for other transcendences.

Appendix VIII (cont'd)

Examples of TAT Stories Given Different Transcendence Ratings

Words or phrases scored for transcendence are underlined.

Example 1

"Well, this guy's in a .. he's in a jail cell, crying and feeling sorry for himself, asking himself why he committed those crimes." (Card 3, 5 instances of transcendence.)

Example 2

"This looks .. oh .. give me a chance to get through .. This looks to me like a mother's very disapproving of a son, son, for something or other, and he feels very bad about it .. From the set of his face, it looks like he's going to go ahead and do whatever it is he's got on his mind anyway, even though he's going to hurt her .. hurt his mother. Well, that .. well, it's something that, ah, he wants to do and that she disapproves of, and .. ah .. he's .. he feels very bad about his mother disapproving of it but I think he'll do it anyway. He makes you feel, well, 'I hate to hurt you but that's the way life is.'" (Card 6, 10 instances of transcendence.)

Example 3

"Ah, I see, like, a water fountain or water fall .. and .. ah .. it's, ah, psychedelic, sort of. Ah, it's like a poster I've seen, you know, like there's a .. there's a broad standing at the top with her arms wide open. She's just trying to get the people together, I guess. And, ah, it's in a .. in a deep valley, with, ah, mountains, you know, it's mountains around in the deep valley, and, ah, there's big high mountains around at the sides. Ah, the sky is blue and there's clouds in it, a lot of clouds and I can see cactuses and cactus flowers on it. And .. and the chick, she's, ah, she's wearing sort of beads, but, ah, just beads, you know, just going like this, sort of thing, and it's not covering any of .. her .. of her body, it's just freely open, you know. That's about it." (Card 16, 15 instances of transcendence.)