Social Intelligence in Alcoholics

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SOCIAL INTELLIGENCE
IN
ALCOHOLICS

by
Carolyn Ann Kowatsch

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of Loyola University of Chicago in Partial Fulfillment
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LIFE

Carolyn Ann Kowatsch, nee Shough, was born on March 21, 1947, in Cincinnati, Ohio. She lived in Covington, Kentucky and Cincinnati, Ohio during her childhood. She attended the Cincinnati public schools through the sixth grade. She switched to a Catholic parochial school for junior high school. She moved to Orlando, Florida in 1962, but continued to spend the academic year in Cincinnati in order to complete her high school degree at St. Ursula Academy. She graduated in June, 1965. She obtained her B.A. in psychology from Edgecliff College, also in Cincinnati, in June, 1969. She graduated summa cum laude and was first in her class. She was a member of several honor societies: Kappa Gamma Pi, Sigma Phi Sigma, Psi Chi and Who's Who Among Students in American Colleges and Universities. She received the Sister Mary Constance Psychology Award and received an honorable mention in the Woodrow Wilson Fellowship Competition.

In September, 1969, she began her graduate training in clinical psychology at Loyola University in Chicago on a USPH grant. In 1971 she did a 500 hour clerkship at Loretto Hospital. From September, 1971 to August, 1972, she was at Rush-Presbyterian-St. Luke's Medical Center for a 2000 hour clinical internship.

She married Helmut Kowatsch on August 15, 1970. They currently have no children. Mrs. Kowatsch is presently employed part-time at the Loyola Child Guidance Center while completing the requirements for a doctorate degree in clinical psychology.
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CHAPTER I

INTRODUCTION

Jellinek (1960) defined alcoholism as "any use of an alcoholic beverage that causes any damage to the individual or society or both [p. 35]." Critical in most definitions is an inability to stop drinking even though this is consciously willed (NIMH report, 1967). Fox (1967) stated that alcoholism is a major health problem. He cited several statistics to support this. In the United States 70 to 80 million people drink. Six and a half million are alcoholics. Fox (1967) added that 25 to 30 million people are involved when one considers "that for every one of the 6 1/2 million cases there are at least 5 to 6 other persons adversely affected by it (spouses, children, parents, employers, friends, etc.) [p. 329]." Hayman (1966) described the extent of the problem, also, when he pointed out that there is alcohol dependency in 10% of the adult population and alcoholism in 5%. When it comes to treatment, the successes are few. Hayman (1966) reported that over half of the psychiatrists have obtained no recoveries whatever in working with alcoholic patients. Four-fifths have a 10% recovery rate or less. Alcoholics Anonymous is considered to be one of the most successful agencies for treating alcoholics. Nevertheless, psychiatrists believe that only one-tenth of Alcoholics Anonymous's members remain abstinent for two years and only half are well-adjusted. There is no denying that alcoholism is a critical problem for the mental health worker and researcher.
Research on the Alcoholic Personality

A great deal of the research on alcoholism has been devoted to trying to discover what the "alcoholic personality" is like. The hypothesis seems to have been that alcoholism is the result of a certain personality type. If it could be defined or described, it would be easier to predict who is likely to become an alcoholic and to understand the reasons why. The ultimate goal would be to find clues for its prevention or, at least, early detection so treatment could be less costly in time, energy, and money. Lisansky (1967) stated quite accurately that this search for "the 'persons of one type' likely to become alcoholics [p. 4]" was an extremely naive approach. The goal was admirable, but unfortunately little evidence could be found for a specific alcoholic personality.

The findings of those few researchers who did "discover" a specific personality type are contradictory. Machover and Puzzo (1959) postulated that the typical alcoholic is schizoid. That is, the alcoholic shows general ambivalence, pervasive immaturity, low self-esteem, excessive passivity, unsure reactions of hostility and depression, guilt feelings, failure of control mechanisms, prominence of denial mechanism, and dependence strivings. Podolsky (1963) was more concerned with a trend toward sociopathy. Fagan (1971) also stated there is one type, but it is not neurotic or sociopathic and could be identified by means of the 16 Personality Factor Test. Winokur (1971) stated that there are two types: primary depression and sociopaths. Stein (1971) cited 11 different types. Thus, there was no agreement as to what the alcoholic personality type was.

Most reviewers concluded that no specific alcoholic personality has been identified. Sutherland, Schroeder, and Tordella (1950) extensively re-
viewed the research on the personality of alcoholics. They stated, "No satisfactory evidence has been discovered that justifies a conclusion that persons of one type are more likely to become alcoholics than persons of another type [p. 559]." Syme (1957) updated this review and came to the same conclusion. Diethelm (1955) and Armstrong (1958) also reinforced the conclusion, stated by Rosen (1960), that "alcoholics do not represent a unique personality type [p. 265]."

Armstrong (1961) and Jellinek (1960) also pointed out that it is impossible to determine personality characteristics without taking into account the interaction of socio-cultural influences. Even if a specific personality type should be found, it would not explain why one man of that type would become an alcoholic and another would not. Lisansky (1967) posed what would be a more appropriate question for investigators to explore:

What character or personality traits tend to appear in certain individuals, which, together with membership in highly prone social groups, make for a predisposition or a vulnerability to alcoholism [p. 4]?

Consequently, research has generally split into two directions: socio-cultural influences and specific traits.

Research on Specific Traits of Alcoholics

One of the first researchers who tried to assess a specific trait rather than globally investigate the alcoholic personality was Meyerson (1940). He believed that alcoholics had a basic trait of social ambivalence, i.e., hedonism vs. asceticism. Zwerling (1959) stated that there probably is a "constellation of traits [p. 544]" which may fit into many personality structures. Hayman (1966) defined this more specifically as a "core of oral traits [p. 100]." Lisansky (1967) pointed out a number of areas that seem significant
to investigate: ego defenses, especially denial, handling of aggression, low frustration tolerance, psychosexual immaturity and dependency. Dependency is a much discussed variable with respect to alcoholics. Blane (1968), in fact, titled his interesting book, *The personality of the alcoholic: The guises of dependency*. A recent researcher (Tremper, 1972), however, stated some of the dependency attributed to them may be the result of the social situation of being in a hospital. Since not all the studies relating dependency to alcoholics have been done on hospitalized patients, Tremper's argument would only seem to account for a minimal amount of the variance attributed to dependency. Another investigator, Pryer (1970) pointed out that affiliation may also be an important variable because alcoholics score low on affiliation on the Edward's Personal Preference Schedule. It would probably be informative to investigate the social nature of alcoholics in general, e.g. sociability, social skills, social intelligence, etc.

Two valuable longitudinal studies have been concerned with consistent traits or important transitions found in childhood, adolescence, and adulthood of those males who later became alcoholics. McCord and McCord (1962) described these preadolescents as outwardly self-confident, evidencing unrestrained aggression, sadism, sexual anxiety and activity rather than passivity. One noticeable item is that these preadolescents emphasized their independence while the adults were often dependent. In adolescence they displayed a facade of intense masculinity. Jones (1968) had quite similar findings. She found a core of traits in junior high school, senior high school, and adulthood. Problem drinkers were undercontrolled, extroversion, impulsive, rebellious, gregarious, and displayed low frustration tolerance. There also was an overemphasis on masculinity. Gomberg (1968) concluded that these two studies reveal the
problem drinker was a boy with less than adequate controls, who was overimpu-
sive, overplayed the masculine role, used denial as a major defense, and was
uncomfortable in dependency relationships. Sanford (1968), in commenting on
Jones's article, pointed out the value in her methodology of comparing abstain-
ers and moderate drinkers with problem drinkers. If researchers are to find
critical differences, including nonalcoholics in their studies is essential.

Thus, the possibility that there are several traits, belonging to many
personality types, that are characteristic of alcoholics is beginning to seem
more plausible. A great deal of detailed research still needs to be done.
Hayman (1966) pointed out that too few researchers in alcoholism ask a specific
question. When it is not possible to do a longitudinal study, research on a
limited, clearly defined question with adequate control groups can still make
a contribution. It is the intention of the present author to do just that
type of research. Social intelligence was mentioned above as a pertinent
variable to be studied in relation to alcoholics. The purpose of this research
is to assess this variable in male alcoholics. The question is whether or not
alcoholics measure higher on social intelligence than "normals." This should
also expand the research on social intelligence which has not been extensively
studied in clinical groups.
CHAPTER II
REVIEW OF THE RELATED LITERATURE

Discrimination of Social Intelligence from Closely Related Concepts

A great deal of attention has been given to the social nature of alcoholics in a rather global, anecdotal, from-the-armchair manner. Alcoholics are variously said to be friendly, shy, outgoing, isolated, sociable, alienated, etc. This is not as confusing or contradictory as it may at first seem. Three different variables are being considered when his social nature is under discussion, namely, social competence, sociability, and social intelligence.

Social competence is concerned with social adjustment as measured by age, occupation, employment history, marital status, intelligence, and education. Alcoholics are generally said to have poor social adjustment in this sense. Two studies (Phillips & Zigler, 1961; Zigler & Phillips, 1960) revealed that individuals with action symptoms (alcoholics fall into this category) rather than thought symptoms have lower levels of premorbid social competence, but one researcher disagreed with even this assumption (Straus, 1951). Social competence is related to the clinical observation that alcoholics are unable to maintain satisfying, close relationships. As Hayman (1966) put it, "The alcoholic gives up his love object... and substitutes alcohol [p. 56]."

Other clinicians have pointed out that coping with the unpredictability, infantile demands, and denial of the alcoholic makes it difficult for others to tolerate his behavior for a long period of time. In this regard Kish (1971) found that although alienation is negatively correlated with social skills, alcoholics vary as to the amount of alienation they feel, and may not be as
generally isolated as some clinicians believe.

Sociability relates closely to extraversion which will be discussed more fully later. Walker and Foley (1973) stated that sociability is concerned with the "numbers of self-reported friends, social functions attended, amount of written correspondence, etc. [p. 13]." Schmidt, Smart, and Moss (1968) reviewed the files of 412 alcoholic patients. Comments made by physicians, psychiatrists, nurses, and social workers on the personal attributes and behavior patterns of the patients resulted in more than 5000 attributes. These were divided into 42 categories and analyzed for the three social classes under consideration. The category of "socially desirable characteristics" was the least homogeneous group because it included many attributes. It encompassed such terms as friendly, agreeable, humorous, likeable, nice, pleasant and smooth-mannered. Socially desirable characteristics was the second most frequently attributed category in the low and high social classes and the most frequently attributed category in the middle class. This is not too conclusive, however, because one might expect that the commentators would make some favorable comments. There is some social pressure not to say just negative things in evaluating another person. Having "good social skills" was one of the 10 most frequent attributes for only the high and middle social classes. For the lower class patients this was only the eighteenth most frequent attribute.

Thorndike (1920) defined social intelligence as a certain "ability to understand and manage men and women, girls and boys . . . to act wisely in human relations [p. 288]." Moss and Hunt (1927) stated that is the "ability to get along with others [p. 108]." Vernon (1933) expanded on this concept by saying it was the
ability to get along with people in general, social technique or ease in society, knowledge of social matters, susceptibility to stimuli from other members of a group, as well as insight into the temporary moods or the underlying personality traits of friends and of strangers [p. 44].

Wechsler (1958) stated that it is "facility in dealing with human beings [p. 8]."

O'Sullivan, Guilford and deMille (1965) said that behavioral cognition, one form of social intelligence, is the "ability to understand the thoughts, feelings, and intentions of other people as manifested in discernible, expressionable cues [p. 6]." Wedeck (1947) described an "ability to judge correctly the feelings, moods, motivations of individuals [p. 133]." but did not term it social intelligence.

Throughout the literature empathy has alternated as a measure of social intelligence. Hogan (1969) defined empathy as "the intellectual or imaginative apprehension of another's condition or state of mind without actually experiencing that person's feeling . . . Empathy refers only to the act of constructing for oneself another person's mental state [p. 308]."

Taft (1955) stated that empathy is probably a combination of general intelligence and social intelligence. He did find that the ability to judge people is positively related to social skills which test the ability to predict other's behavior. Empathy was also studied by Dymond (1950) and Rogers (1962).

Shanley, Walker, and Foley (1971) summarized a number of other concepts that appear to be related to social intelligence: the perception of persons (Bruner & Taguiri, 1954), the ability to judge people (Taft, 1955), skill in social perception (Bronfenbrenner, Harding, & Gallwey, 1958), and intuition in the judgment of complex interpersonal situations (Westcott, 1968). Insight (Allport, 1937) is also a pertinent concept.
Measures of Social Intelligence

Until recently there was a lag in research on social intelligence and a dearth of adequate measures (Suran, 1970). Walker and Foley (1973) provide the best summary of this research currently available. They noted that interest in social intelligence has tended to die out and revitalize itself intermittently. They discussed these cycles and the popular tests for each period.

Walker and Foley (1973) indicated that O'Sullivan et al. (1965) have developed what appears to be a promising test of social intelligence, the Six Factor Test of Social Intelligence (SFTSI). It is based on Guilford's own understanding of human intelligence which utilizes his structure of intellect model. He postulates three necessary dimensions that constitute any intellectual act. They are: the operation dimension which includes the categories of cognition, memory, divergent production, convergent production and evaluation; the content dimension with the categories of figural, symbolic, semantic, and behavioral; the product dimension with the categories of units, classes, relations systems, transformations and implications. By making all possible three-dimensional combinations of the categories, 120 abilities were derived. The domain of social intelligence comprises the 30 abilities specific to behavioral content. Behavioral content is combined with all the possible pairings of the five different operations and the six products. Guilford (1967) stated that behavioral content consists of "information, essentially non-verbal, involved in human interaction, where awareness of attention, perceptions, thoughts, desires, feelings, moods, emotions, intentions and actions...is important [p. 77]."

The SFTSI focuses on the six cognitive behavioral abilities (O'Sullivan et al., 1965). It provides six subtests which have varying degrees of...
factor loading for one or more of the cognitive behavioral abilities. These subtests are: Expression Grouping, Missing Pictures, Missing Cartoons, Picture Exchange, Cartoon Predictions, and Social Translations. Convincing reliability and construct validity estimates based on factor loadings have been demonstrated for the SFTSI (Hoepfner & O'Sullivan, 1968; O'Sullivan & Guilford, 1966; O'Sullivan et al., 1965). Further construct validity has been provided by Tenopyr (1967). The present researcher hopes to expand its predictive validity by applying it to the clinical group of alcoholics.

Some researchers have found a positive relationship with abstract intelligence, but the magnitude of these correlations have been .40 or less (Hendricks, Guilford, & Hoepfner, 1969; Hoepfner & O'Sullivan, 1968; Shanley et al., 1971; Suran, 1970; Tenopyr, 1967). Thus, the SFTSI is a relatively promising instrument, but until it is studied more thoroughly, researchers using it will have to consider the effects of abstract intelligence. It would be best to be sure any two groups that are compared are equivalent on abstract intelligence, perhaps by including some measure of abstract intelligence in the test battery.

Recently Hogan (1969) also developed a test that seems to hold promise as a measure of social intelligence. Hogan stated that it is a measure of empathy which was discussed above as a measure that frequently serves as a social intelligence test. Hogan asked four faculty and research psychologists to describe their conceptions of a highly empathic man. The five most characteristic items were: is socially perceptive of a wide-range of interpersonal cues; seems to be aware of the impression he makes on others; is skilled in social techniques of imaginative play, pretending, and humor; has insight into his own motives and behavior; evaluates the motivation of others in interpreting situations. All
of these items reflect insight, perceptiveness, and social acuity. This was his initial criterion for assigning ratings of empathy. A number of individuals from two different samples were then given a composite empathy rating based on a Q-sort description and the empathy criterion. These subjects' empathy ratings were then correlated with their performance on a number of other measures. Hogan concluded that the use of the ratings as criterion measures seemed justified. The sample groups were then separated into high and low empathy groups. Their responses on the California Psychological Inventory (CPI), Minnesota Multiphasic Personality Inventory (MMPI), and the Institute of Personality Assessment and Research (IPAR) items were then analyzed. Finally, 64 items were selected which seemed most accurate in distinguishing the two groups. From the CPI 31 items were selected, 25 from the MMPI and 8 from the IPAR. Hogan's scale appears to have adequate reliability and concurrent validity to warrant its use in studies using more than one measure. Once again further research needs to be done. Thus, the present author is using it as another measure of social intelligence. It is hoped that this will add to its predictive validity as well as provide further concurrent validity.

Research on the Social Intelligence of Alcoholics

At this time there has been only one study that was designed to relate social intelligence to alcoholics directly. Craddick and Leipold (1970) assessed the effects of role empathy on the height of human figure drawings done by male alcoholics. They hypothesized that alcoholics show poor empathy. This hypothesis was based on the earlier research of Feldman and Graley (1954). These earlier researchers concluded that maladjusted individuals experience more anxiety when attempting to alter a set or role because it is more difficult
for them to do this. Specifically patients were asked to make drawings of
different types of people. A reduction in the size of the figures as compared
to the drawing of the self was thought to indicate anxiety. This is because
constriction is often thought to suggest anxiety. The authors concluded that
the maladjusted patients found it harder to empathize than normal people
because most figure drawings were smaller than the drawing of the self, indicat­ing
greater anxiety in trying to adopt a different role. The 1970 researchers
used this same logic in their study on alcoholics. They concluded that alco­holics experience more anxiety than controls when attempting to alter set, i.e.,
empathizing themselves into a different role. The measures used in this re­search are relatively unsophisticated, especially when one considers the dif­ferent hypotheses for the size of figure drawings. For example, an enlarged
drawing of the self can indicate grandiose ideas about the self (Machover,
1953). Perhaps the self drawings are just enlarged rather than the others
constricted. Their conclusion also seems tenuous, because their definition of
role empathy is rather far removed from empathy itself.

Although little has been done directly to assess the social intelli­gence of alcoholics, some predictions can be made on the basis of indirect
evidence. There seems to be a strong clinical impression that alcoholics have
poor social adjustment (social competence), but good social skills (social
intelligence). Hayman (1966) seemed to be saying this when he stated,

The alcoholic often appears to have considerable social presence
[social skills] and is considered to be a 'nice' guy [sociability and
social skills]. Although often thought to be an outgoing person
[sociability], the alcoholic, under the surface, may be an extremely
shy, sensitive and withdrawn person [sociability and social competence]
[p. 254.]

Bracketed comments mine.
This clinical observation would lead one to conclude that alcoholics would do well on measures of social intelligence. Indirect evidence also comes from the research on field-dependency and extraversion which seems to indicate a similar conclusion.

Research on Field-Dependency

Field-dependency research (Witkin, 1965) was originally thought to be a fruitful method for studying the trait of dependency, which is believed to be a critical trait for alcoholics. A number of studies have shown that alcoholics as a group tend to show marked field-dependency (Bailey, Hustmeyer, & Kristofferson, 1961; Karp, Poster, & Goodman, 1963; Karp, Witkin, & Goodenough, 1965; Witkin, Karp, & Goodenough, 1959). Field-dependence-independence is a dimension that measures the population in general, like I.Q., rather than just clinical groups. Field-dependent alcoholics are not different from field-dependent normals in cognitive, perceptual, or motor performance (Goldstein, Neuringer, & Klappersack, 1970; Klappersack, 1968). Researchers are beginning to question whether field-dependency really relates to the trait of dependency or is measuring a different entity altogether. Groden (1970) found that field-dependency was related to dependency as measured by the Trail-Making Test only for long-term alcoholics. Pisani, Jacobson, and Berenbaum (1972) suggested that the field-dependence generally found in alcoholics may be partly due to brain-damage and an acceleration of the aging process resulting from chronic excessive drinking. Goldstein, Neuringer, Reiff, and Shelly (1968) reported that field-dependency correlated with only two of fourteen measures of dependency. Consequently, the question of whether or not field-dependency really relates to dependency has not been adequately determined yet.
Field-dependency has been shown to be a significant variable in relation to a number of other personality traits (Witkin, 1965). Field-dependent subjects are thought to be poorly differentiated, and they do show a relatively global body concept in their figure drawings. Field-dependent subjects also rely on external sources for definition of their attitudes, judgments, sentiments, and view of themselves. Field-dependent children looked at the face of an examiner twice as often as field-independent ones (Konstadt & Forman, 1965). Field-dependent subjects have further been shown to be more socially compliant (Solar, Davenport, & Bruehl, 1969; Witkin, 1965). They also have a better memory for faces (Messick & Damarin, 1964; Witkin, 1965). Thus, Witkin said field-dependent subjects (and consequently alcoholics) are "strongly influenced by the immediate social context in his experience of himself [p. 321]."

Put differently, field-dependent subjects seem to function by relying heavily on the social cues and the social context of a situation in order to respond. One could hypothesize that field-dependent subjects would have a greater facility for interpreting a social situation, thus, greater social intelligence. This hypothesis will be tested indirectly in the present study which will assess the social intelligence of alcoholics, since the alcoholics should be more field-dependent than normals. Thus, the prediction indicated by the field-dependent literature seems to be that alcoholics will score higher on measures of social intelligence than normals.

The field-dependent subject's reliance on the social context suggests an extraverted rather than introverted orientation. One study supports this hypothesis; two do not. Evans (1967) found a positive correlation between field-dependence and extraversion. Silber (1970) hypothesized that extraverts seek external stimulation and tend to be more field-dependent, so they would
be more influenced by background stimulus in an adaptation experiment. Her groups were not, however, significantly different. On a serial learning task varying in sequential redundancy, Orenstein (1970) also found no significant relationship between extraversion and field-dependency. Both authors conclude that these concepts are independent and are measuring different variables. Too little research on too few variables has been done to warrant a final conclusion.

Research on Extraversion

Before moving into the findings relating alcoholism to the extraversion-introversion dimension, some comments should be made about this dimension itself. Carrigan (1960), in a comprehensive review of the area concluded that this is not a unitary dimension. Two factors are needed to account for the intercorrelations between extraversion-introversion variables. These are referred to as sociability and performance speed or social extraversion and lack of control. This finding of two factors is confirmed by two other studies (Farley, 1970; Farley & Farley, 1970) which attribute more variance in the extraversion-introversion dimension to impulsivity rather than sociability. Carrigan also concluded that the relationship of extraversion-introversion to adjustment is not clear cut. In a number of situations "good" adjustment appears to be related to extraversion and "poor" adjustment to introversion. Two conspicuous exceptions are the extraversion attributed to high scores on Pd and Ma scales on the Minnesota Multiphasic Personality Inventory (MMPI). It is suggested that the impulsiveness factor contributes to maladjusted extraversion while sociability is associated with well-adjusted extraversion.
There have been a few attempts to relate extraversion-introversion to social intelligence. The hypothesis is that extraverts will score higher.

The picture arrangement subtest of the Wechsler Adult Intelligence Test is said to be related to social skills (Schaefer, 1948). Schill (1966) found that high scorers on the MMPI social introversion scale did more poorly on picture arrangement than did low social introversion scorers. Johnson (1969) found just the opposite. It is suggested that perhaps the picture arrangement subtest does not accurately and reliably tap social intelligence. Hogan (1969) found a negative correlation of .65 between his empathy measure and the MMPI social introversion scale. He further found a positive correlation of .51 between empathy and the Maudsley Personality Inventory extraversion measure. Finally, he reported a positive correlation of .63 between empathy and the Meyers-Briggs Type Indicator of extraversion. Ward (1961) found that extraverts are more accurate in applying stereotypes than are introverts. She concluded that extraverts are better on tasks requiring empathy and person perception. Thus, extraversion seems to be positively correlated with social intelligence, indicating that extraverted subjects score higher on social intelligence measures than introverted ones.

From this review it would seem probable that the impulsiveness trait attributed to alcoholics would tend to gain them higher scores on extraversion than introversion. Franks (1967) reported a positive correlation between an individual's characteristic indulgence in alcoholic beverages and his extraversion score. Four studies have been done using alcoholic subjects. Three of these (Hoch, 1940; Norbury, 1942; Wenger, 1944) found the percentage of extraverts to range from 63% to 75% in these alcoholic samples. Only one study (Davidoff & Whitaker, 1940) found a majority of the alcoholic subjects to be...
introverted rather than extraverted. In studies where the subjects actually consumed alcohol, they were observed to become more sociable and social interaction was facilitated (Keehn, 1970; Williams, 1968). Keehn's research supported the "everyday observation that alcohol, at least in some doses, reduces social inhibitions or, put differently, occasions more extraverted behavior [p. 767]." The studies, although limited, seem to show a positive correlation between the use of alcohol and extraversion.

**Summary**

Little has been done to adequately assess the social intelligence of alcoholics. Until recently the instruments to assess social intelligence have been weak, but Guilford's Six Factor Test of Social Intelligence and Hogan's Empathy Test seem to be the most promising measures. Indirect evidence comes from the research on extraversion and field-dependency. There is some evidence, although weak, to suggest that they are both positively correlated with social intelligence. There is also some limited findings that they are both positively correlated with alcoholism or alcohol use.

Specifically, the present researcher hypothesizes that alcoholics show greater social intelligence than "normals," i.e., nonalcoholics, as measured operationally by the Six Factor Test of Social Intelligence and Hogan's Empathy Test. The following subhypotheses are also made:

1. Alcoholics show greater field-dependency than normals as measured by the Hidden Patterns Test (Witkin, 1954);
2. Alcoholics show greater extraversion than normals as measured by the Maudsley Personality Inventory (Murphy, 1959);
3. Social intelligence is positively correlated with field-dependency;
4. Social intelligence is positively correlated with extraversion; and
5. Social intelligence is positively correlated with abstract intelligence as measured by the verbal scale of the Shipley-Hartford Test.

It is hoped that some of the armchair notions about the alcoholic's social intelligence will be clarified, so that those who attempt to rehabilitate them will know if good social skills is a characteristic they really have with which to work.
CHAPTER III

METHOD

Subjects

The experimental group consisted of 24 male subjects defined as alcoholics because they were currently patients at the Chicago Alcoholic Treatment Center (C.A.T.C.). The new patients are regularly given the Draw-a-Person Test, Bender-Gestalt, and the Shipley-Hartford Test as a group at the end of their first week at the Center. The present examiner tested these new patients at the end of their second week at the Center.

The control group consisted of 24 "normal" males. Eighteen of these subjects were obtained from the medical units of Hines Veterans Administration Hospital. They were defined as normal because they did not carry a secondary diagnosis of alcoholism and were not being treated for psychiatric problems. Also, they were ambulatory, nonterminal patients who did not have an alcoholism associated disorder, e.g., cirrhosis of the liver. Further, they were not suspected by the doctors or nurses to be alcoholic or to have serious psychiatric problems. Finally, they were not thought to be slowed down or confused by any medication they were currently receiving. Lists of patients who met these qualifications were given to the examiner by the nursing staff twice a week. From these lists of possible subjects, 18 volunteers were obtained. Six of the control subjects were not patients. They were known by a reliable judge to be nonalcoholic, steady, working men who had never been in treatment for psychiatric problems. Also, they were thought to be from the same general socio-economic and educational level as the experimental group.
Measures

A pretest information sheet was provided to obtain information regarding age, years of education, type of work done on current or last job, any technical training received, and type of work for which the subject was trained if different from the above. The Coleman Index (Coleman, 1959) was used to determine the socio-economic level of the subjects at the time of the examination (Coleman Index Now), and the level for which each subject had originally been trained (Coleman Index Before). It assigns various occupational groups to specific socio-economic classes which are designated by a numerical ranging from one (lowest) to seven (highest). Since it is possible that the socio-economic level of the alcoholic group may be a reflection of a downwardly mobile trend and the scores of the normal group may reflect stability or upward mobility, ratings of the socio-economic level for which they were trained initially and the level at which they were currently functioning were assigned to subjects in both groups.

The measures of social intelligence were Hogan's Empathy Test described above and the following three subtests of Guilford's Six Factor Test of Social Intelligence: Social Translations, Expression Grouping and Cartoon Predictions. Social Translations is the one subtest which uses printed words only. The task is to choose one of three alternative pairs of people between whom a given verbal statement will have a unique meaning, different from that if spoken between members of another given pair. It has a factor loading of .51 on cognition of behavioral transformations (CBT) (Guilford, 1967). CBT refers to the ability for flexibility of interpretation in contrast to rigidity of such

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2 This is actually a reverse of Coleman's Index, but it is easier to manipulate statistically this way because a low level is indicated by a low numeral.
interpretation. It also has a small secondary loading for cognition of behavioral relations (CBR). CBR is the ability to understand social relations. In Expression Grouping each item consists of a group of three drawings which depict facial expressions, hand gestures or body postures. The task is to select one of four alternative drawings of expressions to show that the class of the original three has been recognized. A factor loading of .59 for cognition of behavioral classes (CBC) is reported. CBC is the ability to see similarity of behavioral information in different expressional modes. Cartoon Predictions requires the subject to choose one of three alternative cartoons which shows what is most likely to follow a given interpersonal situation cartoon. It has a factor loading of .55 for cognition of behavioral implications (CBI). CBI is the ability to draw implications or make predictions about what will happen or follow a given social situation.

The hypothesis that alcoholics will score higher on social intelligence than normals is based on research on field-dependency and extraversion. Tests were given to measure these also. The Hidden Patterns Test (Witkin, 1954) was given to measure the field-dependency-independency continuum. The higher the score, the greater the field-independency and vice versa. The Maudsley Personality Inventory (Murphy, 1959) was given to measure the extraversion-introversion dimension. High scores indicate greater extraversion.

Since social intelligence as measured by the Six Factor Test of Social Intelligence has sometimes been found to be positively correlated with abstract intelligence, the Shipley-Hartford Verbal Scale was given. In this way the examiner could see if the two groups were comparable in terms of verbal intelligence.
Procedure

The Shipley-Hartford is part of the standard battery of tests given by C.A.T.C. Consequently, this test was not administered by the present examiner to the alcoholic subjects. The scores were merely obtained from C.A.T.C. The present examiner administered the tests in the following order: the information sheet, Hidden Patterns Test-- Cf-2, Guilford's Six Factor Test of Social Intelligence subtests (Social Translations, Expression Grouping, Cartoon Predictions), Maudsley Personality Inventory, and Hogan's Empathy Test. The entire battery was administered to each subject during one examining session. The subjects were seen in three separate groups of 7 to 14 subjects each. The test results from 8 subjects were eliminated either because of failure to complete the untimed tests or because directions were not followed, e.g., consistently marking two answers when only one answer should be given, or thinking they should mark only one design in each row on the Hidden Patterns Test.

The control subjects were administered the test battery in the same order, except that the Shipley-Hartford Test was given to them by the present examiner after the information sheet and before the Hidden Patterns Test. Each subject also completed the battery during one session. The subjects were seen in 6 groups of 2 to 5 subjects each. It was unnecessary to eliminate any of the protocols from the control group, possibly because they were volunteers and the examiner could attend more closely to procedural errors when there are only 5 rather than 14 subjects.
CHAPTER IV

RESULTS

The descriptive statistics for the alcoholic and normal groups are presented in Table 1. These data indicated that the groups were indeed quite similar in composition and that the variables of age, years of education, socio-economic level, and verbal intelligence were adequately controlled. The mean age of the alcoholic subjects was 39.33 years and for the normal subjects it was 41.54. The mean years of education was 10.58 for the alcoholic subjects and 11.54 for the normal subjects. The mean socio-economic level of the alcoholic group was 2.04. It was 2.62 for the normal subjects. This indicated that the majority of the subjects came from the intermediate lower class (Level 2) or upper lower class (Level 3). The difference (.38) between the Coleman Index Now and the Coleman Index Before for the alcoholics did reflect a slight downward trend, but the control group was also very slightly downwardly mobile (.08). The means for verbal intelligence, as measured by the Shipley-Hartford, were also close for the two groups: 25.79 for the alcoholic subjects, 27.17 for the normal subjects.

Descriptive statistics for the field-dependency, extraversion and social intelligence measures are shown in Table 2. The means for the alcoholic and normal groups are quite close on all the measures. There is, in fact, no significant difference between them on any of the measures. This will be discussed more fully shortly.
### TABLE 1

Descriptive Statistics for Age, Socioeconomic status and Verbal Intelligence for Alcoholics and Normals (N = 24 each group)

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<th>Normals</th>
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<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
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<td>Age</td>
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<td>Coleman Index Before</td>
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<td>Shipley-Hartford Verbal Scale</td>
<td>25.79</td>
<td>6.72</td>
<td>27.17</td>
<td>5.95</td>
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</table>

### TABLE 2

Descriptive Statistics for the Field-Dependency, Extraversion, Social Intelligence and Composite Scores for Alcoholics and Normals (N = 24 each group)

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<td>14.66</td>
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<td>Cartoon Predictions</td>
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<td>3.68</td>
<td>15.44</td>
<td>4.24</td>
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<tr>
<td>Composite ST+EG+CP</td>
<td>38.70</td>
<td>7.67</td>
<td>42.95</td>
<td>8.86</td>
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</table>
Pearson product-moment correlation matrices were obtained for alcoholic and normal groups separately and combined. The separate matrices are presented in Table 3. The combined correlation matrix is shown in Table 4. There was only one noteworthy difference that was obscured in the combined correlation matrix. For the normal group, field-independency and the Coleman Index Now had a positive correlation of .17. The correlation for these two measures for the alcoholic group was negative .51. The direction of these correlations remained the same when field-independency and the Coleman Index Before were compared also. The correlation for the control group was .36. For the alcoholic group the correlation was --.22. This could be due to chance since no explanatory hypothesis would seem to be applicable.

When all three correlation matrices were examined, an unexpected trend became apparent. Age was consistently negatively correlated with all five social intelligence scores. The only exception was that Social Translations had an essentially zero correlation with age. This overall negative trend reached a statistically significant level only for the correlation between age and Cartoon Predictions for only the alcoholic group.

Table 4 indicates that the Shipley-Hartford scores were significantly correlated with a number of the social intelligence measures: .42 ($p < .01$) for Hogan's Empathy Test, .56 ($p < .001$) for Social Translations, .51 ($p < .001$) for Cartoon Predictions, and .62 ($p < .001$) with the Composite score for the three Guilford subtests. Since social intelligence was found to be significantly correlated with verbal intelligence for these data and is frequently found to be correlated with it by other researchers, it was thought necessary to consider even the small mean difference of 1.28 for the Shipley-Hartford when analyzing the data. Consequently, a $2 \times 2$ repeated measures analysis
### TABLE 3
Matrix of Correlations for All Twelve Variables (Alcoholics and Normals Separately)\(^a\)

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<td>.42(^a)</td>
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<td>.44(^a)</td>
<td>.52(^b)</td>
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\textsuperscript{a} \textsuperscript{p} .05 \textsuperscript{b} \textsuperscript{p} .01 \textsuperscript{c} \textsuperscript{p} .001

*df = 22 for all correlations.

** Upper value is the correlation for the alcoholic group; lower value is the correlation for the normal group.

*** Since the composite score is merely a summation of 8, 10, and 11, this does not meet the correlation requirement of independent measures. Assigning a level of significance would be inappropriate.
### TABLE 4
Matrix of Correlations for All Twelve Variables (Alcoholics and Normals Combined)*

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9+10+11

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<sup>a</sup>p .05  <sup>b</sup>p .01  <sup>c</sup>p .001

*df = 46 for all variables

** Since the composite score is merely a summation of 9, 10, and 11, this does not meet the correlation requirement of independent measures. Assigning a level of significance would be inappropriate.
of variance was done rather than a t test. This approach was selected since it would reveal whether there are any patterning differences resulting from the interaction of verbal intelligence with social intelligence for alcoholics and normals.

Several analyses were done. The groups were alcoholics and normals. The measures were the Shipley-Hartford and one of the following tests of social intelligence: Hogan's Empathy Test, Cartoon Predictions, or the Composite score. There was no significant effect for groups for any of the analyses. There was also no significant interaction between verbal intelligence and the social intelligence measures.

The basis for the hypothesis regarding the social intelligence of alcoholics came from the research done on extraversion and field-dependency. Table 4 shows that the extraversion scores had a .41 correlation with Hogan's Empathy Test which is significant at the .01 level. Field-independency had a correlation of .29 \((p < .05)\) with Social Translations, .44 \((p < .01)\) correlation with Cartoon Predictions and .49 \((p < .001)\) with the Composite score. Although the scores for the alcoholic subjects and the normal subjects were not significantly different on field-dependency or extraversion, it was thought that an analysis of variance similar to the one reported above would be more accurate in order to consider any effects they might have on the social intelligence score. There was, however, no significant interaction between the Composite score and extraversion nor field-dependency, nor between extraversion and Hogan's Empathy Test.

Thus, the following hypotheses were confirmed: 1. Social intelligence is positively correlated with field-independency, but only for Social Translations, Cartoon Predictions and the Composite score;
2. Social intelligence is positively correlated with extraversion, but only for Hogan's Empathy Test;

3. Social intelligence is positively correlated with verbal intelligence.

The hypotheses that were not supported were the following:

1. Alcoholics show greater social intelligence than normals;
2. Alcoholics show greater field-dependency than normals;
3. Alcoholics show greater extraversion than normals.
CHAPTER V

DISCUSSION

The clinical impression as described above (Hayman, 1966) seemed to be that alcoholics have poor social adjustment, but good social skills. For the present study, alcoholics did not differ significantly from normals on the social intelligence measures. The fact that this study did not confirm the hypothesis that alcoholics have better social skills than normals raised four possible alternatives. First, the clinical impression is wrong and the judges are inaccurate. Second, this impression of the social nature of alcoholics is more a reflection of their sociability or dependency rather than superior social skills. Third, alcoholics and normals have the same ability to understand social situations and relationships, but alcoholics use this knowledge to better effect in social interactions. The clinical impression is generally based on observed behavior, and no social intelligence measures based on actual behavior were given. Perhaps judges could be trained in assessing social intelligence through behavioral observations and/or interviews. Then they could judge a number of subjects, half alcoholics and half normals, on social intelligence without being informed of their classification. Fourth, the impression may be based on a comparison with other so-called "clinical" groups rather than a "normal" group, since few normal people are treated by mental health workers. If so, this may explain why alcoholics appear to be superior in social intelligence. In summary, the ideal research study would use both behavioral and cognitive measures of social intelligence and sociability and measure normals, alcoholics, and several other clinical groups.
It would also be advisable to use both experienced mental health workers and specifically trained judges for the behavioral assessments. Since this would be no small task; especially with the present state of behavioral measures of social intelligence, the second and fourth alternatives seem to hold the most promise for individual investigations. The correct alternative has yet to be determined.

The research evidence for the hypothesis that alcoholics would score higher on social intelligence measures came from the literature on extraversion and field-dependency. The alcoholics and normals did not, however, differ significantly on these variables. One might wonder whether the differences found between alcoholics and normals on these measures by other researchers are due to sampling variations rather than real trait differences. One indication in this regard is the fact that the mean age for the alcoholic sample was 39.33 years. This is a fairly young sample since the average age range for C.A.T.C. is 45 to 49 years (Pisani & Motanky, 1970). This may also be true for other agencies treating alcoholics. Since this is a young sample (at least for C.A.T.C.), there may not be as much brain-damage resulting from chronic excessive drinking as for older groups. Pisani et al.'s (1972) hypothesis may be correct that the field-dependency of alcoholics may be partly due to brain-damage or an acceleration of the aging process rather than a predisposing personality trait. One way of assessing their hypothesis would be to see if the field-dependency of alcoholics increases with age and if this increase is greater than that for normals over the same time span.

Extraversion and field-dependency were found to be correlated with the social intelligence measures. Extraversion was significantly positively correlated with the Hogan Empathy Test but not the Guilford measures. Contrary to
expectations, field-independency rather than field-dependency was positively correlated with social intelligence. This time the correlation was significant only for the Guilford measures, excluding Expression Grouping. This raised the question as to whether the greater attention paid to social cues by field-dependent subjects may not be due to difficulty in interpreting these signs rather than a facility in using them. Such difficulty may necessitate more attention to these cues.

The Hogan Empathy Test and Guilford measures (but not Expression Grouping) also showed a significant positive correlation with each other so they may be tapping some small common variance subsumed under the general notion of cognitive social intelligence, i.e., the understanding rather than acting side of social intelligence. Perhaps they are more accurately, however, measuring different aspects or types of cognitive social intelligence. This is supported by the differing correlations with extraversion and field-dependency. One might also wonder about the role of Guilford's Expression Grouping subtest which is significantly correlated only with the Composite Guilford score (which doesn't count really since one of the measures making up the Composite score is Expression Grouping).

Abstract intelligence did account for some of the variance in social intelligence for the data obtained. Both the Shipley-Hartford and the years of education were correlated with all the measures of social intelligence except Expression Grouping. The Shipley-Hartford directly and years of education indirectly indicated that abstract intelligence is not a negligible factor, at least for the lower socio-economic levels. Some verbal or abstract intelligence measure should always be included in a social intelligence test battery until such time that more sophisticated measures are developed.
The consistent negative correlation between age and social intelligence raised an interesting question since these measures have been found to be positively correlated for children in grades 6, 9, and 12 (Shanley et al., 1971). One might investigate the possibility that there is a ceiling at which this positive correlation reverses itself, making the relationship a curvilinear one.

Any future studies on the social intelligence of alcoholics should consider the correlations between social intelligence and abstract intelligence, field-dependency, and extraversion in their experimental design. This is because the data may reflect sampling variations on these measures rather than any real difference in social intelligence for the groups compared. Perhaps the most significant result of this study was the questions raised rather than any answers found. The role of variables related to social intelligence, like age, socio-economic class, field-independency, and extraversion, are not clearly defined. The reason for the inaccurate clinical impression that alcoholics compared to other clinical groups still needs to be investigated. A great deal needs to be known about social intelligence before any definitive answers are going to be found.
SUMMARY

The social intelligence of alcoholics was investigated by comparing the performance of a group of alcoholic males with a group of normal males on Hogan's Empathy Test and three of the subtests form Guilford's Six Factor Test of Social Intelligence. Verbal intelligence, extraversion and field-dependency measures were also given since these were thought to be variables closely related to social intelligence which might be accounting for any differences that might be found. The groups were controlled for age, years of education and socio-economic level. No significant differences were found for the alcoholic and normals males on any of the variables measured, including all the social intelligence tests. It is concluded that these two groups do not differ on cognitive social intelligence. Suggestions were given for trying to understand why alcoholics are often thought to have superior social intelligence. More questions were also raised about the nature of social intelligence.
References


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The thesis submitted by Carolyn Ann Kowatsch has been read and approved by members of the Department of Psychology.

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

The thesis is therefore accepted in partial fulfillment of the requirements for the degree of Master of Arts.

5/16/73
DATE

Ronald Walker
ADVISOR'S SIGNATURE