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Assessing interpersonal dominance and affiliation on the Thematic Apperception Test: The development and validation of two orthogonal scales.

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ASSESSING INTERPERSONAL DOMINANCE AND AFFILIATION ON THE

THEMATIC APPERCEPTION TEST: THE DEVELOPMENT AND VALIDATION OF

TWO ORTHOGONAL SCALES

By

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Abstract

The Interpersonal Circumplex Model (ICM; Freedman et al., 1951; Leary, 1957), a

circular representation of interpersonal behaviour, identifies the components of

interpersonal dominance and affiliation that underlie social interactions. The present

study addresses the deficiency of psychometric scales to measure interpersonal constructs

on the TAT by developing the Interpersonal Dominance and Affiliation TAT Scales.

Twenty-five undergraduate students rated 100 sample TAT stories for the level of

interpersonal dominance and affiliation depicted. Reliability analyses of these ratings

were then utilized to empirically establish anchor points for the interpersonal TAT scales.

Preliminary validity of the scales was further evaluated in a sample of 57 undergraduates.

Results showed that the Interpersonal Dominance TAT Scale correlated significantly with

the self-report ($r = .40$) and peer-report of interpersonal dominance ($r = .33$), as well as

masculinity ($r = .27$). The Interpersonal Affiliation TAT Scale correlated significantly

with self-report of interpersonal affiliation ($r = .27$), impression management ($r = .51$),

and femininity ($r = .30$). The discussion centers on the relationship of interpersonal

variables assessed across measurement domains and future applications of the

Interpersonal TAT scales.

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Assessing Interpersonal Dominance and Affiliation on the

Thematic Apperception Test: The Development and Validation

of Two Orthogonal Scales

The Thematic Apperception Test (TAT; Morgan & Murray, 1935) is a projective

instrument used frequently in clinical research and practice to assess individuals'

psychological functioning. In the TAT, individuals are presented with ambiguous pictures

(black and white) and asked to tell stories that they believe fit, and complete the actions

of the character(s) portrayed. Although several quantitative scoring schemes have been

developed for the TAT, the majority focus on psychodynamic constructs rather than

interpersonal conceptualizations of personality. The relative absence of interpersonal

scales for the TAT limits the type of information that can be obtained by clinicians and

researchers using this projective instrument. The purpose of the present research was to

address the relative absence of interpersonal measures for the TAT and develop two

orthogonal scales based on interpersonal theory (Leary, 1957; Wiggins, 1995).

Specifically, two scales were constructed for assessing the bipolar constructs of

interpersonal dominance and *affiliation*, which have been identified to underlie human

social interactions (Bakan, 1966; Wiggins, 1982). A second purpose of the present

research was to evaluate the prelimimary validity of the TAT scales, including

concurrent, discriminant, and criterion-predictive abilities. The validity of the

Interpersonal Circumplex Model (ICM) was further examined in the research by

comparing interpersonal variables across the measurement domains of self-report, peer-

ratings, and the TAT.

Interpersonal conceptions of personality and psychopathology have figured

prominently in the history of clinical psychology since the writings of Sullivan (1940,

1948, 1950, 1953) and explored in both the psychodynamic literature and social cognition

research. Interpersonal theory views personality as inherently embedded in the real and

imagined relations between individuals and significant others, thereby emphasizing the

social meaning of behaviour (Kiesler, 1996). Researchers (e.g., Leary, 1957; Benjamin,

1974) have provided a systematic language for the description of interpersonal

transactions, called the Interpersonal Circumplex Model (ICM), and demonstrated that

this language permits the specification of a set of common variables to the clinical

endeavors of assessment, diagnosis, and treatment. Of particular interest in the present

study are the constructs of interpersonal dominance and affiliation that have been

identified to encompass the ICM. *Interpersonal dominance* refers to the extent to which

an individual exerts power or status over others (Wiggins, 1995), and ranges on a

continuum from acts of extreme submissiveness (e.g., self-punishment, suicide) to

dominating behaviour (e.g., authority, exploitation, abuse). *Interpersonal affiliation* is the

degree to which an individual feels a sense of intimacy, union, or solidarity with others

(Foa & Foa, 1974), and ranges from acts of coldness (e.g., anger, threats) to warmth (e.g.,

love, friendship).

The utility of an interpersonal perspective for clinical research and practice has

been repeatedly highlighted over the last fifty years (e.g., Adams, 1964; Benjamin, 1974;

Cantor, Smith, French, & Mezzich, 1980; Carson, 1969; Foa, 1961; Freedman et al.,

1951; Horowitz & Vitkus, 1986; Kiesler, 1991; Lorr, 1997; Plutchik, 1980; Wiggins,

1979a; Wiggins & Broughton, 1985). To date, however, measures for assessing

interpersonal behaviour have primarily been developed in questionnaire format. For

instance, Wiggins (1979a, 1982, 1991, 1995) has developed the Interpersonal Adjectives

Scales to assess the spectrum of interpersonal behaviour. Although this measure has

demonstrated good psychometric properties, self-report measures have been generally

criticized for being susceptible to response biases, such as lying, faking, or responding in

a socially desirable manner (Edwards, 1957; Paulhus, 1986, 1991; Wiggins, 1964). To

overcome the problems of self-report, researchers (e.g., Leary, 1957) have attempted to

develop alternative methods to assess interpersonal variables. For instance, Leary (1957)

described a method of scoring interpersonal variables on the TAT. However, Leary's

TAT measures have been criticized for lacking sound psychometric properties and for

being non-replicable (Wiggins, 1965, 1982).

The present study will overcome the limitations of Leary's (1957) TAT scoring

system and develop two psychometrically sound scales for assessing interpersonal

dominance and affiliation on the TAT. These scales will provide an invaluable tool for

researchers and clinicians to gain a broader representation of individuals' functioning, as

well as to explore the nature and consequences of interpersonal behaviour. A discussion

of the theoretical research framework informing the present study will follow in the next

sections, which includes research on the TAT, interpersonal theory, and the Interpersonal

Circumplex Model (ICM). An examination of interpersonal models of personality

assessment will follow in order to provide a frame of reference for the types of

methodological approaches investigators have undertaken to date, as well as the benefits

and limitations of each method. The constructs of interpersonal dominance and affiliation

will then be described, as well as the various domains of measurement and specific scales

available for assessing interpersonal variables (i.e., self-report, peer-report, and the TAT).

This review provides a context for the selection of measures utilized in the present study

to evaluate the validity of the interpersonal TAT scales.

Review of the Literature

The Thematic Apperception Test

The Thematic Apperception Test (TAT) is a projective instrument developed by Morgan and Murray (1935) at the Harvard Psychological Clinic. It is widely used in clinical research and practice, and has served as a model for the development of numerous other assessment instruments, such as the Children's Apperception Test (CAT; Bellack, 1993) and the Roberts Apperception Test for Children (RATC; McArthur & Roberts, 1982). The TAT utilizes projective techniques for assessment, in which individuals provide responses to stimulus items that are unstructured or semi-structured in nature. Specifically, individuals are presented with ambiguous black and white illustrations, and asked to tell stories about the character(s) portrayed. The respondent's story is to include a description of what led up to the event shown in the picture, what is happening at the present moment, what the characters are thinking and feeling, and the outcome of the plot (Murray, 1943). The essence of the technique is that the stimuli are ambiguous to some degree and, therefore, require individuals to use his or her imaginative perceptions (Leary, 1957).

The TAT cards were specifically designed to represent different areas of psychological functioning and tap specific kinds of psychological conflict (e.g., need for aggression; Morgan & Murray, 1935). There are four overlapping sets of 20 TAT cards designed for boys and girls (≤ age 14), and males and females over age 14 (Anastasi & Urbina, 1997). Morgan and Murray originally specified that the test be administered in two one-hour sessions, with 10 cards employed during each session. During the second session, respondents are instructed to give free play to their imagination and are shown 10

cards that are more unusual, dramatic, and bizarre. Contrary to the original procedure, most clinicians currently use brief sets of 10 specially selected cards (Cramer, 1999), with administration being approximately one hour in length. The TAT is usually administered as an oral individual test, but can also be administered in written format for group adminstration.

The TAT is generally considered a tool for assessing personality constructs grounded in psychodynamic theory. For instance, TAT responses are believed to reflect an individual's fantasized and symbolic environment, brought into the story to create a setting for expression of his or her psychological needs (Aron, 1949). The themes elicited in the TAT are believed to reflect a "deeper" picture of an individual's personality than those of self-report (Leary, 1957). The traits attributed to the characters in the stories reflect a subset of a person's repertoire of interpersonal schemas, expectancies, affects, wishes, fantasies, conflicts, and knowledge (Westen, Lohr, Silk, Kerber, & Goodrich, 1985). Such imaginative expressions and symbols are an indirect form of communicating to the administrator about one's private perceptions, opinions, and reactions (Cramer, 1999). Individuals are thought to develop such indirect language in order to avoid the anxiety associated with public expression, preserve feelings of uniqueness, and maintain one's self-esteem (Leary, 1957). Thus, the TAT permits the assessment of individuals' private or "preconscious" interpersonal themes, which are potentials for future overt expression. Although it is commonly stated that projective data denote repressed or unconscious material, this is not necessarily the case. It is important to clarify that themes appearing in projective tests have sometimes been found to repeat conscious perception, as assessed through self-report measures (Leary, 1957).

Early Research on the Thematic Apperception Test

From 1930 to 1980, a limited number of objective scoring systems existed for the

TAT. The three well-known systems available were developed by Aron (1949), Murray

(1938), and Sanford and colleagues (Sanford, Adkins, Miller, & Cobb, 1943). All of these

scoring systems are complex in nature and involve a lengthy scoring process based on the

content of the respondent's stories. The first step in the evaluation process is to determine

who the "hero" is in the story, that is, the character of either sex with whom the

respondent self-identifies (Murray, 1943). The hero of the story becomes the respondent's

symbolic self, and the people that he or she interacts with denote the "interpersonal other"

(Leary, 1957). Thus, the themes associated with the symbolic self and his or her

interactions with others are thought to represent the respondent's symbolic world and are

scored for interpersonal variables. In Murray's (1938) TAT scoring scheme, which was

later adapted by Sanford et al. (1943), the nature of individuals' symbolic interpersonal

interactions are assessed for the "needs" and "press" depicted. Individual "needs" include

the need for achievement, affiliation, and aggression; "press" refers to environmental

forces that facilitate or interfere with the satisfaction of these needs (e.g., being attacked

or criticized, being comforted, and exposure to physical danger). To assess the magnitude

or strength of individuals' needs and press, the examiner notes the intensity, duration, and

frequency of their occurrence throughout the TAT stories (Anastasi & Urbina, 1997).

Aron's (1949) TAT scoring system is comparable to Murray's (1938) and Sanford

et al.'s (1943) in its focus on individual needs and motivation. However, the scoring

categories are more diverse and complex. For instance, the following groups of variables

are identified for scoring purposes: 1) variables describing the behavior trend of the hero

(e.g., need aggression); 2) variables describing environmental forces acting upon a hero

(e.g., human threats); and 3) variables describing beneficial or depriving characteristics of

human and non-human objects (e.g., mental health). Aron's (1949) detailed scoring

method further involves seven procedural steps, which take approximately 30-40 minutes

to gain adequate proficiency to complete. This lengthy time commitment may have

deterred clinicians and researchers from utilizing the scoring system, as it is not

frequently cited in the empirical literature. However, the scales described by Aron,

Murray, and Sanford et al. are all thought to be reliable and valid when utilized

appropriately.

During this period (1930-1980), researchers also collected a fair amount of

normative data for the TAT to assist clinicians to make accurate interpretations about

individuals' personality structure. Specifically, normative data were developed for

identifying the most frequent response characteristics for each TAT card, the themes

developed, the roles ascribed to the characters, the emotional tones expressed, the speed

of responses, and the length of stories (Atkinson, 1958; Henry, 1956; Murstein, 1972).

These empirical studies demonstrate that specific themes are common for different TAT

cards, such as those dealing with intimacy, achievement, and power (Henry, 1956; Holt,

1999). Despite the availability and utility of this information, few clinicians use these

norms to inform their practice, but rather utilize their own clinical intuition (Garb, Wood,

Lilienfeld, & Nezworski, 2002; Holt, 1999; Schneidman, 1999). This is a very subjective

practice, given that clinicians differ in their interpretation of story content and diagnosis

of personality. In fact, clinicians have been found to over-diagnose psychological

disturbance in TAT response profiles (Garb et al., 2002; Murstein, 1972). Thus, the

practice of utilizing clinical intuition to interpret the TAT undermines the reliability and

validity of the instrument.

Clinicians' subjective interpretation of story content and diagnosis of personality

have led the TAT to be repeatedly criticized in the literature (e.g., Holt, 1999; Keiser &

Prather, 1990; Mischel, 1968). In 1968, Mischel provided a landmark critique of the

psychometric properties of projective testing that influenced negative attitudes about the

TAT for over 30 years (Cramer, 1999). Early scoring schemes were further criticized for

not referring to psychologically significant material and for obscuring individual

differences by emphasizing molecular aspects of responses (Aron, 1949). Such criticisms

have resulted in generations of psychologists being "trained with a deeply ingrained

assumption that projective techniques are inherently invalid and unreliable" (Westen et

al., 1990; p. 362). Nonetheless, a camp of researchers has repeatedly emphasized the

clinical value of projective techniques, including the TAT, and have attempted to develop

standardized scoring systems to address psychometric deficiencies (e.g., Cramer, 1987,

1991, 1999; McClelland, 1985; Westen, 1991; Winter, 1999).

Clinical Value of the Thematic Apperception Test

Levy (1963) argued convincingly that psychological instruments fall on a

methodological continuum ranging from projective techniques to self-report inventories,

rather than representing distinct categories. Levy leveled the playing field for projective

and objective instruments (e.g., self-report) by positing that they are both valuable

methods of assessing individual personality and psychopathology. Both techniques offer

different strengths in the assessment process. Projective techniques are thought to be an

effective means for "breaking the ice" during the initial contacts between clinician and

client, given that the task is intrinsically interesting and often entertaining (Anastasi &

Urbina, 1997). The TAT tends to divert the respondent's attention away from her or

himself, and offers little or no threat to prestige since any response given is "right." The

TAT expresses the narrative of the respondent within the intentions, desires, and wishes

of the stories' characters. Cramer (1999) emphasized that the TAT permits a non-

restrictive representation of the diversity of individual experience, which directly

contrasts the multiple-choice items provided in self-report measures. This open approach

fits within the narrative mode of thought—an area that is receiving increasing interest

within the discipline of psychology (e.g., Bruner, 1986; Sarbin, 1986). Another valuable

aspect of the TAT is that the respondent becomes absorbed in the task, making him or her

less likely to resort to the customary disguises and restraints of interpersonal

communication (Anastasi & Urbina, 1997). Thus, projective instruments are generally

considered less susceptible to faking than self-report inventories because the true purpose

of the latter are disguised.

A strength of self-report measures are that they contain standardized items and are

therefore regarded as more objective methods of assessment (Anastasi & Urbina, 1997).

Self-report also has greater face validity than projective measures, in that it superficially

appears to measure the construct of interest. However, this characteristic is often

undesirable for personality assessment, as it has been shown to influence the accuracy of

information obtained. A study comparing projective and self-report techniques for

measuring dependency found a negative relationship between the face validity of the test

and its susceptibility of faking (Bornstein, Rossner, Hill, & Stepanian, 1994). Thus,

projective instruments, such as the TAT, may be more valuable than self-report. In fact,

investigations have confirmed the effectiveness of the TAT for traditional applications, including the extent of psychopathology, the use of defense mechanisms, and for evaluating problem-solving skills (e.g., Cramer & Blatt, 1990; Hibbard et al., 1994; Ronan, Colavito, & Hammontree, 1993; Ronan, Date, & Weisbrod, 1995). For these reasons, the TAT continues to be used in clinical research and practice. A survey of 412 randomly selected clinical psychologists in the American Psychological Association found that 34 % of respondents frequently or always used the TAT, and 82% occasionally used the instrument (Watkins, Campbell, Nieberdig, & Hallmal, 1995).

Recent Research on the Thematic Apperception Test

Since the introduction of the TAT, there has been a shift towards utilizing empirically-defined scoring systems to interpret the test results (Winter, 1999). Although a number of quantitative scoring schemes has been developed to date, the majority has focused on psychodynamic constructs, rather than interpersonal conceptualizations of personality. Westen (1991) developed a TAT coding system called the Social Cognition and Object Relations Scale (SCORS) to assess an individual's developmental level of object relations, as well as the distortion of object relations as it occurs in individuals with borderline personality disorder. Good inter-rater reliability for the SCORS has been found in a variety of studies, with coefficients ranging from .75 to .95 for multiple raters (e.g., Westen, Lohr, Silk, Gold, & Kerber, 1990; Westen, Ludolph, Block, Wixon, & Wiss, 1990; Westen, Ludolph, Lerner, Ruffins, & Wiss, 1990). The validity of the system has also been established through its ability to differentiate between normal adolescents and adolescents with borderline personality disorder (Westen, Ludolph, Block et al., 1990), as well as between adult psychiatric diagnostic groups (Westen, Lohr et al., 1990).

Another objective scoring system for the TAT is the Defense Mechanisms Manual (DMM; Cramer, 1987), which is designed to assess the presence of the three defense mechanisms of denial, projection, and identification. The DMM has been utilized in a wide range of studies with children, adolescents, adults, and psychiatric patients, and adequate inter-rater reliability has been demonstrated in each (e.g., Cramer, 1987, 1991, 1997, 1998; Hibbard et al., 1994; Hibbard & Porcerelli, 1998). Similar to the SCORS, the DMM has been demonstrated to reveal meaningful psychodynamic differences between various psychiatric patients and control groups, as well as within psychiatric diagnostic groups (Cramer, 1999). Additional coding schemes for the TAT have been developed to assess individuals' need for achievement (McClelland, 1985; McClelland, Atkinson, Clark, & Lowell, 1976) and need for power (McClelland, 1985; Winter, 1992).

The history of the development and applications of the TAT highlights the absence of scales to measure interpersonal variables. Research in interpersonal theory and the Interpersonal Circumplex Model (ICM) may provide valuable insight as to the viability of assessing interpersonal variables. The next section explores interpersonal theory and the ICM to establish a foundation for scale development in the present research.

Interpersonal Theory

Humans are social animals who cannot be conceived as existing independently from other persons (Sullivan, 1953). From birth onward, we find ourselves in interpersonal situations involving interactions with others. Our early attachments to parents and significant persons are cognitively and emotionally represented in our memories as personifications of interpersonal situations (Wiggins, 1995). These

personifications, in turn, affect the way we think, feel, and behave in our current interpersonal situations with significant others. Such considerations led Sullivan (1940) to propose that the basic unit for observing and theorizing about personality is the *"relatively enduring pattern of recurrent interpersonal situations which characterize human life"* (p. 110-111). Sullivan was characterized as "almost secretly" dominating American psychiatry during the 1940s and 1950s (Chapman, 1976), advocating for the discipline to use field theory to study personality (Wiggins & Trobst, 1999). This was in direct contrast to the intrapersonal nomenclature used in psychology and psychiatry during the first half of the 20th century.

Currently, a vast literature is available on social cognition and development, as well as personality. Of particular importance to the present research, are the conceptualizations of personality proposed by interpersonal theorists (e.g., Kiesler, 1996), which accentuate the social impact and consequences of human behaviour. Interpersonal perspectives emphasize that personality characteristics have communal meaning and reflect one's relationships with others (Leary, 1957). For instance, terms such as depressed, anxious, and impulsive become more meaningful when the interpersonal context or impact of the action is designated (e.g., "She is depressed to show her parents how badly she feels they have treated her."). Interpersonal theory views personality as inherently embedded in the real and imagined relations between an individual and significant others (Kiesler, 1996). Thus, interpersonal behavior refers to "behaviour which is related overtly, consciously, ethically, or symbolically to another human being (real, collective, or imagined)" (Leary, 1957, p. 4). Sullivan emphasized the magnitude of interpersonal relationships by adopting Eldrige's (1925) general biological principal of

communal existence. The principal specifies that living organisms cannot live if separated

from their necessary environment, and for humans, that necessary environment is culture

or interchange with others (Sullivan, 1953).

Sullivan proposed that human behavior could be understood in terms of the basic

coordinates of social life, identified as negotiations for self-esteem and security (Trobst,

1999). Self-esteem (status, power, worth) was conceived as a deeply held conviction of

oneself as a worthy person, who is capable of securing the respect of significant others

(Mullahy, 1970). Security (love, intimacy, integration) is an equally held conviction of

oneself as a loved person, capable of forming intimate and permanent unions with

significant others (Wiggins, 1995). More recently, these coordinates have been cast

within the broader scope of agency and communion by interpersonal theorists, but are

generally referred to as dominance and affiliation (Wiggins, 1991). Sullivan's account of

human motivation emphasized the interpersonal nature of human needs, and the concept

of need tensions was put forth to apply to various states of disequilibrium created by

deficits (Wiggins & Trapnell, 1996). Need tensions (e.g., anxiety) are tendencies toward

overt actions, whose goal is to provide satisfaction and return the individual to a state of

relative equilibrium. The kind and degree of satisfaction received depends heavily upon

the existence of "complementary" patterns of motivation in potentially cooperative others

(Sullivan, 1953). For instance, an individual's need for power can only be fulfilled if he

or she has relationships with others who are willing to be submissive. Consequently, need

tensions arise when individuals' needs are not being satisfied through their interactions

with significant others.

Interpersonal theory (Sullivan, 1953) asserts that each of us continually exerts a

force field that pushes others to respond to us with constricted classes of dominance and affiliation (Wiggins & Trobst, 1999). The central notion is that two people will reciprocally influence each other's behavior during interactions, as one person's actions elicit, evoke, or invite particular reactions from the other (Carson, 1969; Horowitz & Vitkus, 1986; Kiesler, 1983; Wiggins & Trobst, 1999). Individuals "pull" from others' complementary responses that are designed to affirm and validate their chosen style of living and being (Kiesler, 1996). Thus, interpersonal transactions may be thought of as occasions for "exchange" in which participants give or take away social resources from each other (Foa & Foa, 1974). If a non-complementary reaction occurs, a tension will arise that forces one or both partners to adapt their behavior, or else leave the interpersonal field (Horowitz, 1996). Unfortunately, many people become trapped or "stuck" in vicious circles of interacting that lead them to experience repetitive interpersonal problems (Horowitz, 1996).

Interpersonal conflict arises out of individuals' interpersonal learning history and attachment styles. To draw upon attachment theory for further clarification, individuals have internalized working models of self and others, which pattern their interpersonal behaviour (Bowlby, 1973, 1977). These working models originate from individuals' experience of being cared for, responded to, and protected by their primary attachment figure(s). Although not all relationships necessarily replicate one's primary attachments, these attachments create the basis for what the individual expects of self and other (Flosheim, Henry, & Benjamin, 1996). An individual's attachment style functions like a set of interpersonal rules for engaging with others and are somewhat resistant to change. Thus, the task of clinical treatment is, in part, to modify these interactional patterns

within the client-therapist relationship (Horowitz, 1996). Interpersonal theory provides a framework for measuring interpersonal behaviour and several researchers (e.g., Leary, 1957; Wiggins, 1995) have described a specific taxonomy, called the Interpersonal Circumplex Model (ICM). In the next section, the ICM model and its applications are discussed in order to provide a theoretical frame of reference for the two scales developed in the present study.

The Interpersonal Circumplex Model

While Sullivan proposed an interpersonal theoretical perspective of personality, subsequent researchers (e.g., Freedman et al., 1951) developed a taxonomy of measurable interpersonal behaviours. These variables were found to be intuitively well captured by a circular arrangement, called the Interpersonal Circumplex Model (ICM; Leary, 1957). The ICM is a circular display of 16 interpersonal variables, organized around the two bipolar coordinates of dominance (versus submissive) and affiliation (versus coldness). The concept of the circumplex was adopted from Guttman's (1954) mathematical conception of mental abilities, which empirically demonstrated a strong relationship among various intellectual tests. A circumplex can be defined as a set of qualitatively different traits in a given domain that have an order without a beginning or end. It is a correlational structure in which the dimensions are reducible to differences in two dimensions with a constant radius (Lorr, 1996). The circular arrangement implies that variables close to each other are more similar, and variables opposite each other are considered end points on a bipolar continuum (Wiggins, 1982).

Thus, the ICM represents the spectrum of interpersonal behaviour and is organized around the two dimensions of *interpersonal dominance* and *affiliation* (Leary,

1957). The 16 interpersonal variables identified in the model are thought to represent

various combinations of dominance and affiliation (see Figure 1). It is common practice

for the circumplex to be divided into 8 segments (octants), rather than 16, to preserve the

reliability of distinguishing among the closely synonymous words or phrases (Wiggins,

1979a).
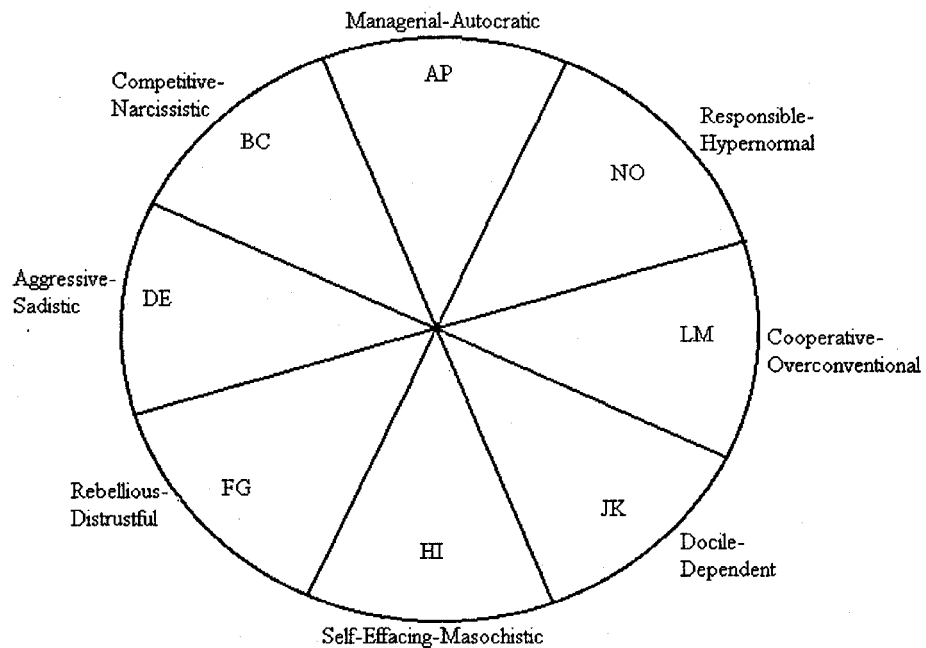
Figure 1.   Leary's Interpersonal Circumplex Model (described on p. 26)

From a psychodiagnostic perspective, the circumplex involves a dimensional

classification in which each categorical membership is continuous rather than discrete.

The interpersonal elements are distributed continuously around the perimeter of a circle,

with each fuzzy category merging into its neighboring categories (Carson, 1996; Wiggins,

1980). A distinct advantage of the interpersonal circumplex model (ICM) is that it provides an explicit conceptual definition of the universal content of interpersonal behavior (Wiggins, 1979b). Any interpersonal behaviour can be represented as a vector originating from the center of the circle, and, therefore, the system is potentially falsifiable through analyses of the variance among personality traits. The ICM also alerts the investigator to noticeable gaps in the interpersonal space of a given set of variables (Wiggins, 1979b). The circumplex structure (Guttman, 1954) has been empirically substantiated in a large number of studies (e.g., Kiesler, 1996; Plutchik & Conte, 1997) and employed in diverse content areas. The interpersonal circumplex itself functions as a nomological net in which the construct validity of other interpersonal measures may be evaluated (Gurtman, 1992; Wiggins & Trobst, 1999).

The ICM provides a single framework for interpreting personality scales from a variety of research traditions in personality, clinical, and social psychology (Wiggins & Broughton, 1985, 1991). The heuristic value of interpersonal circumplex representations is sufficiently demonstrated by the approximately 1000 references appearing in Kiesler's (1996) review of the literature. Research topics to which the model has been utilized include the following: personality assessment (Wiggins & Trobst, 1997a), psychotherapy (McMullen & Conway, 1997), psychiatric diagnosis (Widiger & Hagemoser, 1997), complementarity (Kiesler, 1983), emotion (Plutchik, 1980), nonverbal behavior (Gifford, 1991), social support (Trobst, 2000), manipulation tactics (Buss, Gomes, Higgins, & Lauterbach, 1987), agentic and communal situations (Moskowitz, 1994), and attachment styles (Bartholomew & Horowitz, 1991). Specifically within the domain of clinical psychology, interpersonal researchers (e.g., Benjamin, 1993; Carson, 1996; Frances &

Widiger, 1986; Leary, 1957; Wiggins & Broughton, 1985) have advocated for the ICM to

replace the classification of personality disorders found in the Diagnostic and Statistical

Manual of Mental Disorders (DSM; American Psychiatric Association, 1968, 1980, 1987,

& 1994). The rationale behind this course of action includes concerns about forcing

patients into the Kraepelinian diagnostic categories found in the DSM. Sullivan (1953)

believed that such categories failed to capture the unique patterns of interpersonal

transactions, and advocated for a "factual diagnosis" rather than "formal diagnosis."

Further grounds for utilizing the ICM to describe personality include the notably

poor reliability of the DSM Axis II personality categories. This finding has been the basis

of extended controversy over whether or not personality can be defined in terms of

categories (Widiger, 1993). In contrast, interpersonal theory describes a dimensional

approach to personality, in which normality and abnormality are viewed as different

points on the same measurement continuum (Leary, 1957). Mental illness is considered a

metaphor for problems in living, particularly maladaptive variants of interpersonal

relatedness (Widiger & Kelso, 1983; Wiggins, 1982). Studies have verified this

conceptualization by establishing that different interpersonal problems are associated with

different psychiatric disorders (Alden & Phillips, 1990; Roberts et al., 1982). Moreover,

Plutchik and Platman (1977) investigated the applicability of interpersonal traits to

diagnostic labels utilizing a sample of clinicians and found the factor plot to reveal an

assumed similarity among diagnostic categories. This similarity resulted in a circumplex

structure, organized around the familiar coordinates of dominance and affiliation. A

circumplex was also obtained when clinicians were asked to indicate the applicability of

emotion terms (e.g., fearful, angry, sad) to categories of psychiatric diagnosis (Plutchik,

1967). Thus, it has been concluded that the DSM personality disorders emphasize

interpersonal behaviour, rather than symptoms or social evaluations, and these bear close

resemblance to the ICM (see figure 2; Wiggins, 1982).
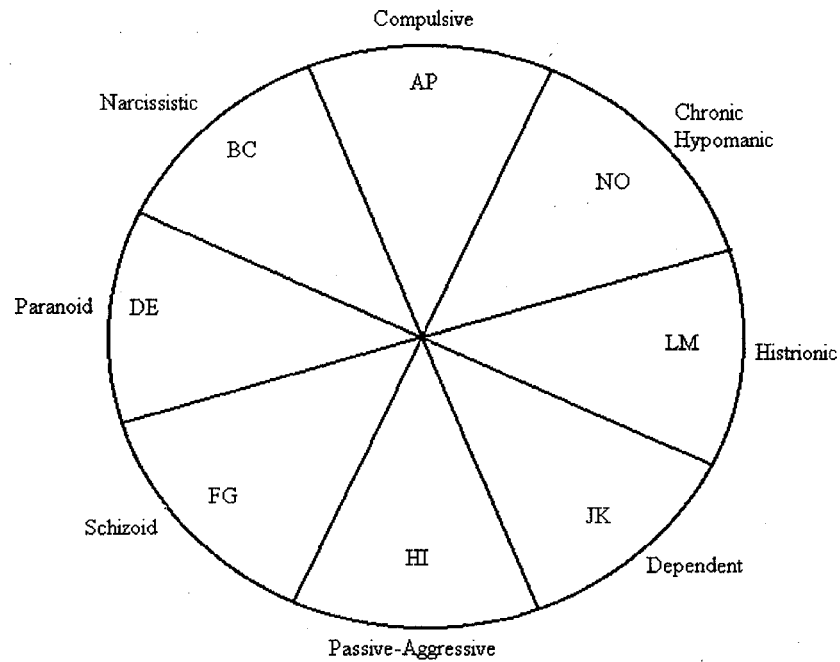
Figure 2. The relationship between the DSM-III personality disorders and the
Interpersonal Circumplex Model.

Sullivan's (1940, 1948, 1950, 1953) work has inspired scholarship for nearly 50

years. Today, a large body of scientific literature on interpersonal theory and the ICM

exists to aid researchers in developing interpersonal systems of personality assessment for

clinical research and practice. These systems of personality assessment have not only

proven effective for describing individuals' interpersonal behaviour, but also have shifted

the focus of clinical treatment beyond the individual to the social meaning and

consequences of behaviour (Kiesler, 1996). Individuals' psychological distress is viewed

as a result of a larger social system that requires changes in interpersonal functioning.

Thus, treatment assists individuals to change their style of interacting within the system,

which in turn, influences their relationships with significant others. Recognition of the

contextual influences in the treatment process also serves to minimize the stigma of

mental illness for the individual client and evokes broader changes in his or her social

environment. These consequences of the ICM approach have substantial utility for the

clinical endeavors of assessment, treatment, and recovery.

Researchers have recognized the value of the ICM and have applied the model to

diverse aspects of social interactions (e.g., Kiesler, 1979, 1987), as well as the building of

existing models of personality (e.g., Lorr & McNair, 1963, 1965). In sum, numerous

models currently exist that have grown out of this perspective. The advantages and

limitations of each approach are reviewed in the next section. This review provides a

basis for the selection of an interpersonal model to inform the present research and the

methodology utilized for scale development.

Interpersonal Models of Personality Assessment

Interpersonal theorists have developed a variety of empirical taxonomies to

capture the realm of interpersonal space. Although these taxonomies differ in focus,

methodology, and populations studied, underlying all is the ICM. The originators of the

interpersonal circumplex (Freedman, Leary, Ossorio, & Coffey, 1951) emphasized the

study of overt behaviour in dyads and groups to assess individuals' personality. Such

micro-analytic techniques provide a systematic framework for the observation of ongoing

interpersonal transactions, such as those in small groups (Wiggins & Trapnell, 1996).

Researchers have subsequently expanded interpersonal theory to focus on interpersonal

acts (Buss & Craik, 1983), traits (Wiggins, 1979a), affects (Plutchik, 1980), problems

(Horowitz, 1979), and psychiatric symptoms (Widiger & Hagemoser, 1997). Moreover,

macro-analytic techniques have been employed to study interpersonal behaviour that

endures over time and across situations (e.g., Leary, 1957). The results of such analyses

reflect an individual's characteristic interpersonal style or mode of adapting (LaForge,

Freedman, & Wiggins, 1985).

　　　Despite the different analyses utilized, a commonality among interpersonal

models constructed to date is the empirical demonstration of a circumplex structure

among the variables studied (Wiggins & Trobst, 1999). The various models also have

similar origins in the historical work of Freedman et al. (1951) and Leary (1957). The

present study also draws upon the work of these researchers, as well as the most recent

model of personality assessment proposed by Wiggins (1995). Given such, a historical

review of the various systems of personality assessment will be provided, highlighting the

advantages and limitations of each model (see also Table 1).

Table 1

Interpersonal Systems of Personality Assessment

Researcher(s)	Participants	Benefits	Limitations
Freedman et al. (1951)	Psychiatric Patients	Utilized Multi-Method Assessment	Focus on Interpersonal Motives
Leary (1957)	Psychiatric Patients	Practical Applications	Lack of Bipolarity Among Variables
Chance (1959, 1966)	Families in Treatment	Longitudinal Analysis	Time Demanding
Lorr and McNair (1963, 1965)	Therapists' ratings of Patients	Describes Overt Behaviour	Self-Report Format
Benjamin (1973)	Psychiatric Patients	Highly Detailed	Too Complex for Replication
Foa and Foa (1974)	Literature Review	Identified Meaning of Interpersonal Events	Cultural Bias
Kiesler (1979, 1987)	College Students	Therapeutic Value	Self-Report Format
Horowitz (1979)	Psychiatric Patients	Clinical Value	Self-Report Format
Wiggins (1979a)	College Students	Sound Psychometric Properties	Self-Report Format

The Kaiser Foundation Research Group. Freedman, Leary, Ossorio, and Coffey

(1951) published the first interpersonal system of personality diagnosis, which was the

collective product of a number of individuals associated with the Kaiser Foundation

Hospital in Oakland, California, during the early 1950s. The research group sought to

develop a descriptive language for summarizing patient interpersonal behaviour during

small group interactions, both inside and outside of the psychiatric setting (Wiggins,

1982). Psychologists were recruited to observe the interactions of research participants

during group psychotherapy and asked to describe the content and attributes of the

individuals in ordinary language. The use of trained professionals as outside observers of

behaviour most likely enhanced the richness and accuracy of the description. Transitive

verbs were employed to describe interpersonal activity and adjectives were used for

describing the content or attributes of participants. Descriptive categories were

additionally developed for a range of terms in order to capture the intensity of the

interpersonal action (Wiggins, 1982). For example, "hostile" transitive verbs might range

from "insult" to "attack" to "murder." Although the focus of the system was on group

process in psychotherapy, the researchers also wanted to relate interpersonal behaviour

with intrapsychic processes, such as repression (LaForge, Freedman, & Wiggins, 1985).

After conducting their analyses, Freedman et al. (1951) selected sixteen categories

to represent "generic interpersonal motivations," and empirically demonstrated that these

variables formed a circumplex structure. The sixteen interpersonal categories represented

a blend of the primary axes of power and affiliation, and included the following: power

(A), narcissism (B), exploitation (C), punishment (D), hostility (E), rebellion (F), distrust

(G), masochism (H), weakness (I), conformity (J), trust (K), collaboration (L), love (M),

tenderness (N), generosity (O), and success (P). The letters represent the alphabetical

ordering of the variables around the circumplex in which correlations between adjacent

categories are higher than correlations between nonadjacent categories. In practice, the

Kaiser Foundation Research Group utilized a multi-method assessment approach of

personality to develop the interpersonal system, despite the initial reliance on outside

observer-ratings (psychologists). Specifically, the researchers correlated observations of

patient behaviour in social situations to self-report, and descriptions made by significant

others (Wiggins, 1982). This use of several sources of information about an individual is

a strong asset of this interpersonal system. This practice minimizes the influence of

measurement error and response biases, as well as broadens the scope of information

collected about an individuals' functioning. However, a drawback of this system is the

authors' emphasis on interpersonal motivations, rather than overt interpersonal behaviour

that is more easily identifiable by observers or significant others.

The Kaiser Foundation Research Group additionally developed a geometric

typology for the circumplex to analyze the various sources of information collected about

an individual (LaForge, Leary, Naboisek, Coffey, & Freedman, 1954). The typology

permitted direct estimates of the contributions of the underlying dimensions of power and

affiliation through trigonometric functions, thereby providing coordinate values. This

interpersonal system permits a patient's personality profile to be represented as a single

point on the circumplex. The intensity or extremeness of the single-point diagnosis is

computed by calculating an individual's mean score on all sixteen dimensions and

interpreted with reference to the distance from the center of the circle (Wiggins, 1982).

An individual is classified as interpersonally maladaptive if his or her single-point score

differs by more than one standard deviation from a normative population (LaForge et al.,

1954). The sixteen interpersonal variables of the ICM could also be assessed with a self-

report instrument, called the Interpersonal Check List (ICL; LaForge & Suczek, 1955).

The items of the scale were comprised of trait adjectives to describe interpersonal

behaviour, and could be combined into sixteen scales arranged on a circular order (Lorr,

1996). Laforge (1963) factor analyzed data from subject responses to the ICL and

demonstrated that two major bipolar axes–dominance and affiliation–could satisfactorily

account for the circumplex reflexes. The ICL became the standard psychometric device in

the interpersonal field and was primarily utilized by Leary and associates (Wiggins,

1995).

Leary's system. Leary's (1957) *Interpersonal Diagnosis of Personality*, an

accumulated product of the Kaiser Foundation Research Group, details the construction

of the circumplex. The book also describes a multi-method assessment approach for

interpersonal variables that could be used to identify specific psychological syndromes

and personality types. Leary proposed to gather information about a patient's personality

from a variety of sources, including self-report, group testing, and the TAT (LaForge et

al., 1985). While Leary's multi-method assessment approach was comparable to the

Kaiser Research Foundation Group, the major advancement was Leary's detailed

description of procedures for analyzing such data. Thus, other researchers in the field

could potentially replicate Leary's system. Indeed, Leary's work had a major impact on

clinical psychology and was not only introduced as a descriptive alternative to APA

typology (Truckenmiller & Schaie, 1979), but also generated a proliferation of two-

dimensional models of interpersonal behaviour in the scientific literature. Consequently,

the interpersonal system is generally known as the "Leary System," despite its collective

construction as an extension of the Kaiser Foundation Research Group (Wiggins, 1982).

It is important to note that Leary (1957) differed from the Kaiser Group in the

number of personality types identified in the circumplex. Leary felt the system was more

efficient for clinical use by collapsing adjacent categories to form octants (LaForge,

Freedman, & Wiggins, 1985). Thus, the following eight personality types are identified in

Leary's interpersonal circumplex model (see figure 1, p. 17): managerial-autocratic (AP),

competitive-narcissistic (BC), aggressive-sadistic (DE), rebellious-distrustful (FG), self-

effacing-masochistic (HI), docile-dependent (JK), cooperative-over conventional (LM),

and responsible-hyper normal (NO). In the diagnostic application of the system, the

circular arrangement of variables was given metric interpretations within conventional

Euclidean space, in which conventional trigonometric formulas could be applied

(Wiggins, 1982). Thus, the length of a given vector in the interpersonal circle was

expressed with reference to the magnitude of the two orthogonal components of power

and affiliation. The origin of the circle was interpreted as the mean standard score of a

normative population, and the length of an individual's vector was interpreted as a

deviation from that mean.

Given the metric interpretation of Leary's (1957) model, a principle psychometric

shortcoming of the system was the lack of bipolarity between variables opposite each

other on the circle (Wiggins, 1982). It has been pointed out (Wiggins, 1979a) that several

of the bipolar contrasts did not make a great deal of conceptual sense, including success

versus masochism, narcissism versus conformity, rebellion versus tenderness, distrust

versus generosity, and punishment versus collaboration. This lack of bipolarity is thought

to account for why several researchers found noticeable gaps in the upper right quadrants of Leary's system (PA and NO) when evaluating its circumplex structure (e.g., Lorr & McNair, 1965; Stern, 1970; Wiggins, 1979a). Specifically, the tenderness-generosity octant (NO) did not appear to be an accurate bipolar contrast to the rebellious-distrustful octant (FG). Lorr and McNair (1965) noted that tenderness and generosity (NO) are too weak and loving to be placed on the end point of the interpersonal circle. They thought the NO quadrant reflected a socially exhibitionistic style of behaving (gregarious-extraverted) and attempted to close the gap in Leary's system by adding such substantive variables.

Chance's system. One of the earliest extensions and clinical applications of the Kaiser Foundation Research Group was presented by Chance (1959, 1966). Chance (1959) examined the interpersonal experiences of families in treatment to develop an interpersonal system of personality assessment. However, Chance differed from the Kaiser Group in postulating that 20 interpersonal categories comprised the interpersonal circumplex, instead of sixteen. To develop the system, data were collected on 34 families who were systematically interviewed and tested at the third, sixteenth, and thirtieth session of family therapy. Interview statements were coded for content, intensity, and acceptance versus rejection within the 20-variable interpersonal system. Following the interviews, patients rated themselves, as well as their therapists, on a 60-item Q-sort version of the interpersonal system. Therapists were then asked to use a Q-sort methodology to rate the current status of their patients and predict their patient's future self-reports during later sessions. The next step of the study was to evaluate the data for circumplex structure from the perspective of both patients and therapists. Chance (1966)

found the content of interpersonal experience was best represented by 16 categories, organized around the underlying axes of active–passive and positive–negative. The 16 interpersonal categories included the following: lead (A), boss-rebel (B), compete (C), punish (D), hate (E), resent-complain (F), distrust (G), retreat (H), submit (I), conform-admire (J), trust (K), cooperate (L), appreciate-love (M), support (N), and give (O).

In the clinical application of Chance's system, therapists were required to examine transcripts of psychotherapy and code individuals' interpersonal experiences according to the circumplex dimensions. Chance (1966) specified that this analysis must minimally include a) the classification of the content of experience, b) an indication of its intensity for the individual, and c) an appraisal of the quality of the experience in terms of its acceptability to the individual, as well as when observed in others. Thus, clinicians first classified the content of an individual's experience according to the 16 interpersonal variables. Then the intensity of the coded interpersonal experience was rated on a 3-point Likert scale (1 = minimal, 3 = maximum), followed by an indication of the quality of the experience in terms of self-accepting (+) or self-rejecting (-).

A strength of Chance's structured system is that it provided a frame of reference for generating and testing specific hypotheses about interpersonal behaviour, as well as for evaluating treatment outcome (Wiggins, 1982). The methodology utilized to construct the circumplex is also an advantage of Chance's system. The longitudinal analysis of family therapy sessions and ratings from multiple individuals (family members and therapists) permits an excellent opportunity to tap into the richness of interpersonal experience. Although this system may have some value for clinicians, the time involved to classify and code the content of therapy sessions is a limitation. This system consists of

a three-step analysis of the data collected on each individual, per therapy session, and thus, would require a great deal of time to utilize. Nonetheless, it was Chance's (1966) conviction that the interpersonal system was clinically useful and had potential application to clinicians of diverse theoretical orientations. For instance, clinicians have the opportunity to change the underlying coordinates to fit their modality, such as using the polarities of activity–passivity and friendliness–hostility for orthodox psychoanalysts (Chance & Arnold, 1960).

Lorr and McNair's system. Lorr and McNair (1963, 1965) conducted a series of investigations to develop a rating instrument for therapists to use to classify their patients according to an interpersonal circumplex model. Building upon the previous work of interpersonal theorists (e.g., Leary, 1957), Lorr and McNair (1963) hypothesized that 13 categories of interpersonal behaviour should form a circular order. They provided 10 psychologists with descriptions of the interpersonal categories and asked them to generate statements describing representative overt behaviours within each category. A set of 171 behavioural statements were comprised to form the first version of the Interpersonal Behaviour Inventory (IBI), which employed a Yes-No format for clinicians to rate a patient's interpersonal behaviour. This behavioural approach to scale construction is the advantage of Lorr and McNair's system, given that individuals can more readily identify overt behaviour, as opposed to making judgments about personality dynamics.

To further explore the structure of the IBI, Lorr and McNair (1963) conducted a second study in which 163 psychotherapists were asked to rate the behaviour of 346 patients according to the 171 items of the IBI. From the intercorrelations of the items, 14 group factors were extracted, and an examination of the oblique factor structure revealed

nine scales with the postulated circular ordering. Lorr and McNair (1965) then attempted

to expand their nine-variable circumplex to include the 16 interpersonal variables

postulated by Leary (1957). They added new items to the IBI and had a sample of 265

psychotherapists rate 523 outpatients. Fourteen factors were extracted, and thus, a third

study was conducted in an attempt to map the full spectrum of interpersonal behaviours

(Wiggins, 1982). Lorr and McNair (1965) had a nationwide sample of 115 therapists rate

525 outpatients on an expanded version of the IBI, which utilized a 5-point Likert scale (1

= "not at all;" 5 = "quite often"). From these studies 15 scales were developed to mark the

interpersonal variables of the circumplex (Lorr & McNair, 1963, 1965, 1966).

A limitation of Lorr and McNair's system is their questionable research

methodology for scale construction. Rather than retaining the nine variables confirmed in

the second study (Lorr & McNair, 1963), the authors engaged in repetitive data collection

until they obtained the desired results of 15 dimensions to the circumplex. The

researchers should have built upon these originally obtained results, irrespective of

whether or not they confirm Leary's (1957) circumplex model. Nonetheless, the final

version of the Interpersonal Behaviour Inventory (IBI; Lorr & McNair, 1965) was

comparable to Leary's model and identified 15 dimensions to the interpersonal

circumplex. These include the following: dominance (A), recognition (B), aggression (C),

mistrust (D), autonomy (E), detachment (F), inhibition (G), abasement (H),

submissiveness (I), succorance (J), deference (K), agreeableness (L), nurturance (M),

affiliation (N), and sociability-exhibition (O). Another limitation to Lorr and McNair's

personality system was that it relied solely on the use of a self-report instrument for

assessment. Clinicians were to utilize the self-report instrument to rate their patients'

behaviour and identify his or her personality type within the circumplex. Given that self-report measures have been found to be susceptible to sources of error (e.g., Piedmont, 1998), it is preferable to gather information about an individual from a variety of sources, such as from significant others and other assessment measures (e.g., projective instruments).

There are also several strengths to Lorr and McNair's interpersonal system. For instance, it seemed to advance the understanding of interpersonal variables. Lorr and McNair were the first theorists to emphasize the suspicious and mistrusting nature of the D category (Wiggins, 1982). Their circumplex model diverged from Leary's (1957) model in the N and O vectors, where affiliation and sociability-exhibition replaced tenderness and generosity. Lorr and McNair also identified the two underlying dimensions of the ICM as control and sociability, which added qualities to the traditional dimensions of power and affiliation. The researchers further established a classification scheme for identifying distinct interpersonal "types" or homogeneous subgroups of individuals (Lorr, Bishop, & McNair, 1965). Specifically, the following four profile types were identified to classify approximately half of all patient profiles: 1) inhibited-abasive-submissive, 2) agreeable-nurturant-sociable, 3) hostile-mistrustful-detached, and 4) competitive-dominant-exhibitionistic. The four types represented distinct and meaningful categories within the general logic of the circumplex.

Benjamin's system. Benjamin departed from the Leary tradition in the development of an ICM with separate circular representations for actions, reactions, and self-actions (Wiggins, 1996). Benjamin (1973, 1974, 1977, 1979) developed an elaborate Structural Analysis of Social Behaviour (SASB) to classify behaviour in terms of its

focus. The SASB is considered the most detailed, clinically rich, ambitious, and conceptually demanding of all interpersonal models because it specifies the subtle and complex patterns of interacting from three planes or perspectives (Wiggins, 1995). The complete interpersonal circumplex presented by Benjamin (1974, 1979) consists of 36 finely distinguished points around a circle for each of the three planes. Two of the planes are interpersonal, and one is intrapsychic (Lorr, 1997). The first plane in Benjamin's model is composed of primarily active behaviour directed towards others (Benjamin, 1979). The second plane describes an individual's complementary reactions to these actions and is geometrically represented in a 180-degree rotation to the first plane. Thus, managing and controlling on the first plane of the circumplex is a complementary relationship to yielding and submitting on the second plane.

The third plane of Benjamin's model attempts to specify an intrapsychic plane in accordance with the psychodynamic concept of "introject." That is, the plane portrays what occurs when behaviour on the active or first plane is "turned inwards" (Wiggins, 1982). Thus, if others attempt to actively manage and control a person, the "introject" reaction to this would be for the person to become self-controlling. Benjamin also distinguishes antithetical or antidotal responses, which are strategies for eliciting a response from the other person that is opposite to his or her initial action. The horizontal axis represents affiliation and ranges from friendly–loving to hostile–attacking. The vertical axis is conceived as interdependence and varies according to the plane of interaction: 1) control versus giving autonomy, 2) subordination, 3) self-control versus self-emancipation. This conceptualization of the vertical axis as interdependence, rather than dominance, is another point of discrepancy between Benjamin's (1974) and Leary's

(1957) ICM. Benjamin viewed Leary's model as incomplete because it contained only

one vertical axis of interpersonal control (dominance–submission), which represented

exchanges of enmeshment. In contrast, Benjamin's interdependence axis encompasses

both characteristics of enmeshment and differentiation in interpersonal relations

(Florsheim, Henry, & Benjamin, 1996). Although the SASB model appears to split the

single plane of the interpersonal circumplex, the relationship between the two circumplex

models is largely unknown at present (Schmidt, Wagner, & Kiesler, 1999).

Benjamin (1974) originally identified 36 different variables with a circular

ordering, followed by the development of a cluster form of the SASB in 1993. The

revised SASB model (Benjamin, 1993) identified eight interpersonal variables for each of

the three-circumplex levels. The following clusters were represented on the first level of

the circumplex (i.e., interpersonal behaviour directed towards others): (A) control, (B)

belittling, (C) rejecting, (D) neglecting, (E) freeing, (F) affirming, (G) loving, and (H)

protecting. Benjamin's SASB model provides a fine-grained analysis of interpersonal and

intrapsychic interactions that are utilized for diagnosing attachment disorders. The

clinical application involves coding interactions according to the SASB and identifying

relational processes as complementary (one person's behaviour complements the other's

behaviour), concordant (one person replicates how he or she has been treated by others),

or antithetical in nature (behaviour reflects different personal agendas). Benjamin's

personality system is primarily concerned with evaluating subordinate or superordinate

relations (e.g., parent-child, therapist-client) and is therefore most suitable in form and

content for clinical settings (Benjamin, 1999; Kiesler, 1991). This system permits a high

degree of specificity, however, it is limited by the sophistication required to understand

and utilize the system. Benjamin's analysis of interpersonal interactions is highly

complex and very challenging to replicate in clinical practice.

   Foa and Foa's system. Foa (1961) conducted a review of the interpersonal

literature and suggested that the nature of interpersonal variables could be illuminated

through the application of Guttman's (1958, 1966) procedures for facet design and

analysis. Such procedures provide a logical framework within which variables are given

systematic definition in terms of more basic sets or "facets" (Wiggins, 1982). Foa (1961)

described the two-dimensional facets of interpersonal behaviour to reflect dominance–

submission and love–hostility. Foa and Foa (1974) subsequently maintained that the

interpersonal variables described by Leary (1957) were best conceived as a set of

cognitive categories for processing social information. Consequently, they developed the

social resource/exchange theory to describe the cognitive organization and underlying

mechanisms of interpersonal exchanges.

   Within Foa and Foa's social exchange theory, a resource is defined as any item,

concrete (e.g., giving an object) or symbolic (e.g., body posture), which can become the

object of exchange in an interpersonal situation, bringing reward and/or punishment (Foa,

Tornblom, Foa, & Converse, 1993). Foa and Foa (1974) specified these interpersonal

situations to entail dyadic interactions that have relatively clear-cut social (status) and

emotional (love) consequences for both participants. This operational definition of an

interpersonal situation can be considered an advantage of Foa and Foa's system, in that it

identifies both the meaning and consequences of interpersonal events, which permits a

clear identification of interpersonal variables. Specifically, interpersonal variables are

described to comprise the following three facets: object (self and other), resource (love

and status), and directionality (giving and taking away).

According to Foa and Foa, the assessment of individuals' personality involves the

analysis of interpersonal events and their categorization in terms of the eight possible

combinations of the three facets (e.g., giving love to self, taking status from other).

Following this analysis, an individual's primary method of processing social information

could be identified on the ICM. Although Foa and Foa present a functional description of

interpersonal events, a limitation of their social exchange theory is that it represents a

market or commercial approach to relationships. The emphasis on cognitive processing

negates the emotional components that may be motivating one's desire for affiliation with

others as described in interpersonal theory. This perspective also seems to be culturally

biased to North American ideals, which limits the applicability of Foa and Foa's system

to individuals of diverse ethnic backgrounds.

Kiesler's system. Kiesler (1979, 1987) expanded Leary's (1957) model to develop

a circumplex to map interpersonal communication during ongoing dyadic interactions.

The two central constructs of the model are "evoking message" and "impact message,"

which describe the messages exchanged in dyadic transactions. Kiesler (1979) identified

one actor in each interpersonal interaction as transmitting an evoking message to the

other, through both verbal and nonverbal channels, which is meant to impose a particular

encoder-decoder relationship. The other receives (decodes) an impact message that elicits

covert affective and cognitive reactions, and in turn, influences the relationship message

that he or she communicates to the original actor. Each part of the message is thought to

occur primarily out of awareness as part of automatic interpersonal transactions (Wiggins,

1982). However, the decoder's reactions are potentially available to awareness through introspection and can provide valuable information about the interpersonal style of an actor (Kiesler, 1979, 1996). That is, the decoder's reactions can illustrate the impact an actor has on significant others. Kiesler (1979) proposed that emotional problems stem from the aversive counter communications an individual unknowingly elicits from others. Thus, the major tasks of psychotherapists are to 1) identify the covert thoughts and feelings that the client elicits from the therapist (and presumably significant others), and 2) "metacommunicate" with the client about the self-defeating consequences of the client's evoking style (Wiggins, 1982). Identifying and outlining these two major tasks for therapy is the benefit of Kiesler's system, as it has potential value for assisting clinicians with the process of psychotherapy.

Kiesler further developed a clinical measure with these two purposes in mind called the Impact Message Inventory (IMI; Kiesler, 1987). The inventory was designed to be suitable for behavioural ratings by using items in transitive verb form (Kiesler, 1996). To construct the IMI, Kiesler (1987) initially created 15 vignettes to typify the overt interpersonal behaviours suggested by items from the 15 scales of Lorr and McNair's (1967) Interpersonal Behaviour Inventory. These descriptions were then presented to six members of Kiesler's research team with the instructions to imagine themselves in the company of that individual and record their covert reactions using the sentence stem "He or she makes me feel" (Wiggins & Trapnell, 1996). A total of 784 items were generated from this procedure, which defined the universe of content of impact messages. Rating procedures and content analyses were used to classify the majority of these items according to the following three categories: 1) direct feelings (e.g., irritated), 2) action

tendencies (e.g., I want to take care of him or her), and 3) perceived evoking message

(e.g., he or she wants me to put him or her on a pedestal). Fifteen subsets of impact

message items were then aligned to form scales corresponding to the 15 interpersonal

behaviour categories of Lorr and McNair's (1965) interpersonal circumplex.

An admirable quality of Kiesler's system is the creative approach used for scale

construction (i.e., personal reactions to vignettes). However, this model is limited by its

reliance on a self-report inventory for personality assessment, rather than employing

several different types of measurement. Moreover, the psychometric properties of the IMI

are questionable. Early research found the 15 scales of the inventory did not form a clear

circumplex structure (e.g., Lorr & McNair, 1966), whereas subsequent versions of the

scale (IMI; Kiesler & Schmidt, 1993; IMI-C; Kiesler, Schmidt, & Wagner, 1997) have

demonstrated more robust circumplex structure (e.g., Wiggins, 1995).

Horowitz's system. Horowitz (1979) developed a self-report instrument to

characterize the universe of interpersonal problems addressed in clinical treatment. The

conceptual framework of the instrument originated in Horowitz's distinction between

symptoms and interpersonal problems. A symptom (e.g., "I have difficulty sleeping") was

defined as a complex experience involving interrelated cognitive, affective, and

interpersonal components that lacked an inherent conceptual organization and, thus, could

not be the focus of psychotherapeutic interventions (Horowitz & Vitkus, 1986). However,

interpersonal problems (e.g., "It's hard for me to get close to people") were composed of

an underlying circumplex structure that illuminates how a person tends to be drawn into

particular interactions that sustain his or her symptoms (Horowitz, 1979). Horowitz

believed that interpersonal problems should be the focus of psychotherapy and

developed an instrument specifically for this purpose, called the Inventory of

Interpersonal Problems (IIP; Horowitz, Rosenberg, Baer, Ureno, & Villasenor, 1988).

The IIP was developed by first identifying problems mentioned by outpatients

during intake interviews for psychotherapy (Horowitz, 1979). The interviews were

videotaped and two observers identified every problem mentioned that took the general

form of "It is hard for me to (do something)" (Horowitz, 1996). These problems were

then submitted to 14 judges to decide whether or not each problem was interpersonal. On

average, 76% of problems mentioned per patient were considered interpersonal (e.g., "It

is hard for me to trust other people) and these problems were utilized to construct the IIP.

The use of the IIP to delineate specific sources of interpersonal distress to focus on in

treatment has benefited clinicians (Horowitz & Vitkus, 1986). However, similar to

previous investigators (e.g., Horowitz, 1979; Kiesler, 1979, 1987), Horowitz designed

and utilized a self-report inventory solely for personality assessment. This is a limitation

of Horowitz's approach, given that research has shown self-report measures can be

inaccurate (e.g., Piedmont, 1998). Nonetheless, the IIP has proven useful in clinical

practice and a subsequent circumplex version of the scale has been developed (IIP-C;

Alden, Wiggins, & Pincus, 1990) that locates interpersonal problems occurring in the

following octants of the ICM: domineering (PA), vindictive (BC), cold (DE), socially-

avoidant (FG), nonassertive (HI), exploitable (JK), overly nurturant (LM), and intrusive

(NO).

Wiggins's system. Wiggins (1979a, 1982, 1991) conducted an extensive series of

studies to explore the interpersonal circumplex model (ICM) and to develop an

instrument that reliably assesses its dimensions. The various conceptual frameworks

utilized to guide Wiggins's research, included interpersonal theory (Leary, 1957), the

lexical tradition of personality (Goldberg, 1981), facet analysis (Guttman, 1966), and

social exchange theory (Foa & Foa, 1974). Based on the lexical tradition, Wiggins

proposed that the universe of significant human tendencies or traits was contained within

the covers of an unabridged dictionary (Wiggins, 1982). Thus, Wiggins's (1979a)

research began by constructing a taxonomy of interpersonal behaviour in relation to other

domains of human characteristics. Various rating procedures were used to reduce the

universe of trait-descriptive words in the English language (approx. 27,000) to a list of

4063 terms that were relatively familiar. Wiggins then had a team of judges distinquish

interpersonal traits from other categories, such as temperament, moods, and cognitive

traits, based on Foa and Foa's (1974) working definition of interpersonal traits. That is,

interpersonal traits refer to dyadic interactions with relatively clear-cut social (status) and

emotional (love) consequences for both participants (self and other). The judges

subsequently distributed the interpersonal terms across Leary's (1957) 16 categories of

interpersonal behaviour, which were revised to reflect genuine semantic contrasts on

variables opposite on the circumplex (e.g., success versus masochism was reconstructed

as ambitious versus lazy).

Wiggins's (1979) methodology further entailed evaluating the data for circumplex

structure by administering the 16 lists of interpersonal adjectives to several college

student samples. The results identified eight items in each of the 16 categories to have

optimal circumplex properties. An examination of the factor loadings of each item led to

the following interpretation of the 16 interpersonal variables: power (A), narcissism (B),

exploitation (C), punishment (D), hostility (E), disaffiliation (F), withdrawal (G), failure

(H), weakness (I), modesty (J), trust (K), love (L), collaboration (M), affiliation (N), extraversion (O), and success (P). Further evaluation of the data revealed the 128 items to have superior empirical fit to the circumplex model when scored as octant scales. In fact, the octant scales provided the best circumplex structure in the literature to date (Wiggins, Steiger, & Gaelick, 1981) and were utilized to formulate the Interpersonal Adjective Scales (IAS; Wiggins, 1979a). The IAS is a self-report instrument containing scales to assess the following eight octants of the interpersonal circumplex (see Figure 3): ambitious-dominant (PA), arrogant-calculating (BC), cold-quarrelsome (DE), aloof-introverted (FG), lazy-submissive (HI), unassuming-ingenuous (JK), warm-agreeable (LM), and gregarious-extraverted (NO).
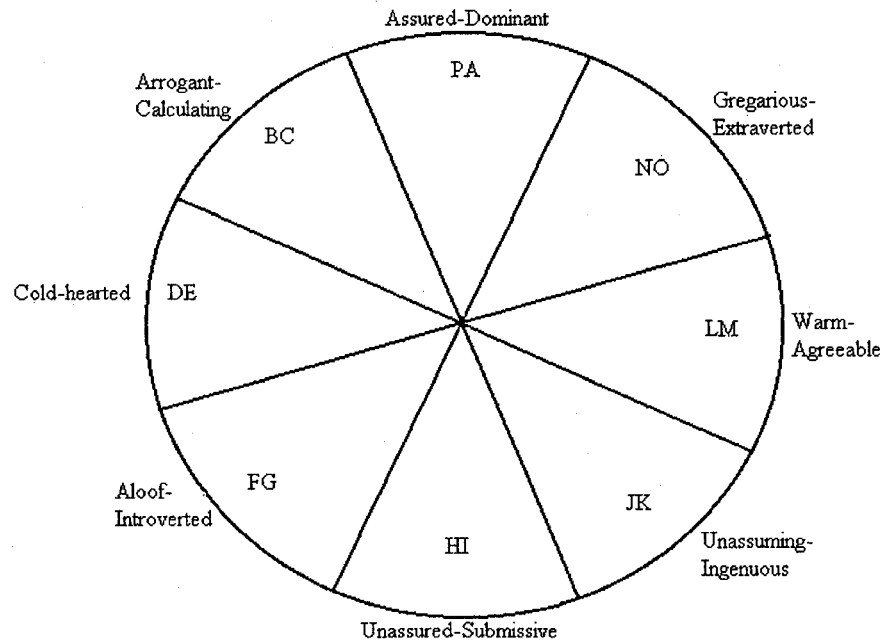
Figure 3.   Wiggins' Interpersonal Circumplex Model.

A shorter version of the IAS was subsequently constructed using item-analytic procedures, called the Interpersonal Adjective Scales-Revised (IAS-R; Wiggins, 1995; Wiggins, Trapnell, & Phillips, 1988). The instrument contains 64 items to assess the four bipolar vectors (eight interpersonal variables) of the interpersonal circumplex and was demonstrated to robustly assess the two underlying dimensions or axes of the circumplex, namely, dominance–submission and love–hate (Wiggins, Trapnell, & Phillips, 1988). In the construction of the IAS-R, the ambitious-dominant scale was renamed assured-dominant based on Kiesler's (1983) argument that the contrasting sixteenths of success (P) and failure (H) were not interpersonal in nature. The IAS-R has been demonstrated to have robust psychometric properties (e.g., Wiggins, Phillips, & Trapnell, 1989), and given such, was used as a reference in research for classifying 172 personality scales over the course of one decade (Wiggins & Broughton, 1991). The exceptional psychometric research conducted by Wiggins to create the scale is the major improvement of this ICM model.

Other interpersonal systems in the literature. Several other researchers developed interpersonal systems of personality assessment in the literature that were less influential. For instance, Schaefer (1957) studied the interactions of mothers with their children to develop an ICM that identified the underlying dimensions of parenting behaviour to be control and hostility. Terrill and Terrill (1965) studied family interactions and developed a method for rating the interpersonal aspects of communication in family discussions. The classification scheme included eight different interpersonal variables arranged on a circular continuum, with each variable's location determined by its relationship to the circle's axes. The two axes identified were the bipolar dimensions of dominance–

submission and hostility–affiliation. Another interpersonal model was Carson's (1969) innovative *Interaction Concepts of Personality*, which provided an elaborate theoretical integration of the ICM within existing clinical, social, and experimental psychology domains (Wiggins, 1996). Carson (1969) proposed that the two underlying dimensions of the circumplex were dominance–submission and love–hate and employed a quadrant interpretation of the model. In contrast to previous models, Carson only identified four interpersonal typologies or personality styles, including friendly-dominance, hostile-dominance, hostile-submission, and friendly-submission.

Other researchers (Meuller & Dilling, 1968) were interested in studying the process of psychotherapy and used the ICM to examine interpersonal themes during client–therapist interactions. They developed a scoring system that focused on reproducing the emotional state the actor desired to establish in therapy. De-Raad (1999) utilized a psycholexical approach to study interpersonal behaviour, which permits a full and comprehensive account of the language of interpersonal behaviour. Self-report and peer-ratings were obtained on a taxonomy of interpersonal trait and behaviour verbs and subjected to principle components analysis. Results centered on a two-factor solution, reflecting the two underlying dimensions of the interpersonal circumplex, dominance and nurturance. More recently, Locke (2000) developed a circumplex scale to measure the range of interpersonal values potentially associated with adaptive and maladaptive interpersonal behaviours.

In the literature review a variety of different circumplex models to assess interpersonal behaviour were described. Among the interpersonal models developed to date and reviewed in the previous section, Leary (1957) and Wiggins (1979a, 1991)

present the clearest description and most empirically supported model of interpersonal behaviour. The various interpersonal models can be distinguished by the populations studied, measures employed, and theoretical rationales, yet the majority of models converge in the identification of two latent variables. These two dimensions represent dominance and affiliation, although the labels differ across researchers. For instance, they have been referred to as power and affiliation (Freedman et al., 1951; Leary, 1957), status and love (Foa, 1961), control and sociability (Lorr & McNair, 1963), and interdependence and affiliation (Benjamin, 1973). The constructs are most commonly described to reflect the bipolar dimensions of dominance-submission and love-hate, and, therefore, are labeled dominance and affiliation in the present study. There is widespread agreement among researchers that these two dimensions give rise to the observed circular ordering of the ICM (e.g., Wiggins, 1995) and account for a large proportion of the variance in ratings of personality traits (e.g., Becker & Krug, 1964; Conte & Plutchik, 1981; Foa, 1961; Lorr & McNair, 1963; Schaefer & Plutchik, 1966; Wiggins, 1979b). Thus, interpersonal dominance and affiliation are crucial and possibly sufficient constructs for the assessment of personality. Given the importance of these two dimensions, it is imperative that scales are available to measure them. However, researchers have tended to develop scales for assessing the 16 dimensions of the ICM (representing combinations of dominance and affiliation), rather than directly measuring the two constructs. It is also apparent from the previous review that the majority of investigators primarily utilize self-report instruments for personality assessment in contrast to Leary's (1957) approach.

To address this deficiency, the present study focuses on the development of two scales to assess interpersonal dominance and affiliation on the TAT. *The Interpersonal*

Dominance and Affiliation TAT scales will encompass the interpersonal variables

identified in the ICM, as well as diverse personality traits. The two scales serve to

simplify the description of personality and, therefore, offer a valuable tool for the

assessment of personality from an interpersonal perspective. The creation of two

interpersonal scales for the TAT not only addresses the deficiency of objective scoring

measures available for this projective instrument, but offers an alternative interpersonal

measure to self-report. The benefits and limitations of the various types of measurement

techniques will be described in more detail in a later section, however, the nature of

interpersonal dominance and affiliation will first be explored.

Interpersonal Dominance and Affiliation

Two orthogonal dimensions have been identified to underlie the interpersonal

circumplex model, namely dominance and affiliation. Dominance refers to the extent to

which an individual feels strong, powerful, and has an impact on the environment (i.e.,

others; McMullen & Conway, 1997). It is a bipolar construct ranging from acts of

submissiveness to domineering interpersonal behaviour (Leary, 1957). Dominant

individuals tend to exercise power over others in a social context, and describe

themselves as forceful, assertive, dominant, and self-confident (Wiggins, 1995). In social

exchanges, dominance involves the granting of love and status to self, and the granting of

love, but not status to other (Foa & Foa, 1974). Tasks reflecting dominance include

making reasonable requests of others, challenging people when the situation calls for it,

standing up for oneself, expressing one's needs directly to others, refusing unreasonable

requests, and being aggressive to protect one's interests (Horowitz, Rosenberg, Baer,

Ureno, & Villasenor, 1988). In its problematic form, this style becomes domineering and

is evident in problems related to controlling, manipulating, being aggressive towards, and trying to change others (Wiggins, 1995).

Interpersonal submissiveness represents the other end of the dominance continuum, and refers to individuals who tend to be timid, fearful, and submissive in social transactions. Within social exchanges, submissiveness involves the denial of love and status to self, and the granting of status but not love to other (Foa & Foa, 1974). Individuals with this interpersonal style tend to avoid situations involving social challenge, power over others, and being the center of attention (Wiggins, 1995). In its problematic form, this style is associated with non-assertion and is manifested by difficulty in making one's needs known to others, discomfort in authoritative roles, and an inability to be firm and assertive with others (Wiggins, 1995).

The second dimension that underlies the ICM, affiliation, refers to the extent to which an individual feels a sense of intimacy, union, or solidarity with others (Foa & Foa, 1974; McAdams, 1985). From a psychoanalytic perspective, affiliation can be conceptualized as the affective coloring of the object world, ranging from malevolent to benevolent (Westen, Lohr, Silk, Kerber, & Goodrich, 1985). This is a bipolar construct ranging from interpersonal acts reflecting love and warmth to coldness, hostility, and hate (Leary, 1957). Warm individuals tend to be nurturing, sympathetic, and caring in social transactions, and describe themselves as forgiving, kind, and softhearted (Wiggins, 1995). They provide material or emotional benefits to others who are in need of help or support. Social exchanges reflecting warmth involve the granting of love but not status to self, and the granting of both love and status to other (Foa & Foa, 1974). Interpersonal warmth becomes overly nurturing in its problematic form, and is manifested in problems resulting

from trying too hard to please others, as well as being too generous, trusting, caring, and permissive in interpersonal interactions (Wiggins, 1995).

Coldness represents the other end of the affiliation continuum, and includes individuals who tend not to be warm, cooperative, or nurturing when such behaviour is appropriate. Cold individuals describe themselves as lacking warmth, being unkind, and unsympathetic (Wiggins, 1995). Leary (1957) observed hostility to be involved in coldness, communicated through subtle attitudes of punishment, discipline, and provoking guilt, rather than overtly destructive acts. Patterns of social exchange reflecting coldness are both the granting of love and status to other, but not to oneself (Foa & Foa, 1974). Thus, an individual who interacts coldly may appear indifferent and non-reactive. In its problematic form, interpersonal coldness becomes an inability to process emotions, and is manifested in problems expressing affection towards others, feeling love for another person, difficulties making long-term commitments, and an inability to be generous and get along with others (Wiggins, 1995).

A major postulate of interpersonal theory is that two interacting people reciprocally influence each other's behavior as they interact (e.g., Carson, 1969; Kiesler, 1983). Kiesler (1983) described that "pairs of interacts, in their daily transactions, are negotiating mutually satisfactory definitions regarding who is going to be more or less in control or dominant and what is to be the characteristic level of friendliness or hostility" (p. 186). Thus, in examining the nature of interpersonal exchanges, research has found complementary behaviors to occur in the dominance dimension, whereas reciprocal behaviors occur in regards to affiliation (Carson, 1969; Horowitz, 1996; Lorr, 1996). Therefore, dominant behavior elicits submissive responses from others, and warm

interpersonal behaviour evokes reciprocal warmth. Taking both dimensions into account, hostile-dominant behavior invites hostile-submissive behavior, and friendly-dominant behavior invites friendly-submissive behavior.

The reciprocity observed for the affiliation dimension coincides with the growing consensus among emotion theorists that the central class of environmental events triggering human emotional sequences is social, interpersonal, and transactional in nature (Kiesler, Schmidt, & Wagner, 1997). For example, Berscheid (1983) proposed a model in which emotional interdependence is a vital component of close interpersonal relationships. The action sequences of individuals in close relationships are closely intertwined, having frequent, strong, and diverse impacts on each other over long periods. Given such, interpersonal affiliation is an important variable that has been examined in clinical research. In general, research has found better therapy outcomes associated with individuals possessing higher levels of affiliation and warmth, whereas negative therapeutic outcomes have been related with interpersonal coldness and hostility (e.g., Henry, Schacht, & Strupp, 1990; Horowitz, 1996; McMullen & Conway, 1994; Strupp, 1980).

Researchers have also proposed that interpersonal dominance and affiliation are conceptually related to the broader concepts of agency and communion that pervade the humanities and social sciences, as well as many contemporary views of personality (Wiggins, 1991; Wiggins & Trapnell, 1996). A vast amount of literature supports an understanding of human social life in terms of these *two orthogonal bipolar dimensions* (e.g., Bakan, 1966; Wiggins, 1991). The terms "agency" and "communion" were adopted by Bakan (1966) to characterize the two fundamental modalities in the existence of living

organisms. Agency refers to the existence of an organism as an individual and communion refers to individual participation in some larger organism of which the individual is a part. The positive pole of agency involves themes of power, mastery, and assertion, whereas its negative pole entails themes of weakness, failure, and submission (Wiggins & Trobst, 1999). Highly agentic individuals would want to be recognized for outstanding contributions to the success and survival of their group (Wiggins & Trapnell, 1996).

The positive pole of communion involves themes of intimacy, union, and solidarity, whereas at the negative pole are themes of remoteness, hostility, and disaffiliation (Wiggins & Trobst, 1999). Highly communal individuals view themselves as part of a larger social or spiritual entity, and thus, do not wish to alienate others and avoid breaking social rules. Wiggins (1991) illustrated the centrality of these concepts to a diverse range of personality theorists, philosophical worldviews, cross-cultural psychology, and psycholinguistics. In regards to personality theorists, the dual themes of agency and communion have appeared in various guises that originated in psychoanalytic, behavioural, and humanistic contexts (Wiggins & Trapnell, 1996). For example, Freud (1964) identified the central abilities of humans to be love (communion) and work (agency), Adler (1930) talked about the importance of striving for superiority and social interest, Horney (1945) specified moving against and towards others, Erikson (1963) put forth autonomy versus basic trust, and Maslow (1971) specified esteem needs versus belongingness and love needs.

Investigations examining the relationship between interpersonal dominance and affiliation and personality characteristics support a broad interpretation of these two

constructs. Dominance correlates with Bem's (1974) masculinity scale, measures of achievement, self-confidence, self-esteem, persistence, vigor, and coordinated planfulness (e.g., Wiggins, 1991; Wiggins & Holzmuller, 1981). On the other end of the continuum, submissiveness was shown to correlate positively with scales measuring abasement (Gough & Heilbrun, 1980), lack of self-confidence (Hirschfield et al., 1977), and fear of negative evaluation (Watson & Friend, 1969). In addition, negative correlations were obtained between submissiveness and standard measures of endurance, achievement, and self-esteem (Phinney & Gough, 1982). Studies of interpersonal affiliation have demonstrated that the construct is related to nurturance, agreeableness, personality adjustment, femininity, warmth, and unconditional positive regard (Lamon, 1991; Plutchik & Platman, 1977; Wiggins, 1991, 1995). Coldness was found to positively correlate with measures of autonomy and hostility, and negatively correlate with nurturance (Wiggins, 1966, 1995). These various correlations in the empirical literature support the interpretation of interpersonal dominance and affiliation as reflecting the broader concepts of agency and communion, respectively.

There has also been an increasing realization that the two interpersonal dimensions are rotational variants of two dimensions from the Five-Factor Model (FFM) of personality, namely, extraversion and agreeableness (e.g., Trapnell & Wiggins, 1990; Wiggins, 1995; Wiggins & Trapnell, 1996). Extraversion refers to gregariousness, assertiveness, activity, excitement-seeking, and positive emotions (Trapnell & Wiggins, 1990). In interpersonal contexts, extraverted individuals keep up their end of the conversation, are comfortable in social activities, take the initiative when meeting others, make dates to get together with others, and establish new friendships (Horowitz,

Rosenberg, Baer, Ureno, & Villasenor, 1988). This personality characteristic represents a combination of both dominance and affiliative qualities. For instance, extraverts' strong desire for social contact is similar to the importance placed upon connection with others observed among affiliative individuals. Agreeableness is the second factor of the FFM and refers to individuals who are trusting, straightforward, altruistic, compliant, modest, and tender-minded (Trapnell & Wiggins, 1990). This characteristic also seems to represent a blend of interpersonal dimensions. In particular, the compliance demonstrated by agreeable individuals represents a component of submissiveness. Consequently, researchers have concluded that the ICM and FFM interpretations of these two dimensions are complementary, rather than competitive (McCrae & Costa, 1989; Trapnell & Wiggins, 1990; Wiggins & Trobst, 1999).

It is evident from the previous discussion that the personality characteristics of interpersonal dominance and affiliation have great relevance to clinical practice. Individuals at the high or low end of these bipolar dimensions tend to experience interpersonal problems that may be addressed through psychological treatment. For instance, individuals with a diminished level of dominance may have difficulty asserting themselves and making decisions, and consequently tend to get taken advantage of by others. Conversely, individuals who are highly dominant and/or cold may be acting in an aggressive or violent manner towards others. Identifying individuals' level of dominance and affiliation provides clinicians with the necessary information about how their clients' interact with and impact others. As previously stated, the focus of the present research is to develop two scales to assess these important dimensions. The various approaches to measuring interpersonal dominance and affiliation will now be reviewed, including the

available instruments that have been constructed to date.

Types of Measurement

Researchers have repeatedly emphasized that interpersonal behaviour should be

assessed from multiple perspectives, and such perspectives require the use of different

types of measurement (e.g., Leary, 1957; LaForge, 1977; Wiggins, 1982). The Kaiser

Foundation Research Group (Freedman, Leary, Ossorio, & Coffey, 1951) proposed that

the same set of interpersonal variables could be measured from different sources or

"levels," such as behaviour ratings, self-report, and projective instruments. The three

sources of measurement identified were the *public level* (Level I; behaviour ratings), the

conscious level (Level II; self-report), and *private level* (Level III; projective instruments).

Leary (1957) expanded this conceptualization to include two additional levels, namely,

the *level of the unexpressed* (Level IV) and the *level of values* (Level V), however,

interpersonal researchers have concentrated on the first three levels. Early interpersonal

theorists adhered to the psychoanalytic notion that personality is comprised of multiple

levels, and the organization of these levels creates unconscious conflicts, ambivalence,

and inconsistencies (Wiggins, 1982). Thus, both Leary (1957) and Freedman et al. (1951)

were interested in calculating the amount of discrepancies between levels of measurement

for a given individual, and utilizing such discrepancies as indices of psychoanalytic

defense mechanisms (e.g., preconscious idealization, displacement, and repression). Inter-

level divergence was thought to indicate the degree of stability of an individual's

personality and predict potential changes in personality organization over time (Leary,

1957).

Subsequent researchers (e.g., LaForge, 1977) have not adhered to the

interpretation that "levels" represent domains of awareness, but rather different domains

of measurement. Interpersonal variables can be measured from these various perspectives,

and utilized to establish the construct and discriminant validity of interpersonal measures

(Cattell, 1957, 1961, 1968; Wiggins, 1982). However, there has been minimal research to

date examining the concordance of interpersonal variables across different types or levels

of measurement. The present study seeks to address this issue by comparing the

assessment of interpersonal dominance and affiliation across the following three types of

measurement: ratings by significant others, self-report measures, and projective

instruments. These three domains will be described in turn, including the available

instruments for each level and the associated methodological problems with each.

Ratings by Peers/Significant Others. This unit of measurement includes behaviour

ratings of a specific individual by observers in social situations, such as professionals or

significant others. Information from this source was proposed to summarize one's actual

relationships with other people (Leary, 1957). When utilizing this measurement, Cattell

(1957) recommended that the raters have access to the individual at different times and

different situations in order to reduce the effects of impression management. That is,

rater-participant familiarity should be maximized to include routine interactions in the

general course of daily living (Truckenmiller & Schaie, 1979). There are currently

numerous instruments available to assess interpersonal variables through ratings of peers

and significant others. These include the Interpersonal Check List (ICL; LaForge &

Suczek, 1955), the Interpersonal Behaviour Inventory (IBI; Lorr & McNair, 1965), the

Inventory of Interpersonal Problems (Horowitz, Rosenberg, Baer, Ureno, & Villasenor,

1988), the Impact Message Inventory (IMI; Kiesler & Schmidt, 1993), and the

Interpersonal Adjective Scales-Revised (IAS-R; Wiggins, 1995). Each of these

instruments will be discussed in turn, pointing out the advantages and limitations of each

instrument (see also Table 2).

Table 2

Peer-Report Instruments for Assessing Interpersonal Variables

Instrument	Authors	Participants	Advantages	Limitations
Interpersonal Check List	LaForge & Suczek (1955)	Psychiatric Patients	Large Research Base	Poor Psychometric Properties
Interpersonal Behaviour Inventory	Lorr & McNair (1965)	Psychiatric Patients	Minimize Social Desirability	Poor Psychometric Properties
Inventory of Interpersonal Problems	Horowitz, et al. (1988)	Psychiatric Patients	Clinically Useful	Susceptible to Response Styles
Impact Message Inventory	Kiesler & Schmidt (1993)	College Students	Clinically Useful	Restricted to Therapists
Interpersonal Adjective Scales-Revised	Wiggins (1995)	College Students	Psychometric Properties	Limited Use with Clinical Populations

The Interpersonal Check List (ICL; LaForge & Suczek, 1955) was the primary

instrument utilized by Leary and associates to assess interpersonal dimensions across all

three levels or perspectives (Wiggins, 1982, 1995). The ICL was used in a variety of

studies on the personality assessment of psychiatric patients and, therefore, has the

advantage of acquiring a large research base and exposure in the interpersonal field. The

instrument contains 126 trait adjectives and is available in both peer-rating and self-report

format. Both formats are identical, except the instructions are changed to focus on the

"other" in the peer-rating format. A limitation of this instrument is that factor-analytic

studies have shown that three general components underlie ICL data (e.g., LaForge, 1963,

Lorr & McNair, 1963; Paddock & Nowicki, 1986; Rinn, 1965), rather than the two

dimensions of dominance and affiliation. Thus, this instrument has questionable construct

validity, as it does not appear to be based on the interpersonal circumplex model.

Researchers have also noted the instrument to be susceptible to a stylistic checking factor

(e.g., Truckenmiller & Schaie, 1979; Wiggins & Trobst, 1997b).

The Interpersonal Behaviour Inventory (IBI; Lorr & McNair, 1965) is designed as

a clinical device for professionals to use to assess patient characteristics and evaluate

therapeutic outcome (e.g., Lorr & McNair, 1963). The advantage of this instrument is the

use of trained professionals as outside observers, rather than family members or friends of

a particular patient. This approach has proven advantageous for minimizing social

desirability ratings (Wiggins, 1982). However, investigations have found that the 15

scales of the IBI do not have clear circumplex structure (e.g., Lorr & McNair, 1966), and

hence, have poor psychometric properties.

The Inventory of Interpersonal Problems (IIP; Horowitz, Rosenberg, Baer, Ureno,

& Villasenor, 1988) permits observer ratings of the interpersonal problems experienced

by an individual. The IIP consists of 127 statements of interpersonal problems (e.g., "tries

to control people too much") to which respondents rate the perceived degree of difficulty

on a 5-point Likert scale (Horowitz, 1996). Subscales of the IIP describe problems in each

of the eight octants identified in Leary's (1957) circumplex model. However, a factor-

analytic study of the instrument (Horowitz et al, 1988) obtained a substantial general

factor that was loaded by all items and scales. Although the factor was interpreted as

reflecting an individual's general tendency to report distress, it was subsequently related

to a symptom-severity measure and self-deception (Tracey, Rounds, & Gurtman, 1996).

Despite such susceptibility to response styles, the IIP has been demonstrated to be a

useful clinical instrument. It has been used for identifying interpersonal problems

discussed in therapy (e.g., Horowitz, Rosenberg, & Bartholomew, 1993) predicting

response to treatment (e.g., Alden & Capreol, 1993), the development of therapeutic

alliance (e.g., Muran, Segal, Samstag, & Crawford, 1994), and projection in group

counseling (e.g., Kivlighan, Marsh-Angelone, & Angelone, 1994). A circumplex version

of the scale has also been constructed (IIP-C; Alden, Wiggins, & Pincus, 1990) that

permits the additional feature of assigning individuals to typological categories (Wiggins

& Trobst, 1997a).

The Impact Message Inventory (IMI; Kiesler & Schmidt, 1993) instructs

respondents to imagine themselves in the company of a particular person and rate the

applicability of each item to that individual. Each item is presented in transitive verb form

(e.g., "I want to tell him to give someone else a chance to make a decision") and the scale

has a total of 90 items. There are two items tapping the subcategories of direct feelings,

action tendencies, and evoking messages for each of the 15 variables of the circumplex

model (Kiesler, 1996). Similar to the Inventory of Interpersonal Problems, an advantage

of the IMI is its suitability for clinical settings, as it permits an assessment of therapists'

covert emotional, behavioural, and cognitive reactions to their patients in psychotherapy

(Wiggins, 1995). The IMI attempts to identify the location of a client's pattern of evoking

negative responses from others within the interpersonal circumplex (Wiggins & Trapnell,

1996). Both the IMI and the more recent circumplex version of the scale (IMI-C; Kiesler,

Schmidt, & Wagner, 1997) were found to have robust circumplex structure (e.g.,

Wiggins, 1995). Nonetheless, a limitation of this instrument is that it is targeted for use

by professionals within the context of providing psychotherapy to their patients. This

restricts the applicability of the instrument, since clinicians conduct most formal

personality assessments outside of the therapeutic context. Thus, the instrument could not

be routinely administered by clinicians as part of psychological assessment, but limited to

use within the therapeutic context.

The Interpersonal Adjective Scales-Revised (IAS-R; Wiggins, 1995) was

originally designed as a self-report measure, but it can be conveniently employed as an

observer rating form by changing the instructions to rating any specified other. Targets of

such ratings have included spouses (e.g., Buss & Barnes, 1986), friends (e.g., Costa &

McCrae, 1992), and experimental subjects (e.g., Gifford, 1994). Robust psychometric

properties have been found for this significant other-rating format of the measure (see

Wiggins, 1995), and consequently, the IAS-R is considered the best measure for assessing

interpersonal dispositions (Locke, 2000; Wiggins, 1982). While this measure has been

widely used in research, the majority of studies has been conducted with college or

university students, rather than with psychiatric patients. Thus, this instrument may be

limited to use with university populations, rather than clinical populations. Regardless,

the observer-rating version of the IAS-R is the best measure available to date and will be

utilized in the present study. The instrument will be further described in the next section

(i.e., self-report measures).

It is apparent that several observer-report measures have been constructed to date

to measure interpersonal variables. Although these instruments have proven valuable,

investigators have identified them to be vulnerable to potential sources of error (e.g.,

Cattell, 1968; McCrae, 1982; Piedmont, 1998). In particular, Cattell (1968) presented a

trait-view theory of perturbations in observer ratings that identified both role relation and

cognitive apperception factors to potentially distort observer data. The view of any

participant's traits was proposed to be a function of a) his or her other traits in interaction

with the participant-observer situation, and b) the observer's traits in interaction with the

participant-observer situation. It was concluded (Cattell, 1968) that observer-ratings are

possibly subject to the same misrepresentations as self-report measures, such as sabotage

(e.g., yes-sayers and no-sayers) and distortion. However, McCrae (1982) identified biases

in observer ratings (e.g., halo effects, stereotypes) that do not overlap with the errors

inherent to self-report. Thus, convergence between peer and self-ratings cannot be

attributable to correlated error but to a reliable effect (Wiggins, 1979b). Conversely,

disagreements between the two sources of information may be indicative of some type of

distortion (McCrae, 1994; Piedmont, 1998). It has been concluded that observer ratings

are a useful counterpoint to self-report measures (Piedmont, 1998). In fact, research has

demonstrated the validity of peer ratings in predicting useful outcomes, such as job

success and marital satisfaction (e.g., Kosek, 1996; Mount, Barrick, & Strauss, 1994).

Self-Report Measures. This type of measurement summarizes an individual's self-ratings of interpersonal behaviour obtained from sources such as an autobiography, psychotherapy, interview, questionnaire, personality inventories, and adjective check lists (LaForge, Freedman, & Wiggins, 1985). The emphasis of such instruments is to assess what people do to one another, rather than what immediate effects their actions may have (Wiggins, 1982). The following self-report inventories have been designed to tap interpersonal variables (see also Table 3): the Interpersonal Check List (ICL; LaForge & Suczek, 1955), the Inventory of Interpersonal Problems (IIP; Horowitz, Rosenberg, Baer, Ureno, & Villasenor, 1988), the Inventory of Interpersonal Problems-Circumplex (IIP-C; Alden, Wiggins, & Pincus, 1990), the Circumplex Scales of Interpersonal Values (CSIV; Locke, 2000), the Brief Interpersonal Circumplex (BIC; Raffety, 1999), the Battery of Interpersonal Capabilities (BIC; Paulhus & Martin, 1988), and the Interpersonal Adjectives Scales-Revised (IAS-R; Wiggins, 1995). These instruments will now be discussed.

Table 3

Self-Report Instruments for Assessing Interpersonal Variables

Instrument	Authors	Participants	Advantages	Limitations
Interpersonal Check List	LaForge & Suczek (1955)	Psychiatric Patients	Large Research Base	Poor Psychometrics
Inventory of Interpersonal Problems	Horowitz et al. (1988)	Psychiatric Patients	Clinically Useful	Susceptible to Response Styles
Inventory of Interpersonal Problems-Circumplex	Horowitz et al. (1988)	Psychiatric Patients	Psychometric Properties	Inadequate Research
Circumplex Scales of Interpersonal Values	Locke (2000)	College Students	Psychometric Properties	Assesses Values
Brief Interpersonal Circumplex	Raffety (1999)	University Students	Brief Format	Limited Use
Battery of Interpersonal Capabilities	Paulhus & Martin (1988)	University Students	Indicates Range of Behaviours	No Predictive Validity
Interpersonal Adjectives Scales-Revised	Wiggins (1995)	College Students	Robust Psychometric Properties	Limited Use with Clinical Populations

The Interpersonal Check List (ICL; LaForge & Suczek, 1955) is available in other-rating and self-report formats, as described in the previous section. It contains 128 trait adjectives to describe interpersonal behaviour, which are combined into 16 scales arranged on a circular order (Lorr, 1996). As previously stated, this instrument has the advantage of having developed a large research base in the literature. The limitation of the instrument is that research has shown the scale to lack sound psychometric properties (e.g., Lorr & McNair, 1963, 1965; Paddock & Nowicki, 1986; Truckenmiller & Schaie, 1979).

Similar to the ICL, the Inventory of Interpersonal Problems (IIP; Horowitz, Rosenberg, Baer, Ureno, & Villasenor, 1988) is available in both other- and self-report format. The measure is used to identify dysfunctional patterns of interpersonal interactions, such as "It is hard for me to express intimacy" and "It is hard for me to trust other people" (Gurtman, 1999). While this instrument has proven useful for clinical research and practice (e.g., Alden & Capreol, 1993), it has been demonstrated to be susceptible to response styles (Horowitz et al., 1988; Tracey, Rounds, & Gurtman, 1996). The IIP-C is a circumplex version of the IIP scale that contains 64 items to assess interpersonal problems in eight octants. The scale was shown to structurally converge with the IAS-R (Wiggins & Trapnell, 1996; Wiggins & Trobst, 1997b) and define the two underlying dimensions of the circumplex (Lorr, 1996). Thus, preliminary research indicates that the scale has sound psychometric properties. Although this is an advantage of the instrument, further research is necessary to confirm its utility for clinical research and practice.

The Circumplex Scales of Interpersonal Values (CSIV; Locke, 2000) was

designed to complement the IAS-R and IIP-C by assessing interpersonal values that may

be associated with adaptive and maladaptive interpersonal behaviors. Thus, a limitation

of this scale is that it assesses personal values, rather than personality characteristics,

which may or may not tap individuals' current interpersonal behaviour. In the CSIV,

respondents rate the importance of their own interpersonal behaviours (e.g., "I could not

bear to make a mistake in front of them"), as well as other people (e.g., "It is important

that they not get angry with me") on a 5-point Likert scale. Preliminary research suggests

the CSIV has sound psychometric properties (Locke, 2000), however, further research is

required.

The Brief Interpersonal Circumplex (BIC; Raffety, 1999) is a recently developed

instrument that includes both an 8- and 4-item version. The brief nature of this scale is

advantageous for quick administration, and the circumplex structure of the instrument has

been confirmed by preliminary research (Raffety, 1999). This instrument shows promise

for future investigations of interpersonal theory, but additional scientific evaluation is

necessary.

The Battery of Interpersonal Capabilities (BIC; Paulhus & Martin, 1988) is based

on Wiggins' (1979) interpersonal circumplex and designed to assess "personality

capabilities" or functional flexibility. Respondents indicate "how capable" they would be

of acting in a certain manner "if the situation called for it" using a 7-point Likert scale.

An advantage of the BIC is that it indicates a range of interpersonal behaviour that a

respondent may engage in across a variety of situations (Paulhus & Martin, 1988).

However, a limitation is that the predictive validity of the instrument has yet to be

established.

The Interpersonal Adjectives Scales-Revised (IAS-R; Wiggins, 1995) was designed to serve as semantic markers of interpersonal space for comparisons with other assessment systems. It is a self-report instrument designed to measure the two important dimensions of interpersonal transactions, namely, dominance and nurturance. The IAS-R consists of a test booklet with a list of 64 interpersonal adjectives, to which respondents rate how accurately each word describes them as individuals on an 8-point Likert scale (Wiggins, 1995). Example items from the IAS-R reflecting the warmth category include softhearted, accommodating, gentlehearted, tenderhearted, charitable, and sympathetic. Items assessing interpersonal coldness include uncharitable, ironhearted, unsympathetic, ruthless, coldhearted, and cruel (Wiggins, 1995). The IAS-R has demonstrated admirable psychometric properties, as research has found the scales to form a circumplex structure organized around the orthogonal coordinates of dominance and nurturance (Wiggins, Trapnell, & Phillips, 1988; Wiggins & Trobst, 1997b). It is the most widely used instrument in the literature, however, as previously stated, a limitation of this instrument is that it has been predominantly used with university populations. The applicability of the IAS-R to clinical populations is unknown at present.

Despite the demonstration of adequate psychometric properties among the interpersonal measures, investigators have repeatedly highlighted self-report instruments to be subject to potential misrepresentations (e.g., Edwards, 1957; Paulhus, 1986, 1991; Wiggins, 1964). In particular, self-report instruments are susceptible to response biases, such as lying, faking, and responding to items in a socially desirable manner. Socially desirable responding refers to the tendency to present oneself favorably on self-report inventories in regards to current social norms (Paulhus, 1991). Wiggins (1979a) obtained

a relationship between ratings of interpersonal adjectives and social desirability, concluding that response biases also persist in the interpersonal domain. Impression management is one component of socially desirable responding that has been identified to reduce the predictive validity of content measures (e.g., McCrae et al., 1989). Individuals engaging in impression management purposefully tailor their responses to create the most positive social image (Paulhus, 1991). It has been recommended that researchers control for the influence of impression management when using self-report measures (e.g., Paulhus, 1991), particularly when motives arise for conscious distortion (e.g., job application, custody settlement).

While it is apparent that self-report measures have psychometric limitations, there is also evidence supporting their validity. Instruments comprised of more direct and "obvious" items have been demonstrated to yield more honest and accurate responses from participants (Furnham, 1986; Worthington & Schlottman, 1986; Wrobel & Lachar, 1982). In a large sample of job applicants, it was found that such individuals tended not to distort their responses in the absence of instructions to do so (Hough, Eaton, Dunnette, Kamp, & McCloy, 1990). Further evidence supporting the trustworthiness of self-report inventories includes the convergent correlations obtained between self-report and observer ratings (e.g., Jackson, 1989; Muten, 1991). Thus, it is apparent that self-report measures are a valuable source of information about individuals, but investigators should be cautious about the potential contamination of response styles.

Projective Instruments. These types of measures are thought to assess private or intrapersonal perception, which indirectly comprise the expressions individuals make about their imagined self in their preconscious or symbolic world (Leary, 1957).

Information obtained through projective instruments includes the interpersonal motives and actions attributed to figures in an individual's waking fantasies, creative expressions, wishes, and dreams (LaForge, Freedman, & Wiggins, 1985). The TAT was the projective instrument routinely administered by Leary and associates to assess interpersonal variables at the private level. While Leary (1957) described an interpersonal coding system for the TAT, it has been criticized for lacking sound psychometric properties (Wiggins, 1965) and it has been utilized in limited form in the literature.

Shore, Massimo, Kisielewski, and Moran (1966) utilized Leary's (1957) scale of interpersonal analysis to analyze thematic stories for the level of object relations, but did not describe specific methodological procedures. Other researchers coded the interpersonal themes of TAT protocols according to Leary's scale, but developed their own scoring system (e.g., Terrill, 1960; Truckenmiller & Schaie, 1979). Wiggins (1982) stated that Leary's system is not replicable, and represents a sketch of an interpersonal diagnostic system, rather than a validated and psychometrically sound set of procedures. Recent research addressing interpersonal variables on the TAT has utilized the Interpersonal Adjectives Scales-Revised (IAS-R; Wiggins, 1995) to score response protocols (e.g., Colwell, 1998). However, the psychometric properties of using the IAS-R as a projective measurement have not been demonstrated.

Comparing Variables Across Measurement Domains. In Leary's (1957) interpersonal system of personality diagnosis, it was proposed that the interpersonal circumplex model (ICM) could be reproduced on different "levels" or measurement domains. That is, both self-report, significant other-report, and the TAT should assess the same interpersonal constructs. However, minimal research to date has examined this

proposition by comparing interpersonal variables across measurement techniques. Studies

conducted to date have yielded minimal conclusions. For instance, Leary (1957) found

interpersonal variables corresponded across measurement types in approximately half of

participants. Leary accounted for this discrepancy by specifying that individuals' defense

mechanisms reduce correlations across the "levels" of personality. Another study (Terrill,

1960) compared the correlational structure of octant scores from the Interpersonal Check

List (self-report format) with TAT ratings in a college student sample. Results indicated a

clear circumplex structure of interpersonal variables among self-report data, but not for

the TAT.

Truckenmiller and Schaie (1979) found partial support for the equivalence of the

ICM across the three types of measurement. A factor analysis of the data revealed three

factors at each level. The first two factors were bipolar and orthogonal in nature, roughly

corresponding to dominance-submission and warm-cold. However, correlations of

interpersonal variables across measurement domains were not significant for the TAT. In

a recent study of interpersonal variables among psychopathic individuals, Colwell (1998)

found that data from all three levels (observer ratings, self-report, and the TAT) did

correlate significantly with each other. In light of such mixed findings, it is difficult to

determine whether the same interpersonal constructs are assessed across objective

(questionnaires) and projective techniques (TAT).

In fact, the issue of criterion validation with projective instruments is presently

vexed in the literature. On the one hand, researchers (e.g., Campbell & Fiske, 1959)

propose a mono-trait view, specifying that the same constructs are assessed across

different measurement techniques. On the other hand, researchers have more recently

highlighted objective and projective measures to assess different facets of an individual's

motivational state within a particular behaviour domain (e.g., McClelland, Koestner, &

Weinberger, 1989). In Campbell and Fiske's (1959) influential article, method variance

was identified as the source of error accounting for weak correlations between scores on

objective and projective tests. Thus, low correlations between variables assessed with the

TAT, self-report, and observer ratings could reflect differences inherent to the various

measurement techniques, rather than differences in the constructs being assessed. The

authors identified numerous extraneous factors that could potentially influence the

accurate evaluation of a variable and proposed that researchers should strive towards

minimizing such influences. Given such possible contamination in measurement,

Campbell and Fiske proposed that a multimethod approach to research was the preferred

method for improving construct validity. That is, assessing variables with several types of

measurement would maximize the likelihood of obtaining accurate information about the

specific variable of interest. Following these recommendations, a central goal of test

development during the 1960s and 1970s was to maximize the correlations between

scores on objective and projective measures (Bornstein, 2002).

More recently, researchers challenged Campbell and Fiske's (1959) mono-trait

view of measurement and proposed that different elements of a construct are assessed

through the various measurement techniques (Bornstein, 2002; McClelland, Koestner, &

Weinberger, 1989; Spangler, 1992; Winter, John, Stewart, Klohnen, & Duncan, 1998).

Rather than reflecting flaws in measurement technique, the researchers emphasize that

differences between objective and projective measures represent valuable information

about the construct being assessed. In a review of the literature, McClelland et al. (1989)

found that scores on objective and projective measures showed only modest inter-

correlations for achievement, affiliation, and power motives across a wide variety of

participant groups. The authors proposed this discrepancy to occur because objective and

projective measures assess different facets of an individual's motivational state.

Specifically, they identified objective measures, such as self-report and observer-ratings,

to assess individuals' self-attributed motives. That is, intentions or dispositions to which

individuals openly acknowledge as valuable to them and characteristic of their day-to-day

functioning. In comparison, projective instruments (e.g., TAT) were proposed to assess

implicit needs or motives that influence an individual's behaviour automatically and often

without his or her awareness (McClelland et al., 1989). Although both measures assess

the same behavioural domain or construct, they were thought to provide different

information about an individual's motivational state. In particular, measures of implicit

needs (i.e., TAT) were thought to provide more direct or accurate information than self-

report because they were not filtered through analytic thought, as well as individuals'

concepts of self and other.

McClelland, Koestner, and Weinberger (1989) outlined and provided empirical

evidence for four fundamental differences between self-attributed motives

(questionnaires) and implicit motives (TAT measures). First, the measures were not

expected to correlate with each other, given that they assess different facets of an

individual's motivational state. As previously stated, the researchers demonstrated low

correlations between projective and objective measures of achievement, affiliation, and

power in the literature. Second, self-attributed motives and implicit motives were thought

to correlate with different types of outcome variables (i.e., differential predictive validity).

TAT measures were thought to predict individuals' spontaneous behavioural trends exhibited across a wide variety of situations or "real world" behaviour. In comparison, questionnaire measures predict individuals' choice behaviour (i.e., what the individual would like to do). McClelland et al. (1989) provided evidence for this differential pattern of criterion-predictive validity through their review of the literature. It was found that measures of implicit achievement strivings (i.e., TAT) were good predictors of spontaneous achievement-related behaviour across various situations, whereas self-attributed achievement measures (i.e., questionnaires) showed greater predictive validity in situations where the person's attention was focused on the achievement-related aspects of his or her actions. Subsequent studies have illustrated similar results between measures of intimacy (Craig, Koestner, & Zuroff, 1994), power (Koestner, Weinberger, & McClelland, 1991), and dependency (Bornstein, 1998).

Based on these results, McClelland, Koestner, and Weinberger (1989) proposed that self-attributed motives further differed from implicit motives in that they are relatively conscious perceptions of what is important to the individual and valued by the individual's culture. Thus, objective measures should correlate with other self-attributed variables, such as self-identity and values. In contrast, measures of implicit motives tap values that individuals may not be consciously aware of, but rather influence their behaviour in an automatic fashion. Thus, implicit motives should predict spontaneous behaviour better than self-attributed motives. McClelland et al. (1989) identify the fourth difference between the two types of motives to be the timing and nature of their development. Implicit motives were proposed to develop early in life without the presence of language, and given such, reflect individual's primal motivations and

emotional states. Self-attributed motives require the presence of language, so develop

later on and are shaped by social values and experiences.

Spangler (1992) conducted two large meta-analyses of the literature on

achievement motivation to further evaluate McClelland, Koestner, and Weinberger's

(1989) distinction between objective and projective measures. Low correlations were

obtained between TAT and questionnaire measures of achievement. This finding lends

partial support to McClelland et al.'s proposition that objective and projective measures

assess different aspects of individuals' motivational state. However, it is also possible

that method variance accounts for the low correlations, as suggested by Campbell and

Fiske (1959). To further address this distinction, Spangler (1992) evaluated whether the

two types of measurement have differential predictive validity. Correlations of objective

and projective measures of achievement were compared across a variety of outcome

variables and significant results were obtained for both types of measures. However, TAT

correlations were particularly large for outcome variables that were task-related, such as

career success. This finding lends support to McClelland et al.'s tenet that TAT measures

predict "real world" behaviour better than objective techniques.

The distinction between projective and objective measures of personality variables

was recently put into the wider context of traits versus motives by Winter, John, Stewart,

Klohnen, and Duncan (1998). Similar to McClelland, Koestner, and Weinberger's study

(1989), the researchers highlight that these two measures assess different classes of

variables within the same behavioural domain. Winter et al. (1998) state that the majority

of personality questionnaires are focused on measuring personality traits, in contrast to

TAT measures, which tap individual motives. Traits refer to individuals' stylistic patterns

of cognition, affect, and behaviour, whereas motives involve wishes, desires, and goals (Winter et al., 1998). To simplify, traits are qualities that people *have* and motives are what people *do* (Cantor, 1990). A similar distinction has also been made in the literature between the assessment of individual attitudes versus the prediction of behaviour (Grunert, 1989). Winter et al. (1998) specify that the majority of items in personality questionnaires assess personality traits, and consequently, one would not expect to find a consistent relationship between objective and projective measures. In regards to criterion-predictive validity of these types of measures, the authors propose that traits and motives interact in the expression of behavioural actions across the lifespan. Thus, both objective and projective measures of personality provide valuable information about individuals' present and future behaviour. Borstein (2002) similarly endorses an interactional perspective between implicit and explicit measures of a given construct, emphasizing the importance of using both measures in a comprehensive personality assessment.

From the previous review, it is apparent that two views have been presented in regard to the relationship between the various measures of personality. On the one hand, researchers suggest projective and objective measures assess different motivational facets within a particular behavioural domain. Discrepancies between these instruments should be maximized, given that research has shown differential patterns of predictive validity. That is, information from self-report measures indicate how an individual views him or herself and believes he or she will act, whereas projective measures highlight how an individual will function in the "real world." On the other hand, the mono-trait view of measurement proposes that projective and objective measures assess the same construct, with discrepancies between the instruments representing measurement error or method

variance. Such method variance should be minimized in order to obtain accurate information about an individual's personality. The present study served to further evaluate this disputed issue by comparing the assessment of interpersonal variables across measurement domains, as well as differences in criterion-predictive validity. Specifically, the present study will compare the assessment of interpersonal dominance and affiliation across ratings from significant others, self-report, and the TAT. From the literature review, it is evident that Wiggins' (1995) IAS-R is the most widely used measure for obtaining both self-report and significant other-report of interpersonal dimensions (Locke, 2000) and, therefore, was selected for the present research. Individuals' scores on the IAS-R obtained through peer- and self-report will be compared to their scores on the Interpersonal Dominance and Affiliation TAT scales developed in the present research. The purpose of the study and methodology utilized will now be described.

Present Study

Various researchers have developed methods of personality assessment based on

the interpersonal circumplex model (ICM), as previously described. Based on the

comprehensive literature review, it is apparent that *a replicable and psychometrically*

sound measure for assessing interpersonal variables on the Thematic Apperception Test

(TAT) is currently unavailable. The present study addressed this deficiency by developing

two orthogonal scales to assess the underlying dimensions of the ICM, namely,

interpersonal dominance and affiliation. These two constructs have been shown to

characterize human social life (Bakan, 1966), and given such, have broad application for

clinical theory, research, and practice. Support for the widespread clinical application of

these constructs has received considerable attention in the last decade. Interpersonal

dominance and affiliation scales have been utilized to describe personality and emotional

functioning from a relational perspective (Plutchik & Conte, 1997; Wiggins, 1995), to

predict treatment outcome (McMullen & Conway, 1997), and to identify interpersonal

patterns to be addressed in psychotherapy (Horowitz, 1996). The present study also

evaluated the validity of the two interpersonal scales, by comparing scores on the TAT

variables, with those of self-report, peer-report, and observer-ratings.

The present research design is comprised of two phases: *scale development* and

the *validity study*. The first research phase began by examining TAT responses collected

previously from an undergraduate student sample and evaluating them for the level of

interpersonal dominance and affiliation depicted. The purpose of this analysis was to

select example TAT responses that could potentially serve as anchor points for the two

scales. Several analyses of participants' TAT responses were conducted and comparisons

were also made with normative TAT data in order to select 100 example TAT stories, 10

for each of the 10 selected TAT cards. These 100 example responses are to display a vast

range of interpersonal dominance and affiliation. The next step in the *scale development*

phase of research involved compiling the 100 TAT sample responses into a booklet and

having them empirically evaluated in a participant sample. Undergraduate students were

asked to rate the sample TAT stories for the level of interpersonal dominance and

affiliation illustrated (Collins & Hibbard, 2001). The purpose of collecting these ratings

was to establish that the 1) two constructs are orthogonal in nature, 2) have internal

consistency, and 3) establish anchor rating points for the scales. Reliability and factor-

analytic procedures were conducted on these ratings to select example TAT responses

that depicted the two constructs of interest, as well as represented different levels of

intensity of the variables. The final step in *scale development* was to utilize the

empirically-selected TAT responses to formulate two 7-point scales for assessing

interpersonal dominance and affiliation on the TAT. Given that normative data have

shown each TAT card to elicit different themes (e.g., Henry, 1956), the present scales

provide separate coding schemes for each of the 10 TAT cards.

The second phase of research, the *validity study*, involved evaluating the validity

of the developed Interpersonal Dominance and Affiliation TAT scales. The validity of a

measure determines what can be inferred from test scores and it is comprised of several

components. The methods of evaluating the validity of the Interpersonal Dominance and

Affiliation TAT scales will be discussed in the following sections and the specific

hypotheses will be presented.

Concurrent Validity of the Interpersonal TAT Scales

The concurrent validity of a scale is the extent to which the scale measures the theoretical construct or trait of interest. Researchers (e.g., Leary, 1957; Wiggins, 1995) have identified interpersonal dominance and affiliation to be the underlying dimensions of the ICM that are orthogonal in nature. The TAT scales developed in the present research were designed to assess these two dimensions, and given such, it is important to evaluate whether they are indeed independent constructs. To address this issue,

(1) *it is hypothesized that a low correlation (r ≤ 0.2) will be obtained between the Interpersonal Dominance and Affiliation TAT scales.*

Concurrent validity also involves establishing interrelationships among behavioural measures or theoretically related constructs (Anastasi & Urbina, 1997). The Interpersonal Dominance and Affiliation TAT scales were designed to assess interpersonal variables and therefore should be compared to other interpersonal measures to evaluate concurrent validity. In a review of the literature, Locke (2000) pointed out that most interpersonal circumplex studies use the Interpersonal Adjectives Scales-Revised (IAS-R; Wiggins, 1995) to assess interpersonal traits and the scale has demonstrated good psychometric properties (e.g., Wiggins, 1995). The IAS-R was also selected for use in the present study to examine the concurrent validity of the interpersonal TAT scales. However, as previously discussed, low correlations have been obtained between projective and objective measures (e.g., McClelland, Koestner, & Weinberger, 1989; Spangler, 1992). Investigations focusing on the assessment of interpersonal variables have yielded mixed results across measurement types (e.g., Colwell, 1998; Leary, 1957; Terrill, 1960; Truckenmiller & Schaie, 1979). Researchers suggest that this discrepancy is a result of method variance (Campbell & Fiske, 1959), or that objective and projective

measures assess different facets of an individual's motivational state (McClelland,

Koestner, & Weinberger, 1989). The concurrent validity examined in the present research

further evaluates the relationship between objective and projective measures. In general,

low correlations have been obtained between these two measurement domains. In light of

these findings, the following hypotheses were proposed:

(2) *a low positive correlation (r ≤ 0.2) will be obtained between the Interpersonal*

Dominance TAT scale and the interpersonal dominance factor score of the

IAS-R (self-report version);

(3) *a low positive correlation (r ≤ 0.2) will be obtained between the Interpersonal*

Affiliation TAT scale and the interpersonal affiliation factor score of the IAS-

R (self-report version).

To further examine concurrent validity of the Interpersonal TAT scales, scores on

these measures were compared to other theoretically related constructs. Previous research

(e.g., Wiggins, 1991) has found interpersonal dominance and affiliation to correlate

positively with Bem's (1974) measures of masculinity and femininity, respectively. This

finding makes conceptual sense, given that the traditional masculine gender role involves

the dominating qualities of assertiveness, aggression, and competitiveness. Similarly, the

traditional feminine gender role involves the affiliative components of warmth,

tenderness, and compassion. The concepts of masculinity and femininity have also been

operationalized (Taylor, 1984) to reflect the characteristics of instrumentality and

expressiveness, respectively. Instrumentality involves engaging in goal-oriented

behaviour and has been related to social power (Gibbs, 1985). Expressiveness refers to

one's level of emotionally expressive behaviour (e.g., discussing feelings) and has been

related to social weakness. In light of previous research and the conceptual similarity

between these constructs,

> (4) *it is hypothesized that a positive correlation will be obtained between the*
>
> *Interpersonal Dominance TAT scale and the Masculinity scale.*
>
> (5) *It is hypothesized that a positive correlation will be obtained between the*
>
> *Interpersonal Affiliation TAT scale and the Femininity scale.*

Criterion Validity of the Interpersonal TAT Scales

Another step in the psychometric testing of the two TAT scales involves

examining criterion-predictive validity. Criterion-predictive validation procedures are

utilized to indicate the effectiveness of a measure for predicting individuals' performance

in specified activities (Anastasi & Urbina, 1997). As previously discussed, researchers

propose that different elements of a construct are assessed through objective and

projective measures (Bornstein, 2002; McClelland, Koestner, & Weinberger, 1989;

Spangler, 1992; Winter, John, Stewart, Klohnen, Duncan, 1998). In particular,

McClelland et al. (1989) demonstrated that projective measures assess individuals'

implicit needs, whereas self-report measures tap individuals' self-attributed motives.

They further provided evidence that the two measurement types are related to different

outcome variables. Scores on TAT measures were found to predict individuals'

spontaneous behavioural trends (Bornstein, 1998; Craig, Koestner, & Zuroff, 1994;

Koestner, Weinberger, & McClelland, 1991; McClelland et al., 1989). Following such

research, the present study examined the criterion-predictive validity of the Interpersonal

Dominance and Affiliation TAT scales in relation to individuals' spontaneous

interpersonal behaviour.

Conducting leaderless group discussions has been found to be an effective method for assessing individuals' spontaneous interpersonal behaviour within organizational settings (L. Couts, personal communication, September 10, 2001). This method permits the opportunity to observe individuals' interpersonal behaviour without the influence of ascribed social roles or explicit awareness of the behaviours desired by the experimenter. This approach also is in concordance with Sullivan's (1953) mandate to utilize field theory to study personality. Thus, leaderless group discussions were conducted in the present study to assess participants' spontaneous interpersonal behaviour. Independent observers rated participants' level of interpersonal dominance and affiliation displayed during the leaderless group discussions and given such, they were labeled as observer-ratings in the present study. Observer-ratings will serve to evaluate the predictive validity of the Interpersonal Dominance and Affiliation TAT scales. As previously stated, McClelland et al. (1989) obtained significant correlations between scores on TAT measures and individuals' spontaneous behaviour. Similar relationships are expected between the TAT measures and observer-ratings in the present study.

(6) *It is hypothesized that at least a moderate positive correlation (r $\geq$ 0.35) will be obtained between scores on the Interpersonal Dominance TAT scale and observer-ratings of interpersonal dominance during leaderless group discussions.*

(7) *It is hypothesized that at least a moderate positive correlation (r $\geq$ 0.35) will exist between scores on the Interpersonal Affiliation TAT scale and observer-ratings of interpersonal affiliation during leaderless group discussions.*

Researchers emphasize the differential predictive validity of projective (TAT)

versus objective measures (questionnaires). Specifically, stronger correlations have been

obtained between projective measures and "real-world" behaviour (e.g., Spangler, 1992),

as opposed to that between self-report and spontaneous behaviour. The present study will

also examine this distinction by comparing the relationship between the Interpersonal

TAT scales and observer-ratings with that obtained between self-report interpersonal

variables (i.e., IAS-R) and observer-ratings.

(8) *It is hypothesized that a stronger correlation will be obtained between the*

Interpersonal Dominance TAT scale and observer ratings of interpersonal

dominance than that obtained for the interpersonal dominance factor score of

the IAS-R (self-report version).

(9) *It is hypothesized that a stronger correlation will be obtained between the*

Interpersonal Affiliation TAT scale and observer ratings of interpersonal

affiliation than that obtained for the interpersonal dominance factor score of

the IAS-R (self-report version).

Validity of the ICM

In Leary's (1957) interpersonal system of personality diagnosis, it was proposed

that the interpersonal circumplex model (ICM) could be reproduced on different "levels."

Subsequent researchers interpret these "levels" to represent different domains of

measurement that permit the opportunity to test the validity of the ICM (e.g., Cattell,

1968; Wiggins, 1982). As previously stated, research addressing the relationship between

various measures of interpersonal variables is presently mixed (e.g., Colwell, 1998;

Leary, 1957; Terrill, 1960; Truckenmiller & Schaie, 1979). The present study evaluated

the validity of the ICM by comparing interpersonal variables across measurement types.

Specifically, interpersonal dominance and affiliation were assessed with the TAT scales, a self-report measure (IAS-R), and with peer-ratings (IAS-R). Scores on these three measures were compared to address the general research questions of variable consistency across measurement domains. In light of the inconclusive results of previous research, no specific hypotheses were made. However, in accordance with Leary's description, one would expect that significant correlations would be obtained between these three measures of interpersonal variables and this finding would serve to validate the ICM.

Discriminant Validity of the TAT Interpersonal Scales

It has also been proposed by Campbell (1960) that concurrent validity involves demonstrating that an instrument does not correlate with theoretically unrelated variables. The absence of a relationship with dissimilar variables is referred to as discriminant validity, and this type of validity was also evaluated in the present study. Specifically, the Interpersonal Dominance and Affiliation TAT scales were correlated with the personality construct of self-concealment (Larson & Chastain, 1990). Self-concealment was chosen because it is theoretically unrelated to interpersonal dominance and affiliation. Self-concealment refers to the active concealment from others of personal information (thoughts, feelings, actions, or events) that one perceives as negative or distressing (Larson & Chastain, 1990). The process of self-concealment is viewed as a special instance of boundary regulation in the maintenance of privacy (Derlega & Chaikin, 1977), and it can also be viewed within a model of self-presentation or image management in which social interactions present opportunities to disclose distressing or negative personal information (Schlenker, 1980). Self-concealment has been shown to correlate positively with physical symptoms and depression, and correlate negatively with social support

(Cepeda-Benito & Short, 1998; Kelly & Achter, 1995; Larson & Chastain, 1990).

The personality characteristic of self-concealment is distinct from the interpersonal concepts of dominance and affiliation. In comparison to dominance, the tendency to actively conceal information from other people is unrelated to the amount of power or status one exerts over others. Individuals may engage in self-concealment regardless of whether they tend to be timid and submissive in their social transactions or assertive and forceful. That is, a person's style of interacting with others is separate from his or her propensity to share personal information with others. Interpersonal affiliation refers to the affect tone of one's interactions with others, ranging from coldness to warmth. The process of personal boundary regulation involved in self-concealment may occur irrespective of the feelings people have towards others. For instance, both hostile and warm individuals may choose to withhold negative personal information from others. Given that self-concealment is theoretically unrelated to the constructs of interpersonal dominance and affiliation, it should not correlate with the two TAT scales and serve to establish preliminary discriminant validity of the interpersonal scales.

(10) *It is hypothesized that a low correlation (r ≤ 0.2) will be obtained between the Self-Concealment Scale and the Interpersonal Dominance TAT scale.*

(11) *It is hypothesized that a low correlation (r ≤ 0.2) will be obtained between the Self-Concealment Scale and the Interpersonal Affiliation TAT scale.*

The Influence of Response Biases

Impression management has been identified as a potential contaminant of self-report data that should be controlled for (Paulhus, 1991). Such a response bias involves the purposefully tailoring of individuals' selections to questionnaire items in order to

create positive social images. Impression management reduces the validity of a self-report measure because participant do not answer honestly to item content. Wiggins (1979a) demonstrated that response biases also persist in the interpersonal domain and given such, a measure of impression management was additionally included in the present study. Collins and Cramer (2000) found the best measure of impression management to be the Impression Management scale of the Balanced Inventory of Desirable Responding (Paulhus, 1991). Scores on this scale were correlated with the self-report measures of interpersonal variables in order to evaluate the accuracy of information being assessed. Response biases are generally considered to be only an issue for self-report measures. However, the relationship between impression management and the Interpersonal Dominance and Affiliation TAT scales were also explored in the present study to assess the influence of response biases on projective measures.

Method

As described in the previous section, the present research consisted of two phases

of data collection, 1) scale development and 2) the validity study. The purpose of scale

development was to collect ratings of example TAT responses from a small

undergraduate student sample. The purpose of collecting these ratings was to establish

that the constructs of interpersonal dominance and affiliation are orthogonal in nature and

have internal consistency, as well as to establish anchor rating points for the scales.

Although the undergraduates' ratings of sample TAT stories were collected previously

(Collins & Hibbard, 2001), they were analyzed in the present study and utilized to

develop the two TAT scales. In the second phase of data collection, the validity of the

Interpersonal Dominance and Affiliation TAT scales were tested in another

undergraduate student sample. The TAT was administered to participants and scored with

the TAT scales developed in study 1. The purpose of study 2 was to evaluate preliminary

validity of the two scales by testing the various hypotheses. The methodology of the two

phases of data collection will now be described in turn.

Scale Development

Participants

Twenty-five undergraduate students (4 men, 21 women) enrolled in an

undergraduate psychology course participated in the study. All individuals attend the

University of Windsor, and were offered partial course credit for their participation in the

study. The mean age of participants was 25, and the ages ranged from 19 to 58. The

average level of education completed for participants was second year of university (24%,

$n = 6$), whereas the most frequent level of education completed was first year of

university (28%, $n = 7$). Participants reported an average family income within the $60,000 to $74,999 range. The ethnic composition of participants was Caucasian (88%, $n = 22$), Black (4%, $n = 1$), Asian (4%, $n = 1$), and other (4%, $n = 1$).

Materials and Measures

Demographic Information. A questionnaire was administered to assess participants' gender, age, level of education, socio-economic status, and ethnicity (see Appendix A).

Instructional lecture. The researcher gave a brief lecture to participants informing them about the purpose of the study, the nature of the two bipolar constructs (i.e., interpersonal dominance and affiliation), and provided specific instructions for completing the questionnaire booklet (see Appendix B).

Sample Responses from the Thematic Apperception Test. Participants were asked to rate 100 TAT sample items for the degree of interpersonal dominance and affiliation depicted, utilizing a 7-point Likert scale (1 = submissiveness, 4 = neutral, 7 = dominance; 1 = coldness, 4 = neutral, 7 = warmth) respectively. The sample items were actual TAT responses given by an anonymous group of undergraduates collected previously by Dr. Stephen Hibbard at a mid-sized university in the United States (see Appendix C). The 100 TAT items were selected by the present investigator to represent the full range of responses elicited by each of the TAT cards and illustrate various levels of interpersonal dominance and affiliation. Ten sample responses were selected for each of the following ten TAT cards: 1, 2, 3GF, 3BM, 4, 6GF, 6BM, 8BM, 13MF, and 18BM.

Procedure

After obtaining ethical approval from the Department of Psychology Research

Ethics Committee, the participants were requested to meet at an arranged location and sign their name on a consent form in order to receive partial course credit. The consent form outlined the general purpose of the study, the voluntary nature of participation, and the confidentiality of individual scores (see Appendix D). The researcher then provided an instructional lecture (approx. 15 minutes) to the participants about the nature of the two constructs of interpersonal dominance and affiliation, as well as instructions for filling out the questionnaire booklet (see Appendix C). Following the lecture, participants were asked to complete the questionnaire booklet containing the sample TAT responses and demographic measure. Written debriefing was provided to participants upon the collection of data (see Appendix E).

Results

The data were entered into a microcomputer and analyzed utilizing the Statistical Package for the Social Sciences (SPSS). Given that there are no prior investigations available to guide scale development for the TAT, the analyses chosen in the present study follow the general recommendations available for scale construction (see Anastasi & Urbina, 1997). Participants' ratings of the sample TAT responses were treated as scale items in the present analyses and therefore, will subsequently be referred to as items in the discussion. Descriptive statistics were first calculated for each of the 10 TAT cards by summing the interpersonal dominance and affiliation ratings for the 10 sample items provided for each card (i.e., total sample items = 100). Table 4 displays the mean, standard deviation, and range of participants' ratings of interpersonal dominance to the sample TAT items for each card. It is apparent that the ratings were within the average range of 40 for each card, with the highest dominance ratings given to TAT card 6GF (M

= 52.9) and the lowest ratings to card 3BM (M = 39.2). Table 5 similarly depicts the

descriptive statistics for participants' ratings of interpersonal affiliation for each TAT

card. The statistics indicate that the ratings were within the average range of 40 for each

card, with the highest affiliation ratings given to TAT card 4 (M = 45.1) and the lowest to

card 6GF (M = 32.4).

Table 4

Participant Ratings of Interpersonal Dominance: Descriptive Statistics for All Sample

TAT Items

TAT Card	Mean	SD	Minimum	Maximum	# of Items	α
1	44.7	6.2	33	60	10	.45
2	44.5	4.7	30	52	10	-.11
3GF	40.6	8.5	25	55	10	.65
3BM	39.2	4.9	31	49	10	-.08
4	43.4	6.1	34	64	10	.36
6GF	52.9	7.0	37	63	10	.59
6BM	43.5	7.1	28	60	10	.54
8BM	52.3	6.6	40	66	10	.50
13MF	40.7	9.0	19	62	10	.69
18BM	43.7	4.5	30	50	10	.00

Note. α = Cronbach's Alpha; SD = Standard Deviation.

$N = 25$

Table 5

Participant Ratings of Interpersonal Affiliation: Descriptive Statistics for All Sample TAT

Items

TAT Card	Mean	SD	Minimum	Maximum	# of Items	α
1	35.6	5.1	26	47	10	.61
2	40.8	5.4	32	55	10	.47
3GF	39.1	7.1	28	55	10	.56
3BM	38.1	5.8	24	49	10	.43
4	45.1	6.4	33	58	10	.56
6GF	32.4	5.7	23	44	10	.62
6BM	42.5	5.7	33	53	10	.47
8BM	41.3	6.6	32	57	10	.73
13MF	36.6	7.3	22	51	10	.67
18BM	42.1	6.2	30	54	10	.67

Note. α = Cronbach's Alpha; SD = Standard Deviation.

$N = 25$

The consistency of ratings to the TAT sample items was then examined to evaluate the preliminary inter-item reliability of the interpersonal TAT scales. Cronbach's alpha was utilized to calculate within card inter-item reliability and results indicated that the reliability levels varied significantly across the 10 TAT cards for both interpersonal dominance (see Table 4) and interpersonal affiliation (see Table 5). While some cards demonstrated satisfactory reliability for both interpersonal dimensions ($\alpha \geq 0.5$), other scores were problematic ($\alpha < 0.5$). This was particularly evident for the reliability of interpersonal dominance, which demonstrated near zero and negative reliability levels (e.g., card 2 = -.11).

Steps were then taken to improve the inter-item reliability for each TAT card. Item-total reliability was calculated for all sample TAT responses within each card (see Appendix O). Sample items that did not demonstrate adequate item-total reliability ($r <$ 0.3) were deleted from the item pool for each TAT card. Cronbach's alpha was then utilized to re-examine the internal consistency of the sample items for each TAT card. The inter-item reliability for the majority of cards still did not attain an acceptable level ($\alpha < 0.5$) for both interpersonal dominance and affiliation. Given such, further items were deleted as necessary to achieve a consistency level greater than 0.5. The deletion process involved calculating inter-item reliability for the various combinations of items within each card with the goal of maximizing both 1) the level of reliability and 2) number of items selected for the TAT scales. It was important to maximize the number of sample items selected for the TAT scales in order to increase the descriptiveness of the coding manual, as the sample TAT items would serve as anchor points in the scales. The results of these reliability analyses yielded a varying range of items being selected for each card

across interpersonal dominance and affiliation (see Tables 6 & 7). The final selected

items were then utilized as anchor points in the development of the Interpersonal

Dominance and Affiliation TAT scales.

Table 6 displays the mean, standard deviation, range, number of selected items,

and reliability coefficients for the interpersonal dominance items for each TAT card. It is

apparent that all 10 TAT cards demonstrated satisfactory internal consistency (or within-

card reliability) once the unreliable items were removed, with reliability coefficients all

above the .50 level. Table 7 similarly displays the descriptive statistics for the

interpersonal affiliation items for each TAT card. The inter-item reliability was adequate

for interpersonal affiliation, with coefficients ranging from the .52 to the .78 level.

Table 6

Participant Ratings of Interpersonal Dominance: Descriptive Statistics for Selected TAT Items

TAT Card	Mean	SD	Minimum	Maximum	# of Items	α
1	34.4	6.1	20	47	7	.66
2	22.7	5.0	12	32	5	.61
3GF	23.7	6.9	10	36	6	.69
3BM	17.2	4.7	4	27	4	.62
4	30.0	4.9	21	43	7	.57
6GF	32.4	6.6	15	41	6	.79
6BM	26.7	5.9	9	36	6	.67
8BM	26.8	6.1	11	34	5	.68
13MF	19.5	6.7	5	32	5	.85
18BM	21.9	4.6	10	31	5	.57
Total Ratings	255.2	40.9	131	327	56	.89

Note. SD = Standard Deviation; α = Cronbach's Alpha.

$N = 25$

Table 7

Participant Ratings of Interpersonal Affiliation: Descriptive Statistics for Selected TAT

Items

TAT Card	Mean	SD	Minimum	Maximum	# of Items	α
1	22.6	3.9	14	30	7	.69
2	15.0	4.9	9	31	5	.69
3GF	13.4	4.5	5	21	4	.63
3BM	18.0	4.6	9	30	5	.52
4	26.4	5.6	15	36	6	.67
6GF	10.4	3.9	6	21	5	.66
6BM	18.2	3.5	11	24	4	.61
8BM	34.3	3.8	26	51	8	.71
13MF	21.1	5.6	10	30	6	.78
18BM	14.8	4.3	7	24	5	.70
Total Ratings	194.3	28.2	155	274	55	.80

Note.   SD = Standard Deviation; α = Cronbach's Alpha.

$N = 25$

Inter-item reliability was also evaluated for the total ratings of TAT items across

the 10 TAT cards. This analysis permitted an examination of the between-card reliability

of the TAT scales or the consistency of ratings across the 10 TAT cards. Composite

variables were first calculated by summing participants' ratings for the items selected for

each TAT card. Cronbach's alpha was then utilized to examine the consistency of

selected items and participants' ratings across the 10 TAT cards. Satisfactory internal

consistency was demonstrated for both dimensions, with a reliability coefficient of .89

obtained for interpersonal dominance and .80 for interpersonal affiliation. Hence, the

objective of selecting TAT sample items that were internally consistent both within and

across the 10 TAT cards was achieved in the present study.

In addition to the reliability analyses, a factor analysis was conducted to evaluate

the underlying factor structure of selected TAT items. The purpose of this statistical

procedure was to verify that participants were indeed rating the sample TAT items on the

two dimensions of interpersonal dominance and affiliation. A principal axis factor

analysis was conducted on participants' total ratings of interpersonal dominance and

affiliation across the 10 TAT cards (total variables = 20). The variables were first

inspected for the assumptions of normality and it was observed that several of the ratings

were skewed. The dominance ratings for TAT card 3GF were positively skewed (.07),

whereas the dominance ratings for cards 2 (-1.2), 6BM (-.11), and 8BM (-.33) were

negatively skewed. In terms of affiliation ratings, results indicated cards 2 (.92) and 6GF

(.40) were skewed in a positive direction, whereas card 18BM was negatively skewed (-

.10). However, given the purpose of the present study, no deletion of variables or

transformations was conducted. An examination of bivariate scatterplots also indicated

that curvilinearity did not exist between variables. The results of the factor analysis

showed five factors with eigenvalues greater than 1 and significant regression weights.

However, an examination of the scree plot indicated that a two-factor solution best fit the

data. Moreover, there was a significant reduction in regression weights after the second

factor. Both the first factor (28.8%; eigenvalue = 5.75) and second factor (21.9%;

eigenvalue = 4.30) explained a moderate portion of shared variance. The results of a two-

factor solution suggest that the goal of creating two scales that are orthogonal in nature

was attained.

Table 8 displays the rotated factor loadings for all 20 variables. The majority of

dominance ratings loaded on factor 1 and affiliation ratings loaded on factor 2, and given

such, were interpreted to reflect interpersonal dominance and affiliation, respectively.

However, it is important to note that several of the factor loadings were problematic.

Specifically, the affiliation ratings for card 1 and card 6GF did not load primarily on the

affiliation factor, and the dominance ratings for card 4 did not load on the dominance

factor. The loadings of participants' ratings to these cards imply that they do not

adequately assess the dimensions of interest. Consequently, it was decided not to include

these cards in the creation of the Interpersonal Dominance and Affiliation TAT scales.

The interpersonal affiliation scale would be based on the use of eight TAT cards, whereas

the interpersonal dominance scales would require nine TAT cards.

Table 8

Exploratory Factor Loadings of Participants' TAT Ratings Following Orthogonal

Rotation

TAT Ratings	Factor 1	Factor 2
Card 1 Dominance	**.71**	-.19
Card 1 Affiliation	**-.37**	-.12
Card 2 Dominance	**.78**	-.34
Card 2 Affiliation	-.13	**.80**
Card 3GF Dominance	**.82**	.00
Card 3GF Affiliation	-.23	**.72**
Card 3BM Dominance	**.78**	-.19
Card 3BM Affiliation	.00	**.73**
Card 4 Dominance	.00	**.59**
Card 4 Affiliation	.00	**.77**
Card 6GF Dominance	**.79**	.11
Card 6 GF Affiliation	**-.18**	.13
Card 6BM Dominance	**.78**	.12
Card 6BM Affiliation	.20	**.60**
Card 8BM Dominance	**.81**	.00
Card 8BM Affiliation	.00	**.66**
Card 13MF Dominance	**.67**	.29
Card 13MF Affiliation	.00	**.74**
Card 18BM Dominance	**.73**	-.16
Card 18BM Affiliation	-.16	**.49**

Note. Primary factor loadings are displayed in boldface type.

The inter-item reliability for total scores on the Interpersonal Dominance and

Affiliation TAT scales was then re-calculated to examine the effect of removing the two

cards for affiliation (card 1 and 6GF) and one card for dominance (card 4). The results of

Cronbach's alpha was .91 for the interpersonal dominance scale and .85 for the

interpersonal affiliation scale, indicating a superior level of internal consistency. Thus,

the exclusion of these three specific TAT cards from the interpersonal TAT scales

improved the overall internal consistency of the scales.

To summarize, the results of reliability analyses (within and between-card)

indicate that the sample TAT items selected for inclusion in the interpersonal scales

assess the two dimensions in a consistent fashion. The factor analysis provides evidence

that the selected TAT items should produce relatively orthogonal scales, in accordance to

the purpose of the scale development phase of research. The final step in scale

development was to use the sample TAT items to construct the coding manual for the

Interpersonal Dominance and Affiliation TAT scales. The mean rating of each sample

TAT item was calculated and used to indicate its placement along the 7-point scales. The

descriptive statistics for all the selected TAT items are provided in Appendix P. Once the

sample items were placed as anchor points on the scale, the main themes were

extrapolated from the items and written into the coding manual.

The developed Interpersonal Dominance and Affiliation TAT scales identify the

typical subject matter of responses given at each point along the 7-point scales, for each

of the TAT cards (see Appendix J). The Interpersonal Dominance scale utilizes 9 TAT

cards for scoring (1, 2, 3GF, 3BM, 6GF, 6BM, 8BM, 13MF, 18BM), whereas the

Interpersonal Affiliation scale utilizes 8 TAT cards (2, 3GF, 3BM, 4, 6BM, 8BM, 13MF,

18BM). Coding for both scales is based on a 7-point Likert scale, with total scores on the

dominance scale ranging from 0 to 63 and scores on the affiliation scale ranging from 0 to

56.

<div align="center">Validity Study</div>

Participants

Fifty-seven undergraduate students (26 men, 31 women) enrolled in a psychology

course at the University of Windsor participated in the study. A small sample was chosen

for the study because of the labour intensive nature of scoring TAT protocols. The

individuals were offered partial course credit for their participation in the study.

Participants ranged in age from 19 to 36, and the mean age was 22. The average level of

education completed for participants was the first year of university (21%, $n = 12$), and

the most frequent level of education completed was high school (28%, $n = 16$).

Participants reported an average family income of within the $60,000 to $74,999 range.

The ethnic composition of participants was Caucasian (82.5%, $n = 47$), Black (5%, $n = 3$),

Asian (2%, $n = 1$), and other (10.5%, $n = 6$).

Measures

Demographic information. A questionnaire was administered to assess

participants' gender, age, level of education, socio-economic status, and ethnicity (see

Appendix A).

Thematic Apperception Test. The Thematic Apperception Test (TAT; Morgan &

Murray, 1935) is a projective instrument containing a series of ambiguous pictures (black

and white) on stimulus cards. Respondents are instructed that this is a story-telling test

and they should tell a dramatic story that completes the actions portrayed by the

character(s) depicted in the TAT cards. A response form was utilized for group

administration that contains the following instructions: a) describe what has led up to the

events shown in the picture; b) what is happening in the story seen in the picture; c) what

the people are thinking and feeling; and d) what will the outcome be (see Appendix F).

Administration typically involves the use of ten TAT cards and can be conveniently

administered in 1–2 hours.

Interpersonal Dominance and Affiliation TAT scales. The Interpersonal

Dominance and Affiliation scales developed in the present study were used to assess

interpersonal variables on the TAT (see Appendix G). In the present study, three graduate

psychology students independently rated participants' TAT responses on the scales. The

Interpersonal scales require the administration of the following ten TAT cards: 1, 2, 3GF,

3BM, 4, 6GF, 6BM, 8BM, 13MF, and 18BM. The Interpersonal Dominance scale utilizes

9 TAT cards for scoring (1, 2, 3GF, 3BM, 6GF, 6BM, 8BM, 13MF, 18BM), whereas the

Interpersonal Affiliation scale utilizes 8 TAT cards (2, 3GF, 3BM, 4, 6BM, 8BM, 13MF,

18BM). Coding for both scales is based on a 7-point Likert scale, with total scores on the

dominance scale range from 0 to 63 and scores on the affiliation scale range from 0 to 56.

Interpersonal dominance is a bipolar construct ranging from submissiveness (1) to

dominance (7), and interpersonal affiliation ranges from coldness (1) to warmth (7). A

score of (4) represents a neutral or balanced response on the two dimensions, and

responses that do not contain interpersonal situations (real or imagined) are scored (0).

The coding manual includes sample responses for each anchor point on the scales across

the various TAT cards. The level of dominance and affiliation scored on each card varies

with respect to the nature of common responses given to each card. The scales have

demonstrated good internal consistency, with reliability coefficients of .91 for

interpersonal dominance and .85 for interpersonal affiliation obtained in the previous

study.

Interpersonal Adjectives Scales-Revised (Self-Report Format). The Interpersonal

Adjectives Scales-Revised (IAS-R; Wiggins, 1995) is a self-report instrument designed to

measure the eight interpersonal variables of the ICM, as well as the two underlying

dimensions, namely, dominance and nurturance. The IAS-R consists of a test booklet

with a list of 64 interpersonal adjectives, to which respondents rate how accurately each

word describes them as individuals on an 8-point Likert scale (1 = Extremely Inaccurate,

8 = Extremely Accurate). The IAS has demonstrated admirable psychometric properties,

with internal consistency coefficients ranging from .73 to .87 in both adult and college

sample (Wiggins, 1995). The structural validity of the instrument has also been

demonstrated, as the scales were found to form a clear circumplex structure organized

around the orthogonal coordinates of dominance and nurturance (Wiggins, Trapnell, &

Phillips, 1988; Wiggins & Trobst, 1997b). College student and adult norms have been

developed for the instrument and are utilized for scoring the instrument. Extensive

procedures are involved for converting raw scores into the underlying factor scores for

interpersonal dominance and affiliation. These steps are described in the manual for the

instrument (IAS-R; Wiggins, 1995) and an automatic computerized scoring system has

also been developed. The total factor scores for interpersonal dominance and affiliation

range from −5.8 to 5.8, with the sign of the number indicating the vector length on these

bipolar dimensions. Given the statistical analyses used in the present study, the factor

scores on this instrument were further converted into one continuous positive scale, with

scores ranging from 1 to 117.

Interpersonal Adjectives Scales-Revised (Other-Rating Format). The Interpersonal Adjective Scales-Revised (IAS-R; Wiggins, 1995) was also administered to assess peer-ratings of participants' interpersonal behaviour. The measure is conveniently employed in peer-rating form by changing the instructions to rating the specified other. The other-format of the measure has demonstrated good psychometric properties (Wiggins, 1995), and has been utilized in numerous studies to date (e.g., Costa & McCrae, 1992; Gifford, 1994). The factor scores for interpersonal dominance and affiliation were calculated in the present study and used for the analyses. The steps involved in these calculations are described in the manual for the instrument (IAS-R; Wiggins, 1995). Similar to the self-report version, the factor scores were further converted into one continuous positive scale, with scores ranging from 1 to 117.

Bem Sex-Role Inventory. The Bem Sex-Role Inventory (BSRI; Bem, 1974) assesses the two independent constructs of masculinity and femininity. The inventory contains 60 items phrased as descriptive characteristics (e.g., assertive), to which respondents' indicate the extent to which each describes themselves on a 7-point Likert scale (1 = Never true, 7 = Always True). There are 20 items to assess masculinity, 20 items for femininity, and 20 neutral items that are not utilized for scoring. Total scores for masculinity and femininity range from 20 to 140. The psychometric properties of these scales have been adequately demonstrated in the scientific literature (e.g., Bem, 1974; Chung, 1996; Kolbe & Langefeld, 1993).

Impression Management scale. The Impression Management scale of the Balanced Inventory of Desirable Responding (BIDR, Version 6; Paulhus, 1991) contains

20 propositional statements to which participants respond on a 7-point Likert scale (1 =

Not True, 7 = Very True). The scale is balanced for keying direction, and only extreme

ratings (1–2 & 6–7) are assigned one point. Thus, total scores range from 0 to 20. Internal

consistency of the Impression Management scale has ranged from .75 to .86, and a test-

retest reliability coefficient of .65 was obtained over a five-week period (Paulhus, 1984,

1991; Mellor, Conroy, & Masteller, 1986).

Self-Concealment Scale. The Self-Concealment Scale (SCS; Larson & Chastain,

1990) is a self-report inventory that contains 10 items phrased as self-statements.

Respondents indicate their level of agreement to each item on a 7-point Likert scale (1 =

Not True, 7 = Very True), and total scores range from 10–70, with higher scores

reflecting higher levels of self-concealment. Larson and Chastain (1990) found the scale

to have good internal consistency ($\alpha = .83$, $N = 306$). Test-retest reliability was assessed

over a 4-week interval in an independent sample of female graduate counseling

psychology students (N = 43) and a high correlation was obtained ($r = .81$).

Leaderless group discussions. Leaderless discussions were conducted with groups

of same-sex participants to assess their spontaneous interpersonal behaviour. The average

number of participants in each group was five, with a total of twelve groups being

conducted. The format of the groups entailed a) 5 minutes of individual preparation to

read the written instructions provided, b) 10 minutes for individual statements (2 minutes

each), and c) a 20-minute group discussion. Participants were provided with written

instructions for the exercise (see Appendix H), which contained background information

on the nature of student evaluations, types of measures available (i.e., objective,

subjective, or combination), and learning techniques required for each type of measure.

The written instructions also described the format of the discussion, including that the purpose was for participants to pretend they are a psychology professor and arrive at a consensus concerning what methods of evaluation to use in their course to be fair to all students.

Participants' spontaneous interpersonal behaviour during the leaderless group discussions was rated on a 5-point Likert scale for the level of interpersonal dominance and affiliation displayed. The group discussions were audiotaped and videotaped to assist with the rating process. Five undergraduate psychology students at the University of Windsor were recruited to independently rate participants' interpersonal behaviour during the discussions according to the criteria provided (see Appendix I). The criteria for evaluating participants' behaviour are based on the description of interpersonal dominance and affiliation provided by Wiggins (1995). The raters were instructed to focus on the process of the group discussions, rather than on the verbal content per se.

Procedure

After obtaining ethics clearance from the University of Windsor Research Ethics Board, the validity of the Interpersonal Dominance and Affiliation TAT scales were evaluated in a sample of undergraduate students enrolled in a psychology course at the University of Windsor. Participants met at an arranged location and were requested to sign their name on a consent form in order to receive partial course credit. The form outlined the general purpose of the study, procedures, the voluntary nature of participation, potential risks, compensation, and the confidentiality of individual scores (see Appendix J). Participants were administered the Thematic Apperception Test in group format, in which the TAT cards were shown on an overhead screen and participants

wrote their stories on the response forms provided (see Appendix F). Group

administration of the TAT is a common procedure utilized in research because of its

convenience and efficiency. The participants also completed a questionnaire booklet

containing the various self-report measures and demographic questionnaire. The order of

the self-report measures was counterbalanced within the test booklet to minimize the

effects of exhaustion.

Participants were further requested to meet on a second occasion to participate in

a leaderless group discussion. The individuals were offered various time slots for this part

of the study based on the restrictions of their sex (female or male-only groups) and

number of individuals (approximately 5 per group). The group discussions were run in

same-sex format in order to minimize the influence of status on participants'

interpersonal behaviour. Research has demonstrated that a power inequality exists

between men and women in social interactions (Webster, 1975), in which men tend to

dominate group discussions. This inequality may potentially interfere with the accurate

assessment of participants' spontaneous interpersonal behaviour, and given such, steps

were taken to eliminate this variable. Participants met at an arranged location during their

assigned time slot and were asked to engage in a leaderless group discussion on the topic

of student evaluations in undergraduate courses at the University of Windsor (see

Appendix H). Of the 57 participants, 55 individuals (96.5%) returned on the second

occasion to continue their participation in the study. The investigator executed all the

discussions in a standardized fashion, and they were both videotaped and audiotaped for

future analyses. A total of 12 group discussions were conducted (female-only = 6; male-

only = 6) and the total time required for each was approximately 40 minutes.

In addition, participants were asked to recruit a person who interacted with them on a daily basis to complete the observer-rating version of the Interpersonal Adjective Scales-Revised (IAS-R). Participants were given a sealed envelope to give to their selected individual that contained a consent form (see Appendix K) and the IAS-R. The participants were asked to return the completed questionnaire during the second meeting time (i.e., group discussion) and 55 individuals returned the peer-rating questionnaire out of the total 57 participants (96.5%). Following the collection of data, written debriefing was provided to participants detailing the purpose of the study (see Appendix L).

Another component of the procedure entailed recruiting research assistants to rate participants' interpersonal behaviour during the leaderless group discussion and score participants' TAT responses. Signs were posted in the psychology department requesting voluntary assistance from undergraduate psychology students. The undergraduate student raters could not be compensated for their time, but rather were provided with research experience to assist them in future academic endeavors (e.g., completion of an Honours Thesis). Four individuals volunteered their time and were asked to independently observe and rate participants' interpersonal behaviour during the videotaped group discussions. The investigator of the present research also served as a fifth rater. Written criteria was provided for rating the level of interpersonal dominance and affiliation displayed by participants during the discussions (see Appendix I), as well as sheets for recording these ratings (see Appendix M). The investigator met independently with each rater for approximately 1 hour to familiarize the undergraduates with the scoring criteria and procedures, and train them on how to judge participants' interpersonal behaviour. Two graduate psychology students at the University of Windsor were further recruited to code

participants' TAT protocols and they were offered monetary compensation for their time.

The present investigator also served as a third rater. The three individuals used the

Interpersonal Dominance and Affiliation TAT scales developed in the present research to

code participants' responses (see Appendix G) and recorded their ratings on the scoring

sheet provided (see Appendix N). The investigator also provided approximately 1 hour of

training to the graduate students as to the application of the interpersonal TAT scales.

Participants' TAT stories were presented to raters in a randomized fashion to minimize

order effects.

Results

The data from all sources were entered into a microcomputer and analyzed with

SPSS. Composite scores were computed for all variables examined in the present study.

Table 9 displays the descriptive statistics for these measures, including the reliability

coefficients. Cronbach's Alpha demonstrated that all the self-report measures had good

internal consistency, with reliability coefficients all above the .80 range for the

Impression Management scale, Self-Concealment scale, Femininity, and Masculinity. The

reliability coefficients could not be calculated for both the self- and peer-report versions

of the IAS-R, given that a series of statistical alterations are performed on the scale items

in order to calculate the factor scores of dominance and affiliation. Table 9 also displays

the inter-rater reliability for the observer-ratings of interpersonal dominance and

affiliation, which was assessed through Intra-Class Correlations. It is apparent that the

agreement between the five independent raters of dominance was superior (ICC = .91),

whereas the reliability of interpersonal affiliation ratings was poor (ICC = .34). In light of

the poor reliability for affiliation, the correlation matrix of observer-ratings was examined

prior to forming composite variables for further analyses.

Table 9

Descriptive Statistics

Variable	Mean	SD	Min	Max	# Items	α	#Raters	ICC
1. Self-Report of Interpersonal Dominance	64.1	8.3	43.0	82.0	64	*	—	—
2. Self-Report of Interpersonal Affiliation	60.9	9.5	40.0	85.0	64	*	—	—
3. Peer-Report of Interpersonal Dominance	64.7	9.7	43.0	85.0	64	*	—	—
4. Peer-Report of Interpersonal Affiliation	63.7	10.5	32.0	85.0	64	*	—	—
5. Observer-Ratings of Interpersonal Dominance	3.1	.8	1.2	4.8	—	—	5	.91
6. Observer-Ratings of Interpersonal Affiliation	3.2	.4	1.67	4.0	—	—	5	.34
7. Masculinity	105.7	14.3	58.0	138.0	20	.88	—	—
8. Femininity	103.2	12.6	68.0	130.0	20	.83	—	—
9. Self-Concealment	25.1	9.3	10.0	46.0	10	.88	—	—
10. Impression Management	5.1	3.1	0	12.0	10	.80	—	—
11. TAT Dominance	30.6	4.6	20.3	41.0	9	.27	3	.88
12. TAT Affiliation	31.9	5.6	17.7	44.0	8	.46	3	.94

Note. α = Cronbach's Alpha; SD = Standard Deviation; Min = Minimum; Max =

Maximum. * The factor scores were used to assess these variables and given such,

reliability could not be calculated.

$N = 57$

Table 10 displays the correlations between the five raters of interpersonal affiliation. Results show that negative and low correlations were obtained for video raters 3 and 5, whereas adequate correlations are found between the other 3 raters. Consequently, the interpersonal affiliation ratings of rater 3 and 5 were excluded from the analyses. A satisfactory Intra-Class Correlation was subsequently obtained across raters 1, 2, and 4 (ICC = .58). Composite variables of observer-ratings were then formulated by averaging the five ratings of interpersonal dominance and three ratings of interpersonal affiliation. Table 9 displays the mean, standard deviation, minimum, and maximum values of the composite variables of observer-ratings.

Table 10

Intercorrelations of Observer-Ratings of Interpersonal Affiliation

Rater	1	2	3	4	5
1	—				
2	.23	—			
3	-.09	-.24	—		
4	.44**	.27*	-.11	—	
5	.21	.05	-.10	.17	—

* p < .05; ** p < .01

$N = 57$

The inter-rater reliability of the Interpersonal Dominance and Affiliation TAT scales created in Study 1 was evaluated through Intra-Class Correlations and displayed in Table 9. The agreement between the three raters for both the dominance and affiliation TAT scales were excellent, with a coefficient of .88 and .94, respectively. The mean of the three ratings of interpersonal dominance and affiliation were then utilized to form composite variables for the TAT scales. The descriptive statistics for these scales are also displayed in Table 9. The average score of participants on the Interpersonal Dominance TAT scale was 30.6 and the mean score on the Interpersonal Affiliation TAT scale was 31.9.

The internal consistency of the Interpersonal Dominance and Affiliation TAT scales was also evaluated in the present study. Cronbach's alpha indicated both the dominance ($\alpha = .27$) and affiliation ($\alpha = .46$) scales had poor inter-item reliability across the TAT cards (see Table 9). In light of the poor reliability coefficients, the inter-rater reliability for each card within the interpersonal scales was evaluated. Table 11 displays the descriptive statistics for all cards included in the TAT scales and the Intra-Class Correlations for each card. Satisfactory inter-rater reliability was obtained for all the cards within the interpersonal scales (>.70 level). Thus, there is a discrepancy between the internal consistency across the items of the interpersonal TAT scales versus the inter-rater reliability of each item within the scale. This result suggests that homogeneity exists among the variance for each card within the scale, but not across cards, which is consistent with previous research highlighting the various TAT cards elicit unique themes. Thus, the levels of dominance and affiliation vary across the TAT cards included in the scales, as expected.

Table 11

Descriptive Statistics for the Interpersonal Dominance and Affiliation TAT scales

TAT Scale	Mean	SD	Minimum	Maximum	ICC
Dominance					
Card 1	3.2	1.4	0	5.3	.89
Card 2	3.7	1.5	0	7.0	.94
Card 3GF	3.2	1.5	0	6.0	.86
Card 3BM	2.7	1.3	0	5.3	.79
Card 6GF	4.0	1.0	1.3	6.3	.79
Card 6BM	3.7	1.0	1.7	7.0	.88
Card 8BM	3.3	1.8	0	6.7	.89
Card 13MF	4.0	1.5	1.0	7.0	.81
Card 18BM	2.8	1.0	0.7	5.0	.70
Affiliation					
Card 2	3.6	1.2	1.0	6.0	.90
Card 3GF	4.2	1.4	0	7.0	.93
Card 3BM	3.8	2.1	0	7.0	.93
Card 4	3.8	1.5	1.3	7.0	.92
Card 6BM	4.7	1.2	1.0	7.0	.92
Card 8BM	3.7	1.5	0	7.0	.95
Card 13MF	4.1	1.8	1.0	7.0	.92
Card 18BM	3.9	1.3	1.7	7.0	.81

Note. SD = Standard Deviation; ICC = Intra-Class Correlations. $N = 57$

To test the hypotheses in the present study, correlations were calculated between variables. An alpha level of .05 was set for evaluating the significance of all correlations, which ensured sufficient power of the study with the present sample size (N = 57), even at low effect sizes. Table 12 displays the inter-correlations of all variables included in the present study. The results of the analyses for concurrent validity will first be presented. As hypothesized, a low correlation was obtained between the Interpersonal Dominance and Affiliation TAT scales ($r = .01$). This confirms that the two scales are independent and orthogonal in nature as hypothesized (1).

The influence of response biases on self-report was evaluated prior to examining concurrent validity between the Interpersonal TAT scales and the IAS-R (self-report version). A strong significant correlation was obtained between the Impression Management scale (BIDR, Version 6; Paulhus, 1991) and the self-report of interpersonal affiliation ($r = .41$), but not for the self-report of dominance ($r = -.17$). Given such, the influence of impression management on the self-report of affiliation was controlled for by conducting a partial correlation between the self-report affiliation and the Interpersonal Affiliation TAT scale. A low partial correlation was obtained between these two measures when the influence of impression management was controlled for ($p\underline{r} = .08$), whereas a significant correlation was obtained between self-report and TAT affiliation ($r = .27$) without this control. Despite the low partial correlation, the significant positive correlation between scores on the TAT Affiliation scale and self-report affiliation is contrary to expectation (Hypothesis 3). The concurrent validity of the Interpersonal Dominance TAT scale was also examined in relation to self-report. A moderate positive correlation was obtained between the TAT and self-report of interpersonal dominance (r

= .40). This result directly contrasts the relationship expected between these two variables (Hypothesis 2).

The concurrent validity of the TAT scales was also evaluated in relation to masculinity and femininity. A significant positive correlation was obtained between the Interpersonal Dominance TAT scale and Bem's (1974) Masculinity scale ($r = .27$), thereby confirming hypothesis (4). A significant positive correlation was also obtained between the Interpersonal Affiliation TAT scale and Bem's (1974) Femininity scale ($r = .30$), confirming hypothesis (5).

Table 12

Intercorrelations of Variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. Self-Report Dominance	—											
2. Self-Report Affiliation	-.02	—										
3. Peer-Report Dominance	.49**	-.20	—									
4. Peer-Report Affiliation	-.02	.88**	-.21	—								
5. Observer-Rating Dominance	.23*	.09	.25*	.11	—							
6. Observer-Rating Affiliation	-.22	.17	-.15	.29*	.03	—						
7. TAT Dominance	.40**	.07	.33**	.07	.06	-.21	—					
8. TAT Affiliation	.06	.27*	.00	.13	.16	-.11	.01	—				
9. Impression Management	-.17	.41**	-.28*	.27*	.07	-.14	-.19	.51**	—			
10. Self-Concealment	-.28*	-.02	-.03	.06	-.03	.18	.18	-.25*	-.27*	—		
11. Masculinity	.70**	-.14	.48**	-.10	.22	-.15	.27*	.14	-.16	-.36**	—	
12. Femininity	-.15	.62**	-.12	-.28*	.08	.20	-.11	.30*	.26**	-.11	-.20*	—

Note. Peer-ratings of dominance and affiliation refer to the ratings made by significant others on the IAS-R. Observer-ratings of dominance and affiliation refer to participants' behaviour during the leaderless group discussions.

* p < .05; ** p < .01

N = 57

Correlations were also utilized to evaluate the criterion validity of the

Interpersonal TAT scales (see Table 12). Contrary to expectation, a moderate positive

correlation was not obtained between the Interpersonal Dominance TAT scale and

observer-ratings of interpersonal dominance during the leaderless group discussions (r =

.06; Hypothesis 6). Similarly, a moderate positive correlation was not obtained between

the Interpersonal Affiliation TAT scale and observer-ratings of affiliation (r = -.11;

Hypothesis 7). To evaluate the differential criterion validity of the TAT versus self-report

of interpersonal variables, the correlation between these variables and observer-ratings of

participants' interpersonal behaviour was compared. A stronger correlation was not

observed between the Interpersonal TAT dominance scale and observer-ratings of

dominance (r = .06) in comparison to the correlation between the self-report of

dominance and observer-ratings (r = .23; Hypothesis 8). In fact, a significant positive

correlation was found between the self-report and observer-ratings of dominance. The

differential criterion validity of the TAT and self-report of affiliation was also evaluated

and hypothesis (9) was not confirmed. The correlation between the Interpersonal

Affiliation TAT scale and observer-ratings of affiliation (r = .16) was not stronger than

that obtained for self-report of affiliation (r = .17).

The validity of the ICM model was examined by comparing the correlations of

interpersonal dominance and affiliation across the measurement domains of self-report,

peer-report, and the TAT. For interpersonal dominance, a significant positive correlation

was obtained across all measurement domains, thereby supporting the validity of the ICM

for dominance. Specifically, a significant positive correlation was obtained between the

Interpersonal dominance TAT scale and self-report of dominance (r = .40), as well as for

peer-ratings of dominance ($r = .33$). The self-report version of dominance also significantly correlated with peer-ratings ($r = .49$). In regards to the dimension of interpersonal affiliation, a significant positive correlation was obtained between the Interpersonal TAT scale and the self-report of affiliation ($r = .27$), but not for peer-ratings of affiliation ($r = .13$). A significant positive correlation was also obtained between the self-report and peer-report of interpersonal affiliation ($r = .88$). Thus, the findings lend partial support for the ICM for interpersonal affiliation.

To address the discriminant validity of the Interpersonal Dominance and Affiliation TAT scales, the relationship between these two variables and a theoretically unrelated construct was examined, namely, self-concealment. A non-significant correlation was obtained between the Interpersonal Dominance TAT scale and the Self-Concealment Scale ($r = .18$), thereby confirming hypothesis (10). However, a significant correlation was found between the Interpersonal Affiliation TAT scale and self-concealment ($r = -.25$). Thus, the results provide preliminary discriminant validity for the Interpersonal Dominance TAT scale, but not for the Interpersonal Affiliation TAT scale.

Discussion

In the present research, two scales were developed for the Thematic Apperception

Test (TAT) to assess the constructs of interpersonal dominance and affiliation, which

have been identified to underlie the Interpersonal Circumplex Model (ICM; Freedman et

al., 1951; Leary, 1957; Wiggins, 1995). Dominance refers to the extent to which

individuals feel that they are strong, powerful, and have an impact on their environment

(McMullen & Conway, 1997). The dimension ranges from submissiveness to a

dominating interpersonal style. Affiliation refers to the extent to which individuals feel a

sense of intimacy, union, or solidarity with others (Foa & Foa, 1974; McAdams, 1985),

and ranges from coldness (hate) to warmth (love). Although researchers have emphasized

the importance of these dimensions, objective scales for measuring interpersonal

variables on the TAT are currently unavailable, thereby limiting the type of information

that can be obtained from this projective instrument. The creation of the Interpersonal

Dominance and Affiliation TAT scales in the present study addressed this deficiency and

provided a tool for assessing individuals' functioning from a broader perspective (i.e.,

interpersonal style).

The purpose of the present research was to 1) develop two orthogonal scales for

the TAT, 2) evaluate the preliminary validity of the scales, and 3) test the validity of the

ICM by comparing interpersonal variables across measurement domains (i.e., self-report,

peer-ratings, the TAT). The results of the present research will be discussed in turn,

beginning with the scale development phase of research and then examining the results of

the validity study. The clinical value of the Interpersonal TAT scales will then be

considered, followed by the limitations of the present study and directions for future

research.

Scale Development

The Interpersonal Dominance and Affiliation TAT scales were developed in the

first phase of research. Psychometric techniques were applied throughout the scale

development process in order to maximize the objective properties of the interpersonal

scales. The first step in scale development involved selecting sample TAT responses to

potentially serve as anchor points for the two scales. Previously collected data of

anonymous TAT responses were used for the selection process. Participants' responses

were evaluated for the level of interpersonal dominance and affiliation depicted by

comparing story content with that of normative data for the TAT (e.g., Henry, 1956) and

Wiggins's (1995) description of interpersonal variables. One hundred TAT responses

were selected (10 per TAT card) and empirically evaluated for the level of interpersonal

dominance and affiliation illustrated in an undergraduate student sample (Collins &

Hibbard, 2001).

The purpose of collecting undergraduate ratings was 1) to establish that the two

constructs were orthogonal in nature, 2) had internal consistency, and 3) to select anchor

points for the scales. Using a group of participants to rate the sample TAT stories ensured

adequate psychometric properties of items being selected for inclusion in the two scales.

Other researchers have similarly relied on external ratings to develop interpersonal

measures of personality. For instance, Lorr and McNair (1963) used a group of

psychologists to identify interpersonal items for the IBI, whereas Horowitiz (1979) and

Wiggins (1979a) utilized a team of judges. These procedures ensure greater objectivity in

item selection in comparison to using one's own research group (e.g., Kiesler, 1987).

Reliability and factor-analytic statistical procedures were conducted on participants' ratings of the sample TAT responses for the next step in scale development. The purpose of these statistical analyses was to select items that depict the two constructs of interest, as well as represent different levels of intensity of the variables. The results of the reliability analyses indicated that the interpersonal dominance and affiliation ratings had adequate internal consistency ($\alpha > .50$ and ICC $> .50$) both within and across the ten TAT cards. Moreover, the factor analyses demonstrated that a two-factor solution best fit participants' ratings, thereby providing preliminary evidence that the two interpersonal scales were orthogonal in nature. However, several of the interpersonal dominance and affiliation ratings were problematic in the factor analyses. The affiliation ratings for card 1 and card 6GF were found not to load primarily on the affiliation factor, and the dominance ratings for card 4 did not load primarily on the dominance factor. These findings suggest that these cards did not sufficiently assess the constructs of interest and consequently, were excluded from the Interpersonal Dominance and Affiliation TAT scales.

Giving consideration to the nature of the illustrations for TAT cards 1, 4, and 6GF may shed some light on why they did not adequately tap the constructs of interpersonal dominance and affiliation. Card 1 depicts a single young male with a violin and typically evokes themes of achievement (Henry, 1956). Achievement is a dominant or power-related construct, which suggests that card 1 is better suited to tapping interpersonal dominance, rather than affiliation. Card 6GF depicts a young woman sitting on a coach with an older man approaching her from behind. Common responses to this card involve power struggles between the two characters (e.g., male boss sexually harassing the female

employee), which are primarily based on the construct of interpersonal dominance. Thus, similar to card 1, card 6GF appears to assess dominance to the exclusion of affiliative components. In contrast, card 4 was found to be better suited for tapping the dimension of interpersonal affiliation. Card 4 is typically referred to as the "Hollywood Card" because it depicts a young man and woman in an emotionally dramatic exchange. The young man is turning away to leave the young woman with an expression of anger on his face, and the young woman is pulling the man back towards her with a facial expression of sadness and desperation. Thus, card 4 seems to be more relevant to the affiliation dimension, rather than interpersonal dominance.

It was found that the exclusion of cards 1 and 6GF from interpersonal affiliation and card 4 from interpersonal dominance improved the internal consistency of the TAT scales. The between-card reliability for interpersonal dominance increased from .89 to .91 after card 4 was excluded from the analyses. Similarly, the reliability coefficient for interpersonal affiliation rose from .80 to .85 after the ratings to card 1 and 6GF were excluded. Thus, a high level of internal consistency was demonstrated for the sample TAT responses selected as anchor points for the interpersonal TAT scales. The mean score on the sample TAT responses was then utilized to order the items along a 7-point Likert scale for each TAT card. The developed Interpersonal Dominance scale utilizes 9 TAT cards for scoring (1, 2, 3GF, 3BM, 6GF, 6BM, 8BM, 13MF, 18BM), and the Interpersonal Affiliation scale utilizes 8 TAT cards (2, 3GF, 3BM, 4, 6BM, 8BM, 13MF, 18BM). Coding for both scales is based on a 7-point Likert scale per TAT card, with total scores on the dominance scale ranging from 0 to 63 and scores on the affiliation scale ranging from 0 to 56.

The coding manual for the scales specifies that only responses containing interpersonal interactions (real or imagined) should be assigned a score, whereas individual behaviour is coded zero. The provision of separate coding schemes per TAT card accounts for the different levels of dominance and affiliation elicited per card. For instance, the coding scheme of card 13MF for interpersonal dominance identifies more extreme levels of submissiveness to be coded (1) and (2) in comparison to card 6BM. A score of (1) and (2) to card 13MF requires the hero to be engaging in self-blaming or punishing acts (e.g., suicide), whereas responses coded (1) to card 6BM involve the hero being controlled by other characters.

Validity Study

In the second phase of research, the validity of the Interpersonal Dominance and Affiliation TAT scales was evaluated in an undergraduate student sample. The purpose of the validity study was to examine whether the TAT scales assess the constructs of interest (i.e., dominance and affiliation) by comparing TAT scores with those of related variables. Participants' were administered a variety of measures, including the TAT, and three graduate students scored TAT protocols with the interpersonal scales. The use of the Interpersonal Dominance and Affiliation TAT scales in the validity study represents the first application of these measures. Thus, consideration of the feedback provided from the graduate student raters taps the practical utility of the interpersonal TAT scales.

It was found that the time required for scoring the 57 TAT protocols in the present study varied across the raters, ranging from 40 to 60 hours. Based on this time range, it would be reasonable to suggest that practitioners using the interpersonal TAT scales on the first occasion would require an average scoring time of one hour per TAT protocol.

The 1-hour scoring time is highly efficient in comparison to the time required to learn and apply other TAT psychometrically-based measures (e.g., SCORS, DMM) and score other projective instruments (e.g., the Rorschach). In regards to feedback about the process of coding TAT responses, a consistent remark from the raters was that identifying participants' level of affiliation was easier than dominance. Participants' TAT responses often described characters engaging in complementary levels of dominance, which made it difficult for the raters to determine which character participants were identifying with in the story (i.e., submissive versus dominant role). In contrast, the raters found that participants' stories described individuals to have reciprocal levels of affiliation. The distinction found between the complementary nature of dominance and reciprocal nature of affiliation is consistent with previous research (Carson, 1969; Horowitz, 1996; Lorr, 1996).

In regards to the difficulty of scoring dominance, the general scoring rules for the interpersonal TAT scales specify that ratings should be based on the actions of the hero (i.e., character to whom the participant has identified with) in the story and several cues are described for identifying the hero (e.g., the hero's feelings, thoughts, and behaviour are described in the second-person). Moreover, it is noted to base ratings on the overall tone of the story if the hero in the story cannot be identified. Further comments about the Interpersonal TAT scales from the graduate raters entailed that the inclusion of response examples to mark the points of the scales was particularly advantageous for scoring. The examples served to highlight the nature of the point on the scale and increase the confidence to which participants' TAT responses were scored.

Examining the agreement of participants' scores on the Interpersonal Dominance

and Affiliation TAT scales across the three raters further speaks to the utility of the scales. In the present study, an excellent reliability coefficient was obtained for the interpersonal affiliation scale (ICC =. 82) and satisfactory reliability was demonstrated for the interpersonal dominance scale (ICC =. 69). These adequate reliability coefficients serve to establish the preliminary inter-rater reliability for the TAT scales. The higher level of reliability obtained for interpersonal affiliation suggests that the concordance of graduate student ratings was higher for interpersonal affiliation than dominance. This finding is consistent with the feedback obtained from graduate students who identified the Interpersonal Affiliation TAT scale was easier to score. In summary, the results of reliability analyses suggest that the Interpersonal Dominance and Affiliation TAT scales can be scored in a consistent fashion and the feedback from graduate students highlights the practical utility of the measures.

In the present study, the validity of the Interpersonal Dominance and Affiliation TAT scales was examined in relation to several related variables and specific hypotheses were made. Specifically, the construct, concurrent, criterion-predictive, and discriminant validity of the TAT scales were addressed in the study, as well as the influence of response biases on self-report and TAT measures. The results of each of these investigations of validity will be discussed in turn. In regards to construct validity, scores on the interpersonal TAT scales were correlated with each other in order to examine the independence of the two scales. Results demonstrated a low correlation between the Interpersonal Dominance and Affiliation TAT scales, thereby confirming hypothesis (1). The low correlation between dominance and affiliation suggest that they are indeed orthogonal constructs, as described in research on the Interpersonal Circumplex Model

(ICM). This finding also serves to confirm that the purpose of scale development was attained, namely, that the scales created are orthogonal in nature.

In regards to the concurrent validity of the Interpersonal Dominance and Affiliation TAT scales, results demonstrated a significant moderate positive correlation to exist between both the self-report and TAT measures of interpersonal dominance ($r = .23$) and affiliation ($r = .27$). These results suggest that the Interpersonal Dominance and Affiliation TAT scales assess the same constructs as the dominance and affiliation factor scores of the Interpersonal Adjective Scales-Revised (IAS-R; Wiggins, 1995). The IAS-R is a well-established measure of interpersonal variables with a substantial research base to support its ability to tap dominance and affiliation (e.g., Costa & McCrae, 1992; Gifford, 1994; Wiggins, Trapnell, & Phillips, 1998; Wiggins & Trobst, 1997b). Thus, the significant correlations between the TAT and self-report measures in the present study serve to establish preliminary concurrent validity of the interpersonal TAT scales. However, these results are contrary to hypotheses (2) and (3) that predicted that a low positive correlation ($r \leq .20$) would exist between TAT and self-report measures of interpersonal variables.

The hypotheses related to the concurrent validity of the TAT scales were based on previous research identifying low correlations to exist between objective and projective measures of specific variables (McClelland, Koestner, & Weinberger, 1989; Spangler, 1992). The issue of concordance between objective and projective measures, however, is currently unresolved in the literature. Investigations comparing measures specifically of interpersonal variables have yielded mixed results in regards to whether high correlations should exist (e.g., Colwell, 1998; Leary, 1957). Moreover, while McClelland et al.

emphasize low correlations to exist between TAT and self-report measures, the mono-trait view of measurement (Campbell & Fiske, 1959) argues that high correlations should be attained between measures of the same constructs. The significant correlations obtained in the present study address this issue and suggest a mono-trait view of interpersonal variables. That is, within the interpersonal domain, objective and projective measures appear to uniformly tap the same constructs. While projective measures are generally considered to tap private or "preconscious" individual themes, it is possible that individuals have greater awareness about their interpersonal behaviour and consequently, there is agreement between their self-report and private themes as assessed with the TAT. Perhaps, having feedback from others during interpersonal interactions and/or noticing their non-verbal cues facilitate insight into one's levels of interpersonal dominance and affiliation. This interpretation is consistent with symbolic interaction theory (Cooley, 1902; Schrauger & Schoeneman, 1979) that identifies reflected appraisals (i.e., perceptions of others' appraisal) to be important determinants of one's self-concept.

The influence of response biases on the measures of interpersonal variables was also evaluated in the present study to evaluate the accuracy of information being assessed. A significant correlation was obtained between the Impression Management scale (BIDR; Paulhus, 1991) and the self-report of interpersonal affiliation (IAS-R, self-report version; Wiggins, 1995). However, a significant relationship was not observed between the Impression Management scale and the self-report of interpersonal dominance (IAS-R; Wiggins, 1995). The significant correlation obtained between impression management and interpersonal affiliation (self-report) is consistent with previous research highlighting the susceptibility of self-report measures to the influence of response biases (e.g.,

Paulhus, 1986, 1991). Impression management refers to an individual's tendency to purposefully tailor his or her responses on questionnaires to create positive social images (Paulhus, 1991). This response bias undermines the accuracy of data obtained on self-report measures and should be controlled for. Consequently, the influence of impression management was controlled for in the present study when examining the concurrent validity of interpersonal affiliation. A substantial reduction was observed in the correlation between the self-report and TAT measures of affiliation ($pr = .08$) after controlling for the influence of impression management. The reduction in this correlation indicates that the construct of impression management accounts for the observed relationship between the two measures of affiliation. In fact, the impression management scale was found to also correlate significantly with the Interpersonal Affiliation TAT scale ($r = .51$) and peer-report of affiliation ($r = .27$). The significant relationship obtained between impression management and these three measures of interpersonal affiliation suggest a relationship exists between these personality characteristics. Previous research has identified the construct of interpersonal affiliation to have considerable heuristic value (Wiggins & Broughton, 1985, 1991), and given such, it is plausible that the characteristic of impression management is subsumed within this interpersonal dimension. The present findings lend support to this interpretation.

The significant relationship obtained between the Interpersonal Affiliation TAT scale and impression management is in contrast to the general assumption that projective instruments are less susceptible to response biases than self-report inventories. However, the influence of impression management on the TAT was limited to the construct of affiliation in the present study, as a significant correlation was not demonstrated for the

Interpersonal Dominance TAT scale. In fact, impression management correlated

significantly with the self-report, peer-report, and TAT measures of affiliation. Therefore,

it is most plausible that a relationship exists between the personality characteristics of

impression management and affiliation. As previously stated, interpersonal affiliation has

been found to have heuristic value in relation to other personality variables, and therefore,

it is likely that impression management is subsumed within this dimension. Individuals

who actively try to portray positive social images (impression management) may be

motivated to do so by their desire to feel close to and achieve union with others

(affiliation). The significant relationship observed between impression management and

affiliation in the present study highlights the need for future investigations to avoid

controlling for this response bias when using the Interpersonal Affiliation TAT scale.

Impression management appears to be part of the construct of affiliation, rather than an

artifact of self-report. However, further research is necessary to replicate the relationship

between these personality variables.

The concurrent validity of the Interpersonal Dominance and Affiliation TAT

scales was also evaluated in relation to the constructs of masculinity and femininity,

respectively. A significant relationship was observed between Bem's Masculinity (1974)

scale and the Interpersonal Dominance TAT scale ($r = .27$), confirming hypothesis (4).

This finding corresponds to previous research (e.g., Wiggins, 1991) and suggests that the

construct of interpersonal dominance, as assessed by the TAT, is theoretically related to

the personality characteristic of masculinity or instrumentality (Taylor, 1984). Thus, the

Interpersonal Dominance TAT scale appears to assess the characteristics of assertiveness,

aggression, competitiveness, and instrumentality, attributes of the traditional masculine

gender role. A significant positive correlation was also found for Bem's (1974)

Femininity scale and the Interpersonal Affiliation TAT scale ($r = .30$), confirming

hypothesis (5). This finding is consistent with previous research demonstrating that a

relationship exists between these variables (e.g., Wiggins, 1991), and provides

preliminary evidence that the Interpersonal Affiliation TAT scale is related to the

construct of femininity or expressiveness (Taylor, 1984). Thus, the Interpersonal

Affiliation TAT scale appears to assess the characteristics of warmth, tenderness,

compassion, and emotional expressiveness, attributes of the traditional feminine gender

role. These findings serve to establish the preliminary concurrent validity of the

Interpersonal Dominance and Affiliation TAT scales.

The significant relationships observed for interpersonal dominance and affiliation

with masculinity and femininity further addresses the heuristic value of the ICM and

interpersonal TAT scales. Investigations have described the ICM to serve as a single

framework for interpreting personality scales from a variety of research traditions (e.g.,

Wiggins & Broughton, 1985, 1991). Thus, the characteristics of masculinity and

femininity may be encompassed within the ICM underlying dimensions of dominance and

affiliation. Further evidence for this interpretation comes by an examination of the

correlation matrix for variables included in the validity study (see Table 11). Masculinity

was found not only to correlate positively with TAT dominance ($r = .27$), but additionally

with self-report of dominance ($r = .70$) and peer-report of dominance ($r = .48$). Similarly,

the femininity scale correlated significantly with TAT affiliation ($r = .30$), self-report of

affiliation ($r = .62$), and impression management ($r = .26$). Therefore, the results of the

study suggest that Interpersonal Dominance and Affiliation TAT scales may encompass

diverse personality traits and serve as a single framework for interpreting personality scales from a variety of research traditions. The personality characteristic of masculinity may be subsumed within interpersonal dominance, and both femininity and impression management may be subsumed within the construct of interpersonal affiliation.

The preliminary criterion-predictive validity of the Interpersonal Dominance and Affiliation TAT scales was evaluated in the present study in relation to observer-ratings of interpersonal variables during the leaderless group discussions. Contrary to hypothesis (6), a significant correlation was not found between the Interpersonal Dominance TAT scale and observer-ratings of interpersonal dominance. Similarly, a significant correlation was not found between the Interpersonal Affiliation TAT scale and observer-ratings of interpersonal affiliation (Hypothesis 7). These results indicate that participants' scores on the interpersonal TAT scales were not related to their spontaneous interpersonal behaviour as assessed through participation in leaderless group discussions. This finding is contrary to previous research demonstrating that TAT measures are related to individuals' "real world" or operant behaviour. Specifically, significant relationships have been observed between TAT measures of intimacy (Craig, Koestner, & Zuroff, 1994), power (Koestner, Weinberger, & McClelland, 1991), dependency (Bornstein, 1998), and achievement (McClelland et al., 1989) with individuals' operant behaviour. McClelland et al. (1989) found that TAT scores of individuals' need for achievement were significantly related to their achievement-related behaviour during a group task. Moreover, in two meta-analyses, Spangler (1992) found large correlations existed between TAT measures and outcome variables that were task-related (e.g., career success).

Several explanations may account for the present failure to establish criterion validity of the interpersonal TAT scales. First, it is possible that the use of leaderless group discussions in the present study was not optimal for assessing participants' "real world" interpersonal behaviour. The participants were undergraduate students and the topic of the group discussions was relevant to their current university experience (i.e., methods of grading in their university courses), rather than their general life or personal experience. That is, students may have been acting in a way consistent with their socially-defined role as a student, rather than their characteristic way of interacting with others. Perhaps a more appropriate criterion variable would be to observe and rate participants' behaviour as they interact with their family members or friends. Additional explanations for the non-significant correlations obtained between observer-ratings and the interpersonal TAT scales may be found in the methods used for evaluating participants' interpersonal behaviour. The group discussions were videotaped in the present study and this somewhat intrusive method of observation could have served to undermine participants' spontaneous behaviour. Participants may have been self-conscious about their interpersonal behaviour because they realized they were being monitored. In support of this explanation, one participant commented to the investigator that she would have "smacked" another participant if it hadn't been for the videotape.

It is also possible that the raters were not provided with enough training to accurately determine the level of dominance and affiliation displayed by participants during the discussion. The investigator met with each rater for approximately 1 hour and this amount of time may not have been sufficient for teaching the individuals how to focus on the process on interpersonal interactions, rather than the content of the group

discussions. Providing the undergraduate student raters with more vigorous training, including several practice opportunities, may have improved the accuracy of these ratings. Another strategy may have been to select raters who have already received training in group process and dynamics, such clinical psychology graduate students, as opposed to training undergraduate students. Such methodological changes may have yielded different results in relation to the criterion-predictive validity of the Interpersonal TAT scales.

The present study also evaluated whether differential patterns of criterion-predictive validity exist between projective (TAT) and objective (questionnaires) measures. Contrary to hypothesis (8), a stronger correlation was not found between the Interpersonal Dominance TAT scale and observer-ratings of dominance ($r = .06$) than that of self-report dominance with observer-ratings ($r = .23$). In fact, the self-report of interpersonal dominance correlated significantly with the observer-ratings of dominance. Similarly, a stronger correlation was not demonstrated for the Interpersonal Affiliation TAT scale with observer-ratings of affiliation ($r = .16$) than that of self-report affiliation ($r = .17$), in contrast to hypothesis (9). The failure to find differential patterns of criterion validity for the TAT scales versus self-report measures of interpersonal variables contradicts the pattern of correlations observed by previous investigators between these measurement domains (e.g., McClelland, Koestner, & Weinberger, 1989; Spangler, 1992; Winter, John, Stewart, Klohnen, & Duncan, 1998). Specifically, McClelland et al. (1989) have outlined projective measures to tap implicit motives, whereas self-report measures assess individuals' self-attributed motives. Projective measures have been demonstrated to better predict individuals' spontaneous behaviour across a wide variety of situations in comparison to questionnaires, which are related to individuals' "choice" behaviour.

However, the opposite relationship was found in the present study, with a significant correlation being obtained between the self-report of dominance and observer-ratings of dominance during the leaderless group discussions.

The failure to establish the differential pattern of criterion validity for the interpersonal TAT scales challenges McClelland's distinction between self-attributed and implicit traits. However, it is also possible that this distinction is not applicable to the interpersonal domain. The majority of research conducted to date investigating the criterion validity of the TAT has focused on individual motives, rather than interpersonal behaviour. Such motives have included the need for power, achievement, and intimacy. Studies addressing the criterion validity of interpersonal variables on the TAT are presently lacking. Therefore, further investigations are required to evaluate the criterion validity of the interpersonal TAT scales, as well as the differential patterns of criterion validity across self-report and projective measures of interpersonal variables. It is possible that within the interpersonal domain, differential patterns of criterion validity do not exist between self-report and TAT measures. Rather, both these measures assess self-attributed characteristics, which may or may not predict individuals' future interpersonal behaviour. Self-report and projective measures may both provide valuable information and be complementary methods for assessing individuals' personality.

The validity of the Interpersonal Circumplex Model was also addressed in the present research by comparing the assessment of interpersonal variables across the measurement domains of self-report, peer-report, and the TAT. In regards to interpersonal dominance, significant relationships were observed between all three measurement domains. The Interpersonal Dominance TAT scale was found to correlate significantly

with both the self-report ($r = .40$) and peer-report of dominance ($r = .33$). Moreover, the

self- and peer-report of interpersonal dominance correlated significantly with each other

($r = .49$). In regards to the dimension of interpersonal affiliation, a significant relationship

was found between the Interpersonal Affiliation TAT scale and the self-report of

affiliation ($r = .27$), as well as between the self-report and peer-report of affiliation ($r = .88$). However, a significant relationship was not observed between the TAT and peer-

report of affiliation. Therefore, only partial support for the validity of the ICM was

demonstrated in the present study. Scores on interpersonal dominance appear to be

consistent across measurement domains, whereas scores on interpersonal affiliation

appear to be moderately consistent. Overall, the results provide preliminary support for

the validity of the ICM, in accordance with Leary's (1957) description that interpersonal

variables can be reproduced on different "levels" or domains of measurement.

The preliminary discriminant validity of the Interpersonal Dominance and

Affiliation TAT scales was additionally examined in the present research. As

hypothesized (Hypothesis 10), a low correlation ($r = .18$) was obtained between the

Interpersonal Dominance TAT scale and the Self-Concealment Scale (SCS; Larson &

Chastain, 1990). This finding confirms that the Interpersonal Dominance TAT scale is

unrelated to the personality characteristic of self-concealment. Interpersonal dominance

refers to the extent to which individuals exert power or status over others (Wiggins,

1995), whereas self-concealment involves the active concealment of personal information

that one perceives as negative or distressing (Larson & Chastain, 1990). However,

contrary to hypothesis (11), a moderate negative correlation ($r = -.25$) was observed

between the Interpersonal Affiliation TAT scale and self-concealment. This finding

suggests that a relationship exists between the personality characteristics of interpersonal affiliation and self-concealment. Therefore, an individual's sense of intimacy or communion with others (Foa & Foa, 1974) may predict his or her tendency to withhold information from others. Individuals' who attempt to achieve closeness with others are less likely to conceal personal information that they view as distressing. While the significant relationship between affiliation and self-concealment in the present study contradicts the purpose of establishing discriminant validity, it may again signify the heuristic value of interpersonal affiliation in relation to other personality characteristics. Further research is necessary to establish discriminant validity for the Interpersonal Affiliation TAT scale by correlating the scale with theoretically unrelated constructs. For example, the personality characteristic of openness to experience may be the focus of future investigations.

Clinical Value of the Interpersonal TAT Scales

The Interpersonal Dominance and Affiliation TAT scales developed in the present research have promising clinical utility. It was evident from the feedback from the graduate student raters that the TAT scales can be conveniently utilized in approximately one hour per individual TAT protocol. This is an efficient time-frame for a personality assessment instrument that is highly suited for use within clinical settings, where professionals' often encounter large case loads and look for ways to maximize their time. The interpersonal TAT scales tap the underlying dimensions of the ICM and therefore, can provide broad information about an individuals' style of interpersonal behaviour, including the type of interactions that he or she elicits from others. For instance, research has demonstrated complementary behaviors to occur in the dominance dimension,

whereas reciprocal behaviors occur in regards to affiliation (Carson, 1969; Horowitz, 1996; Lorr, 1996). Individuals scoring high on the Interpersonal Affiliation TAT scale and low on the Interpersonal Dominance TAT scale may have warm interactions with others, yet tend to act in a submissive manner and thus run the risk of being dominated by others.

Further utility of the Interpersonal Dominance and Affiliation TAT scales includes their ability to direct the focus and outcome of clinical treatment. The scales serve to identify problematic patterns of interpersonal interactions that can be addressed through psychotherapy and assist clinicians to identify the probability of a positive therapeutic outcome. For instance, research has demonstrated more positive treatment outcomes for individuals with higher levels of affiliation versus coldness or hostility (McMullen & Conway, 1997). Consequently, individuals' scores on affiliation may direct clinicians' treatment recommendations when conducting an assessment.

Further clinical utility for the Interpersonal Dominance and Affiliation TAT scales is apparent through consideration of the general clinical advantages of utilizing the TAT. This projective technique is considered an effective means for "breaking the ice" during the initial contacts between clinician and client (Anastasi & Urbina, 1997) and, therefore, may serve to facilitate the therapeutic alliance. Also, the TAT permits free expression of an individual's narrative, which can serve as a model for encouraging open dialogue between the therapist and client. The open dialogue directly contrasts the Socratic method modeled through structured clinical interviews or the pigeonholing effects of self-report items on individuals' experience. Another valuable aspect of the interpersonal TAT scales may lie in their ability to obtain more accurate information about individuals' functioning

and predict future behaviour better than self-report measures. However, further

investigations are required to evaluate the influence of response biases and validity of the

Interpersonal Dominance and Affiliation TAT scales before this conclusion is warranted.

Limitations

There were a few limitations in the present study that require mention. First, the

reliance on an undergraduate student sample limits the generalizability of the results, as

inferences cannot be made to the larger population. Second, the voluntary nature of

participation might have yielded a non-representative sample. The minimal training

provided to the undergraduate students who rated participants' behaviour during the

leaderless group discussions was also a limitation of the research. Further training and

coding experience may have improved the accuracy of which the interpersonal variables

of interest were assessed. Another limitation includes that the present research was

correlational in nature, and given such, causal interpretations can not be made between

the variables of interest.

Conclusions

In summary, the present research contributed to the existing literature on

interpersonal systems of personality assessment. Specifically, two psychometrically valid

scales were created for assessing interpersonal dominance and affiliation on the Thematic

Apperception Test and admirable preliminary psychometric properties were demonstrated

for the scales. During scale development, it was found that the anchor points selected for

inclusion in the interpersonal TAT scales had satisfactory within- and between-card

reliability. The internal consistency of items selected for each specific TAT card were all

above the .50 level (within-card reliability) and the consistency of the total items selected

for inclusion in the interpersonal TAT scales were at a superior level. A reliability

coefficient of .91 was obtained for the Interpersonal Dominance TAT scale and a

coefficient of .85 obtained for the Interpersonal Affiliation TAT scale. Moreover, a

superior level of inter-rater reliability was further demonstrated for the interpersonal TAT

scales during the validity study, with a reliability coefficient of .88 obtained for

interpersonal dominance and .94 for interpersonal affiliation. These indices of reliability

indicate that the interpersonal TAT scales assess the constructs of interpersonal

dominance and affiliation in a consistent fashion.

The validity study served to establish that the Interpersonal Dominance and

Affiliation TAT scales tap the constructs of interest. The preliminary construct validity

for the Interpersonal TAT scales was demonstrated by a low correlation being obtained

between the two scales, suggesting that they indeed are orthogonal in nature. The

concurrent validity was established for the Interpersonal Dominance TAT scale through

significant correlations with the self- and peer-report of interpersonal dominance and

masculinity. Discriminant validity was also shown for the Interpersonal Dominance TAT

scale through the low correlation obtained with self-concealment. Preliminary concurrent

validity was also demonstrated for the Interpersonal Affiliation TAT scale through

significant correlations with self-report of interpersonal affiliation and femininity.

The developed Interpersonal Dominance and Affiliation TAT scales have

potential utility for research and clinical practice. The Interpersonal Dominance and

Affiliation TAT scales will assist researchers and clinicians to gain a broader

representation of individual's psychological functioning, as well as to explore the nature

and consequences of interpersonal behaviour (e.g., suicide, abuse). The development of

the Interpersonal Dominance and Affiliation TAT scales also present a convenient

method for standardizing clinicians' interpretation of the TAT. The use of these objective

TAT scales may therefore serve to reduce the over-diagnosing of psychopathology that

often occurs when clinicians subjectively interpret TAT protocols (e.g., Garb et al., 2002;

Murstein, 1972).

Directions for Future Research

Future research is necessary to further evaluate the psychometric properties of the

Interpersonal Dominance and Affiliation TAT scales. Establishing validity for a scale

requires an accumulation of research evidence focusing on the diverse facets of validity

(concurrent, discriminant, criterion-predictive). It would be desirable to conduct studies

on the TAT scales across a variety of populations, particularly focused on clinical

samples in order to address the clinical utility of the scales. The current study failed to

establish preliminary discriminant and criterion-predictive validity of the interpersonal

TAT scales. Further investigations are particularly necessary to address these scale

properties. In particular, the issue of whether differential patterns of criterion validity

exist between projective and objective measures of variables requires further attention.

An additional direction for future research is to establish normative data for the

Interpersonal Dominance and Affiliation TAT scales within representative samples. Such

normative data can then be utilized to establish clinical cut-off scores for the TAT scales

that are associated with significant interpersonal problems or levels of psychopathology.

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Appendix A
Demographic Information

Please provide answers to the following questions:

1. Gender: _____Male _____ Female

2. Age (in years): _____

3. What is the highest level of education that you have completed?

a) High School _____
b) 1^{rst} year university _____
c) 2nd year university _____
d) 3rd year university _____
e) 4th year university _____
f) Other _____

4. What is your ethnic background?

a) Caucasian
b) Black
c) Asian
d) First Nations/Aboriginal
e) Other _____

5. What is your family's combined yearly income?

a) Under $30,000 _____
b) $30,000 to $44,999 _____
c) $45,000 to $59,999 _____
d) $60,000 to $74,999 _____
e) $75,000 or greater _____

Appendix B

Instructional Lecture

PURPOSE OF THE STUDY: To develop two orthogonal scales for assessing interpersonal dominance and affiliation on the Thematic Apperception Test (TAT; Murray et al., 1938).

- The TAT is a projective personality instrument administered by psychiatric professionals in medical, educational, forensic, and research settings to assess an individual's functioning.

- I am developing two scales to assess an individual's functioning in the interpersonal domain.

INTERPERSONAL THEORY

- Researchers have provided a systematic language for the description of interpersonal transactions/behaviour and utilized this language to describe an individual's style of interacting with others.

- **Interpersonal Traits** refers to dyadic interactions that have social (status) and emotional (love) consequences for both participants (self and others).

- Two dimensions that have been identified are **Interpersonal Dominance** and **Interpersonal Affiliation**.

INTERPERSONAL DOMINANCE

- Interpersonal Dominance is a bipolar construct that ranges from acts of submissiveness to acts of dominance towards others.

Submissiveness   **Neutral**   **Dominance**
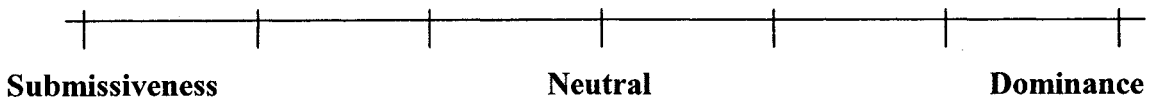
SUBMISSIVENESS: refers to a negativistic and masochistic interpersonal style.

- Interpersonal adjectives to describe a submissive person include the following: self-

doubting, unproductive, unthorough, unindustrious, timid, meek, unaggressive, forceless, and unauthoritative.

- Submissive individuals have a disposition to be timid and fearful in social situations, and are lacking in self-confidence and self-esteem. They avoid situations involving social challenge, power over others, and being the center of attention.

- Such individuals have difficulty making their own needs known to others, discomfort in authoritative roles, and an inability to be firm with and assertive towards others.

- Submissive individuals avoid being directive with others, and are afraid to express their point of view on particular issue. They tend to display passive-aggressiveness in their relationships.

- Interpersonal acts reflecting **submissiveness** include obedience, passivity, indecision, running away from, fear, guilt, anxiety, and masochistic acts (e.g., suicide, self-punishment and mutilation).

DOMINANCE: refers to an autocratic and dogmatic interpersonal style.

- Interpersonal adjectives to describe a dominant person include the following: assertive, forceful, domineering, firm, self-confident, persevering, persistent, industrious, self-disciplined, organized, deliberative, and self-assured.

- Dominant individuals have the tendency to actively take charge in social situations, make decisions, and win arguments. Such individuals give advice to others, and tell others how to deal with things in life (e.g., how to solve a problem, cope with a difficulty).

- Such individuals are domineering, and tend to experience problems related to controlling, manipulating, being aggressive towards, and trying to change others.

- Examples of **interpersonal dominance** include leadership, command, direction, authority, superiority, power struggle, seduction, rejecting, depriving, and violence towards others (e.g., sexual assault, abuse, and murder).

INTERPERSONAL AFFILIATION

- Interpersonal Affiliation is a bipolar construct that ranges from transactions reflecting coldness to those indicating warmth.

Coldness			**Neutral**			**Warmth**
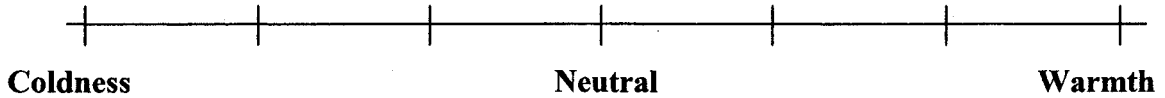
COLDNESS: refers to a hostile and sadistic interpersonal style.

- Interpersonal adjectives to describe a cold individual include the following: hateful, coldhearted, unsympathetic, uncharitable, cruel, ruthless, impolite, disrespectful, and uncooperative.

- Cold individuals are highly critical of others. They would remind other people that sometimes they get what they deserve, and that "whining doesn't help." Such individuals are aggressive and display vindictive attitudes.

- Such individuals are unable to express affection and feel love for another person, have difficulty making long-term commitments to others, and are unable to be generous, get along with, and forgive others.

- Interpersonal acts reflecting **coldness** include hostility, punishment, discipline, provoking guilt, coercion, brutality, quarreling, threat, anger, fighting, and murder.

WARMTH: refers to a loving and nurturing interpersonal style.

- Interpersonal traits ascribed to warm individuals include the following: loving, tenderhearted, kind, sympathetic, appreciative, courteous, charitable, well-mannered, respectful, cooperative, accommodating, and forgiving.

- Warm individuals engage in supportive actions with others, such as giving them a hug, and generally just try to be there for others. They provide material or emotional benefits to others who are in trouble, who need help, who are ill, or who otherwise need of care and support.

- Examples of **interpersonal warmth** include nurturance, such as helping, curing, or taking care of someone, giving, marriage, friendship, and love.

GENERAL INSTRUCTIONS

- The questionnaire booklet contains sample responses from the TAT. You are to read each response and provide a rating of the level of **interpersonal dominance** and **interpersonal affiliation** depicted.

- Each story will receive two separate ratings (i.e., dominance and affiliation) utilizing the provided 7-pt Likert scale.

- **Base your ratings on the interpersonal actions of the "hero" or main character in the story. The "hero" is usually the central focus of the story and all the other characters are described in relation to the "hero" (e.g., the boy's mother and sister).**

Appendix C

TAT Sample Stories

Please read the following stories and rate each of them for the degree of Interpersonal Dominance and Affiliation depicted, utilizing the following two scales.

1	2	3	4	5	6	7

Submissiveness   **Neutral**   **Dominance**

1	2	3	4	5	6	7

Coldness   **Neutral**   **Warmth**
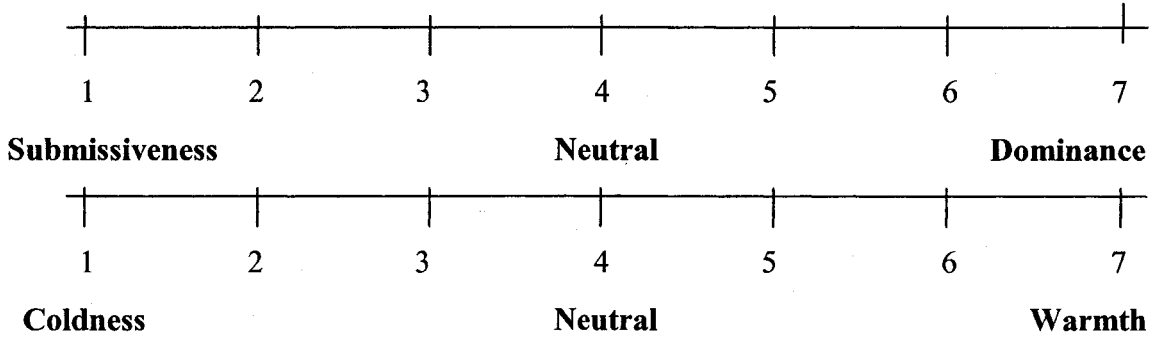
1. The boy's mother is making him take violin lessons. He would rather be playing with his friends than practicing the violin. He is daydreaming about being with his friends and trying to imagine what they are doing. He is feeling disappointment for not being able to do what he wants. He will be forced to learn how to play the violin and in later years when he can play well, he will thank his mother for making him practice.

    Interpersonal Dominance =_____ Interpersonal Affiliation =_____

2. The boy and his mother have been fighting because she is making him practice the violin and he wants to play football. The boy is contemplating his choices of either obeying his mother, or throwing a fit. The mother is in the kitchen waiting to hear him practice the violin. The boy is feeling angry, oppressed, and helpless. The boy decides to rebel and smashes the violin against the table, shattering it into pieces. The mother grounds the boy from all fun activities for two weeks.

    Interpersonal Dominance =_____ Interpersonal Affiliation =_____

3. The boy's parents told him to stay in and do his homework. The boy attempted to sneak out of his window so he could go outside, but his parents caught him and locked him in his room to study. He was told if he didn't know the information by supper, he wouldn't be fed. The boy tries to learn the material even though he would rather be outside. He is very resentful and doesn't want to learn. The boy will go to bed without supper.

    Interpersonal Dominance =_____ Interpersonal Affiliation =_____

4. The kid was supposed to be practicing the violin. He hates the violin and he is plotting to kill his violin teacher. The kid is feeling hatred toward his parents for making him take lessons and hatred toward his violin teacher for making him practice. He tries to murder his teacher but it was unsuccessful. He is put in a juvenile delinquent center.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

5. This little boy's father has just died and this is his father's violin. He is very upset because his father died of cancer and was the best violinist in the country. He is thinking about when he grows older and how he wants to be just like his dad. His mother is singing softly to him and his father's voice is in his mind. He is feeling sad, miserable, and very lonely. He will play the violin, but won't be good at it, and his mother will explain to him that there are other things he is good at.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

6. The boy has come home from school and decided to play, even though his mother told him to go do his homework. His mother scolds him and orders him to go straight to his room to study. Now he's forcing himself to look at his books, but he's thinking of his feelings and how his mother's scolding has hurt him. He feels upset about not being able to play, hates his homework, and feels he never gets to have any fun. He will study enough to do well in his classes and realizes that his mother is only looking after his best interests.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

7. The boy is supposed to be practicing the violin, but he hates it and refuses to practice. The boy is feeling hatred toward his parents for making him learn the instrument and hatred towards his violin teacher. He tries to run away from home, but was unsuccessful. His parents continue to make him take music lessons.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

8. The boy has been trying to learn how to play the violin and is frustrated that he has been unsuccessful in his attempts. He is thinking about discontinuing. His mother or father will see this and try to encourage him to try again.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

9. The boy is over excited at school so to calm him down his teacher and parents are making him take violin lessons to release his energy in a positive way. The boy has been sat down in front of his new violin and is thinking of how to get out of the violin lessons before his friends find out. The boy's friends find out and tease him. He gets upset and throws the violin out the school bus window.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

10. The little boy is taking violin lessons. He really doesn't want to or enjoy them, but his mother has a vision of her son becoming a wonderful violinist. The boy is sad because he can not live up to the pressures put upon him. His first recital will be soon and his

teacher doesn't think he is ready. The child is thinking of how disappointed his mother will be when she finds out, as her dreams will be crushed by his failure. He wonders if his mother will love him the same. The child rises up to overcome the doubts and plays his first recital.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

11. The girl has been attending school- she will be going to college next year. It has been a struggle deciding where to go and getting use to the idea of leaving her family and the countryside. The girl is thinking about her parents and her life on the farm. She is thinking about all they have taught her and how she will miss them. She goes to school and everything is fine. She enjoys coming home, but has grown to love the city.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

12. The girl has been raised on the farm and is currently going to school. The farm has been maintained through her parents' hard work. The girl has been raised strictly, and her parents taught her to believe in the value of hard work, whether academic or physical. She will eventually attend college, and will achieve high scholastic standing. Whether she will be happy or not is another question.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

13. The boy and the girl were having sex in the field when the mother caught them. The girl is being sent home so that the mother can have sex with the boy. The girl is scared of getting in trouble. The mother is thinking nasty thoughts. The boy is thinking that this is the best day of his life. The girl catches the boy and the mother; she kills them and buries them in the field.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

14. A girl, who has grown up in Idaho, loves to read and has always wanted to leave her present life and write for a living. She sees her father and dreams of leaving the poverty stricken farm. She sees her mother and how the work of raising a family has aged her beyond her years. She feels hatred for being stuck in Idaho. She loves her parents, but wishes she had grown up elsewhere. She will marry at eighteen and raise her own family. Her husband is a farmer. Only occasionally will she think of how she should have gotten out.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

15. A sister and her brother live with very cruel parents. The girl has to go to school everyday while her brother slaves away in the garden. They are not really sad or angry because this is their way of life and they have never known anything else; they are just not happy. The girl will come home from school to do her chores and find that her

brother has killed the mother.

Interpersonal Dominance =_____ **Interpersonal Affiliation** =_____

16. The family is starting out in colonial times and is struggling to send their daughter through school. It was a long and hard trip to get to where they are now. The father is harvesting the crop as the mother does her daily chores and the girl goes to school. The father is thinking that the crop will be a good one. The daughter is thinking that there is no need for school, and the mother is wishing she were somewhere else. The girl will eventually go to a university and the parents will die together of old age.

Interpersonal Dominance =_____ **Interpersonal Affiliation** =_____

17. A young woman has gone to the field after school to see her boyfriend and her mother has caught her there. Her boyfriend has gone back to work while the young woman's mother stands watch. The young woman feels love toward her boyfriends and hatred toward her mother for keeping them apart. The girl gets pregnant and runs away.

Interpersonal Dominance =_____ **Interpersonal Affiliation** =_____

18. A girl finally got off from school and began her walk home. She stopped and looked at a farmhouse up the road. The girl becomes fascinated by the farmers' ability to handle his farm machinery and stops to enjoy his craftsmanship. The farmers' wife has become jealous because the girl is starring at her husband, yet the farmer thinks nothing of it. The farmers' wife finally asks the girl to leave so the men can get back to work.

Interpersonal Dominance =_____ **Interpersonal Affiliation** =_____

19. The woman has seen how hard life on the farm is and how it has affected her family. She has decided to move on to a different life. The woman takes one last look at her family working the land. She sets off for school so she can explore her options. The woman is feeling sad about leaving, but is also excited. Her family is very unhappy that she is leaving. The woman becomes very successful and brings her family to the city to live the good life.

Interpersonal Dominance =_____ **Interpersonal Affiliation** =_____

20. Little Judy has prepared for school and has told her parents goodbye for the day, as they toil in the fields trying to earn the next meal. Pa is thinking how smart his little Judy will turn out to be. Ma is wondering how they are going to get all the work done that they need to do today. Little Judy goes on to graduate from high school and becomes the first of her family to receive a college degree.

Interpersonal Dominance =_____ **Interpersonal Affiliation** =_____

21. This lady's boyfriend has just beaten her in the face. She ran away and is now crying. She can't help it that she can't cook. She is crying and trying to feel how bruised her face has actually become. She is wondering whether she should turn her boyfriend in to the police. She is also sad because she really loves him. She turns the boyfriend in and he eventually ends up in jail. She then searches for a new man.

Interpersonal Dominance = _____ Interpersonal Affiliation =_____

22. The woman's husband has been with another woman. She has just opened the bedroom door and seen them together. The woman's heart is broken. She has just closed the door because she couldn't stand to watch anymore. The woman is sad and wonders how she will live her life without her husband. The husband feels good because he is having sex with a different woman. The woman decides to leave him.

Interpersonal Dominance = _____ Interpersonal Affiliation =_____

23. The girl has just been sexually assaulted and has run into the house to hide. She is trying to get over the event that has just transpired. She has reached a place she considers safe and now is beginning to grip reality in tears. She feels very abused and helpless that she was unable to stop the attack. She will live with the fear from this event for the rest of her life but with help will learn to cope.

Interpersonal Dominance =_____ Interpersonal Affiliation =_____

24. This grieving woman has gotten into a major fight with her husband. During this fight she shot him and he is bleeding profusely. The husband has just run out the door, afraid that he may be shot again by his deranged wife. She is weeping that she shot him. The lady is thinking, "did I really aim that low. I meant to shoot him in the chest. I wish now that I had killed him. I can't believe that he slept with forty of his patients." No charges are brought against the lady. The man no longer has a sex life.

Interpersonal Dominance =_____ Interpersonal Affiliation =_____

25. The girl had fallen in love with a boy whom she had grown up with. They had just gotten married. The boy had gotten into trouble with the wrong kind of people. Some men had come and taken her husband and shot him. The woman has just found her husband dead, lying in the barn. The woman is in anguish, she feels faint, all her thoughts are jumbled and she can't think straight. She just wants to go home, and for it all be over. She will get depressed and never quite get over his death. The police capture the men that killed her husband.

Interpersonal Dominance =_____ Interpersonal Affiliation =_____

26. The woman has just found out that her spouse has been cheating on her. She had been wondering if her husband had been faithful and decided to question him about certain events. He admitted to having an affair. She is very upset. Her husband is feeling bad

about his affair and has promised to end it. After a brief interlude, his affair will continue. She will possibly have one of her own, but they will stay together.

Interpersonal Dominance =_____ Interpersonal Affiliation =_____

27. A dreaded disease has spread throughout the country. Thousands of people die daily and there is no cure! The woman's whole family has succumbed to the illness and she is left alone. She begins to feel ill in the midst of her grief. She is desolate. All of her loved ones are dead and she also begins to feel ill. Her mind races feverishly as she mourns. She suddenly dies.

Interpersonal Dominance =_____ Interpersonal Affiliation =_____

28. The girl and her boyfriend just broke up. They have been going together for 5 years and she has cherished their relationship. Her boyfriend left her because he thinks they are incompatible. She is very upset and doesn't believe their relationship is ruined because of incompatibility. She thinks her boyfriend must have met someone else and wants to leave her. She decides not to trust anybody anymore. She can't believe that somebody she loved would do this to her. She will feel scared to ever fall in love again.

Interpersonal Dominance =_____ Interpersonal Affiliation =_____

29. There is a beautiful woman that is the daughter of the mayor. She is very wealthy and spoiled. She always gets what she wants and she want's this woman's man. This woman is naïve and doesn't see it coming. Her friends tell her, but she doesn't listen. She finds her man with the wealthy woman. She is mortified, betrayed, angry, and devastated. She doesn't know what to do. She leaves him and learns from the experience. She is more cautious in relationships and is a stronger person now. She doesn't need to depend on anyone else.

Interpersonal Dominance =_____ Interpersonal Affiliation =_____

30. Johnny has had a stressful day at school. The little boy is very down and depressed. He has let too many things get to him. He doesn't know what to do. School is bad, he has no friends, and life at home isn't all that great. He is feeling tired, angry, lost, helpless, lonely, and he has no where to turn to. He will realize that things get better with time and that he has to pray in order to rescue strength and guidance.

Interpersonal Dominance =_____ Interpersonal Affiliation =_____

31. She stole a diamond ring from her neighbor, who is also her English teacher. She is hiding the ring inside her mattress until it is safe to pawn it. She is exalted that she "got away with it." She feels sneaky and smooth and full of criminal prowess. She can't believe how easy it was. She waits about a month, then goes to pawn the ring, only to find out it is a fake. She goes back to get something real, thus beginning a life

of decadence and crime.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

32. The woman has just had a fight with her husband because he has been coming home late. She is now lying over her bed crying because she just got hit from her husband's fist. She is thinking about her terrible married life. She stays with her husband even though she is abused.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

33. The woman is weak and frail. She has had cancer for 6 months and can no longer handle the pain. She has just taken a large dose of pain medication in an attempt to commit suicide. She knows that her life is almost over anyway. She feels badly for her children, but knows it is better this way than to suffer. She is found, dead, by a neighbor. She died peacefully.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

34. Susie has gotten in trouble over her grades (all C's) and has been sent to her room directly after dinner. She will be grounded for 2 weeks. Susie is terribly depressed, not because she is grounded, but because once again she has let her mother down. She thinks sometimes about hating her mother, but she just can't. She feels helpless when she is around her mother. She will work harder to bring her grades up, but somehow she never feels like she has done enough.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

35. The young woman is at a religious boarding school her parents set her to because they didn't want to deal with her teenage years. She sleeps with her head propped on a couch while she is supposed to be praying. She's dreaming about a wonderful reunion with her parents. She wakes up after being prodded by a nun. She realizes it was just a dream and cries.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

36. Sonya's son had been killed in a car accident. Sonya is crying and grieving over the tragic loss of her son. She is probably feeling guilt, and emptiness. "Why didn't I do a better job as a mother? How could I have prevented this accident? What will I do now to fill the void?" Sonya is strong-willed, and she will accept her son's death as an accident. She will attempt to keep her younger son from driving as long as possible.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

37. He is having a nicotine fit and can't find his cigarettes. He just saw his lover with another woman. He is crying because he can't find his cigarettes and he needs them to

deal with his stress. He feels betrayed, upset, and angry, and wants to seek revenge. He is going to kill his boyfriend and go buy a carton of cigarettes.

Interpersonal Dominance =_____ Interpersonal Affiliation =_____

38. A girl's demented brother framed her for the murder of their mother. She is in jail and has been sentenced to death. She feels a great sense of emptiness and is so emotionally drained that she can hardly move. The brother realizes the magnitude of his doing and goes to town to turn himself in, but when he gets there it is too late, his sister is dead.

Interpersonal Dominance =_____ Interpersonal Affiliation =_____

39. This girl has gotten entirely too drunk. She went to a bar, and after becoming intoxicated, started dirty dancing with some used car salesman. He took her home, had sex with her, and then left. She is starting to sober up and is becoming aware of what has happened. She is thinking that she'll never drink again, and wondering how she'll tell her fiancé. She is ashamed of herself. She decides not to tell her fiancé and lives the rest of her life wishing she could.

Interpersonal Dominance =_____ Interpersonal Affiliation =_____

40. All his friends are going to the high school prom and have asked their dates. He, however, has asked the girl of his dreams and has just been rejected and humiliated because he was showing off by asking her in the presence of his peers. Now he feels embarrassed because of his macho attitude. He wishes he had never been foolish enough to ask her in public. He feels rejected and disillusioned because he doesn't understand situations enough before he acts. Only after the fact does he realize that he overextended his efforts in order to be accepted by his peers.

Interpersonal Dominance =_____ Interpersonal Affiliation =_____

41. The man and woman have been arguing about their relationship. As usual, the woman wants the man to forgive her for what she has done. The man is refusing to speak to the woman. The woman is looking for forgiveness. The man is thinking that he should continue to punish the woman for what she has done. While the woman thinks that if he doesn't forgive her, she can always find someone else to abuse. The weak man gives in and is continually mentally abused by the woman.

Interpersonal Dominance =_____ Interpersonal Affiliation =_____

42. This lady has been in love with this guy for a long time and is now trying to tell him. This woman is trying to express her love to him, but he seems preoccupied. He is looking at another woman and doesn't pay any attention to her. She thinks, "he doesn't love me." She commits suicide and he runs off with the other woman.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

43. They have just spent a glorious night together, making love, but he realizes he's getting a little too close in this relationship and tells her he needs some time to think about their future. She's bewildered by his mixed feelings. Now he is trying to flee the scene because he wants to avoid a heated discussion. She feels excluded, as if he doesn't want her in his life. All she wants to do is help him feel comfortable with their relationship, and he feels trapped. He is scared of commitment, but after several months of separation he decides to marry her.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

44. The man has gotten into a bar fight and his girlfriend has run over to try and restrain him. The fight has died down some and the men are staring each other down. The woman is trying to talk them out of further violence. The man is on an adrenaline high from the fight but knows it has to end. He is beginning to lose his anger and his girlfriend is having a calming effect on him. He will try to end the fight with his dignity and pride still intact.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

45. He has just seen the woman with another man and she runs up to him to try and explain things. She is trying to get him to look at her and to listen to what she is trying to say. She can't look at her because he is angry, surprised, and disappointed in her. She will say, "I'm sorry." He will leave her only to try and pick up the pieces.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

46. This man's wife has cheated on him for 5 years. He finds out when she accidentally calls him the wrong name. She swears that she loves him and the lover was threatening to kill her if she stopped seeing him. She is upset that she has done this to her husband and he is furious (more at the man for threatening his wife). The husband goes and kills the lover and buries the body and he and his wife work things out and live happily ever after.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

47. They had been a happy couple until he had cheated on her. He begged her to come back- she said no. Now months later she wants him back and he is playing hard to get. He is telling her that he's not sure they can make it work and she is just short of begging. She feels lost and deserted after all the time she has put into the relationship. He feels in control. They will get back together, but once again something will tear them apart.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

48. The woman in the picture cheated on her husband. Her husband is very mad at her. She's making up stories to make her husband believe that people have been telling him lies. The woman loves him, but she also loves another man. She doesn't want to leave her husband. Her husband wants to believe her it isn't true, but he can't. He gives her another chance and she decides to leave her boyfriend because she loves him more.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

49. They have been life-long friends, in love, but afraid to admit it. The man has finally admitted his feelings, mumbled quickly, and turns to leave in embarrassment. But the woman reaches to stop him, and to share her feelings. They are both relieved, tense, confused, excited, and afraid. In short, they are in love. They start gushing emotion and caressing each other. Finally, they kiss.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

50. These two individuals have been friends for years. He loves this woman but doesn't want to tell her and wants to die. He wants to jump off the bridge and she keeps asking, "Why, you have a wonderful life?" He wants to tell her that he loves her. She's feeling very stressed and scared for him. He just wants to go far away and hide. He decides to tell her his true feelings and she is shocked. She ends up spending more time with him and falls in love.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

51. This young man has always been dependable and responsible. His father was a judge in the town where they lived. He always thought his son would follow in his footsteps. He dies and the son gets the courage to tell his mother how he feels. He tells her that he wants to be an actor, and he doesn't want to go to law school. She is disappointed and concerned about his future. She tells him that his money is cut off, and he is upset and sad. She ends up apologizing and says he can do what he wants. He ends up failing at acting and comes home to be a lawyer.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

52. George has gone off to college and gotten bad grades, now he must come home and tell his mother. She will be very upset, as George is her only child to go to college. He is confronting her and she is telling him how disappointed she is, but she still loves him. George feels that he has truly let down the most important person in the world. He will go back to school and get better grades in order to please his mother.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

53. A man has been thinking about a problem all day and feels that he has to tell someone. The man tells his mother that he has killed someone and felt pleased with

himself afterwards. The man is thinking about how much money he would inherit from his mother's death, and his mother is thinking about the money she would make by turning him in. The two people join up and become hitmen for the Mafia.

Interpersonal Dominance =_____ **Interpersonal Affiliation** =_____

54. This couple has had a bad disagreement. He is mad because she has not been as devoted to him, as he was to her. He is feeling betrayed by her and she thinks she needs the independence to do what she pleases. She divorces him and becomes a sexual manipulator of rich men. He feels that she never made a commitment while they were married.

Interpersonal Dominance =_____ **Interpersonal Affiliation** =_____

55. This man just told his mother that he has been drafted to the war. She doesn't want him to go, but he has to, even though he needs to stay to take care of his elderly mother. The man is stuck between a rock and a hard place. Both of them are concerned and sad. He goes to war and disappears, never to be seen again.

Interpersonal Dominance =_____ **Interpersonal Affiliation** =_____

56. He has just told his mother that he is gay. She can't believe it and doesn't know what to say, so she stares out the window, while he stands there alone, suffering. She feels like she didn't raise him correctly, and he feels very disappointed that his mother can't accept his true self. She eventually accepts it, but by that time it is to late. He dies of AIDS and leaves the world a cold bitter man. His mother never forgives herself.

Interpersonal Dominance =_____ **Interpersonal Affiliation** =_____

57. The woman has told this man that he is really not her son. He was left on her doorstep and she took him in as her own son. The man can not believe this is happening to him. She feels that she should not have kept it from him so long. He feels betrayed. The man will forgive her and go on as if she were his biological mother.

Interpersonal Dominance =_____ **Interpersonal Affiliation** =_____

58. The mother and her son have not spoken to each other for years. They finally meet to try to make peace. Both of them don't know what to say to each other because it has been so long. They just stand, stare, and contemplate what to say. The mother blames herself for everything. The son is still very angry with his mother, but feels talking to her is the best thing to do. They end up saying only a few choice words to each other and they go their separate ways again.

Interpersonal Dominance =_____ **Interpersonal Affiliation** =_____

59. Jack has just met a girl that he wants to marry, but he doesn't want to leave his mom by herself. Jack has asked his mother what he should do. He is beginning to feel guilty and decides to stay with his mother, while his mother wants him to go on with his life. Jack will not get married, and someone else marries the woman he loves.

   Interpersonal Dominance =_____ Interpersonal Affiliation =_____

60. The son met a woman from the wrong side of town and fell in love. He is leaving to marry her. The mother refuses to accept her son's fiancé. They are wealthy and can't understand associating with the lower class. She is threatening to cut him off from the family fortune. The son and mother both feel betrayed. The son will try to reason, but his mother will not listen. The son leaves and marries the woman he loves.

   Interpersonal Dominance =_____ Interpersonal Affiliation =_____

61. A man's wife has gone away on a business trip for several weeks. He invites a babysitter over to watch the kids. The man makes a pass at the young woman, as he is thinking how much fun it would be to have sex with her. She wants it, but tries to hide her. The two will spend the entire weekend together and she becomes pregnant. The man denies ever being with her.

   Interpersonal Dominance =_____ Interpersonal Affiliation =_____

62. The woman is sitting in a hotel lounge alone, minding her own business, when a man approaches. The woman is frightened when the man appears, and he starts to charm her with flattering comments. The woman is thinking that the man is forward and rude for interrupting her privacy. The man only wishes to make a conquest. The woman finally turns to walk away, but the man follows. Another man comes to her side and defends her, scaring the first man away. Later, she sees the first man being arrested for rape.

   Interpersonal Dominance =_____ Interpersonal Affiliation =_____

63. The man and woman used to be in love, until the money ran out. Now he has a hefty insurance policy on her and plans to make use of it. He has snuck up on her, but just as he aims the gun at her, she turns around. He feels mad that he is caught and she is scared to death. Just as he goes to kill her, a shot rings out and he falls dead. Her sister has shot him, as the wife also had a hefty insurance plan on him.

   Interpersonal Dominance =_____ Interpersonal Affiliation =_____

64. The woman went for an interview to get a job as a model. The man in the picture likes this woman and intends to use his authority to make her sleep with him. He tells her she'll get the job if she sleeps with him. He thinks this is a good opportunity to use his authority. The woman thinks he is doing something wrong and sues him for sexual harassment.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

65. The woman is on her way to visit her relatives and must spend the night in a hotel along the way. She is sitting in the lobby by herself, when someone taps her on the shoulder. She turns around to find a man standing there. He is an old acquaintance who at one time asked her to marry him. She is bewildered. It has been so long since she saw him. He has been searching her since the day she left him. He takes her to dinner and offers to accompany her on the train. She says she must go on alone.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

66. She is being interrogated by her jealous husband because he believes she is seeing someone else. He is using an intimidating tactic to try and get her to admit to something that doesn't exist. She is upset that he doesn't believe her. He wants her to say she is cheating so he can divorce her and get together with a girl from work. They don't divorce, but he has an affair anyways. He catches an S.T.D. and dies. She gets the insurance and moves on.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

67. The man and woman are both happy with each other and want to spend time together. He is asking her to go to the ballet to see "Romeo and Juliet." He feels so much love for her and wants to do something nice for her. She is astonished at his offer because they haven't been going out for a very long time. They go out and tell each other how much they care.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

68. This man has taken this woman by force to his house. He has been watching her for months. He is describing what he is going to do to her in full detail. It is revolting. She feels terrified and trapped. He feels excited and happy to have another victim; it gives him a thrill. Days later her head and hands are found in a garbage dump site, and he isn't caught.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

69. This man is flirting with this lady. He startled her when he walked up to her and started talking to her. She tries to act uninterested. The man is leaning down talking to the woman with a pipe in his mouth. The lady looks surprised and the man looks mischievous. They end up falling in love and living happily ever after.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

70. This wealthy lady has been going out with this poor man and is in love with him. They are now engaged to be married and she finally tells her father. Her father tells

her that the family would be disgraced if she married him. She tells him that she will do what she wants. The father is about to have a mental breakdown. The father realizes that he can't get his daughter to change so he pays her lover to leave the country. The girl is left to mourn.

Interpersonal Dominance =_____ Interpersonal Affiliation =_____

71. The man has been shot by his son. The doctors prepare for surgery, and the son looks as if he hopes his father will not live. The father is feeling extreme pain. The son shows no remorse, as he would gladly see his father die. The father dies and the son claims it was an accidental shooting. After some years, however, he feels so much guilt that he takes his own life.

Interpersonal Dominance =_____ Interpersonal Affiliation =_____

72. The boy's father was killed in the war, not because of a bullet but because of the unsterile instruments that were used on him. The boy is at school studying to be a doctor. He often visualizes what he believes happened to his dad. He is sorrowful because of the death of his father, but it has made him determined to make sure it never happens again. He invents some medical sterilization equipment and becomes a millionaire.

Interpersonal Dominance =_____ Interpersonal Affiliation =_____

73. The boy is thinking that someday he will be a famous doctor. He is imagining himself performing surgery on a man who had been shot. He knows that the man's life depends on him and the boy is being very careful because he doesn't want to screw up. The task is over and the man lives. The boy becomes the successful doctor that he dreamed of.

Interpersonal Dominance =_____ Interpersonal Affiliation =_____

74. Mark, the gangster, has just shot and killed a man and instructed his men to leave no evidence of who the man is. The mob men cut up the body so that the police can not identify him. Mark is getting a power surge/adrenaline rush from killing someone. Mark gets caught because of an eyewitness and is sent to prison for murder.

Interpersonal Dominance =_____ Interpersonal Affiliation =_____

75. As a child, this woman was beaten by her parents. The woman has grabbed her gun and is going to kill her parents. The woman is thinking about how she can get rid of the bodies. She shoots her parents and then turns the gun on herself and pulls the trigger.

Interpersonal Dominance =_____ Interpersonal Affiliation =_____

76. The young boy has just lost his father in a tragic accident. He has been seeing a psychiatrist because he has had re-occurring nightmares about his father being cut during the autopsy. The boy wishes he knew how his father died. The autopsy showed nothing. The boy is left with frustration and helplessness. The boy continues to see a psychiatrist, but never finds out how his father really died.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

77. The boy has pushed his stepfather out of a window and he feels no regrets. The boy is glad to see his stepfather in such pain because he made the boy suffer. The boy feels satisfied with what he did. The stepfather dies and the boy is sent to juvenile detention.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

78. A man has died leaving his son behind. The boy wears his suit to the funeral, which symbolizes that he has become the man of the family. The son is sad, and confused about being forced to grow up too fast. He grows up to be a wonderful and responsible person, someone his father would be proud of.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

79. The little boy is a doctor's son. His father is prominent and well to do, but cares little about his patients (he sees them as subjects, not people). He is well groomed, well trained, and has lots of friends, but he wonders if his life is superficial. He decides to become a better person than his father was.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

80. A little boy is thinking about his past and everything that has happened. He reflects back on the night when his father was kidnapped and murdered. He feels sad and sympathetic, but is determined to succeed in life. The boy maintains a positive attitude in order to be somebody in life.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

81. The businessman has gotten a hotel room for the night in a city where he knows noone. He invites a prostitute back to his room for the evening. He goes to the bathroom and when he returns, he finds the prostitute dead with a note beside her saying "I have AIDS." The girl has stabbed herself. The man is frantic, he knows he has a high chance that he will also have AIDS. The man will call the police and then kill himself.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

82. He repeatedly violates and rapes his wife after their marriage. She endures everything because of society at that time, as well as her overly submissive nature. He has raped her again and she's feeling numb. She has learned to accept it. She's thinking, "I guess this is how it's supposed to be, I love him, don't I?" He is somewhat sorry for what he did, but he will continue to rape her and she will continue to take it.

Interpersonal Dominance =_____ **Interpersonal Affiliation** =_____

83. The husband and wife were having a fierce argument in the living room. The wife rushes to the bedroom and slams the door shut. The husband leaves to cool off. The man returns and forces the door to the bedroom open, only to find his wife dead in bed. He is extremely upset because he was the one that made her kill herself. He goes into the bathroom and finds an empty medicine bottle lying on the floor. He doesn't call the police or an ambulance.

Interpersonal Dominance =_____ **Interpersonal Affiliation** =_____

84. The girl in bed was raped and killed. The girl's boyfriend came and saw her naked in bed and thought she had cheated on him. At first, he is mad, but then he sees the blood and gets scared. He calls the police. The rapist/murderer is arrested by the police.

Interpersonal Dominance =_____ **Interpersonal Affiliation** =_____

85. The man hired a prostitute and they have just had sex. He is upset at his "weakness", as he has just been unfaithful. He is very distraught. He has never cheated on his wife before, though they have been married a long time. The prostitute doesn't care, she has seen this many times before. He will go back to his relationship with a new sense of commitment and never again cheat on his wife.

Interpersonal Dominance =_____ **Interpersonal Affiliation** =_____

86. The man was at work all day, while his wife was at home. She was alone when a man broke into the house and raped her. He then killed her and put her in bed. The man comes home to find her dead and he doesn't know what to do. He is upset, as he loved her very much. He swears that he'll never marry again. He gets framed for the murder and gets sentenced to death.

Interpersonal Dominance =_____ **Interpersonal Affiliation** =_____

87. This man has an open marriage where he and his wife can do whatever they want. He is waking up from another night with a hooker he picked up on the street. He is getting dressed and ready to go home to his wife. He is thinking, "boy, what a night." He goes home and finds his wife with another man and gets into bed with them.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

88. The man and woman got carried away with each other, when they didn't even know each other. The man is just slipping his pants back on and feels that he has accomplished his mission. They have just finished having sex. She is tired and feels very dirty. They will never see each other again. She will start having problems because she doesn't feel what she did was right.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

89. At a restaurant, two people met and they go dancing. They end up going back to her place. The man is getting out of bed and the lady is still asleep. He feels good because he has met somebody he likes. She does too. They will eventually get married and have a very interesting life together.
Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

90. The man is a married businessman and he can't believe that he just had sex with a prostitute in a cheap motel room. But then again, his wife won't give him the time of day, so he deserved a little playtime. The man is feeling shocked, but doesn't regret it. The woman is indifferent because it is her job. This is just a one-time thing that he can brag about to his buddies, but never tell his wife.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

91. He is addicted to drugs and is trying to get off them, but can't. He is running from a friend and is about to run off of a cliff, and his friend reaches out to pull him back. The druggy is terrified of the person following him, unaware of the danger. His friend saves him and he becomes drug-free.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

92. The man is being grabbed from behind in a dark alley. He is a gangster member and it has finally caught up with him. He is preparing to get murdered. He is very scared but knows this is his time to die. He will be murdered and never found.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

93. This man was walking to his car, when he was grabbed and knocked out by a mugger. The mugger stole all his money. The mugger grabs the man out of the parking lot and into an alley. The mugger is thinking that he better hurry before he gets caught. The mugger gets away with it, and the man recovers after a night in the hospital.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

94. This man has been in previous fights and is about to get into another one. His friends have gotten him drunk and are starting up something with other guys. The man fights particularly well, so his friends are holding him back to prevent him from killing someone. The man's adrenaline is rushing and he's feeling boisterous. The man pulls away from his friends and kills someone. They will hunt him down, but it doesn't matter because he is invincible.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

95. The man in the picture has been drinking and playing cards with his buddies all night. The man is jumped from behind and all he hears is "Give me all your money!" He is badly beaten. He doesn't want to, but can't help thinking that it was one of his jealous friends. The man never finds out who jumped him, but his friendships are never the same.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

96. The man has a pain in his back and asks his wife to give him a massage. The wife gives him a massage and he starts to feel better. The woman enjoys giving him a massage. The man will get ready for bed with his wife.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

97. The guy has been drinking his problems away at a local bar. He stumbles from bar to bar. He ends up passing out at the side of a street, where someone tries to lift him up. The drunk guy obviously has no idea what is happening. The person helping him is nervous because the guy might be dead or have alcohol poisoning. The person takes him to the hospital. He is fine the next day and he thanks the person for helping him.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

98. He has just been speaking with a friend about being fired from work. His friend tries to console him and grabs him from behind so as to stop him from leaving until they talk things through. He doesn't feel like waiting around, but wants to get a drink to feel better. He realizes that having a friend will help him through this and alleviate some depression. In several weeks, he gets an even better job and concludes that things happen for a reason.

Interpersonal Dominance =_____ **Interpersonal Affiliation =**_____

99. He has been having a good time at a bar in order to relax from the week. One of his buddies is holding him up because he has had too much to drink. They are wondering how they are going to get home, as they know he is in no condition to drive. He will get home safely and his friends will take care of him.

Interpersonal Dominance =_____ Interpersonal Affiliation =_____

100. The man was criticizing some people in a local bar, so the people left and waited for the man outside. The people attack the man and drag him into an alley to teach him a lesson. The man is thinking about what he has done to deserve this. After the man gets beat up, he realizes how mean he has been to everyone and turns over a new leaf. He is now a sensitive counsellor.

Interpersonal Dominance =_____ Interpersonal Affiliation =_____

Appendix D

University Participation Consent Form

My name is Kerry Collins and I am a graduate student in Clinical Psychology at the University of Windsor. I would like you to participate in a study for my dissertation that asks you to rate sample responses from the Thematic Apperception Test for the level of interpersonal dominance and affiliation depicted. If you decide to participate in the study, it will take approximately 2 hours of your time. You will be provided with a brief instructional lecture and then requested to fill out a questionnaire booklet containing the sample TAT responses.

Your participation is voluntary and you may withdraw from the study at any time. Furthermore, you may refrain from rating and/or reading any stories that you may find particularly offensive. Your responses are anonymous so that individuals cannot be identified, and all responses are confidential.

In order to receive course credit in your Psychology class you must sign this consent form and return the questionnaire booklet to the examiner. If you have any questions please contact my supervisor, Dr. Stephen Hibbard (Department of Psychology, 253-3000 Ext. 2248). Once the study has been completed, you may receive a copy of the study results if you wish, by leaving your name and address on a sign-up sheet after completing the questionnaire booklet. Thank-you for your cooperation.

Please read and sign the following declaration of informed consent if you agree to participate:

I, _____ (name of participant), have read the description of the study, understand its purpose, and recognize that there are no known or expected discomforts or risks involved in my participation. I understand that my answers will be kept confidential and that my name will not be associated with my answers. I voluntarily consent to participate.

_____

(Participant's Signature)

Appendix E

Debriefing Form (Collins & Hibbard, 2001)

Title of Project: Assessing Interpersonal Dominance and Affiliation on the Thematic

Apperception Test: The Development of Two Orthogonal Scales.

Researcher: Kerry Collins

Thank-you for participating in my study. As you may already know from the title of my project, I am interested in developing two orthogonal scales for assessing interpersonal dominance and affiliation on the Thematic Apperception Test (TAT; Morgan & Murray, 1935). The TAT is a projective personality instrument routinely administered by psychiatric professionals in medical, educational, forensic, and research settings in order to assess an individual's functioning. I am developing two scales to assess an individual's functioning in the interpersonal domain on the TAT. Specifically, I am developing one scale to assess an individual's tendency to display dominance in his/her interpersonal relationships. Interpersonal dominance is bipolar construct that ranges from acts of submissiveness (e.g., passivity, guilt, self-punishment) to acts of dominance over others (e.g., leadership, authority, exploitation). The second scale assesses the degree of affiliation an individual displays in his/her interpersonal relationships. Interpersonal affiliation is also a bipolar construct that ranges from acts of coldness (e.g., punishment, fighting, anger) to acts reflecting warmth (e.g., nurturance, friendship, love). The construction of these two scales will assist psychiatric professionals to make broad inferences about an individual's style of interacting with others and the nature of their interpersonal relationships.

If you have any concerns about the nature of your interpersonal relationships, the following are the phone numbers of a few campus agencies that may be of service to you:

University of Windsor Psychological Services Centre	973-7012
University of Windsor Health Services Centre	973-7002
University of Windsor Student Counselling Centre	253-3000 ext. 4616

Appendix F

TAT Response Form

This is a story telling test. You are to make up as dramatic a story as you can. The story will include a) what has led up to the events shown in the picture, b) what is happening in the story as we see it in the picture now, c) what the people are thinking and feeling, and d) what the outcome will be or how it will end.

What has led up to the event shown in this picture?

What is happening in the story at the present time as we see it in the picture?

What are the people thinking and feeling?

What will the outcome be; how is it going to end?

Appendix G

Interpersonal Dominance and AffiliationTAT Scales

Kerry A. Collins and Dr. Stephen Hibbard

University of Windsor

<u>Interpersonal Dominance and Affiliation TAT Scales</u>

This coding manual was developed to assess the constructs of interpersonal dominance and affiliation (Leary, 1957; Wiggins, 1995), which have been identified to underlie the Interpersonal Circumplex Model. *Interpersonal dominance* ranges on a continuum from themes indicating submissiveness to dominating interpersonal behaviour. Interpersonal acts reflecting *submissiveness* include obedience, passivity, indecision, running away from, fear, guilt, anxiety, and masochistic acts (e.g., suicide, self-punishment and mutilation). Examples of *interpersonal dominance* include leadership, command, direction, authority, superiority, power struggle, seduction, rejecting, depriving, and violence towards others (e.g., sexual assault, abuse, and murder).

Interpersonal Affiliation ranges on a continuum from themes of coldness (e.g., punishment, threats, anger) to warmth (e.g., nurturance, care giving, love). Interpersonal acts reflecting *coldness* include hostility, punishment, discipline, provoking guilt, coercion, brutality, quarreling, threat, anger, fighting, and murder. Examples of interpersonal *warmth* include nurturance, such as helping, curing, or taking care of someone, giving, marriage, friendship, and love.

Scale Description:

The Interpersonal scales require the administration of the following ten TAT cards: 1, 2, 3GF, 3BM, 4, 6GF, 6BM, 8BM, 13MF, and 18BM. The Interpersonal Dominance scale utilizes 9 TAT cards for scoring (1, 2, 3GF, 3BM, 6GF, 6BM, 8BM, 13MF, 18BM), whereas the Interpersonal Affiliation scale utilizes 8 TAT cards (2, 3GF, 3BM, 4, 6BM, 8BM, 13MF, 18BM). Coding for both scales is based on a 7-point Likert scale, with total scores on the dominance scale range from 0 to 63 and scores on the affiliation scale range from 0 to 56. The scales represent a bipolar continuum of Interpersonal Dominance and Affiliation, in which scores indicate the intensity of the characteristic. Extreme high or low scores are associated with maladjustment and interpersonal problems (Wiggins, 1995).

Interpersonal Dominance

1	2	3	4	5	6	7

Submissiveness   **Neutral**   **Dominance**

Interpersonal Affiliation

1	2	3	4	5	6	7

Coldness   **Neutral**   **Warmth**
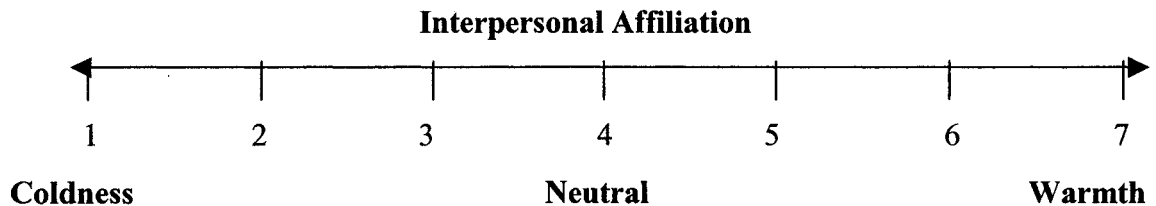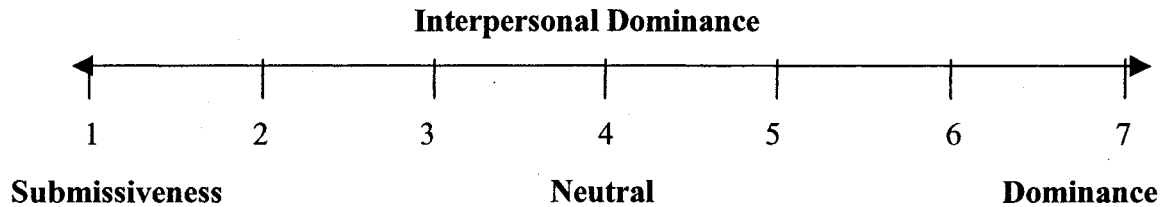
General Scoring Instructions:

- Responses to each TAT card will be given two global ratings (*Interpersonal Dominance & Interpersonal Affiliation*) utilizing the 7-point scales. It is preferable that coders score data on one scale at a time.

- Ratings will usually be based on the actions of the hero in the story. The hero represents the participant's symbolic self and is usually the central character in the TAT story. *Cues for identifying the hero* in the story are long established and include that a) the other characters are described in relation to this central figure (e.g., the boy's mother and sister) and b) the hero's feelings, thoughts, and behaviour are described in the second-person (e.g., she feels hurt and betrayed). Note: If the hero in the story cannot be identified, then the ratings should be based on the overall tone of the story.

- Only stories containing interpersonal situations will be coded for the two dimensions. This involves situations in which the hero in the story (i.e., participant's self) has some action done to him or herself by another person (real or imagined), or engages in an action towards another person in the story (real or imagined). These include stories in which the hero is thinking, fantasizing, or dreaming about an interpersonal situation.

  Note: Assign a "0" to stories that do not contain interpersonal content.

Interpersonal TAT Scales

The following scales establish anchor points for each score (1–7) to represent the bipolar continuum of Interpersonal Dominance and Affiliation. These anchors are different for each of the ten TAT cards and include example responses to assist scoring. Each TAT response should be scored in relation to the anchor points provided for each specific card. When stories vary significantly from the themes and examples provided, utilize the general description of the two constructs to assign a score on the 7-point scales.

Card 1: Interpersonal Dominance

(1)   Score if the story depicts the hero to ignore his/her own wishes and submit to the demands of other character(s). For instance, the story depicts a boy (hero) whose mother is making him take violin lessons, even though he'd rather be playing with friends. While the boy daydreams about doing something else, he is forced to follow his mothers' orders.

(2)   Score if the story describes the hero to submit to the demands of other character(s), but demonstrate some resistance in the process. For instance, the story depicts a boy who decides to go play, even though his mother told him to study. The mother then scolds him and orders him to go to his room to study and the boy follows his mothers' orders.

(3)   Score if the hero reluctantly submits to the demands of other character(s) in order to avoid negative consequences, such as punishment. For example, the boy's parents tell him to do his homework and he tries to sneak out his window. His parents catch him and tell him to learn the information by supper or he won't be fed. The boy is resentful, but tries to learn the information.

(4)   Score if the hero reluctantly complies with the demands of other character(s) in the story and then engages in a passive-aggressive act of deviance. For instance, the boy's parents are making him take violin lessons and he is thinking about how to get out of it. He throws the violin out the school bus window.

(5)   Score if the hero grudgingly complies with the demands of other character(s) in the story and then engages in an aggressive act of deviance. For example, the boy fights

with his mother because she is making him practice the violin and he wants to play football. The boy contemplates obeying his mother and then decides to rebel, smashing the violin against the table.

(6)   Score if the hero grudgingly complies with the demands of other character(s) in the story and then violently acts out against these character(s). For instance, the boy hates the violin, but his parents are making him take lessons and his violin teacher is making him practice. He tries to murder his violin teacher, but is unsuccessful.

(7)   Score if the hero violently resists complying with the demands of other character(s) in the story. For instance, the boy fights with his parents about taking violin lessons. His parents try to force him to take lessons and he shoots them.

Card 2: Interpersonal Dominance

(1)   Score if the hero in the story acts in a submissive manner with other character(s) in the story. For instance, the girl's parents want her to go to school and learn how to manage the farm. She listens to her parents and takes over the family farm after graduation.

(2)   Score if the story depicts the hero to ignore his/her own desires and act in a passive manner. For example, the young woman has grown up on a farm with her parents. She has always wanted to leave her present life and move to the city to pursue a career. She marries a farmer at age 18 and raises her own family.

(3)   Score if the story describes the hero to passively comply with the demands of other character(s). For instance, the girl's parents make her go to school everyday and then complete chores when she comes. She is not happy with her life, but has never known anything else.

(4)   Score if the hero is trying to be controlled by other character(s) in the story and he/she rebels against it. For instance, the young woman (hero) loves her boyfriend and goes to the field to see him, even though her mother has been trying to keep them apart. The young woman decides to run away with her boyfriend.

(5)   Score if the hero demonstrates initiative and engages in independent acts with other character(s) in the story. For example, the young woman sees a farmhouse up the

road and decides to go look at it. She becomes fascinated by the farmer's ability to handle his farm machinery and stops to watch his craftsmanship, even though it is making his wife angry.

(6)   Score if the story describes the hero to be dominating and/or exploitive with other character(s). For instance, the mother (hero) catches her daughter having sex with the boy in the field. The mother sends the girl home so that she can have sex with the boy.

(7)   Score if the hero in the story engages in violent and dominating acts towards other character(s). For example, the girl (hero) has come to see her boyfriend in the field and finds out that he has been cheating on her with her mother. She kills them and buries them in the field.

Card 2: Interpersonal Affiliation

(1)   Score if the hero in the story demonstrates hatred and hostility towards other character(s). For instance, the girl (hero) has come to see her boyfriend in the field and finds out that he has been cheating on her with her mother. She kills them and buries them in the field.

(2)   Score if the story depicts the hero to have cold, hostile, and/or distant relationships with other character(s). For example, a sister and her brother live with very cruel parents. The girl has to go to school everyday while her brother slaves away in the garden. They are not happy, but this is their way of life and they have never known anything else.

(3)   Score if the hero in the story demonstrates jealousy towards other character(s) and/or makes threats. For instance, the farmer's wife has become jealous because the girl is starring at her husband, yet the farmer thinks nothing of it. She finally asks the girl to leave so she can get back to work.

(4)   Score if the hero demonstrates ambivalent feelings towards other character(s) in the story. For example, the girl has grown up on a farm and dreamed about leaving her poverty stricken life. She loves her parents, but feels hatred for being stuck on the farm and wishes she had grown up elsewhere.

(5)   Score if the story describes the hero to have loving and/or care giving relationships with other characters, but some conflict exists between them. For instance, the young woman has gone to the field after school to see her boyfriend, even though her mother does not approve of it. She feels love toward her boyfriend and hatred toward her mother for keeping them apart.

(6)   Score if the hero in the story has loving and care giving relationship(s) with other characters. For example, the young farmer is working hard in the field to provide for his family. His mother brings him his lunch in the field and his wife also joins them on her break from school.

(7)   Score if the hero in the story displays selfless acts of love and nurturance in relation to other character(s). For instance, the young woman was raised on the farm with her family, and her parents encouraged her to go to school. She always dreamed of moving to the city and becoming a journalist. Her parents become ill in their old age and the woman decides to devote herself to taking care of them and the farm. She spends the rest of her life on the farm.

Card 3GF: Interpersonal Dominance

(1)   Score if the story depicts the hero as submissive in his/her relationship with other character(s). For instance, the woman is in an abusive marriage and has just been beaten up by her husband. She stays in the relationship and is beaten up again.

(2)   Score if the hero in the story is in a passive and submissive position with other character(s). For example, the girl and her boyfriend have just broken up. Her boyfriend left her because he thinks they are incompatible. She thinks that he has met someone else and feels scared to ever fall in love again.

(3)   Score if the story describes the hero to be exploited by other character(s) in the story. For instance, the girl has just been sexually assaulted and has run into the house to hide. She has reached a place she considers safe and is now beginning to grip reality in tears.

(4)   Score if the story depicts an exploitive act to occur between the character(s) and the hero responds in an active manner. For example, the woman has just gotten married

and her husband has gotten in trouble with the wrong kind of people. Some men come and take her husband and shoot him. The woman is in a great deal of pain and anguish, and decides to help the police track down his killers.

(5)   Score if the hero in the story is exploited by other character(s) and then exerts his/her agency in retaliation. For instance, the woman's boyfriend has just beaten her face and she has run away and is now crying. She is sad because she really loves him, but is also wondering whether to turn him into the police. She reports him to the police and he ends up in jail.

(6)   Score if the hero in the story is betrayed by other character(s) and engages in exploitive acts to retaliate. For example, the woman has just found out that her spouse has been cheating on her. She is very upset and her husband has promised to end the affair. After a brief interlude, his affair will continue and she decides to have one of her own.

(7)   Score if the story describes a conflict between the hero and other character(s), during which the hero acts in a dominating or aggressive manner. For instance, the woman has found out that her husband cheated on her and has gotten into a major fight with him about it. During the fight she shoots and injures him, and he is no longer able to have a sex life.

Card 3GF: Interpersonal Affiliation

(1)   Score if the hero in the story demonstrates unprovoked hostility towards other character(s). For instance, the woman and her husband have gotten into an argument and become very angry with each other. During the fight, the woman picks up a knife and stabs her husband and then runs away to the barn.

(2)   Score if the hero in the story engages in provoked hostility towards other character(s). For example, the woman has found out that her husband cheated on her and has gotten into a major fight with him about it. During the fight she shoots and injures him, and is now weeping that she shot him.

(3)   Score if the story depicts the hero in a cold and distant relationship with other character(s). For instance, the woman has just found out that her spouse has been

cheating on her. Her husband promises to end the affair, but after a brief interlude, his affair continues. She decides to have her own affair and they stay together.

(4)   Score if the hero demonstrates affection towards other character(s) in the story, but is hurt by him or her. For example, the woman has just opened the door and seen her husband with another woman. Her heart is broken and she wonders how to live her life without her husband. The husband feels good because he is having sex with a different woman.

(5)   Score if the hero in the story feels affection towards other character(s) in the story, but is treated in a hostile manner by him or her. For instance, the woman's boyfriend has just beaten her face and she has run away and is now crying. She is sad because she really loves him, but is also wondering whether to turn him into the police.

(6)   Score if the story describes the hero to be nurturing and care giving with other character(s). For example, the woman has just found out that her father passed away and is very upset. She loved her father and has spent her time taking care of him.

(7)   Score if the story depicts the hero to be in a loving relationship with other character(s). For instance, the woman is upset because she just found out that she is pregnant. She loves her boyfriend, but feels she is too young to have children. She tells her boyfriend and he asks her to marry him and they start their family.

Card 3BM: Interpersonal Dominance

(1)   Score if the hero in the story is submissive in his/her relationship with other character(s) to the point of being self-sacrificing. For instance, the woman tries to be a good wife and please her husband, even though he is abusive towards her. Her husband was upset with her so she has sex with him in order to appease him.

(2)   Score if the story depicts the hero as submissive in his/her relationship with other character(s). For example, the woman had a fight with her husband and he hit her with his fist. She is crying and thinking about her terrible married life. She stays with her husband even though she is abused.

(3)   Score if the hero in the story acts in a passive manner with other character(s). For instance, the woman (hero) had too many drinks at a bar and picked up a man at the bar. The man takes her home, has sex with her, and leaves. She is starting to sober up and become aware of what has happened. She is wondering how to tell her fiancé.

(4)   Score if the hero in the story has been exploited by other character(s). For example, the girl (hero) has been framed for murder by her brother and feels a great sense of emptiness. The brother realizes the magnitude of his actions and goes to town to turn himself in, but it's too late, his sister is dead.

(5)   Score if the hero engages in exploitative acts with other character(s). For instance, the woman stole a diamond ring from her neighbor and is hiding it inside her mattress. She feels sneaky and smooth, as she can't believe how easy it was to get away with it. She waits a month and pawns the ring.

(6)   Score if the story depicts the hero to act in a dominating and aggressive manner with other character(s). For example, the man (hero) just saw his lover with another woman and is crying. He feels betrayed and angry, and wants to seek revenge. He is going to kill the boyfriend.

(7)   Score if the hero in the story has violent and aggressive relationships with other character(s). For instance, the man (hero) is a serial killer and has just found another victim. He takes the prostitute to a hotel room, has sex with her, and then strangles her to death. Her dead body is lying over the chair in the corner of the room.

Card 3BM: Interpersonal Affiliation

(1)   Score if the story depicts the hero as hostile and aggressive in his/her relationships with other character(s). For instance, the man (hero) is a serial killer and has just found another victim. He takes the prostitute to a hotel room, has sex with her, and then strangles her to death. Her dead body is lying over the chair in the corner of the room.

(2)   Score if the hero in the story demonstrates hatred and hostility towards other character(s) in response to an event. For example, the man (hero) just saw his lover with another woman and is crying. He feels betrayed and angry, and wants to seek revenge. He is going to kill the boyfriend.

(3)   Score if the story describes the hero to feel cold, empty, or distant with other character(s). For example, the girl (hero) has been framed for murder by her brother and feels a great sense of emptiness. She is so emotionally drained that she can hardly move. The brother realizes the magnitude of his actions and goes to town to turn himself in, but it's too late, his sister is dead.

(4)   Score if the hero in the story demonstrates ambivalent feelings towards other character(s) in the story. For example, the woman (hero) had a fight with her husband and he hit her with his fist. She is crying and thinking about her terrible married life, contemplating whether or not to leave it. She stays with her husband even though she is abused.

(5)   Score if the hero in the story engages in acts of affection or intimacy with other character(s). For instance, the woman (hero) went out to a bar with her boyfriend to celebrate his birthday. She ended up having too many drinks and started dirty dancing with her boyfriend. She spent the night with him and now is starting to sober up and remember what happened.

(6)   Score if the story describes the hero to have warmth for other character(s) and a desire to obtain their approval. For example, the young woman is at a religious boarding school that her parents sent her to. She is sleeping and dreaming about the wonderful reunion with her parents. She wakes up and realizes it was just a dream and cries.

(7)   Score if the hero in the story is in a warm and loving relationship with other character(s). For instance, the woman is grieving over the loss of her husband, who died of cancer. They have been together for 10 years and she loved him dearly. It will take her a long time to get over the loss.

Card 4: Interpersonal Affiliation

(1)   Score if the hero in the story acts in a hostile and aggressive manner with other character(s) in the story. For instance, the man found that his wife has been cheating on her and confronts her. She tries to deny it and he becomes very angry and slaps her. He tells her that she is lying hoar and turns away from her.

(2)   Score if the story depicts the hero in a cold, hostile, and/or distant relationship with other character(s). For example, the man and woman are having another argument about her affair. The man is refusing to speak to the woman and the woman thinks that if he doesn't get over it, she can always find someone else to abuse.

(3)   Score if the hero in the story has conflictual feelings for other character(s) in the story. For instance, they had a happy relationship until he cheated on her. The man begged her to come back to him and she said no. Now, months later, she wants him back and he is playing hard to get. He is not sure if they can make it work.

(4)   Score if the hero in the story has love and affection for another character, but these feelings are rejected. For example, the woman (hero) has been in love with this guy for a long time and is now trying to tell him. She is trying to express her feelings, but the guy is looking at another woman and doesn't pay attention to her.

(5)   Score if the hero in the story demonstrates ambivalent feelings towards other character(s) in the story. For instance, the woman (hero) has cheated on her husband and her husband is very mad at her. She loves her husband and doesn't want to leave him, but she also loves another man.

(6)   Score if the story describes the hero to be in an affectionate relationship with other character(s) in the story. For example, the man has just had a glorious night making love with the woman, but realizes that he's getting a little too close in the relationship. He is scared of commitment and feels trapped, but after a few months of separation he decides to marry her.

(7) Score if the hero in the story possesses intense feelings of love for other character(s). For example, the man (hero) has been friends with this woman for years. He loves her and wants to tell her, but can't. He wants to jump off a bridge instead and die or go far away and hide. He decides to tell her his true feelings and

she ends up falling in love with him.

Card 6GF: Interpersonal Dominance

(1)   Score if the story describes the hero in a passive and submissive position with other character(s) in the story. For instance, the women went over to her neighbours' house to visit and the man locked her in. He is threatening her, telling her that he is going to have his way with her, and she feels too scared to move.

(2)   Score if the hero in the story is in a submissive position and/or is being manipulated by other character(s). For example, she (the hero) is being interrogated by her jealous husband because he believes she is seeing someone else. Her husband is using an intimidating tactic to try and get her to admit to something that she didn't do. She is upset that he doesn't believe her.

(3)   Score if the story describes the hero to be pursued by other character(s) and takes a passive role. For instance, the man has invited a babysitter over to watch the kids while his wife is out of town. The man is thinking how much fun it would be to have sex with her and makes a pass at her. She wants to get involved with him, but tries to hide her true feelings. They end up getting sexually involved and spending the weekend together.

(4)   Score if the hero in the story demonstrates initiative in his/her interaction with other character(s). For instance, the woman is sitting in a hotel lounge alone, minding her own business, when a man approaches. She is frightened when he appears, and he starts to charm her with flattering comments. The man only wishes to make a conquest and the women thinks he is forward. She turns and walks away from the man.

(5)   Score if the story describes the hero to act in an assertive and independent manner with other character(s). For example, the wealthy lady is in love with a poor man and has become engaged to him. She finally tells her father and he tells her that the family would be disgraced if she married him. She tells him that she will do what she wants.

(6)   Score if the hero in the story acts in an aggressive manner and/or exploits other character(s). For instance, the man and woman used to be in love, until the money

run out. Now he has a hefty insurance policy on her and plans to make use of it. He has snuck up behind her, but just as he aims the gun at her, she turns around. He is about to kill her when a shot rings out and he falls dead.

(7)   Score if the story describes the hero to act in a dominating and violent manner with other character(s). For example, the man has taken a woman by force to his house. He is describing what he is going to do to her in full detail, and he feels excited to have another victim. Days later her head and hands are found in a garbage dump site.

Card 6BM: Interpersonal Dominance

(1)   Score if the hero in the story allows him or herself to be controlled by other character(s). For instance, the man lives with his elderly mother and takes care of her. His mother just told him that she is ill and doesn't have long to live. He is very upset and can't imagine living without her.

(2)   Score if the hero in the story is obedient to other character(s) and puts their needs ahead of his/her own. For example, the man (hero) has just met the girl he wants to marry, but he doesn't want to leave his mom by herself. He has asked his mother what to do and is beginning to feel guilty. He decides to stay with his mother and someone else marries the woman he loves.

(3)   Score if the hero in the story is discussing an issue in a passive manner with other character(s) in the story. For instance, this man has just told his mother that he is gay. She doesn't know what to say, so stares out the window, while he stands there alone and suffering. He feels disappointed that his mother can't accept his true self.

(4)   Score if the story depicts the hero negotiating an issue with other character(s) in an equivocal manner. For example, the son has not spoken to his mother for years and has finally decided to meet to try and make peace. They are standing and contemplating what to say. They end up saying only a few choice words to each other and go their separate ways again.

(5)   Score if the hero in the story is having a conflict with other character(s) and/or engages in coercive behaviour. For example, the couple is having a bad

disagreement. He is mad at her for not being devoted enough to him, as he would like. He is feeling betrayed and the woman thinks she needs the independence to do what she pleases.

(6)   Score if the story describes the hero to act in an independent and directive manner with other character(s) in response to a conflict. For instance, the son met a woman from the wrong side of town and fell in love. His mother refuses to accept her son's fiancé because she is from the lower class and is threatening him. The son tries to reason with his mother, then leaves and marries the woman he loves.

(7)   Score if the hero in the story engages in exploitive and aggressive acts towards other character(s). For instance, the man has just told his mother that he has killed someone and felt pleased with himself afterwards. Now the man is thinking about how much money he would inherit from his mother's death.

Card 6BM: Interpersonal Affiliation

(1)   Score if the hero in the story acts in a hostile, aggressive, and/or violent manner with other character(s). For example, the man has just told his mother that he has killed someone and felt pleased with himself afterwards. Now the man is thinking about how much money he would inherit from his mother's death.

(2)   Score if the story depicts the hero as rejecting or acting in a hostile manner with other character(s). For instance, the woman's son has just failed out of school and come home to live with her. He has just told her what happened and she gets angry with him and tells him that he is a failure.

(3)   Score if the hero in the story demonstrates anger or resentment towards other character(s). For example, the couple is having a bad disagreement. He is mad at her for not being devoted enough to him, as he would like. He is feeling betrayed and the woman thinks she needs the independence to do what she pleases.

(4)   Score if the story depicts the hero to have ambivalent feelings towards other character(s) in the story. For instance, the man just told his mother that he has been drafted to war. He knows that he has to go, even though he needs to stay and take care of his mother. The man is stuck between a rock and a hard place.

(5)   Score if the hero in the story displays warmth, nurturance, and/or care giving with other character(s). For example, the young man's parents have always expected him to become a lawyer and he decides to tell his mother how he really feels. He tells her that he wants to be an actor and she is disappointed and concerned about his future. He is hurt and upset, and his mother apologizes to him and tells him that he can do whatever he wants.

(6)   Score if the story describes the hero to have love and affection for other character(s). For instance, the man has just found out that he is not really his mother's son. He was left on her doorstep and she took him in and raised him. He feels shocked and betrayed, but ends up forgiving her and going on as if she was his real mother.

(7)   Score if the hero in the story is in a loving and nurturing relationship with other character(s). For example, the woman's son has just told her that he has been offered a good job in another city and is deciding whether to move. The woman loves her son very much and wants him the best for him. She will encourage him to take the job and will visit him often.

Card 8BM: Interpersonal Dominance

(1)   Score if the story describes the hero to be in a submissive position with other character(s) and/or engage in submissive acts. For instance, this man has been shot in the war and the doctors are trying to save him. He feels extreme pain and is thinking about his son. He hopes that his son will grow up to be successful and wants to be there for him.

(2)   Score if the hero in the story acts in a passive and avoidant manner in response to an incident with other character(s). For example, this boy is thinking about the tragic incident in which he injured his father while hunting. He is imagining him in the hospital and feeling very guilty and scared. He runs away from home and goes to boarding school.

(3)   Score if the hero in the story accidentally injures other character(s) and shows remorse and/or guilt. For instance, the boy was playing with his father's gun and

accidentally shot him. Now he is watching his father receive surgery and hoping that the doctors can save him. He feels very worried and guilty.

(4)   Score if the story describes the hero to retaliate against other character(s) in an aggressive manner and then engage in self-punishment. For example, this woman was beaten by her parents during childhood and now has grabbed her gun to kill parents. She shoots her parents and then turns the gun on herself and pulls the trigger.

(5)   Score if the hero in the story acts violently towards other character(s)and shows some guilt or remorse. For example, the son has shot his father and the doctors are preparing for surgery. The son hopes his father will not live. His father dies and the son claims it was an accidental shooting. After some years, however, he feels so much guilt that he takes his own life.

(6)   Score if the story describes the hero to retaliate against other character(s) in a violent and aggressive manner and show no remorse. For instance, the boy has pushed his stepfather out of a window and he feels no regrets. The boy is glad to see his stepfather in such pain because he made the boy suffer. The stepfather dies and the boy feels satisfied with what he did.

(7)   Score if the hero in the story engages in violent and aggressive acts towards other character(s) on a regular basis without remorse. For example, Mark, the gangster, has just shot and killed a man and instructed his men to leave no evidence. The mob men cut up the body so that the police cannot identify him. Mark is getting a power surge from killing someone.

Card 8BM: Interpersonal Affiliation

(1)   Score if the hero in the story demonstrates hatred and violence towards other character(s). For example, Mark, the gangster, has just shot and killed a man and instructed his men to leave no evidence. The mob men cut up the body so that the police cannot identify him. Mark is getting a power surge from killing someone.

(2)   Score if the story depicts the hero to have cold, violent, and hostile relationships with other character(s). For example, this woman was beaten by her parents during

childhood and now has grabbed her gun to kill parents. She shoots her parents and then turns the gun on herself and pulls the trigger.

(3)   Score if the hero in the story has hatred and anger towards other character(s). For example, the son has shot his father and the doctors are preparing for surgery. The son hopes his father will not live. His father dies and the son claims it was an accidental shooting. After some years, however, he feels so much guilt that he takes his own life.

(4)   Score if the story describes the hero to have cold and distant relationships with other character(s). For instance, the little boy is a doctor's son and while his father is prominent, he cares little about people. The boy is well groomed, well trained, and has lots of friends, but wonders if his life is superficial. He tries to become a better person than his father was.

(5)   Score if the hero in the story has affection for other character(s). For example, the young boy has just lost his father in a tragic accident and is having re-occurring nightmares about his father being cut during the autopsy. The boy wishes he knew how his father died and feels frustrated and helpless. He decides to go see a psychiatrist.

(6)   Score if the story describes the hero to have affection for other character(s) and/or the desire to become successful. For instance, the boy is thinking about the past and everything that happened. He reflects back on the night when his father was murdered and feels sad. However, he is determined to succeed in life and maintains a positive attitude.

(7)   Score if the hero in the story demonstrates love and devotion towards other character(s). For example, the boy has just lost his father and is very sad. He is wearing his suit to the funeral and thinking about how to become the man of the family for his father. He grows up to be a wonderful and responsible person, someone his father would be proud of.

Card 13MF: Interpersonal Dominance

(1)   Score if the hero in the story is in a submissive position with other character(s) and

engages in self-blaming or punishing behaviour. For instance, a man snuck into this woman's house and raped her. She feels very scared and helpless, and is praying that the man leaves. The man leaves, but the woman never forgets the event. She blames herself for the event and avoids getting involved with men for the rest of her life.

(2)   Score if the story depicts the hero to be punished for an interpersonal act and/or engages in a self-punishing act. For example, the businessman has gotten a hotel room for the night and invites a prostitute back to his room for the evening. He goes to the bathroom and when he returns, he finds that the prostitute has killed herself and left a note saying, "I have AIDS." The man is frantic, and knows he has a high chance of getting AIDS. He kills himself.

(3)   Score if the hero in the story displays guilt and/or regret about an interpersonal act. For instance, the man and woman got carried away with each other, even though they were strangers. They have just finished having sex and she is tired and feels very dirty. They will never see each other again and she will start having problems because she feels she did something wrong.

(4)   Score if the story depicts the hero in a conflictual relationship with other character(s). For example, the husband and wife were having a fierce argument in the living room. The wife rushes to the bedroom and slams the door, and the husband leaves to cool off. He returns and forces the door to the bedroom open, only to find his wife crying in bed.

(5)   Score if the hero in the story is in a relationship and cheats on him or her by using another character. The hero also shows some remorse. For example, the man has hired a prostitute and they have just had sex. He is upset at his "weakness" and for being unfaithful. He has never cheated on his wife before and will go back to his relationship with a new sense of commitment.

(6)   Score if the hero in the story is in a relationship and cheats on him/her by exploiting another character. For instance, the man is a married businessman and he just had sex with a prostitute in a cheap motel room. His wife won't give him the time of day, so he feels he deserved a little playtime. This is just a one-time thing

that he can brag about to his buddies.

(7)   Score if the hero in the story acts in a violent or aggressive manner with other character(s) in the story. For example, this man followed this woman and snuck into her apartment. He beat her up and raped her. He feels like he accomplished his mission and is putting his pants back on to leave.

Card 13MF: Interpersonal Affiliation

(1)   Score if the hero has cold and distant relationship with other character(s) and shows no concern for others' feelings. For instance, the man is a married businessman and he just had sex with a prostitute in a cheap motel room. His wife won't give him the time of day, so he feels he deserved a little playtime. This is just a one-time thing that he can brag about to his buddies.

(2)   Score if the hero in the story acts in a violent manner towards another character in response to an interpersonal event. For example, the businessman got a hotel room for the night and invites a prostitute back to his room for the evening. He goes to the bathroom and when he returns, he finds that the prostitute has killed herself and left a note saying, "I have AIDS." The man is frantic, and knows he has a high chance of getting AIDS. He kills himself.

(3)   Score if the story depicts the hero to have indifferent feelings towards other character(s) in the story. For instance, this man has an open marriage where he and his wife can do whatever they want. He is waking up with another hooker he picked up on the street. He gets dressed and goes home to his wife. There he finds his wife with another man and gets into bed with them.

(4)   Score if the hero in the story demonstrates ambivalent feelings towards other character(s). For instance, the man and woman got carried away with each other, even though they were strangers. They have just finished having sex and she is tired and feels very dirty. They will never see each other again and she will start having problems because she feels she did something wrong.

(5)   Score if the hero in the story displays affection for other character(s) and/or concern about hurting him/her. For example, the man has hired a prostitute and they have

just had sex. He is upset at his "weakness" and for being unfaithful. He has never cheated on his wife before and will go back to his relationship with a new sense of commitment.

(6)   Score if the story describes the hero to have warmth and affection for other character(s) in the story. For instance, these two people met at a restaurant and went dancing. They end up going back to her place and sleeping together. The man is getting out of bed and thinking about how much he likes this woman. He feels good and is excited about starting a relationship with her.

(7)   Score if the hero in the story is caring and nurturing towards other character(s). For example, this man's wife has cancer and is feeling very sick from the chemotherapy. The man loves his wife and is devoted to taking care of her. He will stay by her bedside until she feels better.

Card 18BM: Interpersonal Dominance

Note: Responses to this card often describe the hero to be the victim of a violent act. Given such, base the ratings on the tone of the story and whether sympathy is conveyed for the victim.

(1)   Score if the story depicts the hero to act in a submissive manner with other character(s). For example, this man is an alcoholic and has recently been fired from his job. He has gotten drunk and is staggering down the street when an old friend comes up behind him and surprises him. He tells his friend his situation and asks him for his help. The man offers him a job and takes him to alcoholics anonymous.

(2)   Score if the hero in the story demonstrates passivity and is taken care of by other character(s). For instance, the man is addicted to drugs and is trying to get off them, but can't. He is running from a friend and is about to run off a cliff, when his friend reaches out to pull him back. He is unaware of the danger and the friend saves him and helps him to become drug free.

(3)   Score if the hero is the victim of a violent act and he/she does not obtain justice or seek revenge. For example, the man in the picture has been drinking and playing cards with his buddies all night. The man is jumped from behind, robbed, and badly

beaten. The man never finds out who jumped him.

(4)   Score if the story depicts a mutual exchange of aggression and/or violence between the hero and other character(s). For instance, this man is being grabbed from behind in a dark alley. He is a gangster member and it has finally caught up with him. He knows it is his time to die and is preparing to get murdered.

(5)   Score if the hero in the story engages in an aggressive act towards other character(s). For example, this man was walking to his car, when a mugger grabbed him and knocked him out. The mugger watched him come down the street and then grabbed him and pulled him into an alley. He beat him over the head, stole his wallet, and ran away. The mugger gets away with it and the man recovers in the hospital.

(6)   Score if the story depicts the hero to act in a violent and aggressive manner towards other character(s). For instance, this man has been in previous fights and is about to get into another one. The man fights particularly well, so his friends are holding him back to prevent him from killing someone. His adrenaline is rushing and he pulls away from his friends and kills someone.

(7)   Score if the hero in the story demonstrates a pattern of intense violence and aggression against other character(s). For example, a serial killer has been stalking his next victim in a bar. He follows the man when he leaves and follows him down the street. All of a sudden, he jumps him from behind and stabs him in the back. He walks away feeling powerful and leaves the man to die on the street.

Card 18BM: Interpersonal Affiliation

(1)   Score if the story depicts the hero to have violent relationships with other character(s). For instance, this man has been in previous fights and is about to get into another one. The man fights particularly well, so his friends are holding him back to prevent him from killing someone. His adrenaline is rushing and he pulls away from his friends and kills someone.

(2)   Score if the hero in the story demonstrates anger and violence towards other character(s). For example, this man was walking to his car, when a mugger grabbed

him and knocked him out. The mugger watched him come down the street and then grabbed him and pulled him into an alley. He beat him over the head, stole his wallet, and ran away. The mugger gets away with it and the man recovers in the hospital.

(3)   Score if the hero in the story has hostile relationships with other character(s) and is violently retaliated against. For instance, this man is being grabbed from behind in a dark alley. He is a gangster member and it has finally caught up with him. He knows it is his time to die and is preparing to get murdered.

(4)   Score if the story depicts the hero to be a victim of an aggressive act by other character(s). For example, the man in the picture has been drinking and playing cards with his buddies all night. The man is jumped from behind, robbed, and badly beaten. The man never finds out who jumped him.

(5)   Score if the hero in the story is cared for by other character(s). For instance, the man is addicted to drugs and is trying to get off them, but can't. He is running from a friend and is about to run off a cliff, when his friend reaches out to pull him back. He is unaware of the danger and the friend saves him and helps him to become drug free.

(6)   Score if the story depicts the hero to act in a protecting and nurturing manner. For example, this man was walking to his car in a parking lot when he was jumped from behind and robbed. A friend of his sees he is in trouble and runs over to protect him. He manages to fight off the mugger before his friend is severely injured. He takes him to the hospital and stays by his side until he feels better.

(7)   Score if the hero in the story is in a loving relationship with other character(s). For instance, the man has spent a night out on the town with his girlfriend, celebrating his new job promotion. He is very happy and in love, and wants the world to know. His girlfriend is excited for him and is hugging him from behind.

Appendix H

Instructions for the Leaderless Group Discussion

In this portion of the study, you will participate in a group discussion with four other individuals who are currently attending the University of Windsor. The topic of discussion is your opinion of what constitutes a fair method of evaluating students in undergraduate university courses.

Background Information:

An important issue to students is how they are evaluated (graded) in their university courses. The purpose of student evaluations is for the professor to test how much of the course material the students have learned. However, there are several different methods of evaluation available for professors to choose from and each involve different learning techniques. Moreover, students find some methods of testing easier than others. Common testing-methods include the following:

1) **Objective Measures:** These include Multiple-Choice tests or Fill-in-the-Blank format. This type of testing requires the student to engage in heavy memorization in order to recall information in a precise fashion. The learning techniques involved include the ability to successfully code and access information.

2) **Subjective Measures:** These include Essays, Long- and Short-Answer questions. This type of testing requires students to memorize information and be able to manipulate the information to present it in a logical fashion. The learning techniques involved include the ability to compare and contrast concepts, and successful problem-solving skills.

3) **Combination:** These include tests with both Multiple-Choice and Long- and Short-Answer questions. Thus, this type of tests requires all of the learning techniques described above.

Format of Discussion:

The discussion will begin with a chance for each participant to answer the following

question (maximum time= 2 minutes each):

   1) What method of evaluation do you believe is fair to students?

This will be followed by a 20-minute group discussion in which you are to reach a consensus with the other group members. Specifically, pretend you are a Psychology professor and are designing your undergraduate course. What methods of evaluation should you use in order to be fair to all students in your course?

Appendix I

Guidelines for Rating Leaderless Group Discussions

Interpersonal Dominance

1) Assign a rating of 1 if the individual demonstrates a high amount of submissive interpersonal behaviour. Such acts include letting other members of the group make the decisions, passively complying to the demands of other group members, and a lack of awareness of one's own opinion.

2) Assign a rating of 2 if the individual demonstrates some submissive interpersonal behaviour. Such acts include appearing timid and fearful in the group discussion, as well as numerous avoidance behaviours, such as not challenging the opinions of others, and avoiding being the center of attention.

3) Assign a rating of 3 if the individual demonstrates an average amount of interpersonal dominance or balance of dominant and submissive acts.

4) Assign a rating of 4 if the individual engages in some acts of interpersonal dominance. Such acts include actively taking charge in the group discussion, giving advice to others, being persistent about one's opinion, and making decisions.

5) Assign a rating of 5 if the individual demonstrates a high amount of interpersonal dominance. Such acts include being overly assertive or aggressive with other group members, trying to change or control others by commanding them to implement a specific solution, and manipulation tactics (e.g., personal insults).

Interpersonal Affiliation

1) Assign a rating of 1 if the individual demonstrates a high amount of cold interpersonal behaviour. Such acts include making cruel and hostile remarks to other group members, arguing with others, and displaying vindictive attitudes (e.g., threatening others).

2) Assign a rating of 2 if the individual engages in some acts reflecting interpersonal coldness. Such acts include being critical of the opinions of other group members, being uncooperative, rude, impolite, or disrespectful during the activity.

3) Assign a rating of 3 if the individual displays an average amount of interpersonal affiliation. That is, rate if either a balance of interpersonally warm and cold acts are displayed or the individual is neutral in affiliation.

4) Assign a rating of 4 if the individual engages in some acts reflecting interpersonal warmth. Such acts include being cooperative with others, respectful, and appreciative of their opinions.

5) Assign a rating of 5 if the individual displays a high amount of interpersonal warmth. Such acts include offering other group members support or assistance in the task, providing positive appraisal or complements to others, and being accommodating.

Appendix J

UNIVERSITY OF WINDSOR

Consent to Participate in Research

Title of Project: Assessing Interpersonal Dominance and Affiliation on the Thematic

Apperception Test: The Development and Validation of Two

Orthogonal Scales.

Researcher: Kerry Collins

My name is Kerry Collins and I am a graduate student in Clinical Psychology at the University of Windsor. I would like you to participate in a study that will contribute to my dissertation. If you have any questions or concerns about the research, please feel free to contact my supervisor, Dr. Stephen Hibbard (Department of Psychology, 253-3000 Ext. 2248).

- **Purpose of the Study**

I have developed two independent scales for assessing interpersonal dominance and affiliation on the Thematic Apperception Test (TAT; Morgan & Murray, 1935). The purpose of this study is to test the psychometric properties of these two scales.

- **Procedure**

If you volunteer to participate in this study, you will be asked to meet with me on two occasions for approximately 1-hour (total = 2 hours). In the first meeting, you will be asked to fill out several questionnaires asking for information about your personal thoughts, feelings, and behaviour. You will also be shown ten magazine-like pictures and asked to write stories about the character(s) depicted in the pictures. In addition, you will be given a short questionnaire to be completed by someone who is familiar with you (i.e., family member, spouse, close friend) and must be returned to the researcher by the next meeting time. This portion of the study will take approximately 1 hour of your time.

During the second meeting, you will be asked to participate in a group discussion about methods of student evaluation/grading with four other students. Specifically, you will be asked to express what method of evaluation you believe is fair to all students (e.g., essays, multiple-choice tests) and then asked to reach a consensus with the other group members. This discussion will be videotaped and auditotaped, then independently reviewed by three research assistants. This portion of the study will also take approximately 1 hour of your time.

- **Potential Risks and Discomforts**

There may be psychological risks involved in participating in the group discussion. Specifically, you may feel embarrassed to express your opinion or demeaned by another research participant in the process of trying to reach a consensus. However, the researcher

will minimize these risks by being present during the discussions and terminating them if someone appears to be in distress.

- **Potential Benefits**

The benefits of participating in the study include that you may learn about your patterns of interacting with other people. In addition, you will be contributing to the creation of two scales for the TAT that will assist researchers and clinicians to learn more about interpersonal human behaviour.

- **Compensation**

If you decide to participate in the study, you will receive 3 bonus credits in your Psychology course.

- **Confidentiality**

Your responses are all confidential so that individuals cannot be identified. The videotapes of group discussions will only be observed by the researcher and three research assistants, and will be erased upon the completion of the study. As a participant in the study, you have the right to review your videotape at any time.

- **Participation and Withdrawal**

Your participation is voluntary and you may choose to withdraw from the study at any time. Furthermore, you may refrain from rating, reading any stories, and/or participating in the discussion without explanation or penalty.

- **Rights of Research Subjects**

You may withdraw your consent at any time and discontinue participation without penalty. This study has been reviewed and received ethics clearance through the University of Windsor Research Ethics Board. If you have questions regarding your rights as a research subject, contact:

Research Ethics Co-ordinator   Telephone: 253-3000 ext. 3916
University of Windsor   E-mail: ethics@uwindsor.ca
Windsor, Ontario
N9B 3P4

- **Signature of Research Subject**

I understand the information provided for the study "Assessing Interpersonal Dominance and Affiliation on the Thematic Apperception Test: The Development and Validation of Two Orthogonal Scales" as described herein. My questions have been answered to my satisfaction, and I agree to participate in this study. I have been given a copy of this form.

Print Name:_____   Date: _____

_____
(Participant's Signature)

Appendix K

Consent Form for Significant Other

Title of Project: Assessing Interpersonal Dominance and Affiliation on the Thematic

Apperception Test: The Development and Validation of Two

Orthogonal Scales.

Researcher: Kerry Collins

My name is Kerry Collins and I am a graduate student in Clinical Psychology at the University of Windsor. Your family member/spouse/friend, _____(**insert name**), has decided to participate in a study that will contribute to my dissertation. If you have any questions or concerns about the research, please feel free to contact my supervisor, Dr. Stephen Hibbard (Department of Psychology, 253-3000 Ext. 2248).

- **Purpose of the Study**

I have developed two orthogonal scales for assessing interpersonal dominance and affiliation on the Thematic Apperception Test (TAT; Morgan & Murray, 1935). The purpose of this study is to test the psychometric properties of these two scales.

- **Procedure**

If you volunteer to participate in this study, I would like you to complete the attached questionnaire that asks you to rate the personal characteristics of _____

(insert name)

This questionnaire will take approximately 10 minutes of your time.

- **Compensation**

If you decide to participate in the study, you will assist your family member/spouse/friend earn 3 bonus credits in his or her Psychology course.

- **Confidentiality**

Your responses are anonymous so that individuals cannot be identified, and all responses are confidential.

- **Participation and Withdrawal**

Your participation is voluntary and you may choose to withdraw from the study at any time. Furthermore, you may refrain from rating any items without explanation or penalty.

- **Rights of Research Subjects**

You may withdraw your consent at any time and discontinue participation without penalty. This study has been reviewed and received ethics clearance through the

University of Windsor Research Ethics Board. If you have questions regarding your rights as a research subject, contact:

Research Ethics Co-ordinator   Telephone: 253-3000 ext. 3916
University of Windsor   E-mail: ethics@uwindsor.ca
Windsor, Ontario
N9B 3P4

- **Signature of Research Subject**

I understand the information provided for the study "Assessing Interpersonal Dominance and Affiliation on the Thematic Apperception Test: The Development and Validation of Two Orthogonal Scales" as described herein. My questions have been answered to my satisfaction, and I agree to participate in this study. I have been given a copy of this form.

Print Name:_____   Date: _____

_____
(Participant's Signature)

Appendix L

Debriefing Form

Title of Project: Assessing Interpersonal Dominance and Affiliation on the Thematic

Apperception Test: The Development and Validation of Two

Orthogonal Scales.

Researcher: Kerry Collins

Thank-you for participating in my study. As you may already know from the title of my

project, I am interested in developing two orthogonal scales for assessing interpersonal

dominance and affiliation on the Thematic Apperception Test (TAT; Morgan & Murray,

1935). The purpose of the study you completed was to test the psychometric properties of

the two scales. The TAT was the story-telling test you completed, which I will rate for the

level of interpersonal dominance and affiliation depicted. The questionnaires you

completed, as well as your significant other, assess other variables that have been

examined in relation to interpersonal dominance and affiliation. The group discussion you

participated in will also be rated for these two constructs, and compared to scores on the

questionnaires.

The TAT is a projective personality instrument routinely administered by psychiatric

professionals in medical, educational, forensic, and research settings in order to assess an

individual's functioning. I am developing two scales to assess an individual's functioning

in the interpersonal domain on the TAT. Specifically, I am developing one scale to assess

an individual's tendency to display dominance in his/her interpersonal relationships.

Interpersonal dominance is bipolar construct that ranges from acts of submissiveness

(e.g., passivity, guilt, self-punishment) to acts of dominance over others (e.g., leadership,

authority, exploitation). The second scale assesses the degree of affiliation an individual

displays in his/her interpersonal relationships. Interpersonal affiliation is also a bipolar

construct that ranges from acts of coldness (e.g., punishment, fighting, anger) to acts

reflecting warmth (e.g., nurturance, friendship, love). The construction of these two scales

will assist psychiatric professionals to make broad inferences about an individual's style

of interacting with others and the nature of their interpersonal relationships.

If you have any concerns about the nature of your interpersonal relationships, the following are the phone numbers of a few campus agencies that may be of service to you:

University of Windsor Psychological Services Centre	973-7012
University of Windsor Medical and Health Services	973-7002
University of Windsor Student Counselling Centre	253-3000 ext. 4616

Appendix M

Rating Sheet for Leaderless Group Discussions

Tape # and Date: _____

Rater: _____

```
           3
    2   ╱‾‾‾‾‾╲   4
      ╱         ╲
  1  │           │  5
      ╲         ╱
       ╲_____╱
```
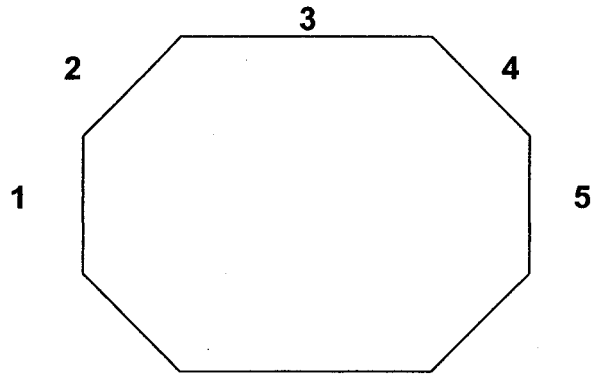
Participant 1:

    Interpersonal Dominance = _____   Interpersonal Affiliation = _____

Participant 2:

    Interpersonal Dominance = _____   Interpersonal Affiliation = _____

Participant 3:

    Interpersonal Dominance = _____   Interpersonal Affiliation = _____

Participant 4:

    Interpersonal Dominance = _____   Interpersonal Affiliation = _____

Participant 5:

    Interpersonal Dominance = _____   Interpersonal Affiliation = _____

Appendix N

TAT Scoring Sheet

Participant #: _____

Coder: _____

1) Card 1

Interpersonal Dominance: _____   Interpersonal Affiliation: _____

2) Card 2

Interpersonal Dominance: _____   Interpersonal Affiliation: _____

3) Card 3GF

Interpersonal Dominance: _____   Interpersonal Affiliation: _____

4) Card 3BM

Interpersonal Dominance: _____   Interpersonal Affiliation: _____

5) Card 4

Interpersonal Dominance: _____   Interpersonal Affiliation: _____

6) Card 6GF

Interpersonal Dominance: _____   Interpersonal Affiliation: _____

7) Card 6BM

Interpersonal Dominance: _____   Interpersonal Affiliation: _____

8) Card 8BM

Interpersonal Dominance: _____   Interpersonal Affiliation: _____

9) Card 13MF

Interpersonal Dominance: _____   Interpersonal Affiliation: _____

10) Card 18 BM

Interpersonal Dominance: _____   Interpersonal Affiliation: _____

Total: **Interpersonal Dominance: ____**   **Interpersonal Affiliation: ____**

Appendix O

Item-Total Reliability of Sample TAT Responses

Dominance Ratings	r	Affiliation Ratings	r
Card 1		*Card 1*	
Response 01	**.62***	**Response 01**	**.58***
Response 02	**.57***	Response 02	.48*
Response 03	**.67***	**Response 03**	**.65***
Response 04	.37	**Response 04**	**.46***
Response 05	.12	**Response 05**	**.49***
Response 06	**.43***	Response 06	.39
Response 07	.37	**Response 07**	**.42***
Response 08	.04	**Response 08**	**.82***
Response 09	**.58***	**Response 09**	**.72***
Response 10	.26	Response 10	.43*
Card 2		*Card 2*	
Response 11	.22	Response 11	.13
Response 12	.13	Response 12	.32
Response 13	**.46***	**Response 13**	**.55***
Response 14	**.34**	**Response 14**	**.48***
Response 15	**.54***	**Response 15**	**.61***
Response 16	.08	Response 16	.30
Response 17	**.47***	**Response 17**	.38
Response 18	**.30**	**Response 18**	**.73***
Response 19	.25	Response 19	.29
Response 20	.20	Response 20	.28
Card 3GF		*Card 3GF*	
Response 21	**.50***	**Response 21**	**.39**

Dominance Ratings	r	Affiliation Ratings	r
Response 22	.43*	**Response 22**	**.74****
Response 23	**.35**	Response 23	.60**
Response 24	**.58****	**Response 24**	**.41***
Response 25	**.69****	Response 25	.39
Response 26	**.81****	**Response 26**	**.56****
Response 27	.30	Response 27	.36
Response 28	**.48***	Response 28	.38
Response 29	.31	Response 29	.23
Response 30	.51**	Response 30	.34
Card 3BM		*Card 3BM*	
Response 31	**.30**	Response 31	-16
Response 32	**.58****	**Response 32**	**.49***
Response 33	.16	Response 33	.30
Response 34	.19	Response 34	.48*
Response 35	.51**	**Response 35**	**.65****
Response 36	.09	Response 36	.40*
Response 37	**.32**	**Response 37**	**.44***
Response 38	**.44***	**Response 38**	**.46***
Response 39	.56**	**Response 39**	**.46***
Response 40	-.14	Response 40	.37
Card 4		*Card 4*	
Response 41	.52**	**Response 41**	**.67****
Response 42	**.75****	**Response 42**	**.67****
Response 43	**.30**	**Response 43**	**.44***
Response 44	**.30**	Response 44	.26
Response 45	**.31**	Response 45	.02
Response 46	.32	Response 46	.44*

Dominance Ratings	r	Affiliation Ratings	r
Response 47	.31	**Response 47**	**.49***
Response 48	**.51***	**Response 48**	**.52***
Response 49	**.30**	Response 49	-.04
Response 50	**.43***	**Response 50**	**.67***
Card 6BM		*Card 6BM*	
Response 51	.47*	**Response 51**	**.55***
Response 52	.21	Response 52	.42*
Response 53	**.62***	Response 53	.40*
Response 54	**.55***	**Response 54**	**.71***
Response 55	.48*	**Response 55**	**.50***
Response 56	**.72***	Response 56	.41*
Response 57	.19	**Response 57**	**.41***
Response 58	**.40***	Response 58	.19
Response 59	**.37***	Response 59	-.09
Response 60	**.65***	Response 60	.62**
Card 6GF		*Card 6GF*	
Response 61	**.69***	**Response 61**	**.58***
Response 62	**.45***	Response 62	.66**
Response 63	**.74***	**Response 63**	**.44***
Response 64	.36	Response 64	.50*
Response 65	.31	Response 65	.50*
Response 66	**.59***	**Response 66**	**.82***
Response 67	-.02	Response 67	.03
Response 68	**.64***	**Response 68**	**.44***
Response 69	.33	Response 69	-.10
Response 70	**.54***	**Response 70**	**.59***
Card 8BM		*Card 8BM*	

Dominance Ratings	r	Affiliation Ratings	r
Response 71	**.58****	**Response 71**	**.50***
Response 72	**.39**	**Response 72**	**.72****
Response 73	.36	Response 73	.55**
Response 74	**.58****	**Response 74**	**.35**
Response 75	**.52****	**Response 75**	**.70****
Response 76	.37	**Response 76**	**.58****
Response 77	**.45**	Response 77	.36
Response 78	.30	**Response 78**	**.61****
Response 79	.35	**Response 79**	**.52****
Response 80	.32	**Response 80**	**.51****
Card 13MF		*Card 13MF*	
Response 81	**.72****	**Response 81**	**.49***
Response 82	.26	Response 82	.46*
Response 83	**.76****	Response 83	.25
Response 84	.37	Response 84	.55**
Response 85	**.69****	**Response 85**	**.59****
Response 86	.37	Response 86	.26
Response 87	.36	**Response 87**	**.74****
Response 88	**.63****	**Response 88**	**.64****
Response 89	.34	**Response 89**	**.43***
Response 90	**.86****	**Response 90**	**.75****
Card 18BM		*Card 18BM*	
Response 91	**.55****	**Response 91**	**.47***
Response 92	**.31**	**Response 92**	**.55****
Response 93	**.41***	**Response 93**	**.61****
Response 94	**.38**	**Response 94**	**.64****
Response 95	**.70****	**Response 95**	**.49***

Dominance Ratings	r	Affiliation Ratings	r
Response 96	-.17	Response 96	.15
Response 97	.29	Response 97	.40*
Response 98	.36	Response 98	.52**
Response 99	-.15	Response 99	.27
Response 100	.39	Response 100	.76**

Note: Sample responses selected for inclusion in the Interpersonal TAT scales are displayed in boldface type.

* p < .05

** p < .01

APPENDIX P

Descriptive Statistics for Selected TAT Responses

Interpersonal Dominance	Mean	SD	Interpersonal Affiliation	Mean	SD
Card 1			*Card 1*		
Response 01	3.28	1.62	Response 01	4.08	1.04
Response 02	5.32	1.44	Response 03	2.76	1.09
Response 03	4.72	1.60	Response 04	1.16	.37
Response 04	6.36	1.55	Response 05	6.08	.91
Response 06	3.52	1.50	Response 07	1.20	.41
Response 07	6.28	1.67	Response 08	4.44	1.12
Response 09	4.92	1.32	Response 09	2.92	1.26
Card 2			*Card 2*		
Response 13	6.24	1.51	Response 13	1.36	1.04
Response 14	2.88	1.56	Response 14	3.68	1.35
Response 15	4.04	1.99	Response 15	2.92	1.71
Response 17	4.68	1.68	Response 17	3.76	1.64
Response 18	4.92	1.00	Response 18	3.32	1.46
Card 3GF			*Card 3GF*		
Response 21	3.88	2.17	Response 21	4.16	1.63
Response 23	3.20	2.10	Response 22	3.96	1.86
Response 24	5.76	1.86	Response 24	2.04	1.51
Response 25	3.72	1.37	Response 26	3.24	1.53
Response 26	4.08	1.82			
Response 28	3.04	1.46			
Card 3BM			*Card 3BM*		
Response 31	5.52	1.33	Response 32	3.56	1.81
Response 32	1.80	1.68	Response 35	4.92	1.38
Response 37	5.60	1.68	Response 37	2.28	1.37
Response 38	4.28	2.13	Response 38	3.04	1.92

Interpersonal Dominance	Mean	SD	Interpersonal Affiliation	Mean	SD
			Response 39	4.16	1.21
Card 4			*Card 4*		
Response 42	2.32	1.89			
Response 43	4.32	1.03			
Response 44	5.40	.91			
Response 45	4.80	1.19			
Response 48	4.80	.96			
Response 49	4.52	1.50			
Response 50	3.80	1.50			
Card 6BM			*Card 6BM*		
Response 53	5.36	2.00	Response 51	4.84	.94
Response 54	4.76	2.15	Response 54	2.88	1.51
Response 56	4.16	1.46	Response 55	4.68	1.31
Response 58	4.72	1.28	Response 57	5.80	1.26
Response 59	2.12	1.27			
Response 60	5.60	1.32			
Card 6GF			*Card 6GF*		
Response 61	4.96	1.62	Response 61	2.24	1.23
Response 62	5.28	1.28	Response 63	1.56	.87
Response 63	5.72	1.82	Response 66	2.60	1.23
Response 66	4.64	1.47	Response 68	1.20	.82
Response 68	6.40	1.68	Response 70	2.84	1.60
Response 70	5.36	1.60			
Card 8BM			*Card 8BM*		
Response 71	5.04	2.03	Response 71	2.28	1.62
Response 74	6.04	1.67	Response 72	5.88	1.30
Response 75	4.04	2.42	Response 74	1.40	1.08
Response 77	5.96	1.64	Response 75	1.88	1.48

Interpersonal Dominance	Mean	SD	Interpersonal Affiliation	Mean	SD
			Response 76	5.56	1.23
			Response 78	6.00	1.23
			Response 79	5.44	1.04
			Response 80	5.88	.83
Card 13MF			*Card 13MF*		
Response 81	3.44	1.85	Response 81	2.76	1.59
Response 83	4.04	1.95	Response 85	4.48	1.16
Response 85	4.32	1.49	Response 87	2.92	1.63
Response 88	3.48	1.23	Response 88	3.00	1.41
Response 90	4.20	1.89	Response 89	5.56	1.12
			Response 90	2.40	1.08
Card 18BM			*Card 18BM*		
Response 91	3.48	1.83	Response 91	4.96	1.21
Response 92	3.68	1.97	Response 92	2.44	1.33
Response 93	5.04	1.74	Response 93	2.36	1.44
Response 94	6.16	1.41	Response 94	1.88	1.30
Response 95	3.56	1.16	Response 95	3.16	1.11

Note: SD = Standard Deviation.

$N = 25$

VITA AUCTORIS

NAME	Kerry Collins
PLACE OF BIRTH	Winnipeg, Manitoba
YEAR OF BIRTH	1975
EDUCATION	Westwood Collegiate, Winnipeg
	1989-1993
	University of Manitoba, Winnipeg, Manitoba
	1993-1997 B.A. (Hons.)
	University of Windsor, Windsor, Ontario
	1998-2000 M.A.
	University of Windsor, Windsor, Ontario
	2000-2003 Ph.D.