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THE MINNESOTA MULTIPHASIC PERSONALITY INVENTORY-REVISED  
(MMPI-2): EXTENDING AMERICAN INDIAN NORMS

A Dissertation

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In partial fulfillment of the requirements for the

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By

KATHLEEN LACEY

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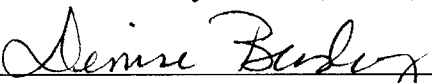
THE MINNESOTA MULTIPHASIC PERSONALITY INVENTORY-REVISED  
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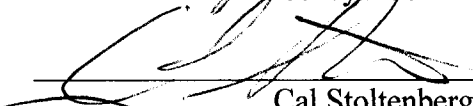
APPROVED FOR THE  
DEPARTMENT OF EDUCATIONAL PSYCHOLOGY

BY

  
Terry M. Pace, Ph.D., Chair

  
Denise Beesley, Ph.D.

  
Rockey Robbins, Ph.D.

  
Cal Stoltenberg, Ph.D.

  
Robert Terry, Ph.D.

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## **Abstract**

This study obtained and compared MMPI-2 data collected from a non-clinical sample of Oklahoma Indian tribal members to the MMPI-2's normative sample. Seventy-five, volunteer, self-identified members of the Delaware Tribe of Indians attending tribal events or meetings in two Oklahoma locations completed the MMPI-2 in full. Additional demographic data were collected including gender, age, and acculturative and educational level to satisfy methodological suggestions that these variables be considered and ruled out as sources of MMPI-2 scale variations. Average scores on the MMPI-2 Basic Scales were obtained, as were average scores on all of the Harris-Lingoes and Content subscales and most of the Supplementary subscales. Comparisons were made between these scores and (a) the MMPI-2 standard of  $T = 50$ , (b) within-(Delaware) group, across gender, age, acculturative status, and education, (c) the scores of two other American Indian samples obtained from previous studies, and (d) between the combined scores of all three American Indian samples and the MMPI-2 standard. Data were analyzed in a series of stages to satisfy methodological suggestions postulated in the MMPI-2 interpretative manuals and MMPI-2 research. In the first stage, non K-corrected scale score averages for the Delaware Tribe were compared to those of the MMPI-2 normative standard of  $T = 50$ , using a one-sample t-test. Scores on three of the 13 Basic Scales (F, 1, and 6) reached clinical significance (a difference of  $\geq 5$  T points) and two others reached statistical significance (4 and 9; at  $\leq .004$ ), after use of a Bonferroni adjustment to account for the thirteen scales. In the second stage, average Delaware T-scores on the Harris-Lingoes, Supplementary, and Content subscales were compared to those of the MMPI-2 normative standard via a one-sample t-test. Clinical significance was reached on three of the Harris-

Lingoes subscales, on three of the Supplementary subscales analyzed, and on two of the Content subscales. Phase three involved within-(Delaware) sample comparisons on the Basic Scales relative to the demographic variables, gender, age, acculturation, and education, via separate ANOVAs. No clinically significant gender differences were found on Basic Scale scores, except that on Scale 5, *Mf*, as expected, and no differences were found between high and low educational levels. Two age differences were found, on Scales 6 and 9. Phase four involved combining the three Tribal samples' scores and comparing these, via a one-sample *t*-test, to the standard, wherein clinical differences were obtained on six Basic, nine Harris-Lingoes, on nine Supplementary, and five Content scales. In phase five, MANOVA was used to compare Delaware scores, on the above scales and subscales, to the scores of two other Tribal samples, wherein clinically significant differences were obtained on two Basic Scales, seven Harris-Lingoes, two Supplementary, and five Content subscales.

This study was undertaken to ascertain historical or culture-bound personality differences between Euro-American, the Delaware, and two other Indian cultures, as well as between each of the three Indian samples compared. Additionally, results of this study establish a baseline from which to compare clinical profiles of, at least, individuals from the three tribes compared. Use of scores for the combined American Indian sample may also contribute to more valid use of the MMPI-2's with American Indian populations in general. Most importantly, the results of this study may help establish a more adequate and appropriate cultural baseline from which to view pathology, in contribution to counseling psychology's knowledge of, and treatment directions for, American Indian individuals.

The Minnesota Multiphasic Personality Inventory - Revised  
(MMPI-2): Extending American Indian Norms

In the United States personality and abnormality is conceptualized with the Euro, middle-class, male as the standard point of reference (Dana, 1998; McLoyd, 1991; Spindler, 1990). Personality assessment instruments are typically devised not only from the point-of-view of the “Western yardstick” (Niles, 1993), but from the same culture’s standards of life. Deviations from the normal range are considered abnormal or maladaptive personality traits, whether assessed in Euro-males, Euro-females, or in racial-minority individuals. Yet, unless personality assessment instruments have adequate and appropriate ethnic representation in their normative sample *and* are individually validated for use with each population, a finding of abnormality in a racial-minority individual cannot necessarily be equated to the same findings for the majority culture.

One widely used personality instrument, the Minnesota Multiphasic Personality Inventory, is often used in mental health settings as a screening for psychopathology. Additionally, it is used within the court systems to evaluate mental stability, parental stability in custody arrangements, and for consideration of sentencing and/or treatment. It is used in penal institutions for treatment evaluation and for release consideration. It is used in many high security vocation arenas, such as within the FBI, police departments, fire departments, and airflight crew members, or in other vocational areas for hiring purposes, for assessment of personal stability, to recommend therapeutic treatment, and for assessment of therapeutic change. It has been used in higher education for consideration of acceptance into various academic fields. It is also used for Social Security benefit evaluation and for drug and alcohol treatment evaluation and treatment release. It is very frequently used by psychologists to assess minority populations

(Velasquez, Ayala, & Mendoza, 1998) because ethnic-minorities were included in its normative sample and because translations and norms exist for certain ethnic-minority groups (Velasquez, Mendoza, Nezami, Castillo-Canez, Pace, Choney, Gomez, & Miles, 2000). Additionally, its use, administration, and standard interpretation is taught within most, if not all Master's and Ph.D. level counseling programs in the US and multiple other countries (Austin, 1994; Butcher & Graham, 1989; Costello, 1977; Elion & Megargee, 1975; Greene, 2000; Morfitt, Rouse, & Holden, 1997; Schmit & Stanard, 1996).

The most recent inventory, the MMPI-2, contains three validity scales, ten clinical scales, and multiple other subscales derived from the clinical scales and item content. The validity scales are comprised of L, the 'lie' scale, which detects response distortion; F, which detects atypical responding; and K, which measures psychological sophistication and is partially a function of education. A proportion of one's score on K scale is also used to weigh some of the clinical scales, in order to maximize discrimination between normal and abnormal scores. Additional means of assessing validity are also incorporated into the MMPI-2 scoring system. MMPI-2 clinical scales are as follows, and, it is important to note that their titles are not necessarily self-explanatory nor do they necessarily infer diagnoses or clinical symptoms or syndromes of similar name (for additional comments see Helmes & Reddon, 1993):

(1, Hs) Hypochondriasis; (2, D) Depression; (3, Hy) Hysteria;  
(4, Pd) Psychopathic Deviate; (5, Mf) Masculinity-Femininity;  
(6, Pa) Paranoia; (7, Pt) Psychasthenia; (8, Sc) Schizophrenia;  
(9, Ma) Hypomania; and (0, Si) Social Introversion.

Additionally, some items within each scale are considered 'critical' or red flags for further exploration. These items were chosen either based empirically upon their ability

to differentiate normal from psychiatric samples or as logical, face-valid indicators of a personal crisis experience (for further information, see Greene, 1991). A classic example of some critical items that may be more frequently endorsed by American Indians than Euro-Americans are in reference to visual, tactile, or olfactory sensations or experiences from things that are not or were not tangible (often called 'visions' or associated with dreams in American Indian cultures).

Because the original version of the MMPI (1940) standardization utilized a predominantly Euro-American sample, subsequent research suggested its lack of validity for use with racial minorities. Because of this, in part, the MMPI was revised and restandardized with 1980 census-based, percentage-wise representation of the major ethnic groups of the United States (Greene, 1991, 2000). Yet questions still remain as to the adequacy and appropriateness of its representation of American Indians. Even though the relative *proportion* of American Indians included in the MMPI-2 standardization sample may have been accurate, its representation of all 520 American Indian tribes was not. In using this instrument to assess American Indian personality, not only has the lack of American Indian norms been questioned, but the MMPI series' item content has been as well (Uecker, Boutillier, & Richardson, 1980).

Although American Indian tribes share some similarities, differences between tribal beliefs and customs range considerably (Dinges, Trimble, Manson, & Pasquale, 1981; Hanson, 1980; LaFramboise, Trimble, & Mohatt, 1991). It has been said that although American Indians make up only one percent of the population, they represent fifty percent of the diversity (Hodgkinson, 1990). "The tendency to place all Indians into one tribe inhibits non-Indians from understanding the complex nature of each tribe" (Medicine, 1988) as well as obscures long-held Tribal customs, beliefs, and behaviors. Unfortunately, many researchers fall victim to this trap.

Due to the MMPI-2's wide-spread and broad use, studies comparing scores for different Indian tribes are needed to ascertain similarities and differences, both in normal individuals and in clinical samples. An appropriate cultural baseline must be established for American Indians so that implied pathology in clinical and other settings will be relative to the appropriate standards of behavior *for* American Indians.

American Indians have long underutilized health services, which in part is due to historical mistreatment and the resulting misunderstandings and misgivings toward Euro-American's health and mental health institutions. Additionally, because of differing culture-bound behaviors and beliefs, American Indians have often been misdiagnosed and/or overpathologized in both medical and, especially, mental health establishments (Gynther, 1972, 1979; Gynther & Green, 1980; Dana, 1988, 1998). It is our duty as mental health professionals to increase our knowledge of the ever increasing racial minority populations in this country in both assessment and treatment areas (APA, 1993). Much more research is needed to understand how culture affects behavior and personality. It is unethical to conduct mental health services under the assumption that important differences do not exist without the research to support this (APA, 1992; APA, 1993; also see Greene, 2000).

### Questions and Hypotheses

The specific questions this study hopes to answer are:

1. Do normal Delaware Tribal-member scores differ from normative scores on the MMPI-2, and if so, how and on what scales?

*It is hypothesized that this Tribe's mean scale scores will differ from some MMPI-2 normative, clinical and validity scale values ( $T = 50$ ).*

2. Do, and how do normal Delaware Tribal-member scores differ from MMPI-2 normative scores on the Harris-Lingoes, Supplementary, and Content subscales?

*It is hypothesized that this Tribe's mean scores will differ from some MMPI-2 normative Harris-Lingoes, Supplementary, and Content subscale values ( $T = 50$ ).*

3. Do, and how do, normal Delaware Tribal-member scores differ from the Southwest Oklahoma (SWO) and Eastern-Woodland Oklahoma (EWO) tribes' MMPI-2 scores?

*It is hypothesized that this Tribe's average scores will differ from some of both the SWPO and the EWO's tribes' normative scores on validity and clinical scales.*

4. Do, and how do, normal Delaware Tribal-member scores differ from the Southwest Plains Oklahoma (SWPO) and Eastern-Woodland Oklahoma (EWO) tribes' scores on the Harris-Lingoes, Supplementary, and Content subscales?

*It is hypothesized that the Delaware Tribe's average scores will differ on some of the Harris-Lingoes, Supplementary, and Content subscales from those of the SWPO and the EWO's tribes' scores.*

5. When combined, do and how do the American Indian samples scores differ from the MMPI-2 normative sample on clinical, validity, Harris-Lingoes, Supplementary, and Content scales?

*It is hypothesized that, when combined, the three tribes' average scores will differ from some of the MMPI-2's normative scores on validity, clinical, Harris-Lingoes, Supplementary, and Content scales.*

6. Do, and how do Delaware demographic variables gender, age, education, and level of acculturation affect scores on the MMPI-2 scales?

*It is hypothesized that demographic variables gender, age, education, and acculturation will not fully account for scale score differences between this Tribe and the MMPI-2 normative values.*

## **Review of the Literature**

### **Personality: Theory and Assessment**

What is personality? To answer this, one must first envision a theory that encompasses and explains the composition and/or determinants that define what we call personality. If a proposed theory considers genetics, learning, culture-society, self-awareness, traits, unconscious mechanisms, and cognitive processes (Hergenhahn, 1990), it may well have covered all the bases. But then, why does more than one personality theory exist? The answer to this is probably best understood by the word itself: personality. Each theory, given the personalities (i.e. the genetics, learning, sociocultural climate and background, self-awareness, traits, and unconscious and cognitive processes of the *theorist*) reflects each theorist's own experiences, their own personalities, and individual differences among them.

Theories of personality date as far back as Hippocrates and Galen (Brennan, 1998), who, over two-thousand years ago, postulated that biological 'humors' were responsible for human activity. Today, much more advanced biological models for the explanation of human personality still exist, as do psychodynamic, learning, cognitive, humanistic, and sociocultural models. Additionally, theories representing culturally determined personality functioning are those of individualism-collectivism theories, ecological systems theories, cultural-ecological theories, social identity theories, ecocultural and sociocultural theories, theories of structure and agency, and multiple-worlds theories (see Cooper & Denner, 1998, for a review). The primary similarity in most models is that personality is conceptualized within an environmental context; individuals act, react, perceive reality, and generally *learn to be* via their immediate environment. The primary difference between the early theories and today's, and/or between scientific and unscientific ones, are their empirical bases and empirical



disputability.

When a theory can be tested, is generalizable, and can withstand empirical tests to the contrary, it is considered scientific (Hergenhahn, 1990). Although no single theory of personality can explain in full the complex interaction between humans, their ever-changing environment, biological components, and accompanying cognitive processes, the purpose of scientific research is to continually test, fine-tune, and improve upon theory as questions arise.

Theories are not truths in themselves, but approximate truths, and scientists should stand ready to revise or discard them when disconfirming evidence comes along.

(Hergenhahn, 1990)

Theory of personality development has improved immeasurably from Hippocrates' time. In combination, modern theories can be used with some degree of reliability, to not only categorize personality types, but to postulate how normal and abnormal personality is conceptualized along a continuum of variables. Again, to a degree, personality can be created, changed, and/or measured. The inability to, with complete accuracy, develop laws of human personality formation is partially due to the extensive range of individual and environmental differences, as well as to the theorist's own limitations in being human.

Regardless of the particular theoretical paradigm, yet of interest and utility to the field of psychology, the ability to stipulate normalcy allows a frame of reference as to the constitution of abnormal personality. Whether by theoretical, logical, factor-analytic, or empirical criterion keying, personality tests as assessment instruments are developed with the ideal that personality traits can be described by and therefore derived from groupings of personal attributes, behaviors, and beliefs. Although personality assessment is used in a multitude of settings, for a multitude of purposes, counseling psychology is often

concerned with personality on a normal-abnormal continuum. Measures of personality serve as the means, whereas an instrument's norms serve as the baseline, from which to differentiate normal from abnormal personality functioning. A personality instrument's scale means, variances, criterion validities, reliabilities, factor structure (Paunonen & Ashton, 1998), and generalizability comprise its worth as well as its fortitude against empirical challenge.

Personality assessment, by questionnaire, dates to Francis Galton in the 19th century, who devised methods for mental assessment (Butcher, Graham, & Ben-Porath, 1995; Brennan, 1998) beginning the movement toward systematic study of mental functioning. To date, the best, most feasible, and commonly used means of measuring personality is still by questionnaire, in the form of theoretically and empirically based self-report instruments. Given that humans are not perfect, the self-report method of obtaining personality information, or any other self-report information for that matter, might be considered controversial at the very least. Yet, although controversial, the validity of self-report measures, when scored and interpreted with empiricized (Meehl, 1945) and standard procedures, have withstood much examination. The primary rationale for using standard means of administering, scoring, and interpreting psychological assessment instruments is for comparability: so that the scores produced by a client can be directly compared with those produced by the instrument's normative sample (Ben-Porath & Graham, 1991). In theory, an instrument's normative sample homogeneously symbolizes that which is typical or 'normal', upon which inferences can be made about a client's scores. The more heterogeneous the normative sample and the more homogeneous the normative scores, the more precise the instrument is in its measurement of personality constructs of the population from which the sample was taken and, therefore, in its description of the population. Yet, when comparisons yield

significantly different scores among groups of any type, the issues of validity arises. Whether the norms, constructs, format, content, or diagnostic criteria is equivalent from group to group becomes a very important issue for an instrument of any type (see Nzewi, 1999).

### The MMPI

From the many self-report, personality instruments that are marketed for professional use, the one most commonly and widely used has been the Minnesota Multiphasic Personality Inventory series (MMPI, MMPI-2, & MMPI-A; Archer, Maruish, Imhof, Piotrowski, 1991; Austin, 1994; Wrobel & Lachar, 1995). The original MMPI form, in use for over fifty years (Ben-Porath & McCully, 1993), is not only used world-wide with individuals from the age of fourteen to eighty-plus, but has also been, by far, the most scrutinized. (Butcher, Graham, & Ben-Porath, 1995). A plethora of MMPI studies have been published, which, as the original instrument became dated, helped contribute to its revision. One area of scrutiny has been the generalizability of the original MMPI to many racial minority groups, as, the original normative sample, for the most part, excluded minority subjects (Hathaway & McKinley, 1940). In consideration of this limited normative sample coupled with the magnitude of empirical research, the original MMPI was not as clinically useful with racial minorities as it was with the Caucasian group upon which it was normed (see Austin, 1994; Gynther, 1972, 1981; Pritchard & Rosenblatt, 1980; Timbrook & Graham, 1994).

Given the above situation and controversy, the MMPI was revised. Its normative sample included proportionate representation of all federally recognized racial groups (Austin, 1994; Butcher & Graham, 1994), which at the time of restandardization was based on the most recent (1980) national census data. Although much more representative of the United States as a whole, the normative sample still varied from the

census parameters on years of education, occupational status (Greene, 1991), and accurate racial-group representation (Austin, 1994; Duckworth, 1991; Long, Graham, & Timbrook, 1994; Pace, Choney, Robbins, Blair, Hill, & Lacey, 1997). For example, as MMPI-2 developers contend that education significantly affects scoring and thus interpretation on validity scales L and K, much research stemmed from the normative sample's above average educational and occupational status (for MMPI-2 norms, see Greene, 1991 and Butcher, et. al, 1989). Yet, more recent comparisons report that these variables do not significantly effect MMPI-2 scores (see Greene, 2000), from which one might conclude that controlling for them is not necessary.

Since education and occupation tend to covary with race, a concern of this study is to determine if and how these factors, relative to race, contribute to the utility of the MMPI-2 with racial minority groups. By the mere fact that racial-minority college students are used in many of the comparative studies, in that education is probably the greatest social, intellectual, and cultural equalizer in the United States, college samples appear to be biased relative to any minority race or culture as a whole. Most racial-minority individuals do not attend college and those that do may share values and behaviors more similar to Euro-Americans and thereby be more assimilated to Euro culture than to their own.

The MMPI-2 developers contend that the normative sample includes adequate proportions of racial groups, therefore rendering it appropriate for use with minority individuals, yet much research has sought to confirm or deny this stance. To date relatively few MMPI-2 studies have been conducted with ethnic minority groups in the United States, and although the new MMPI version appears to have advantages over the old relative to ethnic-minority assessment, the potential for bias still exists, particularly when the impact of ethnicity upon personality development and behavior is not well

understood (see Velasquez, Mendoza, Nezami, Castillo-Canez, Pace, Choney, Gomez, & Miles, 2000).

The particular ethnic group of interest to this writer, is one of great diversity, including over 500 separate and unique groups. These people who have, in large, resisted assimilating into mainstream culture for centuries (Dahlstrom, Lachar, & Dahlstrom, 1986), largely due to the fact that they have always had their own culture, are the American Indians.

#### Representation of American Indians in MMPI-2 Norms

As outlined above, in most theories of personality, cultural environment is an influence inherent in personality development. How much of an influence relative to heredity, the larger society, learning, self-awareness, unconscious mechanisms, and cognitive processes, is widely debated. Yet, in lieu of the fact that there are *still* over 500 Native American Tribes, many members of which *still* engage in their own age-old cultural traditions and *still* fight to preserve their heritage, if any U. S. ethnic minority group differs from the mainstream culture, for a large part, this one has literally fought to do so for centuries. Whether or not this group differs from that of the MMPI-2's normative sample, as the few previously conducted studies have suggested (Pace, Choney, Robbins, Blair, Hill, & Lacey, 1997; Robin, Greene, Albaugh, & Caldwell, 1999), is of great importance for both the psychological-instrument norming process as well as for appropriate assessment of and service to American Indians and other racial groups.

The MMPI-2 normative sample representation of American Indians included fifty-five members of one tribe, the Muckleshoot Tribe, and twenty members of unspecified Tribal affiliation. In that each American Indian Tribe is separate and distinct from one another and that most still maintain distinct and idiosyncratic tribal traditions

and beliefs, by inclusion of three percent American Indian but only one tribe in its restandardization, the MMPI-2 at best successfully represents norms for *one Tribe*. The intent of this study is not to educate those individuals unfamiliar with the diversity of American Indian culture, but rather to propose a rationale for differential personality formation and manifestation and thereby rationale for the need to strongly consider American Indian culture in administration and interpretation of at least one very commonly used personality instrument, the MMPI-2.

#### Cross-Cultural Validation of Personality Instruments

Because the United States originated as a cultural ‘melting pot’ and was built upon cultural diversity, the population is represented by extensive cultural influence. But, what exactly is culture and cultural influence and why does it matter in personality assessment? Even cultural anthropologists disagree on the exact definition, although most agree that culture encompasses a worldview based on themes of shared values, beliefs, and behaviors transmitted from generation to generation (Cooper & Denner, 1998). The operational definition of culture, being difficult to describe in so many words, and, without the assistance of theoretical explanation, is like trying to define ‘social development’ in brief terminology. When we think of culture, we often think of the differentiating customs, beliefs, and practices of individuals of racial groups or of other countries. In the United States, the idea of ‘culture’ has often been viewed as a strange, archaic, nearly obsolete concept that constitutes a deficiency in dominant worldview. Culture is to be traded in like an old car and exchanged for the practices and beliefs of the greater society, if one is to ‘fit in’ or belong. Those who fail to adopt the dominant culture suffer the consequences and are seen as deviants, as oppositional, or as undereducated, uncivilized outcasts. Although this is the mentality and motivation upon which this country was established and has maintained since the very beginning, it fails

to recognize and/or credit its own truths. American Indians refused the dominant culture simply because they already had one (Dahlstrom, Lachar, and Dahlstrom, 1986), just as the Europeans entering the New World refused the Indian culture because they already had one. An all-encompassing and recent description of culture is: “a multidimensional, dynamic, and heterogeneous entity that varies as a function of language, economics, religion, social and governmental institutions, climate, and historical background” (Bukowski & Sippola, 1998).

Although identifying an individual by race, country-of-birth, language spoken, skin color, or what have you, may provide some information as to cultural origin, these variables, although often used categorically in research, fail to acknowledge the idiosyncrasies of cultural influence upon personality development. Equating culture and country is at best an approximation; countries are not culturally homogeneous (p. 745). The bottom line, in a multicultural society such as the United States, there is no acceptable reason to continue the use of assessment instruments based solely on Euro-American assumptions (Dana, 1998), particularly when the population is not solely Euro-American.

Ben-Porath (1990) has postulated three reasons that developers of personality instruments may want cross-cultural validation, and, although his article referred to ‘international’, non-U. S. cultures, since the United States is also multicultural his reasons also apply to cross-U. S.-cultural validation. Ben-Porath’s first reason is to assess whether local measures of personality constructs exist in the ‘other’ culture; logically, if they do not and the construct is found to be emic, or culture-specific, the instrument cannot measure the construct cross-culturally. Secondly, if found that the constructs *do* exist in another culture, a second or third (etc.) culture may come under study to assure that the constructs are etic (Berry, 1969), or universal. Thirdly, even if the constructs do

exist in other cultures, it is necessary to determine whether or not they exist on the same levels and with the same variability as in the original culture.

Invariance in normal scores cross-culturally indicates the utility of the instrument of interest in those cultures studied (Paunonen & Ashton, 1998). On the other hand, if variance between cultures arise, Paunonen and Ashton (1998) suggest that there may be several reasons including: (1) poor test translation, (2) lack of item relevance, (3) trait-level differences, (4) trait-structure differences, (5) differential causal links, (6) differential response-style, (7) test-format problems, (8) different analytic methods, (9) emic criteria, and/or (10) emic constructs (see also Berry, Poortinga, Segall, & Dasen, 1992; Lonner & Berry, 1986).

Test items are considered unbiased when they measure a single or multiple definable theoretical construct across cultures and when all persons, of the same ability have an equal chance of correctly answering any one item regardless of group membership. A test is considered unbiased if individuals with comparable personality or psychological traits, regardless of culture, score similarly. If and when differences in item endorsement and/or test scores occur between cultural groups, it is important to distinguish between cultural differences and item or test bias (paraphrased from Nzewi, 1999). Although problematic for the continuity of theory in describing, predicting, and explaining behavior, recognition *that* culture affects personality development and research determining *how* this occurs is a venture both necessary and ethically warranted.



In addition to the above reasons that an instrument may fail to generalize cross-culturally is that of biculturality. Members of United States ethnic groups may vacillate, either physically or in identification, between the dominant culture and that of their own. Living in, identifying with, and/or vacillating between two cultures may not only affect test response but, responses *dependent* upon the setting (e.g. a mental health setting vs. a cultural gathering) in which the assessment occurs might also be obtained. Although the setting in which a personality assessment occurs has been investigated relative to over- and under-reporting of symptoms (for example for Social Security benefit evaluation or for court or vocational purposes; see Greene, 2000, p. 430), the setting's effect on or interaction with biculturality has not been investigated as such.

#### Assessment Setting and Bi-Culturality

American Indians had the dominant, European culture forced upon them; many have since learned how to think and behave differently depending upon the requirements of either their own or the dominant culture's. Ethnic minority individuals may tend to accommodate their social environment, behaving relative to behavioral expectations of the particular culture. Or a 'When in Rome, do as the Romans do' / 'wearing the appropriate 'hat' sort of thing, just as we all accommodate our behavior, for example, when transitioning from work-to-home life and roles therein. The changes we make in behavior relative to the particular setting is an important, learned response to social expectations. Very simply put, learning takes place when behaviors contrary to what is expected are punished or negatively reinforced, a basic rule of social learning and of teaching social appropriateness. In the same manner ethnic minority individuals may tend to alter behavior relative to the racial-cultural environment, due to personal or vicarious learning or information passed multigenerationally.

If administering a test for cross-cultural validity purposes or for clinical

evaluation, the setting and testing situation becomes very important in the type of information the participant is willing to disclose. As previously mentioned, studies have been conducted delineating the tendencies of clients in various settings *to acknowledge* (innocence by reason of insanity) or *not to acknowledge* (child custody) psychopathology, when there is sufficient motivation to do so (Greene, 2000). It may be that setting either triggers defensive, self-protective responses or ‘when in Rome...’, or in-group, social appropriateness type responses in bicultural individuals. Whichever the actual case, there has been only a small bit of research conducted, in clinical vs. non-clinical settings, wherein responses can be compared and hypotheses developed. Early MMPI studies conducted in *clinical* settings portray American Indians as more adaptive and less pathological than their White counterparts whereas those of *normals* taken from either school or reservation settings are more pathological (Arthur, 1944; Butcher, Braswell, & Raney, 1983; Uecker, Boutilier, & Richardson, 1980). Although this could be hypothesized as due to less variation between normalcy and psychopathology in American Indians as a group, it can also be hypothesized as, at least in part, a function of the setting in which the study was conducted.

It may be that American Indians, as may other bicultural groups, adjust their willingness to disclose per setting, not only because of varying trust in the assessor and/or perceived consequences, but because they have learned to adapt their behavior to the expectations of two worlds (Garrett, 1995). The long-held stereotype that American Indians are quiet, stoic, poised, unemotional, and unresponsive may be the impression taken from behavior observed while operating in the dominant society. This is quite contrary to what is observable during Indian festivities and gatherings. For this reason, collecting ‘normal’ responses on any instrument may best be accomplished in a natural, comfortable setting, which is of particular importance with this population.

The earliest MMPI study conducted using American Indians as subjects, by Grace Arthur in 1944, found Indian highschool students to be more well adjusted than her sample of White college students even given their “attitudes, opinions, and frustrations..... over a long period of time” (p. 244). Unfortunately, whether these findings were influenced by the setting or the examiner will never be known. Although Arthur’s findings may not hold true today in lieu of the continuation of societal pressures, limitations, and restrictions, she summed up the Indian psychological experience of the ‘40s by noting....

*“the Indian has lost most of his land, but has kept his sanity. We have taken his land, and are using larger and larger tracts of it for hospitals for insane white men and women. Would we be better off, do you think, if we gave back enough of his land to keep him and his children from starvation, and, instead, borrowed enough of his habits of thought to enable the present generation and those to come to retain the sanity that the white race appears to be in grave danger of losing?”* (p. 250).

Just as it is apparently difficult for test developers to understand that American Indians or other racial minority groups differ enough in cultural experience to warrant culture-specific test norms, it is also difficult for many American Indians to understand why Euro-Americans consider the two culturally parallel. It is our duty as psychologists and researchers to acknowledge and respect cultural differences, be it in every day life, in academic and social settings, or in development, standardization, and interpretation of the instruments we use in therapeutic and research settings (APA, 1992; APA, 1993).

Although rarely addressed in comparative studies, beyond biculturalism and setting, issues of identity confusion or diffusion, and/or acculturative stress manifest in an otherwise normal bicultural individual might also affect MMPI-A or MMPI-2 scale elevations. Depending upon the individual’s comfort with and acceptance into each

respective culture, issues of marginality, lack of a single, secure ethnic identity, or acculturative or enculturative stress, unique issues with minority individuals, are likely to affect responses.

### American Indian Personality Assessment

Dahlstrom, Lachar, and Dahlstrom (1986) contend that the dearth of information on 'normal' American Indian personality is in part due to the prerequisite that the examiner be "well trained and a trusted member of the group" and that "as much background information as possible" be collected in order that interpretation be more meaningful. These authors also suggest that being aware of possible meanings of (either high or low) minority-group-member scores is advisable rather than introducing an "a priori" notion that an instrument's norms represent that which is normal for all groups. In that very little research exists on 'normal' Native American personality and there are very few American Indian psychologists conducting research, there is no conclusive evidence (a) delineating the effects of culture on personality and/or (b) separating the effects of culture from that of biculturality and/or (c) from the effects of long-term conflict with the dominant society. In addition to this, it is presumptive to assume that culture, acculturation, socioeconomic status, and education covary identically with personality among all racial minority groups, without adequate studies to support this.

Because little information exists about normal American Indian responses on the MMPI or MMPI-2, abnormal personality inferred from these instruments is likely to be of questionable validity (Uecker, Boutilier, & Richardson, 1980). Normative-sample inclusion of one of the over 500 Tribes simply does not connote accurate representation of American Indians as a whole. Uecker, once asked by a judge during a court situation,

“If the MMPI has not been validated for use with Indians, why do you use it?” (see Uecker, Boutilier, & Richardson, 1980). But MMPI personality assessment of Indians for court purposes still occurs as before (p. 358).

In a nutshell, the MMPI was used, as the MMPI-2 will be used, because there is no better personality assessment instrument available for measurement of maladjustment (Greene, 2000; personal conversation, Pace, 1996). Although many of the original version’s flaws were addressed in the revised version, empirical evidence is needed to confirm or deny that these revisions constitute improvements in the validity of assessment for the American Indian population. Because of the limited ethnic representation on the original version, “the expansion of ethnic representation in the MMPI-2 normative group has renewed interest in researching its potential ethnic bias” (Greene, Gwin, & Staal, 1997).

#### The MMPI and Revision to the MMPI-2

Hathaway and McKinley conceptualized and developed the original MMPI “out of their frustration with lack of screening instruments for hospitalized patients” (Austin, 1994) and was first introduced in 1942. Scale items were selected, from a larger pool of items, based on their ability to differentiate between normals (hospital visitors) and hospitalized (pathological) patients, by a criterion keying method. This method of test development is carried out in three phases, first, an operational index for the construct of choice is selected, second, items assumed to be associated with the index are selected, and third, groups are tested wherein scores are contrasted with the criterion group to see which items adequately differentiate the groups (normal from criterion). In this same manner, the original set of 504 items were administered to normals and selected,

homogeneously diagnosed patients (which served as the criterion group for the specific scale), wherein items endorsed in one direction (either T or F) significantly more frequently by the criterion group became the items contributing to the MMPI scale (for more in-depth explanation, see Greene, 1991, 2000). Since their method was empirical and no theoretical rationale served as a basis for accepting or rejecting items, *why* some items distinguished the control from the criterion group was not known. Additional validation procedures were employed for some scales, further investigating the effects of demographic variables on item responses (Greene, 1991, 2000). The result was an instrument consisting of 566 items upon which ten clinical and three validity scales could be derived.

This instrument subsequently became the most widely used and widely researched personality instrument in the world. Negative features of the MMPI, which eventually led to its revision were (a) with its norms that were outdated, and nonrepresentative, and potentially misleading, (b) its inclusion of ambiguous and possibly offensive items, (c) inadequacies of linear T scores, and (d) the authors' desire to include additional scales (paraphrased from Austin, 1994). In that one goal of its restandardization was to "preserve comparability between older and newer versions", the restandardization committee "took an admittedly conservative approach" in order to "retain test users while also improving the psychometric adequacy of the instrument" (p. 179).

Led by a proposal from committee member Butcher, the committee began formally revising the MMPI in 1982. One-hundred and six items were dropped, several due to religious, sexist, and/or outdated content (Greene, 2000), 107 items were added (pertaining to alcohol and drug abuse, client suitability for treatment, and work related

problems; p. 23), and 460 items were retained. The final result was an instrument with 567 items, 10 clinical, and 3 validity computed from the first 370 items, and additional supplementary, content, and validity scales computed from the additional items. The restandardization sample included 2,600 participants, representing seven states, to reflect national census parameters on age, marital status, ethnicity, and so on (Greene, 1991, 2000).

Both instruments, in their combined 60-plus year history, have been used by researchers, clinicians, attorneys, human resource specialists, and social workers (Austin, 1994), in clinical, educational, criminal justice (Elion & Megargee, 1975), vocational, police department (Costello, 1977), and other settings, in more than 65 countries, with over 115 recognized translations (Butcher & Graham, 1989).

Even with substantial revisions and restandardization, the MMPI-2 has been criticized as to its validity of use with minority and other special populations, in part due to characteristics of the normative sample. Not only are minority groups underrepresented (Long, Graham, & Timbrook, 1994; Butcher, Dahlstrom, Graham, Tellegen, & Kaemmer, 1989) and misrepresented (Pace, Choney, Robbins, Blair, Hill, & Lacey, 1997) but education is overrepresented (Butcher, Dahlstrom, Graham, Tellegen, & Kaemmer, 1989), as well. Additionally, the use of translated versions has been suggested when assessing bilingual individuals in order to obtain more valid responses. The rationale behind this is that bilingual individuals may be more comfortable and likely to self-disclose psychological and other information in their native language than they would in English due to ease of comprehension of the items (Velasquez, et al, 2000).

### The MMPI, MMPI-2 and Racial Minorities

Very few MMPI or MMPI-2 studies have been conducted using American Indians as participants, either normal or clinical samples, yet those that have substantiate significant differences between normal Indians and the normative sample (Pace, Choney, Robbins, Blair, Hill, & Lacey, 1997; Robin, Greene, Albaugh, Caldwell, & Goldman, 1999). Many more studies have used Black and/or Hispanic racial minority participants, which will be reviewed here to outline the MMPI's questionable validity with these populations. Although Black, Hispanic, and American Indian cultures are by no means the same, that differences attributable to culture exist between the dominant culture and racial minority cultures is the focus of this review. Also, the close correspondence between the two MMPI versions in reliability and validity consistency (Ben-Porath & Butcher, 1989; Graham, 1990), items shared, and comparable clinical and validity scales between the two allow that early research be applied to the MMPI-2 (Butcher, 1990).

Additionally, to date, "there is little systematic research that has investigated the influence of any single demographic variable on specific MMPI or MMPI-2 scales, or codetypes, let alone combinations of these variables. Only the variables *age*, in comparison of adolescents and adults, and *ethnic group* membership, in comparison of blacks and whites, have been explored in any real depth" (Greene, 2000). There are even fewer studies that have investigated supplementary or content subscale scores on any demographic variable for any minority group even though it is strongly suggested that elevations on any one MMPI-2 Basic Scale be further investigated via the corresponding subscale to best understand the nature of the client's situation and to best help them clinically (see Greene, 2000, p. 138). Although research on the MMPI-2 comparing



participant demographics is scant, there have been hundreds upon hundreds of studies criticizing the MMPI's utility with special populations. Reviewing all of these is well beyond the scope of this paper, yet, in that minority group-scores tend to be higher, indicating pathology, primary concerns are that this (1) either placed them at a disadvantage by either overpathologizing them or that (2) differences between them and the majority group were indicative of important behavioral differences (e.g. Dahlstrom, Lachar, & Dahlstrom, 1986; Dana, 1988, 1998).

MMPI scales F and 8, well documented as being effective measures of severe psychopathology (see Nzewi, 1999), were also frequently the scales that differentiated Blacks and American Indians from Whites on the early version of this instrument. Several studies have documented that African Americans score higher than Whites on F and on Scales 4, 8, and 9 (Elion & Megargee, 1975; Timbrook & Graham, 1994), yet, when matched by age, education, income, and/or intelligence, no significant scale means differences were found between the samples (Butcher, Braswell, & Raney 1983; Timbrook & Graham, 1994). Although Butcher, et al (1983) concluded that those White/Black differences found (in scales F, 6, 8, and 9) were reflective of pathology in the Black patients, Smith and Graham (1981) found that, although F scale elevations in their sample of White psychiatric inpatients were related to levels of pathology, similar elevations in Black patients was not. Interestingly, the Timbrook and Graham study (1994) excluded Black-subject scores for which no close White match could be found.

MMPI-2 research comparing Black and White participants is scant, but what has been revealed is that normal, Black, male students continue to elevate scale 8 and normal, Black, females elevate scale 5. Research on clinical samples is less clear cut: two of the

five studies published found that Blacks elevated scales 6 and 8, while three found no differences between Blacks and Whites on these scales (see Greene,2000).

In clinical populations, even though an elevated Scale 4 is a distinguishing characteristic of alcoholic in-patients, diagnosed alcoholic American Indians do not elevate Scale 4 as do Whites and Hispanics (Page & Bozlee, 1982). Page and Bozlee's study also concluded a greater incidence of psychopathology in Whites and Hispanics than among American Indian alcoholic in-patients. Black psychiatric in-patients have been reported to score higher on average on MMPI scales 2, 5, F, 6, 8, and 9 than Whites, who score higher on Scales 7, 8, 9, and F than American Indians (Butcher, Braswell, & Raney, 1983). Also, in this same study, more Black than American Indian than White in-patients admitted aggression-related symptoms, whereas more Black than White than American Indians admitted paranoid symptoms (p. 592). Rather than suggest that these differences may be due to the instrument or to differences in the psychological functioning between the samples and the MMPI normative data (Nzewi, 1999), the authors concluded that they reflected "actual symptomatic differences" (Butcher, Braswell, & Raney, 1983).

MMPI-2 studies comparing American Indians to the MMPI-2 normative sample have found similar elevations as were noted in MMPI studies. All studies found elevations on scales F, 8, and 9 in the normal Indian samples, but there were differences between the three studies relative to other scale elevations (see Greene, 2000, p. 482-8). An interesting finding by Robin, et al (1999) was that, as socioeconomic status increased, American Indian scores became more similar to the MMPI-2 normative sample, although significant scale differences were *still* evident. In other words, it appears that SES

differences in White samples means something different than SES differences in Indians, which is doubtfully only relative to scores on the MMPI-2. It may be that neither education nor income (manifest indicators of SES) attenuates Indian-White differences in the same way as they do within White groups. It may also be that within Indian cultures, because values and meanings different from those of Whites are placed on education and income, that culture circumscribes these variables not only as moderators of psychological health or sophistication, but also of health, wealth, or prosperity in general.

Although a major MMPI restandardization project has never been conducted in Mexico, other than with adolescents, a number of important studies have established differences between the Mexican and the U.S. normative groups. Additionally, many of these and other comparative studies have used college students as their sample of normal participants, which as mentioned earlier, may not constitute a 'normal' representation of the minority group in question.

In Mexican/White comparisons, higher elevations have been found in normal Mexican samples on Scales 2 and 8, and in a university sample, elevations on L and Scale 5 (for female students). These and other studies have concluded that, due to significant elevations among normal Mexicans, that "neither the MMPI adaptation nor the norms were culturally adjusted for the Mexican population" (Butcher, 1992). In the few MMPI-2 studies conducted thus far, consistent Hispanic elevation of the L scale has been noted (Velasquez, et. al, 2000), the elevation of which is frequently attributed to defensiveness but may more realistically indicate a culture based behavior of psychological reticence. Other studies, using translated versions of the MMPI-2, have concluded mixed results. When using the Mexican Spanish version with college students, often no significant

differences have been found between the Mexican sample and MMPI-2 normative scores on clinical scales although meaningful differences have been noted in Content scales. The translated version used in the above study takes into consideration differences in word meaning and usage and was developed through a transliteration process. When using the same translated version in Mexico with undergraduate students, differentiation between psychiatric and normal groups confirmed the test's reliability with Mexican populations (Lucio, Reyes, & Scott 1994). As all published Hispanic-White studies to date have compared only college samples, Greene (2000) suggests that it is premature to conclude that no differences exist between these groups and that additional studies using normal, Hispanic, adult, non-college student samples are needed (p. 482).

Additionally, the MMPI-2 is currently being translated for use in countries such as Belgium, Chile, China, France Hong Kong, Israel, Korea, Italy, Japan, Norway, Russia, Spain, and Thailand (Butcher, 1992) although few reliability and validity studies have been conducted to support its trans-national use.

The purpose of this study is to assess normal American Indians using the MMPI-2 to distinguish whether this sample, as represented by one tribe, does or does not elevate any MMPI-2 scales. Even though age, education, and socioeconomic status have no systematic effects on MMPI-2 scores (see Greene, 2000), proponents continue to suggest that these variables be controlled when comparing ethnic groups. Therefore, rather than fight the system, the variables gender, age, education, *and* level of acculturation will be controlled in this research. Any differences found will point toward (1) differing cultural beliefs, values, and practices, (2) a higher incidence of pathology due to past and present events and conditions, or (3) a combination of both as mediating variables in scale

elevation, and therefore in personality manifestation and development. As differences have been found among the few tribes previously assessed, differences are also expected between this sample and the normative sample as well. Although this research will attempt to present both sides of the issue, it is virtually impossible to, after 600 years of history, to differentiate and/or assign an accurate weight to either of the above causations. An additional goal of this research is to pinpoint specific subscales, which are used to augment basic scale interpretation, that differ between the tribes and the standard value ( $T = 50$ ). As these scores represent normative, baseline values whether differences are due to culture, pathology, or both, what this will inevitably accomplish is the development of more appropriate group norms. Without empirically derived group norms a standard for comparison and interpretation does not exist and the use of *standard* interpretation for diverse clientele is not valid; variations in interpretation, at least for Indian clients, may well be culture, and even Tribe specific.

### **Delaware Tribal History**

Although lengthy, the tribal history outlined below was included to aid the reader's understanding of at least one tribe's cultural beliefs and practices as well as the nature and breadth of tribal experiences and historical trauma, much of which is common to all American Indians. By knowing more about the history and American Indian experience, the reader may be better able to envision both a historical-trauma rationale as well as culture-driven differences in personality development and constructs therein.

#### **Origin**

The first *recorded* contact between the Delaware tribe and Europeans occurred in 1524, when Giovanni da Verrazano, an Italian navigator in the service of France, entered

New York harbor and attempted to kidnap several tribal members. Over the following 400-plus years this tribe experienced similar maleficent interactions with these and other 'salt water people' (Sultzman, 2000; Weslager, 2000; Wilker, 1994).

Upon contact with the Dutch in the early 1600s, there were an estimated 8,000 to 20,000 tribal members scattered among the banks of the Delaware River in what is now New Jersey, Delaware, New York, and Pennsylvania (Sultzman, 2000; Weslager, 2000; Wilker, 1994). They were not a migratory tribe and appeared to have lived in the same area for thousands of years before contact with Europeans. Although they called themselves the Lenni Lenape ('original people' or grandfather tribe), they are frequently known as 'Delaware' and there are at least two theories regarding how they received this European name. Either they were given the same name as the river upon which they lived, derived from De La Warr, the (1610) governor of the English colony at Jamestown, or the name was derived from a misunderstood Lenape phrase (Sultzman, 2000; Weslager, 2000). Regardless, they have been referred to by Europeans as 'Delaware' since the early 1600s and both terms will be used interchangeably throughout this paper.

Originally the Lenape consisted of approximately thirty to forty different bands, living in small, politically independent communities, each with their own government, Chief (usually called a Sachem), and supporting councilors, or 'great men' (Sultzman, 2000; Weslager, 2000). Chiefs did not have servants, greater wealth, or more authority than other tribal members; potential successors were nominated when the present chief grew too old to adequately represent the people. As the lineage was matriarchal, only the chief's brother, his sister's son, or the son of a sister's daughter would qualify as successor (Weslager, 2000).

Three different dialects of the same Algonquin (aka Algonquian) language were spoken among the bands, which were separated into four geographical areas, and although each could communicate with the others there were significant differences in vocabulary and pronunciation. By the 18th century, due to European borne diseases, the population had decreased significantly, many of the original band structures had disintegrated, and the four different groups were brought much closer to one another. Because the people spoke three language dialects and lived in three separate geographical locations, documentation has mistakenly translated this into band or clan affiliation (eg. Turtle, Turkey, and Wolf). In absence of sir names, relations had always been determined by some (undocumented) method of clanship, yet the three animal clanship terms were eventually adopted by both the Lenape and Europeans to differentiate the groups linguistically, politically, and relationally. Clanship was always inherited from the mother, and because this was the method of determining kinship, it was taboo to marry into or bear offspring with a member of one's own clan (Sultzman, 2000; Weslager, 2000).

Typically a mild-mannered and sedentary people, sustenance was attained through fishing, hunting and trapping, agriculture, and collecting wild nuts, berries, herbs, and roots. Bands in the northern areas dressed, lived, and hunted differently than those of the coastal or river regions. One-room bark wigwams or longhouses of different shapes and sizes served mainly as sleeping quarters for one or several families, most of the day being spent outdoors. Tools, weapons, and other utensils were made of stone, wood, bone, shell, and clay; clothing was made of animal skins, feathers, and plant fibers, depending upon the season. Corn, beans, squash, and pumpkin were planted, harvested, dried, and

stored for the winter, as were wild fruits and berries, nuts, and maple sugar (Weslager, 2000; Wilker, 1994). Tobacco, used only for ceremonial purposes, was also harvested and medicinal herbs were collected and used to treat illnesses and ailments. Sweat lodges lined the creeks and tributaries and were used to prevent and cure ailments as well as for spiritual purification rites. Hollowed out logs were used to traverse the waterways in the event an individual or family had to travel long distances (Weslager, 2000).

As with all other Indian tribes, the Lenape concept of land tenure was entirely different from the European traditions of land ownership and sale; living a sedentary life, they had no need or ambition to expand their territories or extend their political influence. Land was like air, sunlight, or the river waters--a medium necessary to sustain life. The idea of owning the life-giving land was as alien to their thinking as was owning the air or the sunshine. Hunting, fishing, and/or trapping rights on an area of land could be transferred, but that did not mean that anyone owned the land nor that anyone could exclude others from entry. Families did possess respected territorial rights to seasonally hunt and fish certain areas, which were handed down within the family, but this was for survival purposes only. In contrast, the land in Europe had been divided and subdivided for so many centuries that vast stretches of unoccupied forests was a completely new concept to the white settlers. The common man in Europe had no property, no rights to firewood, game, fish, recreation, or even farming unless granted by a land-owner. Europeans tended more to try to dominate nature than did the Indians, who tended to consider themselves an integral part of nature, survival depending upon maintaining one's own place in the scheme of things (Weslager, 2000; Wilker, 1994). Additionally, the concept of personal wealth was quite different from European standards of the time;



wealth was conceptualized by giving, with the abundance of anything always being shared with others, whether it was food, gifts received, or acquisitions by other means, only the smallest portion was retained by the gift-giver (Weslager, 2000).

### **Social Roles**

Kinship was a fundamental concept in the social organization and life revolved around the immediate family. Men were the protectors and providers of meat, whereas women did the gardening, sewing and pottery making, tended the children, and carried supplies on long journeys, so that the man's arms were free to protect the family. The elderly were held in a position of esteem, having survived a long and difficult life. Children were rarely punished and never mistreated for fear that the Creator would remove them from undeserving parents. There were no formal marriage ceremonies and, although some unions were arranged by parents, usually a young couple simply decided to live together. Courtship was a matter of gift giving rather than of romantic love; public affection was never displayed. It was very rare for a couple with children to separate and even more rare for a man to have more than one wife (Sultzman, 2000; Weslager, 2000).

Upon contact with the Dutch, for the purpose of trading for 'valuable' European goods, the role of Lenape men expanded from protector and hunter to also include the role of supplying furs. Also, since Indians frequently offered their wives or daughters to newcomers as a gesture of welcome, acceptance, and friendship, this, in the early 17th century, was the beginning of crossbreeding between Europeans and many Indian tribes (Weslager, 2000).

## **Spiritual Beliefs**

There was no one God, but a primary Creator, and many lesser Gods, Spirits, or forces that were ever present in all things and in all aspects of life. Before and after planting season, a hunt, or the gathering of wild foods or herbs, the Spirits were asked for protection from harm or guidance and influence or were thanked for their role in the event. Certain Spiritual ceremonies were always performed before and after major events. The Lenape's concept of the beginning of life was that humans were brought to Earth on the back of a giant turtle, which swam out of the sea. From earth upon the turtle's back a tree grew, which sprouted the first man and woman. Because of this belief, the twelve plates upon the turtle's back have always held high significance in ceremonies, with everything occurring in increments of twelve. The number four and the four directions (N, S, E, & W) are also of high significance, with four different Spirits being custodian for each direction and responsible for four different types of weather (Weslager, 2000; Wilker, 1994). Another belief was that Mother Earth's breathing caused the ebb and flow of the ocean tides (Weslager, 2000). The most vital and intimate phase of Lenape spirituality was a belief in dreams or visions, which were the point of contact between everyday life and the spiritual world. A belief in the existence of a personal guardian, which was usually an animal or bird, was also common. Although not all were, those who were blessed with a guardian spirit received in a vision always kept a symbol of it on their person at all times and could consult this Spirit for aid, comfort, or for foretelling upcoming events. Rites and ceremonies were performed for many reasons, although most frequently to appease an offended spirit force or to seek blessing for crops, etc (Weslager, 2000).

Although it is unsure whether or not this method was an original spiritual practice, at least from the late 1770s until 1924, many ceremonies and rituals were performed in what was called a "Big House", a log structure always with two fires and two doors opening to the east and west. Twelve carved faces of the Misingw (M'sing), the Hunting Spirit or the Keeper of the Game were hung within the structure and *watched* each ceremony (Sultzman, 1994; Weslager, 2000; Wilker, 1994). Men and women recited their visions and/or asked the Spirits, any of the Four Directions, the Thunder, or Mother Earth for bounty, assistance, or protection. Names were given to children not at birth, but after the parent(s) or a visionary experienced a significant dream or vision regarding the child. An individual's name could change later in life after a significant achievement or upon another significant vision. These names were kept secret outside of the family circle and also from evil spirits, who could perform evil more readily if they knew an individual's real name. Nicknames or aliases were used instead of the given name and these are very likely the ones recorded on early deeds and other written records, although relatively soon after contact with Europeans, many Delaware were referred to by and may have adopted Christian and European names in addition to their given names (Weslager, 2000).

A belief in the survival of one's soul or spirit after death was an integral part of spirituality, although there was no concept of redemption from sin or salvation or of a devil or hell in the Christian sense. The deceased's spirit was said to stay in the vicinity for a period of days before traveling on to the highest heaven, where pain, sickness, and sorrow were unknown (Weslager, 2000). Additionally, when a tribal member died, a grave marker, or "identifying thing" as the Delaware term directly translates, was made

by a friend of the deceased--never by a family member--and placed on the grave.

Different marker shapes were made for males and females and a mourner made symbolic red designs on the marker during the burial ceremony. The deceased was placed in an extended position with the head pointed east and the feet west (Sultzman, 1994; Weslager, 2000; The Delaware Cemetery in Dewey, OK is still in use and many tribal members are still buried with the traditional markers).

### **Introduction into the Fur Trade**

The first contenders for the fur trade with the Delaware were the Dutch, led by Henry Hudson, in 1609 on Manhattan Island (Sultzman, 2000; Weslager, 2000; Wilker, 1994). At this point, in efforts to trade for European goods, of which the Indians had become fond, Indian warriors began hunting and trapping for profit and, many times under the influence of alcohol furnished by the Dutch, also began warring with other tribes for hunting territories. By the mid 1600s many thousands of pelts were being shipped annually to Holland. After only about 25 years of fur trade, the beaver and other animals native to the area were virtually wiped out (Sultzman, 2000; Weslager, 2000).

### **Early Land Deeds**

In 1624, the first exchange of land occurred with the Dutch swapping European goods for two small parcels of land, although the first recorded *land transfers* or deeds are dated 1629. It is clear that the Indians did not understand the significance of the documents or of the transfers of the land; they believed they were agreeing to swap and share trapping rights. In 1633, after a series of misunderstandings over land and uneven trades, the Lenape began to move in the direction of consolidating their forces. Swedish arrival in the area brought more animosities between the Swedes and the Dutch and

between the Indians and both European groups. The Swedes bartered with the Delaware for their first large parcel of territory in 1638, although they made the deal with a neighboring tribe, believing all Indians to be as one (Sultzman, 2000; Weslager, 2000; Wilker, 1994).

At least twenty land deeds or transfers occurred in the next 300 years between 1600 and 1900, including the famous Walking Purchase of 1736 (Weslager, 2000; Wilker, 1994), as white settlement forced the Delaware tribe to relocate at least twenty times. By 1900 they had lived in Delaware, New Jersey, New York, Pennsylvania, West Virginia, Ontario, Michigan, Indiana, Missouri, Arkansas, Louisiana, Texas, Wisconsin, Kansas, and Oklahoma.

### **Relocation**

By the 1660s, small pox, the first of at least 14 separate epidemics that significantly reduced the Delaware population, had broken out in neighboring tribes and was transmitted to the Delaware in 1663, which the Dutch have been accused of intentionally spreading. At this time the Delaware began leaving their native lands, which coincided with the downfall of Dutch power in the area and the beginning of English rule there. Due to these epidemics, the total Delaware 'warrior strength' in 1671 had declined to about 1,000 from an estimated 8,000 to 10,000 only 60 years earlier (Sultzman, 2000; Weslager, 2000; Wilker, 1994). Along with various other tribes, once autonomous bands of Delaware began converging near the Susquehanna River (northern Maryland) in the late 1600s. After relocating there, they were promised never to be bothered by White settlers and, in unison, the tribes vowed never sell to the land again. Here they lived peacefully, banding, interbreeding, and exchanging customs with several

other tribes, for several years before wandering west of the mountains to the Ohio River in the 1730s. Battles between the English and French over western lands developed into the French and Indian War, but not before forcing the majority of Delaware remaining on the Susquehanna River from this region (Weslager, 2000; Wilker, 1994).

In retaliation for the many wrongs done at the hands of the English, a disorganized war party comprised of the Susquehanna Delaware and led by a self-declared war chief, raided, burned, looted, and killed or captured English settlers in nearby towns. The Governor of Pennsylvania officially declared war on this faction of the Delaware in 1756, wherein cash bounties were offered for Indian scalps. A peace treaty was officially offered and accepted in 1762, wherein the promise was again made that no white settlers would be permitted to settle on Indian land west of the Allegheny Mountains. This did not last very long due to settlers from Connecticut and Ohio trespassing, burning Indian villages and settling west of the mountains. Another series of battles ensued followed by Indian surrender in 1764 (Sultzman, 2000; Weslager, 2000; Wilker, 1994). Representatives from the three Delaware bands, Turtle, Turkey, and Wolf, signed peace treaties and from this point on the animal clan association stuck and were used by both the English and the Delaware. This treaty kept the Delaware from seeking revenge upon any white or black man, even in the event of trespassing on Indian land or killing Indian people. When Pennsylvania, Connecticut, Maryland, and Virginia began bearing arms against each other for western land rights, sworn to peace, the Delaware had no alternative but to leave the area once again, some moving west to the State of Ohio, some moving north to the Albany, NY area, and some relocating to Canada (Sultzman, 2000; Weslager, 2000). For those relocating to Ohio, life along the Ohio

River was reminiscent of life in the Delaware River valley and both native and converted Indians remained and thrived there until 1795, following the outbreak of the American Revolution.

Just prior to the American Revolution the total Christians and non-Christian Delaware population west of the Alleghenies was about 2,500 to 3,000, which is relatively insignificant considering original numbers. Regardless of numbers, the Continental Congress continued to consult with Delaware leaders as spokespersons, believing the Delaware to be the grandfather tribe, both having much influence and tending more, than some other tribes, toward keeping peace than engaging in war. Prior to the war, in 1778 the 'Ohio' Delaware sought support from the Continental Congress to form the 14th United State. Although this never occurred, Congress led them to believe that it was a possibility, thus securing the tribe as an important ally during the Revolution. During the Revolution, tribal clans were split in supporting either the British or the Americans cause. After Americans disregarded the conditions of the current peace treaty, the Delaware lost trust in the Americans and many bands began to fight for the British cause. As a result, in 1782, thinking all Delaware had participated in the revolution, an attack led by the highest military authority in Washington County slaughtered the entire village of Delaware Christian Indians (Weslager, 2000). Subsequently, the Delaware and many other tribes in the area lost faith in all white men, in their religion, and in their God (Sultzman, 2000; Weslager, 2000; Wilker, 1994). When the Americans eventually won the Revolution, England was forced to cede land west of the 13 colonies for further American expansion; land already occupied by several dozen displaced Indian tribes. Since peace treaties had been made with England and

America won the war, the States declared all previous treaties (that specified the Ohio River as the westernmost American boundary) defunct (Sultzman, 2000; Weslager, 2000).

In 1783, thirty-five different tribes, including the Delaware, met on the Sandusky River and formed an *Indian Confederacy* to defend their settlements against all invaders (Weslager, 2000; Wilker, 1994). In attempts to appease as well as to break the Indian Confederacy apart, State and Federal governments began offering negotiations. Despite its original purpose, but believing it for the best, the Indian Confederacy signed a treaty placing themselves under the protection of the new American government and agreed to relocate to an area within the Northwest Territory. At this time, the largest bands of Delaware were living in various places in Ohio, whereas a small band (now referred to as the 'Western' Delaware) which left the main body in 1789, had settled near present day Cape Girardeau, Missouri in Spanish territory. The 'Moravian' band continued to remain separate from the above two bands, settling first on the upper Sandusky River (current Detroit area) before moving to the Huron River (Milan), then to the Thames in Canada, near a settlement of Delaware that had relocated there much earlier (Sultzman, 2000; Weslager, 2000).

Following an uprising and a crushing defeat, the Indian Confederacy again relocated, signing the 1795 Greenville (Ohio) Treaty with the US to occupy lands in north Ohio and within the territory now comprising Indiana and Illinois. The original intent of this treaty was to soften the blow of once again forcing them to vacate their land and the treaty conditions stipulated that from the date of the treaty and every year "forever after" the government would pay any Indian nation agreeing to the treaty



conditions with goods or with cash. The Delaware were allotted land in Western Ohio as far west as the Mississippi River, which was the westernmost boundary of US territory. Again, land-hungry settlers invaded the Ohio territory so quickly that in less than 10 years Ohio contained the population required for statehood (Sultzman, 2000; Weslager, 2000).

Under Pres. Jefferson, the Louisiana Territory was purchased from France, both to acquire the port of New Orleans and to again remove the Indian tribes in Ohio. He had conceptualized a 'White-Indian neighbor' arrangement in Ohio wherein the white settlers were encouraged to 'Americanize' the Indians there, teaching them their way of agriculture, farming, and formal education. Since this situation was not working well and most of the Delaware were tired of and resented this effort, they ceded their Ohio land and moved to Indiana territory in about 1800 (Weslager, 2000; Wilker, 1994). While there, the Delaware reverted strongly to their old Indian customs, returned to living in bark huts or log homes, and were openly hostile to all whites, including the Moravian pastors and all other Christian missionaries. State and federal agents continued to try to Americanize them, offering them farming implements, domestic animals, and money. Although some used 'modern' farm tools most preferred the old ways and refused to plant large crops and/or fence in their crops and livestock. The men returned to hunting and the old way of doing things; it was as if 100 years had not passed since they were removed from their original homeland. But, since the US Government had awarded Revolutionary soldiers property in Indiana for their service in the war, very quickly other settlers began squatting on the land. The subsequent treaties of 1802, '03, and '04 whittled more land from them (Weslager, 2000).

By 1805, Pres. Harrison had persuaded the Indians to cede 56 million acres to the US, attempting to make the bargain with the Delaware tribe who had no right to sell as they were living on Miami tribal land. Needless to say, the deal fell through.

Things had not gone well for the Indians in many years including drought and low crop production. During these hard times a Delaware visionary experienced a moving dream and declared that the bad luck was due to taking up the ways of White man, which was the general consensus of many of the tribes there. Coinciding with this unrest the Shawnee chief, Tecumseh, was visiting many tribes in an attempt to gain support for a united Indian force against White encroachment upon Indian lands (Sultzman, 2000; Weslager, 2000; Wilker, 1994). He sought federal support for a separate Indian Territory or US State, which was denied just as it had been in the 1770s (Sultzman, 2000; Weslager, 2000). Nevertheless, triggered by the desire to remain separate and independent, an uprising of angry Indian braves, excluding Delaware, suffered a resounding defeat at the Battle of Tippecanoe in 1811. This resulted in outright hatred of Americans and a distinct split between tribes who sought to maintain peace and those who wanted to fight for the Indian cause. The Delaware remained neutral even though their brother tribe, the Miami, joined the British cause. The subsequent defeat of the British brought hordes of American settlers westward into Indiana which, when adequately populated, became a state in 1816. The US government enacted an 'absolute right' to sell any and all land in Indiana confiscated from British occupancy in the Treaty of Paris. Reneging on previous treaties, the government maintained that Indians had only the right of occupancy on US land and that the government held all land titles as well as the absolute right to do with it what they wanted (Weslager, 2000).

In the Treaty of 1818, the tribes were again cajoled into ceding their lands and relocating west of the Mississippi, wherein they were given three years and supplies for doing so. In perhaps the most important treaty for the Delaware and other tribes involved, wherein land ownership was removed from Indian control, in 1820 along with 25 other Indian nations, approximately 2,000 Delaware were moved west (separate Delaware groups still resided in Ontario, in New York, in Wisconsin, in Ohio, as well as those located in Spanish territory in SE Missouri who had since moved on to either Arkansas or Texas; Sultzman, 2000; Weslager, 2000; Wilker, 1994).

The main two problems with this governmental move was that (1) there were already other tribes living in the area allotted the displaced Indiana tribes and (2) the military personnel supervising the move were inexperienced in handling Indian affairs, the office for which was not set up until 1832 and not transferred from military to civilian control until 1849. The main body of Delaware settled on James Fork near Wilson's Creek in the NW part of Christian County (MO), which had long before been over hunted. The scarcity of game in the Ozarks soon sent Delaware hunters west to the plains and prairies where thousands of buffalo wintered along the Red, Brazos, and Rio Grande Rivers, wherein competition and conflict with the skilled Osage hunters was inevitable. Many hostile acts occurred between the two tribes; stifled young braves sought to prove their manhood and warring skills. After only a few years there the government again negotiated a treaty with the Delaware in 1829, canceling their occupancy there and allocating them lands in Kansas at the junction of the Kansas and Missouri Rivers. Again they were promised the occupancy and use of this land "forever....against the claims and

assaults of all people..." Their land in Missouri was sold, the profits to be used for schools in Kansas for the Delaware children (Sultzman, 2000; Weslager, 2000).

The Kansas reserve contained almost 3 million acres and only when living there did the Delaware begin to settle down, farming and raising livestock, rather than seasonally roaming in search of game. Many built frame houses and even barns and outbuildings for livestock. Those most successful at farming were the most energetic to erect fences, build smokehouses and stables, and use horse-drawn (rather than hand) plows. Life was good and the Delaware appeared to be satisfied although the notion of establishing an Indian territory of over 70 million acres was still being considered and was proposed by Congress in 1836. The proposal was to allot a territory (Oklahoma) large enough to accommodate ALL Indian tribes as well as allow each tribe to elect their own representatives to the US Congress, but the proposal was tabled (Weslager, 2000).

When the movement to California in the 1840s began, followed by the 1859 gold rush in Colorado, the only route to the West was through Indian settlements. Delaware guides were frequently hired to lead wagon trains through the 'uncivilized' territories west of the Kansas River, stopping to hunt and camp as necessary, and conflicts with western Indian tribes ensued (Sultzman, 2000; Weslager, 2000). The Federal government attempted to resolve these disputes by paying western tribes to move from their lands and allow the relocated eastern tribes room to roam and hunt.

Meanwhile in Kansas, Methodist, Baptist, and Moravian missionaries were active among the Delaware and churches established schools (missions) for the Delaware children. Although children were frequently 'enrolled' through deceptive means, most missionary schools taught children to read and write in English and taught hymns and

scriptures in the Delaware language. Children lived in dormitories and attended school 10 months of the year. Christian influence upon the tribe was widespread and many old customs were abandoned for Christian ones. Also during this time, contrary to the wishes of tribal members, Indian agents and commissioners began to play a part in the selection of Delaware chiefs and sub-chiefs and assisted in the selection of the Delaware head chief in 1860. At this point, within the tribe, a Turtle, Turkey, and Wolf band chief was still being elected as well as a single head chief. Band councils were also appointed and consisted of five members, serving as a legislative body or court. In 1855, the Delaware were appointed their own Federal Agent and in 1865, the former superintendent of the Shawnee Mission (Baptist) school was named US Indian Agent to the Delaware by Pres. Lincoln (Weslager, 2000).

The Delaware lived happily in Kansas for 38 years before the Treaty of 1866, which removed ownership of Kansas lands (Sultzman, 2000; Weslager, 2000). As White squatters, railroad companies, and the Kansas-Nebraska Act, which allowed US citizens to settle on Indian land, took chunks of the land the government again forced them to relocate. Swarms of people invaded Kansas prior to the Civil War in attempts to create a majority on both sides of the slavery issue. This was too much for the tribes there, who had been strongly encouraged by their Indian agents to remain neutral on the issue. At this point, US military officers actually offered Delaware land for sale to the public before any land contracts had been either written or negotiated. Squatters not only stole their land but also their horses, livestock, timber, and personal property. Since Indians were not American citizens they had little recourse for protecting or recovering their property. Their only alternative was to appeal to the government to force the thieves into

paying for what they had taken, which equated to 'legally selling' their property as far as the government and the squatters were concerned. Additionally, the government paid them \$10,000 for than a million acres, a deal which, 100 years later, was challenged and deemed to be worth over \$600,000 at 1854 land prices. Yet the size of their territory decreased tremendously with these deceitful practices. Also, rather than keep all their funds in a federal trust, which would have eventually made them a wealthy tribe, the Delaware opted to distribute land payments per capita in order to replace the stolen livestock and personal property (Weslager, 2000).

By the 1860s the Delaware had had enough and met secretly, without their Indian agent who had been trying to change customary council and tribal practices, to discuss moving from Kansas to the Rocky Mountains, the Far West, or the Southwest to escape the onslaught of white settlers. It was originally the Delaware's initiative, not the government's, to investigate life in Indian Territory (now Oklahoma) with the Cherokee and Choctaw tribes already there. From their own national securities they funded an expedition to visit in 1860, offering to join with the Cherokee tribe if land purchases could not be negotiated. Although the government finally allotted small acreages of land in Kansas to tribal members, the rest of the land was sold or offered with eminent domain to the railroads. Railroad companies were very influential on government policies, as they were the means for expanding the nation as well as communicating with the Far West. Carrying mail, passengers, and freight, which Indians had little use for, the railroads exerted great pressure on the government to relocate the Indians and purchase their land. Shady methods, including bribery and extortion, were used to obtain the last of the Delaware land in Kansas. The Department of the Interior, at the time "the most

corrupt department of the government", not only failed to protect the rights of the Delaware but actually benefited from land sales and treaties at the Delaware's expense (Weslager, 2000).

The Civil War came and went leaving the many male Delaware volunteers to deal with restlessness, alcohol addiction, and fighting among themselves. The first written tribal laws in 1886 were in direct response to the veteran's behaviors. For the first time ever, punishments were set up for crimes and misdeeds including the use of alcohol. Although the government was happy to see this 'civilized' effort, the written laws were rarely obeyed and even more rarely enforced. At this point there were two different schools of thought among the Delaware: the traditionalists, who fought to preserve elements of their Indian way of life and shun the ways of the White men and the modernists, who sent their children to school, attended church, and used modern farming tools. Although the two sides lived life with very different resources, both sought to maintain their heritage and their Delaware identities. In the winter of 1866 the Department of Indian Affairs brought tribal chiefs from Kansas to Washington in attempts to persuade them to sell their land and move to Indian Territory or further west (Weslager, 2000). The government offered any tribal member voluntarily doing so 160 acres of land already ceded, or to be ceded, by the tribes already residing there. The government also proposed that any individual willing to dissolve tribal relations and become US citizens could stay on their allotment in Kansas and still take their share of the tribe's national trust fund (Sultzman, 2000; Weslager, 2000). Although most of the Delaware left for Indian Territory, when they arrived there the Cherokees had not yet ceded the land (reserved for the Delaware) to the government, and the trouble began.

## **History in Oklahoma**

The government made an agreement with the Cherokee Tribe, who were one of the 'Five Civilized Tribes' (already relocated to Oklahoma) having their own formal government, schools, etc., to only place "friendly, civilized" Indians on Cherokee land, subject to agreement with the Cherokee Nation and approval from the US president. The Cherokee tribe agreed, with the stipulation that any tribal members residing in Cherokee country also agree to be incorporated into the Cherokee tribe. Although this was the fourth move for many of the tribal Elders, the Delaware wanted to leave Kansas as soon as possible. Although there were serious disagreements with the conditions of the move, a contract was written, signed, and approved by Pres. Johnson in 1867. Nine hundred eighty-five tribal members signed the required list to be allotted land in Indian Territory. Twenty modernists and their children elected to become US citizens and remain in Kansas.

Life in Indian Territory was anything but easy, given land disputes, old inter-tribal scores to settle, poverty, and the wrath of Mother Nature. About 225 other Delaware families, who had been living in Spanish Territory in Missouri in 1815 relocated to East Texas and by the 1830s, although reduced to only 150 families, were living with other displaced tribes on what remained of the Caddo Confederacy. By the 1850s, this band, now numbering only 85 families, was forced into Indian Territory by Indian-leery Texans who had been subject to fierce Comanche raids for a long time and did not want to deal with *any* Indians. In 1895 Congress ratified another agreement with the Cherokee for a reservation encompassing present day Anadarko, OK for the Caddo and Delaware band from Texas (Weslager, 2000).



Mainly out of necessity the revival of customary Delaware basket weaving, woodworking, and other crafts occurred, as did the use of wild herbs, traditional remedies, and sweats as cures for ailments and illnesses. Many men took up hunting for game again rather than tie themselves to the land, which they had resented all along. A new Big House was constructed and families came from afar to attend the traditional 12-day ceremonies (Weslager, 2000).

Poverty stricken, the Delaware demanded the government disburse trust funds so that they could improve their living conditions; they were paid on a per capita basis in 1891 and 1893, emptying their federal account. Although the Cherokee tribe routinely received federal monies as well as payment for tribal lands sold, they refused to include Delaware members in allocation. Because, according to their 1867 agreement, at least 985 Delaware were members of the Cherokee tribe and, according to the Treaty of 1866 the government was obligated to "protect, preserve, and defend the Delaware in their just rights", the Delaware demanded either their share of the funds or that the government return to them the money they had spent to purchase and improve Cherokee land as well as the dues paid for Cherokee tribal membership status. Litigation over these issues, as well as for unpaid land purchases and timber and personal property losses while in Kansas, was begun in the US Court of Claims. The decision, on behalf of the Delaware, was appealed by the Cherokees and heard in Supreme Court in 1894 (Sultzman, 2000; Weslager, 2000). Although the 'principal Chief' of the Delaware (who had never been elected, since the position was technically abolished with the 1867 Cherokee agreement) fought and won for the tribe, other disagreements with the Cherokee soon followed over gas, oil, and coal found on Delaware land. Unscrupulous "Cherokee" businessmen

(mainly white men who had married Cherokee women) claimed mineral rights to these lands and feuds and battles (literally) ensued between the two tribes. The Cherokees, borrowing the frequently used governmental term, eventually took the position that the Delaware had purchased only the 'right of occupancy' on the land. Individual Cherokee members were not allowed to own property, owning only the improvements on the land they occupied, and they took the same stance with the Delaware, although this had not been a condition of the original 1867 agreement, which guaranteed the Delaware tribe full ownership of the land (Weslager, 2000). The Delaware were unable to obtain satisfaction from the Cherokee government and brought another suit to the US Claims Court in 1898 for the purpose of defining their rights to title and possession (Sultzman, 2000; Weslager, 2000).

During these litigations the US government deserted the Delaware and abandoned the guardian role it had long held. A decision was finally made against the Delaware's full title to the land, which was immediately appealed. In the meantime, the 'Land Run' occurred and White settlers were overrunning Indian Territory; by 1896, out of the 365,000 residing there, 300,000 were white settlers. The Dawes Severalty Act, passed by Congress in 1887, intended to eliminate Indian Territory and create a state that would embrace the Indian tribes there (and their land). On behalf of the U.S., Senator Dawes entered into negotiations with the "Five Civilized Tribes" to purchase tribal land or allot acreages to individual tribal members. The Tribes resisted this, fearing high taxation and loss of their Indian identities, but the government persevered and passed an amendment to the Dawes Act in 1901 decreeing citizenship to all Indians in Indian Territory. A detailed roll of all Indians was made and land trespassed upon by White squatters was

supposed to be restored to the rightful Indian owners. Approximately 110 acres was allotted, although not to every Indian man, woman, and child living in Indian Territory, but only to those who had signed the 1867 registry; all others were to be treated the same as individual Cherokee tribal members, who could not individually own land (Sultzman, 2000; Weslager, 2000). In 1904, the Delaware were given a paltry lump sum by the government "to settle all claims and demands of every name and nature" between the Delaware tribe and the United States, which actually did not settle much of anything. In 1946 Congress established the Indian Claims Commission to act as a court regarding claims between Indian tribes and the U.S. government. The Commission's job was to evaluate and settle any unfair claims, treaties, or land deed transactions; several hundred claims were filed between 1946 and 1972 and over \$100 million were awarded. Disbursement of these awards depended upon proof of lineage, heritage, and/or adequate blood quantum, the degree of which was mandated by either the government or the tribe (American Indians are the only U.S. racial minority whose membership is mandated by the federal government). For the Delaware, proof of heritage was linked to individuals who had signed the 1867 roll (Weslager, 2000).

The Delaware tribe sought and was granted sovereignty status in 1996, thus ending 130 years of Cherokee government and the reestablishment of their own (Sultzman, 2000; Weslager, 2000).

### **Current Population**

Of the original count of 20,000 in the 1600s, to the 4,000 in 1670, to the 2,000 in 1845 through 1910, to present day numbers of about 16,000 in both the US and Canada, the Delaware population has undergone drastic changes. Currently about 10,000

members belong to the Oklahoma Eastern Band, about 1,200 belong to the Oklahoma Western Band, there are about 2,000 of the Munsee band living on three reserves on the Munsie River in southern Ontario, Canada, about 1,500 Munsee live in the US in Wisconsin and Kansas, and several other smaller bands live in New Jersey, and Pennsylvania (Sultzman, 2000; Weslager, 2000).

### **History of the Comparative Tribal Samples**

A brief history of the tribes to which the MMPI-2 standard and the Delaware data were compared may help the reader understand more about the uniqueness of cultural and historical experiences. This may also help the reader understand, from a cultural perspective, basic and subscale scores. As mentioned above, the two tribes assessed in a 1997 study will be referred to as the SWPO (Southwestern Plains Oklahoma) sample and the EWO (Eastern Woodlands Oklahoma) sample. The SWPO sample came from a tribe with a total enrollment of about 10,000. Historically this tribe lived in the northwestern U.S. and was relocated to regions in Texas, Oklahoma, and New Mexico in the late 1700s. They were nomadic, roaming and hunting buffalo and deer, and living in easily portable teepees. The society was patriarchal, social structures consisted of extended families and bands, and they were fierce warriors and protectors of their hunting grounds and tribal members. They kept the Spanish and Mexicans at bay for two centuries before engaging in military conflicts with various United States militias. Beginning in the 1830s, their lands were claimed by white settlers under the ruse of manifest destiny, the gold rush, and white superiority. The tribe fought valiantly against assimilation until the late 19th century, when they were vanquished and relocated to individual 160-acre plots in a southwestern section of Oklahoma territory. Beginning in the early 20th century, the

children were forced into boarding schools and taught the English language and religion at the expense of their own. In the latter part of the 20th century, it became routine for children to enroll in public schools, just as they do today. Today, they live among 200,000 Euro-Americans in the Oklahoma area that was once their reservation, yet they have their own government, constitution, and tribal council. Although many tribal members proclaim a Christian faith, many continue to practice age-old peyote ceremonies in their own Native American Churches. They maintain tribal customs by keeping in contact with one another and attending organized religious ceremonies and powwows (Cash & Wolff, 1974; Fehrenbach, 1974).

The EWO tribe has a membership of over 100,000, which, for a large percentage is a matter of citizenship rather than cultural participation, although tribal customs are still practiced and the tribal language is still spoken and taught. The tribe originated in the Southeastern part of the United States and, upon their first encounters with Europeans, were living in thatched houses within established villages, growing crops for their primary sustenance. European explorers brought with them diseases, against which the tribe had no immunities, wiping out large numbers of tribal members. Fur traders took tribal women as wives and began residing in tribal villages. With them came European ways of life: the English language, European housing, guns and other weapons, and beliefs and values that promoted individual ownership of properties and inequalities of wealth. Tribal members began hunting for profit, selling and trading furs and also engaged in slavery for their own benefit. Many tribal members became Christians and began attending Christian boarding schools. In 1827, the tribe adopted a constitution based upon the U.S. constitution, which relinquished power from the town counsels.

Conflicts with state and federal agencies over tribal boundaries led to an army-driven, mass relocation to Oklahoma territory, in which more than half of the tribe died in route. Although a tribal government was established and schools were conducted and laws distributed in both English and the tribal language, the Civil War weakened the tribe to the point that the US federal government began governing many tribal affairs. In 1898, the Dawes Commission abolished communal residency and forced individual land ownership by allotting tribal members 160 acres per person. When oil was discovered on tribal allotments, businessmen conspired with the judicial system to trick, coerce, and/or force them off of their land. In the '60s, many were relocated from what was left of their lands to cities for job training, wherein assimilation was stressed as means for a better life. Although the reservation is gone, many still hold and honor traditional beliefs and customs, participate in stomp dances, and speak the tribal language (Carter, 1976; Ehle, 1988; Wright, 1992).

Because of the differing origin of the three tribes it might be predicted that MMPI-2 subscale scores would vary tremendously between them. But because of the passage of time since the tribes have lived according to their original lifestyles and due to the similarity in experiences with relocation and rehabilitation efforts, some of these differences may well be attenuated. The question remains: Have the cultures survived or rather can aspects of the cultures that can be measured by this test be differentiated from Euro-Americans, as well as from each other?

### **Conclusion**

Now, if a people had personally, vicariously, or multigenerationally suffered abuse, threats, harm, broken or unfulfilled promises, and forced relocation, among

countless other atrocities for centuries at the hands of others, not to mention the government, would one not expect them to be more wary, mistrustful, suspicious, secretive, distressed, and/or rebellious? Even though a comparison of the 'Indian experience' could be made to the multigenerational effects among Holocaust survivors, or more recently, the unexpected ambiguous reactions of the recently 'liberated' Iraqis, each historical experience is unique and may not be directly comparable nor is an establishment of severity level necessary for purposes of this paper. The only real question is, based on Euro-American constructs or standards, do we call this pathology? Have the effects of these experiences been integrated into personality or might differing results on personality tests be due to cultural differences? It is likely that American Indians, just like anybody else, are products of their past and present, the perception of which dictates how they view themselves and the world around them. Racial or group differences on psychological tests cannot be attributed to 'pathology' without considering past and present social conditions, not to mention beliefs, values, and spiritual or existential modes of viewing human existence. Hopefully, the tribal histories briefed above will assist the reader in comprehending the relationship between culture, history, and personality.

## **METHOD**

### **Research Design**

Subject selection for this study was purposive; only members of the Delaware Tribe of Indians were assessed and members of other Indian tribes were denied participation. Because cultural influence upon personality development was the focus of this study, and given the divergent cultural practices of separate Indian tribes, it made theoretical and practical sense to assess members of one tribe at a time. Additionally, use of this methodology should give the most robust causal-comparative support of cultural influence upon personality. On the down side, because of this methodology, generalizability to any other tribe or other group of individuals will most likely be invalid.

### **Participants**

Subjects were self-identified members of the Delaware Tribe of Indians and were required to verify this by statement of degree of Indian blood and Tribal affiliation. Participants were those attending Annual Delaware Tribal functions and/or tribal meetings in Bartlesville, OK or Anadarko, OK, Tribal seats for two bands of the Delaware tribe. Either gender was accepted as participants and no efforts were made to recruit or limit either gender's participation. This study's target was to obtain completed assessment packets of 75 to 100 adults, age 18 to 80, which was appropriate for adequate analytic power.

Independent variables analyzed were gender, level of acculturation, collapsed into either strong or weak identification with the Tribe, education, split between high (12th grade and above) and low (under 12th grade) groups, and age, which was collapsed into



four cells. The dependent variables were T-scores on the thirteen MMPI-2 validity and clinical scales. Additionally, this group's subscale scores were compared to the MMPI-2's normative standard of  $T = 50$  as well as to group subscale scores of two other tribes introduced above, from which data was collected in 1997 for a previous study.

### **Instruments**

**MMPI-2:** The Minnesota Multiphasic Personality Inventory-Revised edition is a standardized, 567-item, objective personality inventory. It is the most widely used personality inventory in existence and is most often used for assessing psychopathology. It consists of 13 scales, 10 of which assess major categories of abnormal behavior and 3 validity scales, which assess the individual's test-taking attitudes. Additionally, several separate supplementary methods exist for further content analysis of a respondent's protocol. When used in clinical situations these are helpful in gaining a more in-depth understanding of the individual respondent's issues as well as for tailoring treatment to the respondent's needs, with consideration of available resources, strengths, personality tendencies, etc. The MMPI-2 is used for individuals between the ages of 18 and 80 years and utilizes a self-report format.

**Life Perspectives Scale (LPS;** Choney, Berryhill-Paapke, & Robbins, 1995). This instrument measures traditional versus non-traditional American Indian world-view in a 51-item, self-report, 5-point Likert-scale format. Responses on this instrument were originally designed to load onto one of four levels of acculturation. Recent revision and revalidation empirically substantiates only two of its original four factors and only moderate (.85) internal consistency. Due to lack of comparable acculturation instruments for American Indians, concurrent validity for the LPS is not available (Berryhill, 1998).

The LPS has been used in mental health settings for appropriate attention to American Indian enculturation in treatment delivery and was selected for use to assess acculturation/enculturation in this study.

**Demographic Sheet:** A standard demographic sheet was used to assess participant age, gender, educational attainment, etc., and also included questions as to the participant's upbringing, language(s) spoken, and level of cultural identification. The demographic form also included items intended to screen participants for psychopathology, including the presence or absence of personality testing or diagnoses and previous mental health treatment, which was necessary given the purpose of this study.

### **Procedures**

A booth was set up at several different Delaware tribal functions on separate occasions in Bartlesville and Anadarko, OK identifying the study and the examiner's university and departmental affiliation. Additionally, permission was gained to announce the study and elicit participants during a General Tribal Council meeting in Anadarko. Individuals participating in and/or attending these events were invited to complete the research packet. The purpose of the study and instructions for completing all instruments was explained. Participants were then given a pre-numbered research packet containing the MMPI-2, the Life Perspectives Scale, a demographic/information form, and the consent form (the latter two are presented in Appendix A). To assure that the sample was representative of normal Delaware Indians, a condition for participation in the study was non-engagement in current or recent mental health counseling. Another condition of participation was 8<sup>th</sup> grade level reading ability; during the personalized instruction for

completing the packet, each participant was asked about reading ability before being allowed to participate. Additionally, as this was not a timed administration, participants were allowed to begin and end testing as convenient, take breaks as necessary, and were allowed to discontinue testing upon request, if desired, with no adverse consequences or penalty.

Upon completion of the pre-numbered test packet, responses were checked for completeness by the administrator, upon which time participants received \$10 in cash for their participation or were allowed to donate this amount to their Tribal Education Committee for student scholarship purposes. All participants were given the option to sign up for a chance at a Pendleton blanket, which was awarded when data collection was completed.

The procedures and methodology used in this study were chosen to minimize potential threats to internal validity and to maximize accurate representation of the Delaware Indian tribe. Typically, those attending Delaware cultural events represent all levels of acculturation, being neither predominantly traditional nor Euro-assimilated. These also represent a general community or normal, non-clinical sample.

The same methodology and procedures described above were used in 1997 in data collection with the SWPO and EWO tribes.

## RESULTS

Data was analyzed in a series of stages to meet both the suggestions and requirements of MMPI-2 authors/proponents and to address all research questions and hypotheses. In stage one, to address the first research question, *do normal Delaware Tribal-member scores differ from normative scores on the MMPI-2, and if so, on what scales?*, non K-corrected scale score averages for the Delaware Tribe were compared to those of the MMPI-2 normative standard of  $T = 50$ , using a one-sample t-test. Although similar studies have used K-corrected scores in analyses (Robin, et. al, 1999), wherein medical patients were used as participants, non K-corrected scores were used in this study, as this was considered to be a normal, non-clinical sample and there was no need to maximize discrimination between the normative and research groups. Additionally, with the exception of numerous omissions, all completed profiles were included in analyses regardless of validity indices. Because the intent of this study was to obtain normative baseline ranges on all of the MMPI-2 scales in an Indian population, it was considered important to obtain these data whether or not they fit the established MMPI-2 validity requirements, as this was the whole purpose in doing this study. Although several basic and supplemental scales reached statistical significance, even after (Bonferroni) adjustments were made to account for the multiple levels within each subscale set, as Greene (1991, 2000) recommends that only MMPI-2 scale differences greater than T-score points, or one-half of a standard deviation, are clinically meaningful, differences at or above this suggested cutoff point are the focus of this paper and are indicated with an asterisk (\*) on all tables.

Analyses indicated that scores on three of the 13 basic scales reached either

clinical significance (F, 1 and 6) or differed from the standard by 5 T points or more (see Table 1).

To address question #2, *do, and how do normal Delaware Tribal-member scores differ from MMPI-2 normative scores on the Harris-Lingoes, Supplementary, Content subscales?*, average Delaware T-scores on these subscales were compared to those of the MMPI-2 normative standard of T = 50 via a one-sample t-test. As 28 Harris-Lingoes, 19 Supplementary, and 15 Content subscales were compared, results are indicated in Tables 2 through 4 for the sake of brevity, although these will be addressed in the following discussion section. In short, clinical significance was reached on three (Pa1, Sc3 and Sc6) of the 28 Harris-Lingoes subscales, on three (Mac-R, Re and Fb) Supplementary subscales, and on two (HEA and BIZ) Content subscales.

To address questions #3 and #4, regarding how the Delaware Tribal-member scores differed from those of two other tribal samples (SWPO and EWO) on either the basic scales or the subscales (Harris-Lingoes, Supplementary and Content) multivariate analyses of variance was used to compare average scores of three separate Indian samples. Data collected in 1997 for two separate tribes, one located in Southwest Oklahoma (referred to as SWPO, N = 89) and one in Northeast Oklahoma (EWO, N = 82), were used for these comparisons (see Pace, et. al, 1997). Since the three groups differed in size Tukey's HSD was performed to ascertain the differences between samples. Clinically significant differences between the three tribal samples were obtained on only two Basic (scales 8 and 9), on seven Harris-Lingoes (Hy4, Pd1, Pa1, Sc1, Sc5 and Ma4), two Supplementary (APS and Fb), and five Content subscales (GM, GF, PS, FRS and TRT; see Table 6 – 9 for sample means and Table 11 for specific

differences between Tribal samples).

Additionally, scores from the Indian samples were pooled, averaged, and compared to the MMPI-2 normative sample using the one-sample t-test to satisfy question #5, which asks, *when combined, do and how do the Delaware the SWPO, and the EWO tribes' scores differ from the MMPI-2 normative sample?* Differences that met clinical significance, or were 5 or more T-points from the standard, were found on six Basic, (F, 1, 4, 6, 8 and 9), nine Harris-Lingoes (Hy4, Pd2, Pd4, Pa1, Sc1, Sc3, Sc5, Sc6 and Ma4), on eight Supplementary (Es, Mac-R, AAS, MDS, Do, Re, PK and PS), and on five Content (HEA, BIZ, CYN, ASP, TRT) scales (see Table 10).

In addressing suggestions that demographics: age, education, and acculturative level be controlled, due to their positive correlation with T-scores, because scores relative to these demographic variables were not available for the standardization sample, comparisons between the normative and target sample were not possible. Only within (Delaware)-group comparisons were performed to address what role, if any, demographic variables might play in T score differences on the Basic Scales. Scores among the 30 male and 45 female Delaware participants were compared via ANOVA wherein the only clinically significant differences between genders was on Scale 5 (Mf), as expected. Regarding educational level, participants were separated into *high* and *low* educational level groups, wherein scores among the *low* group, which consisted of participants having completed 11th grade or less education (53%), were compared to the *high* group, which consisted of those with education at the 12th grade level or above (47%). Results indicated no clinically significant Basic Scale score difference between the two levels of education (see Table 5).

Two levels of acculturation were isolated, wherein a median split of LPS Total score was conducted. Individuals scoring above an LPS Total of 132, which indicated a lower level of assimilation into the dominant (Euro-American) culture, were assigned to one group (“low acculturation”) and those scoring below 132, indicating a higher degree of assimilation (“high acculturation”), were assigned to the other group. For the Delaware sample the mean acculturative group scores on the 13 Basis Scales were compared using a one-way ANOVA, wherein no clinically significant differences were found.

Participant age was collapsed into four groups, (1) 18 - 30 (representing 25% of the sample), (2) 31 - 45 (30%), (3) 46 - 60 (25%), and (4) 61 - 85 (20%). Group average scores were obtained, wherein T-scores were compared across levels and scales using separate one-way analyses of variance. Clinically significant differences were found on Scales 6 and 9, with age group #2 (age 31 - 45) scoring over 14 T points higher than age group #4 (age 61 - 85) on Scale 6, and age groups #1 (age 18 - 30) and #2 (age 31 - 45) scoring, respectively, 8 and 10 points higher than age group #4 (age 61 - 85) on Scale 9.

## **DISCUSSION**

For the Delaware sample, scores on three Basic Scales (Table 1), three Harris-Lingoes (Table 2), three Supplementary (Table 3), and two Content (Table 4) subscales differed by more than 5 T points from the standard of  $T = 50$ . Additionally, individual Tribal sample scores and/or the combined AI scores differed from the standard on seven Basic Scales (Table 6), fifteen Harris-Lingoes (Table 7), twelve Supplementary (Table 8), and ten Content subscales (Table 9). Inter-Tribal differences reached clinical significance on two Basic and fourteen subscales (Table 11). In a clinical situation,

although the Harris-Lingoes subscales are not utilized in profile interpretation unless the corresponding Basic Scale is elevated above a T score of 70, scores from these analyses are reported relative to the standard of  $T = 50$ , whether or not they met this criteria. It is as important to know how the American Indian samples differ from one another as it is to know how they differ from the standard. Accurate and sensitive clinical scale interpretation depends largely upon interpretation of the related and/or contributing subscales. If one was to ignore the score on each subscale, the contribution, meaning, and interpretation of each relative to the Basic scale would be discounted.

The intent of this paper is not only to ascertain which Basic scale scores differ between the American Indian samples and the standard but also attempt to construct some clinically applicable meaning for these differences. In the MMPI-2 Interpretive Manual, Greene suggests a multistage process of profile interpretation, the last stage of which is use of subscale scores to amplify clinical scale description (2000; p. 24). Since most clinical scales share the majority of their items with several subscales, whether or not each contributing subscale is interpreted the subscales *do* directly affect the clinical scales. Throughout the discussion section of this paper, findings will be discussed with the above in mind, wherein subscales sharing items with each clinical scale are listed (refer to Table 12) and discussed.

#### L-Scale

The L scale was developed to identify persons who are deliberately trying to avoid answering items openly and honestly and assess negative impulses and character weaknesses (p. 89-92). It contains 15 items, upon all of which the deviant response is *false*, and shares very few with any subscale, although half of its items are shared with



two subscales: three with the Supplementary scale O-H (overcontrolled hostility) and four with APS (addiction potential). Greene (2000) suggests that a high L-Scale tends to reduce the elevation on most other clinical scales and that the L-scale is also a measure of psychological mindedness and correlates with educational level and socioeconomic status (p. 91). In the Delaware sample the L score was slightly elevated, although not clinically, from the standard, yet scores did not vary according to educational level. Scores among the *low* educational level group did not differ from those in the *high* educational level group. It appears that within the Delaware sample, education as a mediator of guardedness, psychological sophistication, denial or any of the other L Scale referents should be used with caution.

Of the three AI samples only the SWPO sample's scores reached clinical significance on the L Scale, the elevation of which tended to skew the combined AI score. On the subscales sharing items with L (Table 12), all samples scored slightly higher than the standard on O-H, which assesses inhibition or control of aggressive impulses (Greene, 2000; p. 246–247) although no single score met the 'clinical' criteria. Interestingly, the Delaware sample, who were traditionally thought of as a 'peace-keeping' Tribe (Weslager, 2000), scored the highest of the three, indicating a tendency to control aggressive impulses even more so than did the other two Indian samples. Additionally, two of the three AI samples (the Delaware and the SWPO) scored lower on APS, which assesses proneness to substance addiction (p. 255-256), although only the SWPO score was clinically lower. Although O-H and APS share only seven of the L Scales' 15 items (p. 240), obtained may have scores tended to counterbalance each other to some degree in the above situations. Yet because all L scores were still higher than

what would be accounted for by these two subscales and because the subscale scores varied among the samples, it is difficult to come to one conclusive interpretation of the L-Scale's elevation. Being as these were normal individuals it may be that the referents of the L Scale are interpreted somewhat differently in Indian cultures. Therefore, if these average scores represent baselines from which to gauge or infer pathology in clinical profiles, it appears that Tribe-specific baselines may be more appropriate than a general American Indian one on this scale.

### F-Scale

The F, or *infrequency* scale, was developed from items that were endorsed in the deviant direction by fewer than 10% of the MMPI-2 normative sample (p. 66). In short, the F scale is intended to assess acknowledgement of unusual experiences and/or generalized distress or problems, with higher scores indicating more "severe distress" (p. 69). Also, according to Greene, 2000 (p. 68), specific raw scores on the F scale cannot be used routinely to classify the profile as invalid, particularly in racial minority individuals, as the necessary within group cross-validation needed to make this assumption is lacking. This scale contains 60 items, 35 of which are common to the F scale alone (p. 66), 10 of which are shared with BIZ, and three of which are shared with each DEP, HEA, ASP, and WRK Content subscales (p. 206). Additionally, it shares items with the Supplementary scales: two with Es, five with Mac-R, PK, and APS, four with PS, and fewer than three with five other Supplementary subscales (p. 240).

In the normative Delaware sample, because the F scale was almost an entire standard deviation higher than the standard, culturally appropriate interpretation of scores is vital. One may interpret the consistently higher scores in this sample as evident of a

higher degree of pathology, of more unusual experiences, of being more generally distressed, or any combination of the three. It could also be that normal Delaware Indians *report* unusual experiences and/or distress more readily (which appears to be, at least in part, contraindicated by the elevated L Scale score, which infers a higher than standard degree of denial or guardedness) or that the scale measures something other than distress among normal Indians.

Because acculturative level failed to mediate scores on this scale it is difficult to differentiate the occurrence of unusual experiences from that of distress in relation to culture, even with use of subscale scores to augment understanding. Again, all of these participants were individuals attending tribal functions, including general council meetings and stomp dances, as well as those visiting tribal centers. It may be that whether they report identifying with the tribal culture or not they may still be involved on some level and still hold beliefs, values, or behaviors common to the tribe.

Scales that share items with the F Scale are the Content scales BIZ, DEP, HEA, ASP, and WRK. Reviewing scores on these scales may give a better understanding of how and why the F-scale was elevated. As indicated in Table 4, the Delaware sample's BIZ score was clinically higher than the standard (58.68; average endorsement of about 4 items), and, although an elevated BIZ subscale cannot fully explain an elevated F scale, because they share 10 items, endorsement of BIZ items may well have affected F scale scores for the Delaware sample. The BIZ scale assesses 'psychotic' thought processes, hallucinations, paranoid delusions of persecution, and odd, peculiar, and eccentric thoughts and experiences (p. 192-193). Because all three tribal samples' scores were clinically higher than the standard (from about 9 to 13 points), it is not possible to draw

culture-specific conclusions without further analysis and input from tribal experts.

Standard interpretation of a high BIZ score indicates the presence of overt and easily recognizable psychotic symptoms, impaired insight, lack of the ability to engage in collaborative relationships, a grandiose self-perception, or strange ideas and experiences that are not necessarily indicative of psychosis. Because all of the normative samples scored higher on this subscale, it is unlikely that the same constructs are being measured in these samples as the scale developers contend; these elevations may not be associated with level of distress. Additionally, one suggestion in interpreting this scale is to compare high scores with scores on the content scale LSE (*low self-esteem*) to determine whether or not high BIZ scores are supported by negative self-attitudes and/or depressive mood disorders. In doing this, although scores on LSE were higher than the standard, no samples' scores were more than 4.5 points higher and the combined AI average score was only 3 T points higher. This indicates that low 'self-esteem', or the presence of negative self-attitudes, was not a major contributor to the BIZ scale elevation.

In comparing individual tribes on the BIZ scale, the Delaware and EWO samples scored more similarly to one another than to the SWPO sample, which tended to raise the overall AI average score (Table 9). Differences between tribes also reached clinical significance (Table 11) and may support cultural or experiential differences between the SWPO and the other two tribes.

One could hypothesize that the SWPO tribe, who lived a more nomadic lifestyle and engaged more frequently in fierce warfare than the other two (Cash & Wolff, 1974; Fehrenbach, 1974), still retain beliefs, values, and worldviews that differ from and are more 'unusual', as measured by BIZ, than those living a more sedentary and peaceable

lifestyle. It could also be hypothesized that the SWPO tribe, which originated in the NW United States and had a shorter history of involvement with European settlers and a shorter history of removal (Cash & Wolff, 1974), may have retained more of their original cultural beliefs due to less assimilation into and accommodation of Euro-American culture. Both the Delaware and EWO tribes originated in the North Eastern US; the Delaware tribe came into contact with settlers as early as the 1400s, was subjected to removal efforts as early as the 1600s, and was relocated at least 20 times, although in many different directions (Sultzman, 2000; Weslager, 2000). The EWO tribe, originated in the SE, had contact with European settlers later than the Delaware but earlier than the SWPO, and experienced relocation efforts (Carter, 1976; Ehle, 1988; Wright, 1992) later than the Delaware although earlier than the SWPO and other tribes originating in the plains or western regions of the United States.

If there was a direct, negative relationship between (a) European contact and relocation efforts and (b) cultural retention, this finding would be much easier to explain. Yet, because cultural revitalization movements, group cohesiveness and a greater reliance on friends, family, and traditional spiritual beliefs is frequently an outcome of the experience of forcible change (Haviland, 1996), another likely hypothesis is that the group having experienced the most trauma may also tend to be the most cohesive, having relied upon one another more and having retained more of their traditional customs, and would thereby be the most different. Again, without further analysis and expert input a definite conclusion and interpretation is beyond the scope of this research.

The other Content subscales sharing items with the F-scale, DEP, HEA, ASP, and WRK, were also different than the standard although not as radically different as were

BIZ scores. Scores for the Delaware sample were consistently lower than those of the other two samples and met clinical significance on only the HEA subscale.

HEA, which assesses health concerns, was over 5 T-points higher in each sample. Considering the problems many Indians face in obtaining health care services and the prevalence of health care problems experienced by them, it is likely that many of their health concerns are real and reflect untreated or under-treated ailments (Choney, Berryhill-Paapke, & Robbins, 1995; Indian Health Services, 1993; Mitchell & O'Neill, 1998, Robin, et al, 1997).

Scores for the SWPO, EWO, and combined AI samples were clinically higher on ASP (antisocial practices), which assesses 'disregard for rules and social conventions coupled with a cynical attitude about others' motives' (Greene, 2000; p. 195-197). The greater disregard for rules and social conventions and cynicism and likely results from negative or insensitive past and present relations with various levels of society. Considering the histories of these three samples it is not difficult to imagine that negative experiences and chronic stressors may have translated into negative attitudes and mental and physical health problems. Often the health statistics associated with these groups are associated with a general unwillingness to instill the habits and/or changes needed to improve life or personal situations by assimilation into the mainstream society. This assumption implies that American Indians are obstinate, self-destructive, and the cause of their own demise. On the contrary, although American Indians have been subjected to centuries of poor treatment by the US government many aspects of the cultures still exist. Nevertheless and not surprisingly, a progressive deterioration in attitude and mental and physical health conditions may have been an outcome.

On the DEP content scale the Delaware sample's score was only slightly higher, although both the SWPO and the EWO samples' scores on were 5 + T-points higher than the standard. As this scale assesses chronic, generalized distress and negative emotionality (p. 189-190), findings indicate that members of the SWPO and EWO samples report more generalized distress and negative emotionality than the norm, yet whether or not this is indicative of depression is not certain. Because Scale 2, Depression, was not clinically elevated for any of the samples, individually or combined, although the SWPO and EWO samples reported more negative emotionality, they are not necessarily depressed, as measured by Scale 2. Regretfully, scores are not available on the Content Component subscales, which may have given some insight into specific causes for this Content scale elevation.

The score on WRK, which assesses distress and negative emotionality in work (p. 200-201), was elevated in all samples although met clinical significance in only one of the three AI samples, the EWO. In consideration of the lack of equal job opportunities, unemployment rates, which vary from 50 – 90% among American Indians, and lack of exposure to and problems identifying with career roles (Brave Heart, 1998; Bryde, 1971; Parrillo, 1985; US Bureau of the Census, 1991), a high degree of resentment towards work expectations and conformity therein would be expected.

Supplementary scales, Mac-R, PK, PS, and APS, also share items with F. Mac-R, which was designed to differentiate diagnosed alcoholics (from non-alcoholic individuals with other diagnoses) by assessing risk-taking behavior, impulsivity, and energy level, correlates only minimally with the F scale (p. 228-243). Nevertheless, in that Mac-R shares 5 items with F and was clinically elevated in all three samples, it may have

contributed to the F-scale elevation. From these findings, all three samples report engaging in the above behaviors more than average, yet, although the AAS (Addiction Admission, which measures substance use and has a moderate correlation with Mac-R; p. 254-255) score was elevated in all three samples, the APS (Addiction Potential Scale, which is intended to measure proneness to alcohol addiction; p. 255-256) score was *lower* in most samples and clinically lower in the SWPO sample (Table 8).

From scores on Mac-R and AAS, admission of alcohol use is apparent, but does the mere admission necessarily imply addiction proneness for these samples? It could be that alcohol use in itself does not predict proneness for American Indians or that these specific risk-taking behaviors (in the Mac-R and AAS scales) are not effective predictors of alcohol addiction in American Indians. Reports of alcoholism rates in Indian populations have ranged from 0 to 6 times that of the general population (Bates, Beauvais, & Trimble, 1997; Plaud, Schweigman, & Welty, 1998), death rates among Indians have been estimated to be 600% higher than the general population, and it has been reported that up to 75% of all Indian deaths are related to alcohol use (Mitchell & O'Dell, 1998). If the APS is unable to accurately project alcohol addiction potential and related deaths in American Indians, maybe something more accurate should be used with these populations.

PK and PS, which share almost half of their items with one another, assess common post-traumatic symptoms such as emotional and/or situational distress, anxiety, and lack of confidence, with the latter scale correlating negatively with educational level (Greene, 2000; p. 252-254). Both scales were clinically elevated in all AI samples except the Delaware and appear to have contributed to the F-scale elevation. Considering



American Indian individuals experience traumatic events very frequently, at a rate over 80% and meet a PTSD diagnosis at a rate of 22% (the national average is 1 - 9%) these findings are likely accurate perceptions of life experiences (Jones, Daughinais, Dack, & Somervell, 1997; Robin, Chester, Rasmussen, Jaranson, & Goldman, 1997). Not only do American Indians experience an exorbitant amount of traumatic events in the present, but also re-experience past traumas through stories told by one generation to the next (Brave Heart, 1998). Stressful issues and events that American Indians have historically experienced and pass on to the next generation are tribe-specific, yet generally includes the following: (a) forced removal from traditional, sacred lands and tribal ways of life; (b) the killing of tribal chiefs, leaders, and important persons; (c) mutilation, massacres, and mass burials; (d) and the forced removal of children to boarding schools wherein they were abused, starved, exposed to horrendous health conditions and to a wide variety of diseases, and where they often died (Brave Heart, 1998; Choney et al, 1995).

Although for the most part, the first three of these are transmitted through verbal or written family and tribal histories, the forced removal of children to boarding schools could have been experienced by some of this study's participants. As late as the first part of the twenty-first century, Indian children were removed from their homes and placed into boarding schools. This was the government's way of fulfilling its promise of education in treaties with Indian tribes and, at the same time, fulfilling its desire to civilize, Christianize, and assimilate them by removing cultural practices and beliefs. Native languages and customs were forbidden in efforts to weaken ties to their culture (Choney et al, 1995). The detrimental effects of boarding schools have been intergenerational, affecting those who personally attended these schools as well as those

whose parents or grandparents attended (Dauphinais, 1993). Generations have been affected by being denied the opportunity of being reared in a family environment, which may have undermined many individuals' ability to engage in functional social interactions and the opportunity to learn and practice functional parenting skills (Choney et al, 1995; Dauphinais, 1993).

### K-Scale

Scale K, contains 30 items which assess general coping skills and correlates positively with educational level and psychological mindedness (Greene, 2000; p. 93-96). It shares items with Supplementary scales APS (6), A (5), R and Mt (4), and the Content scale CYN (5; p. 206, 240). All three samples scored lower than the standard on the K scale, which, according to standard interpretation, indicates fewer coping abilities, lower educational level, and/or lack of psychological mindedness, yet none of these differences met clinical significance. Considering the history and perseverance of American Indians this interpretation could be challenged, although 'coping skills' and 'survival skills' may not be considered the same thing, as measured by the K Scale. Considering the original genocidal plans of the US government, Indian cultures might not have survived for the length of time that they have without a relatively high level of survival *and* coping skills (Braveheart, 1998; Choney, et al, 1995).

Although there are no meaningful age or gender effects on the K scale, educational level has been reported to affect K scores. Yet, because 47% of the Delaware sample reported completing high school or more education, which was similar to the educational level of the standardization sample, and because there were no education effects, lack of education does not appear to be an acceptable rationale for low K scores.

For both the SWPO and EWO samples scores on A and Mt, Supplementary scales sharing items with K (refer to Table 12), were slightly higher, although not clinically so, and scores on the Content Scale, CYN (which assesses lack of belief or trust in others and their motives; p. 194-195), were consistently higher and met significance for the combined AI, the SWPO, and EWO samples. A high CYN score infers lack of trust in other's motives and a general belief that others are unprincipled and corrupt (p. 194). Scores on APS (Addiction Potential) were lower in the SWPO sample and those on R were about the same as the standard. Although these subscales do not fully explain the K scale, it appears that, because of equivalent educational status, the samples should have scored about par with the standard or slightly higher, which was not the case. What, then do low scores on K indicate for these Indian samples? Might it be due to the specific MMPI-2 items assessing coping resources and the possibility that the two cultures differ in what they consider helpful and/or valuable? For example, could the personal insight and psychological mindedness as expressed in items of the MMPI-2 not assess the same thing in among these samples? Without item analyses and further exploration and qualitative information, a definite conclusion cannot be made.

#### Scale 1 (Hs)

Scale 1, Hs, which has 32 items, assesses physical symptoms and the tendency to convert psychological symptoms to physical ailments. The higher the score, the more frequent physical ailments were reported and the more likely tendency for conversion (p. 130-133). It shares items with the Content subscale HEA (23 items), which assesses general health problems including those involving sensory-motor malfunctioning and symptoms about the head (p.191-192). All three tribal samples clinically elevated Scale

1 as well as HEA, which appears to indicate either the presence of more physical symptoms and/or a greater willingness to admit them. High scorers on the HEA subscale are described as having physical symptoms across several body systems and a belief that one is sicker than most people.

So do Indian people have more long-term, characterologic problems and poorer health? It is well known that American Indians have a high incidence of diabetes and various other medical disorders. Research has also supported the high levels of stress, due to prolonged stressful life situations, acculturation, or multigenerational issues. Additionally, the suicide attempt rate among American Indians is from 2 to 7 times the national average, the alcoholism rate is 13 times, and coronary heart disease, hypertension, and accidental death are well above that of the national average and/or all other US minority races. American Indians also have more serious mental and physical health problems than are reported for all race populations in the United States (Choney, et al., 1995; Indian Health Service, 1995; Lester, 1999; Mitchell & O'Dell, 1998; Plaud et al., 1998; Robin, Chester, Rasmussen, Jaranson, & Goldman, 1997). So, it appears that the incidence of health problems is greater for this ethnic group, and not just an issue of over-reporting.

Scale 1 also shares items with Supplementary subscales Es (7), Mt (6), and GM, PK, PS (5 each; p. 240). The SWPO and EWO samples clinically elevated PK and PS and Mt was elevated across samples as well, although only clinically elevated in the EWO sample. Higher scores on PK and PS, as discussed in relationship to the F-scale, likely reflect either isolated or chronic traumatic experiences.

Low scores on Es, Ego Strength, are interpreted as the experience of chronic,

characterologic problems, negative emotionality, and of lack of personality integration and characterize the individual as generally maladjusted or emotionally distressed (Greene, 2000; p. 224-227). Es is comprised of items that successfully differentiated 'improved' from 'unimproved' patients after six months of psychotherapy, higher scores being associated with improvement (p. 224). The combined AI score on Es was more than 5 T-points lower than the standard, which indicates either that the Indians in these samples more frequently acknowledge the presence of chronic problems but also indicates that they scored more similarly to the 'unimproved' criterion group. If the latter is true, indicating Indians are less likely to improve in conventional psychotherapy this should be an important consideration for treatment recommendations. What does it take to 'improve' in psychotherapy? Could the emphasis on insight and psychological mindedness be less effective for American Indians? Might it be that conventional methods of treatment delivery are the issue and not 'psychological mindedness'? If conventional methods are not effective, then what is? Addressing effective means of treatment delivery for American Indians is well beyond the scope of this paper, but the fact remains that effective, culturally-sensitive treatments do exist (see Ponterotto et al, 1995 for a review).

As discussed relative to the K-scale, scores on the Mt scale were slightly higher than the standard in the EWO sample and are likely due to accurate reports of distressing life events and conditions. Additionally, scores on the Supplementary scale GM (which are interpreted as lacking stereotypically masculine interests or behaviors and the greater experience of negative emotionality and fears; p. 251), which shares five items with Scale 1, were generally lower, although did not meet clinical significance. It may be that

cultural differences regarding what constitutes masculinity, personal strength, and personal well being come into play on this scale.

Because HEA, which shares more items with Scale 1 than other subscales, was high the effect of low scores was diluted, although are still important. As mentioned before a T-score of 42 on Es would be clinically meaningful, as would be a T-score 60 (the average scores for SWPO sample) on HEA even if the Scale 1 score were relatively normal. The rational for viewing scores on and using content and supplementary scales in interpretation is very much supported. Just like any other data, MMPI-2 data can be interpreted in more than one way (Greene, 2000) and it is strongly advised that the clinician consider both empirical and client data in any interpretation (p. 363-364).

Scores on Scale1 tend to increase both with age and female gender. But with the Delaware sample neither gender nor age mediated scores on this scale. Both genders and all age groups tended to endorse Scale 1 and HEA items more frequently than the standard. Interpretations may be that it is either culturally acceptable to admit health problems, regardless of age and gender, or that members of this sample experience more health problems.

#### Scale 2 (D)

On average, scores on Scale 2 (Depression; 57 items), which assesses attitudes and behaviors that reflect depression (p. 133-138), did not differ clinically from the standard. Scores among the EWO sample on many of the scales sharing items with Scale 2 generally varied more from the standard than either of the other samples and scores among the Delaware sample generally varied the least.

Scores on some of the Supplementary scales that share items with Scale 2 differed

clinically from the standard. Scores on Es (10 each), for the combined AI and SWPO samples, scores on Mt (16) for the EWO sample and scores on PK and PS (13 each) for both the SWPO and EWO samples, differed by five or more T points. Scores on Es, which were addressed relative to F and Scale 1, were lower than the standard and scores on Mt, PK, and PS, addressed relative to Scale 1, were higher, and may have attenuated overall scores on Scale 2 to some degree.

The Content subscales ANX (6), DEP (9), HEA (10) and WRK (5) share items with Scale 2 and, although Scale 2 was not clinically different, it is worthwhile to observe which scales differed substantially from the standard (see Tables 9 and 12). For the EWO sample only, average score on ANX, which measures generalized distress and negative, anxious emotionality (p. 185-187) were clinically higher. Scores on DEP, which assesses chronic, characterological, distress and negative emotionality (p. 189-191), were clinically higher among the SWPO and EWO samples and the EWO score on WRK, which assesses generalized problems that tend to negatively affect work productivity (p. 200-201), was higher as well. As previously discussed, a higher level of generalized and/or chronic distress was a condition hypothesized from scores on other scales relative to F and Scale 1. Also, given the general high rates of poverty and unemployment and difficulties in optimal educational and career opportunities among American Indians (Bryde, 1971; Parrillo, 1985), it would be expected that work productivity issues would also be more pronounced in all Indian samples. Yet because only the EWO sample elevated this scale, work problems do not appear to be a generalized issue.

HEA scores, discussed relative to Scale 1, were higher than the standard across all

samples and probably reflect accurate appraisals of health concerns in light of limited access to health services.

### Scale 3 (Hy)

Scores on Scale 3, Hy (60 items), which assesses somatic symptoms and proneness to conversion in response to stress (p. 139-143), were not different from the standard in any of the three tribal samples, even when scores were combined.

Nevertheless, because several of the scores on the subscales contributing to Hy were clinically different than the standard, it is worthwhile to summarize these findings. Scale 3 shares items with Harris Lingoes subscales Hy1 through Hy5, Supplementary subscales, PS (12), Mt and Es (11), PK (10), GM and Mac-R (5), and A, R, O-H, and APS (4), and Content subscales, HEA (16), CYN (6), WRK (5), and DEP (4; p. 206 and 240; see Tables 7, 8, 9 and 12).

Although Harris-Lingoes subscales are not interpreted in a clinical situation unless the corresponding clinical scale exceeds a T score of 70 (p. 138), for the purpose of this study it is important to investigate how these samples differed from the standard. Both the SWPO and EWO samples scored clinically lower on Hy2, *Need for Affection*, which assesses trust in others, optimism, and lack of resentment toward others (p. 143). Low scores on this subscale have no direct interpretation although a high score implicates a trusting attitude toward others and their motives as well as an adamant denial of resentment toward others (p. 143). If interpretation of a low score is opposite that of a high score, both the SWPO and EWO sample scores willingly admitted distrust and a tendency to question others' motives. Considering these elevations, this may reflect past occurrences, such as treaties, land deals, and relocation efforts, the history and impact of



which tend to be passed orally from generation to generation. Initial distrust may also be attributable to a commonly held Indian attitude that trust is something that must be earned; that trust is a product of honesty and integrity, over a period of time and across behaviors, which has historically been the rationale behind and method of selecting tribal leaders (Weslager, 2000).

All samples scored higher on Hy4, *Somatic Symptoms and Complaints*, interpreted as tending toward somatization, repression, and conversion of affect (Greene, 2000; p. 143), although scores for the Delaware sample did not meet clinical significance. One interpretation may be that 'psychological sophistication' is not generally identified or isolated as an independently learned attribute in a holistic concept of health, such as in many Indian cultures. Another interpretation may be related to a greater incidence of many health issues and problems attaining adequate health care. On Hy5, *Inhibition of Aggression*, the SWPO sample scored the lowest, indicating a lack of inhibition of aggression, which might be interpreted as either the confession or sanction of violence, anger, or swearing (p. 143), which could be a cultural idiosyncrasy, given this Tribe's historical reputation for being proud, fierce, and protective warriors (Cash & Wolff, 1974; Fehrenbach, 1974).

The Delaware sample's scores differed from the standard on the Supplementary subscale Mac-R, discussed in previous sections, as did scores for the other Tribal samples, both SWPO and EWO sample scores differed on PK and PS, and the SWPO sample score differed on APS, which was discussed relative to Scales F, K, and 3. Additionally, the EWO sample differed on Mt and the SWPO sample differed on GF, as well. For the SWPO and combined AI samples scores on Es, which assesses absence of

distress, general adjustment, and personality integration (Greene, 2000; p. 224-227), was clinically lower than the standard. As Es correlates negatively with the F-scale, PK, and PS, a low score on this scale coincides with and would have the same interpretation as the high scores found on F, PK, and PS, discussed previously. Interestingly, although the score did not meet clinical significance, the Delaware score on O-H, *Overcontrolled Hostility*, or overcontrol of aggressive impulses (p. 243-247), was higher than the other samples. Historically the Delaware were renown for their mediation abilities and peace-keeping values (Sultzman, 2000; Weslager, 2000; Wilker, 1994), and it may be that scores on O-H reflect this same behavior.

All tribal and combined AI scores were higher on two of the Content subscales sharing items with Scale 3, HEA and CYN. HEA, discussed in the F-scale section, assesses general health symptoms and CYN, assesses lack of trust in other's behaviors and motives. Because over half of the items on the Harris-Lingoes scale, Hy2, are scored in the opposite direction on CYN, the negative relationship between the sample scores on these two scales may be supported, and interpretation of a high CYN score may therefore be interpreted the same as a low Hy2 score, discussed above. The SWPO and EWO samples scored higher on DEP and the EWO sample scored higher on WRK, both discussed previously.

#### Scale 4 (Pd)

Clinically higher differences were found on Scale 4, Psychopathic Deviate, in all samples except the Delaware (see Table 6). This scale contains 50 items and elevated scores indicate general social maladjustment, concerns about family members, and conflict with or hostility toward authority figures (Greene, 2000; p. 146-151). High

scorers (above  $T = 65$ ) tend to be described as angry, impulsive, emotionally shallow, and unpredictable (p. 150), although none of the scores reached this degree of elevation.

Although a score of 55 is within the 'normal' range, because all were more than 5 T points higher than the standard, it is of interest to look at the subscales to see where these differences lie. Scores on all but one Harris-Lingoes subscales sharing items with Scale 4 were clinically higher in one sample or another as were scores on Supplementary scales, Mt (5), PK (11), PS (9), MDS, and MAC-R (8 each), and Content scales, DEP and FAM (6 each). Clinically lower scores, for at least one sample, were found on Supplementary scale Es (6), APS (5), Do (6), Re (5).

In most cases, score differences on the Harris-Lingoes subscales Pd1, 2, 4, and 5 reached clinical significance. The average T-score on Pd1, *familial discord*, the interpretation of which is self-explanatory, was clinically higher in both the SWPO and EWO samples. Because it is generally the norm to live among or near nuclear and extended family in Indian cultures, there may be a greater probability for conflicts, simply due to proximity. Typically, several generations of the same family live in the same community if not household, and many decisions, both major and minor, may tend to be more of a group effort than in other society American societies. Conflict may also occur regarding the use of traditional versus modern ways of handling matters, such as child rearing, healing, spirituality, etc., as well as in conducting one's self and one's life. Conflict related to poverty, substance use, or health issues may also be more likely in these samples. Why Pd1 items were endorsed less frequently by the Delaware sample is unclear; although the tribe itself is greatly disbursed, with groups banding together in various regions in both the U.S. and Canada, for the most part each group contains

individual families that separated from the main band hundreds of years ago (Weslager, 2000). In comparison, it may be that the SWPO and EWO tribes experienced fewer instances of relocation and are more self-contained in their respective Oklahoma regions. They may tend to live in closer proximity with nuclear and extended family than the Delaware and therefore experience a greater frequency of family problems and conflicts.

Pd2, *authority conflict*, assesses behavioral and legal problems as well as resentment of societal demands and conventions (p. 150) and was higher in all samples, although clinically elevated in only the SWPO and combined AI samples. One interpretation of this might be in terms of past and present conflict between American Indians and governmental and other 'authorities' and the resultant resistance of many Indians to societal rules and conventions. Authority, like respect is frequently viewed as a quality that is earned, via honorable behaviors while in a position of authority (Waslager, 2000). Additionally, there seems to be a universal phenomenon among American Indians in response to opinions that differ from one's own or in response to being told what to or not to do: say nothing, nod, smile and do or think what you want, although literature discussing this is scant. There is also a phenomenon, which may be related to the value of humility, of laughing at and admitting ones' past mistakes. It may be that results on this scale amplify the clash of cultures (Garrett, 1995). Scores may reflect both resentment of authority and honest and accurate reports of non-conventional behavior.

In the EWO sample higher scores were obtained on Pd4, *social alienation*, which assesses feelings of isolation, as if one does not belong, and externalization of blame (Greene, 2000; p. 150). Although most respondents reported identifying with both Indian

and Euro-American societies, the issue of marginality, or feeling as if one caught between two worlds, is a common theme among American Indians. The conflict between being unaccepted, evidenced in discrimination and prejudice, and the aspiration for succeed and self-sufficiency (Garrett, 1995) is likely to be exemplified in this subscale. Higher scores on Pd5, *self-alienation*, are interpreted as lack of self-integration, admission of guilt, and loss of heart and hope (p. 150). Scores for both the SWPO and EWO samples were clinically higher on this scale. Ironically, one potential interpretation for this might be that these 'original people' are unsure about their American identity or who they are in relation to other Americans and to American society.

The EWO sample elevated the Mt (college maladjustment) Supplementary scale, which assesses general emotional distress, anxiety, and lack of confidence in one's abilities, rather than college maladjustment, per se (Greene, 2000; p. 249-250). Whether this sample is more distressed or whether members lack confidence in their individual abilities is unclear. Further analysis of items contributing to this subscale is necessary for differentiation between these two possibilities.

PK and PS share eleven and nine items respectively with Scale 4 and assess situational and personal distress and symptoms common to trauma experiences (p. 252-254). Both the SWPO and EWO samples scored clinically higher on these scales, which, as discussed previously, may be interpreted in relation to the high incidence of traumatic experiences among American Indian samples (Jones, Daughinais, Dack, & Somervell, 1997; Robin, Chester, Rasmussen, Jaranson, & Goldman, 1997). Elevation of these subscales is likely an accurate assessment of the participants' responses to traumatic life experiences.

The MDS, *marital distress*, scale assesses marital and family problems; the higher the T score, the more significant the distress (Greene, 2000; p. 256). Little research has been conducted on this scale and an elevated score does not differentiate marital from family of origin distress, which would be especially helpful in interpretation of these samples' scores. Many Indian families are multigenerational and the presence of family problems may confuse the issue and be wrongly interpreted as marital distress. MDS was clinically elevated in all samples except the Delaware sample, which neared clinical elevation (54.65). Because scores on Pd1 (family discord) and FAM (family problems) were also lower in the Delaware sample, it may be that the Delaware participants experience more marital problems than family problems compared to the other two samples.

A high score on the MAC-R subscale, which shares eight items with Scale 4, is suggestive of more than just alcohol use/abuse, but also of risk-taking personality and behavioral dimensions. It taps impulsivity, high energy level, and general psychological maladjustment. Because little data exists for normal, non-white ethnic groups, there is no baseline for determining whether or not these MAC-R dimensions indicate a greater propensity for alcohol abuse in non-white groups (Greene, 2000; p. 228-236). All American Indian groups endorsed more items than the norm on the MAC-R and, on AAS which assesses admission of risk-taking behavior and substance use, except the Delaware sample. The SWPO sample endorsed fewer items on APS (addiction potential) which might be indicative of lower propensity for alcohol addiction, regardless of alcohol use, or it may be that the relationship between risk-taking behavior and alcohol addiction is not the same as it is in the normative sample. Yet, as discussed relative to the F-scale,

there are far greater deaths attributable to alcohol among American Indians. The SWPO sample's score on this scale may also suggest a tendency to underestimate or underreport one's propensity to alcohol addiction.

Lower scores for all samples were found on Supplementary scales Es, Do, and Re although scores did not meet clinical significance in all instances. A Clinically lower score was also found on APS for the SWPO sample. The Es (ego strength) scale, which measures general adjustment, personality integration, and absence of distress (p. 224-227), was clinically lower in the SWPO and combined AI samples. As discussed previously, it correlates negatively with the F-scale, PK, and PS and a low score on Es would be interpreted similarly to high scores on F, PK, and PS. Again, as this scale was developed by differentiating improved from non-improved psychiatric patients with the assumption that it takes adequate personal resources, personality integration, and the absence of distress to improve in standard outpatient therapy (p. 224), this may help explain why traditional outpatient therapy has been unsuccessful for American Indian clients. The determinants assessed by the Es scale were not endorsed as frequently by these American Indian participants as they were in the normative sample. One interpretation of these findings may be that the 'ego-strength' qualities assessed by this scale and needed for therapeutic improvement differ between the two groups. Because many American Indian societies function by way of group-focused, communal interactions, the concept of thinking, behaving, and existing as an individual may neither be practiced nor as valued in American Indian societies as in others. Interventions that focus on the extended family or one's position within and responsibility to the Indian community may produce more therapeutic change than individual, ego-based therapies.

Scores among all samples except the Delaware were clinically lower on the Do (dominance) scale, which assesses personal strength, dominance, leadership, and one's degree and practice of influence upon others (p. 247-278). Like the Es scale, the dominant traits assessed by this scale were not endorsed and therefore may not be practiced by members of these samples. This finding might be paralleled with the common assumption that American Indians in general are passive and reserved (Choney et al, 1999; Garrett 1995) although it is just as likely that dominance is simply expressed differently in Indian societies.

Although there has been virtually no research on the Re scale and few interpretations of low scores, low scorers might be described as being the opposite of high scorers, who feel a sense of commitment and obligation to a pre-set value system as well as confidence and trust in the world (Greene, 2000; p. 248-249). Scores on this scale were clinically lower in all samples, the lowest score found in the SWPO sample. Is it that these participants actually lack social and moral commitment or that they lack trust and confidence in the world, or might it be a reciprocal relationship between the two? Even though most of the Re items relate to school attendance and behavior or to interactions with 'authorities', the primary issue here is why these participants less frequently endorse items related to societal value, trust, and obligation and responsible behavior therein.

One interpretation of this may be that not only personally experienced but also generational stressors and traumatic experiences passed from one generation to the next have affected faith in and commitment to society. The difficulty in assessing medical and social services, issues with health, substance use, poverty, discrimination, inadequate



parenting skills, etc., etc., may be personal experiences of many of these participants. Other issues which affect trust in the world, whether or not directly experienced, may have been 'handed down' through generations and experienced in a more vicarious manner. These experiences are tribe-specific, but might include (a) forced removal from traditional, sacred lands and tribal ways of life; (b) the killing of tribal chiefs, leaders, and important persons; (c) mutilation, massacres, and mass burials; (d) and the forced removal of children to boarding schools wherein they were abused, starved, exposed to horrendous health conditions and to a wide variety of diseases, and where they often died (Braveheart, 1998). Additionally, from 1881 to 1978 (with the passing of the American Indian Religious Freedom Act) it was illegal to practice traditional American Indian religions which included those healing methods and ceremonies designed to facilitate the grief process.

To lose confidence in and commitment to a world that has spent 600 years attempting to remove every aspect of a culture as well as denying basic 'inalienable' human rights (Braveheart, 1998; Choney, et. al, 1995) is not so difficult to conceptualize. Not only Indian cultures, but many other cultures as well do not necessarily think only in terms of the present and what might be occurring politically and socially in the present, but tend to remember the past in terms of why the present is as it is. What is culture but a worldview based on themes of shared values, beliefs, and behaviors transmitted from generation to generation (Cooper & Denner, 1998). Past events and issues, and the effects thereof, are passed down from generation to generation and helps create a sense of homogeneity and tribal and family belonging and loyalty. For Indians, those traumatic experiences suffered by one's 'people' tend to be internalized very deeply and likely

similar to descendants of African slaves or Holocaust, Hiroshima, and POW survivors, to mention a few, who pass the experience from one generation to the next as historical and experiential aspects of one's identity. The term 'historical trauma' has been used to describe this phenomenon, which is further defined as cumulative trauma, which collects and compounds emotional and psychic wounding (Neiderhard, 1989).

Additionally, in many Indian societies, the death of a loved one or other losses are honored by a full year of mourning, following which ceremonies are conducted to release the spirit to the world beyond and to welcome the bereaved back into society as fully functioning members after the mourning period (Weslager, 2000; Choney et al, 1995). These traditional Indian ceremonies effectively parallel what we call 'grief-management', but since spiritual ceremonies, including ceremonies to grieve losses, were prohibited by U.S. law for nearly 100 years, countless numbers of losses likely went unresolved, exacerbating the impact of each trauma (Brave Heart, 1998).

The effect of Indian children being removed from their homes and placed in boarding schools affected not only the children and their immediate families but also the children of the children and generations to come. Because for nearly a century, Indian children were removed from their homes and placed into boarding schools, which was the government's way of fulfilling their promise of education in treaties with Indian tribes and, at the same time, fulfilling their desire to civilize, Christianize, and assimilate them by removing cultural practices and beliefs. Native languages and customs were forbidden in efforts to weaken ties to their culture (Choney, et al, 1995). The detrimental effects of boarding schools were intergenerational, affecting those who attended as well as those whose parents or grandparents attended (Dauphinais, 1993). Parents, the

children, and generations to come were negatively affected by resulting health problems and through the denial of being reared in a family environment, which undermined everything from the ability to engage in social interactions to the experience of normal and functional parenting practices (Brave Heart, 1998; Choney, et al, 1995; Dauphinais, 1993). Scores on the Re and other scales assessing confidence in and commitment to societal mandates may be understood in terms of at least some of the above.

The Content subscale, DEP, which assesses chronic and generalized distress and negative emotionality, was clinically higher in the SWPO and EWO samples. This scale tends to have greater specificity and discriminant validity for assessing anxious and depressive symptoms than does Scale 2 (Greene, 2000; p. 189-191). Because neither Scale 2 (Depression) nor any of the Harris-Lingoes depression subscales were clinically elevated in either the SWPO or EWO samples, high scores on DEP might be interpreted as evidence of chronic or characterologic issues. The SWPO sample score on DEP was higher than the EWO sample, yet scores on both Scale 2 and Harris-Lingoes depression subscales were lower than EWO scores. It appears that the DEP subscale is picking up something other than brooding or subjective depression in the SWPO sample, although what this is cannot be explained without further analysis.

Scores on the FAM subscale reached clinical significance for only the SWPO sample although was high for the EWO sample. The Delaware sample did not score much differently from the standard, indicating fewer family problems than the other samples, which concurs with the score on Pd1 (family discord). High scores on FAM are evident of familial discord and feelings that one lacks familial love, support, and companionship (p. 199-200). Because Indians tend to interact with and rely heavily on

family members an item analysis of this subscale would be interesting and may reveal that higher levels of family discord are due more to closer proximity and greater interaction, rather than lack of love and support. It is also likely that more diverse living conditions and the inordinate amount of daily stressors contribute to interfamilial problems.

#### Scale 5 (Mf)

Scale 5 (Mf; 56 items) is not considered a clinical scale, because scores were statistically higher than the norm, it is of importance to investigate why this occurred. High scores for either gender indicate atypical endorsement of 'masculine' or 'feminine' interests, attitudes, and behaviors (p. 151-155). High scoring normal men are generally described as being socially perceptive, tolerant, and psychologically complex and high scoring normal women are described as being bold, unsympathetic, and adventurous (p. 153). Although this scale shares few items with other clinical scales, it does share several items with the following Supplementary and Content scales: R, MAC-R, and APS (8), Es (7), O-H (4), Re (5), GM (9), and GF (16) and CYN and ASP (3).

Scores on R did not differ from the standard although scores on MAC-R were clinically higher and scores on APS were clinically lower in only the SWPO sample (see Table 8). Scores on Es were clinically lower in the SWPO and combined AI samples, the interpretation of which was discussed previously. Scores on Re were clinically lower in all samples and was discussed at length relative to Scale 4. The two scales pertaining most directly to Scale 5, GM and GF, interestingly were much lower in the SWPO sample than both the standard and the two other tribal samples. It appears that participants from the SWPO tribe aspire to neither traditional masculine nor feminine

roles, as measured within the MMPI-2. GM consists of items depicting stereotypically masculine interests and behaviors and negative emotionality and fears (p. 251), and research supports GM not as a measure of masculinity per se, but as more of a measure of general well being and personal strength. Again, cultural differences regarding masculinity may explain lower scores on this subscale, and, measures of well being and personal strength might be comparable to measures of personal insight or personal psychological mindedness, which, as discussed relative to Scale 3, may not tend to be as valued in Indian or other communal cultures as in individualistic cultures. The GF scale, which shares sixteen items with Scale 5, is comprised of very stereotypically feminine items, high scores upon which are interpreted as very feminine, socially responsible, and socially active (p. 252). Although there are few direct interpretations for low scorers, as these samples scored low on measures of social responsibility and trust (Re and CYN) and high on Si3 (discussed further relative to Scale 0), it may be that these attitudes also affected GF scores.

Scores on the Content scale, CYN (*Cynicism*), discussed previously relative to the K scale and Scale 3, were clinically higher in all samples except the Delaware sample. A high score on CYN indicates a belief that others are dishonorable, unprincipled, and corrupt (p. 194-195). This scale tends to be elevated along with ASP and BIZ, which is in fact the case with these samples. ASP (*Antisocial Practices*) was clinically elevated in all samples except the Delaware. This scale assesses attitudes, such as contempt of rules and laws and a cynical view of other's motives, and behaviors including truancy, theft, and conflict with authorities (p. 195-196). Both cynicism and authority conflicts have been broached previously in the F, K, Scale 3 and 5 sections; the admission of non-law

abiding and delinquent behaviors may reflect reality and/or it may simple be that there is less of a taboo in Indian cultures against admitting such attitudes and behaviors. In that the Delaware sample scored lower than the other samples on this scale and that a traditional Delaware value has historically been to 'keep the peace' (Sultzman, 2000; Weslager, 2000), lower scores on this scale may be at least in part attributable to this value being preserved and passed from generation to generation.

#### Scale 6 (Pa)

Scores on Scale 6 (Pa; 40 items), which assesses interpersonal sensitivity and suspiciousness as well as moral self-righteousness (Greene, 2000; p. 155-160), was clinically higher in all samples, with the SWPO sample score being over 10 T-points higher than the standard. The three related Harris-Lingoes scales, Pa1 and Pa2 were also higher than the standard in most samples. Pa1 (*Ideas of External Influence*) assesses externalization of blame for problems, frustrations, and failures as well as persecutory ideas (p. 159), and was clinically elevated in all three samples, with the SWPO sample scoring 15 T-points above the standard. The fact of the matter is Indians *are* externally controlled; the Department of the Interior's Bureau of Indian Affairs, which has historically been accused of misappropriation of finances and tribal funding (Choney et al, 1995), controls much of what occurs within Indian tribes and has throughout the history of the United States. American Indians are the *only* US racial minority group for which the federal government predicates membership and resource distribution (ibid) and it is likely that Indians, realistically, externalize blame at least for problems brought on by chronically poor and maleficent Federal management and decisions. Also, in that American Indians have been persecuted and oppressed throughout the history of this

nation (Brave heart, 1998; Carter, 1976; Cash & Wolff, 1974; Choney et al, 1995; Ehle, 1988; Fehrenbach, 1974; Sultzman, 2000; Weslager, 2000; Wright, 1992) the presence of persecutory ideas is very likely and could be considered an appropriate survival response, given the events that have occurred throughout 600 years of history.

Pa2, *Poignancy*, assesses a respondent's belief that he or she is different or special with high scores indicating over-sensitivity or 'thin skin' (p. 159). Two of the three tribal samples scored higher on this scale although neither reached clinical significance. Additionally, all scores on Pa3, *Naiveté*, were lower than the standard, although did not meet clinically significant criteria either.

Scale 6 also shares items with Supplementary scales, Mt (4), PK (7), and PS (6). The Mt score, discussed relative to previous scales, was clinically higher for only the EWO sample. Scores on both PK and PS were clinically higher in all samples except the Delaware, discussed relative to Scales 1 – 4, and may have been affected by perceptions of generalized distress and the admission of traumatic experiences, both past and present. The related Content subscales upon which the samples scored clinically higher were BIZ, which shares eight items, CYN (7), ASP (6), and DEP (4), all of which were addressed earlier in this paper. Scores on BIZ, which assesses unusual thoughts and experiences (p. 192-193), averaged over 10 points higher than the standard and scores on CYN, a lack of belief and trust in others (p. 194-195), averaged six points higher. Scores on ASP, Antisocial Practices, were clinically elevated in all samples but the Delaware, as were scores on DEP, a measure of generalized distress and negative emotionality (p. 189-191). Elevated scores on Scale 6 appear in the samples to be influenced by lack of belief and trust in others, generalized distress, culturally different thought processes and

experiences, chronic trauma, realistic evaluations of who and what underlies or brought about many of their problems, heightened sensitivity, and admission of socially deviant behavior.

Scores on Scale 6 varied between age groups in the Delaware sample with age group #2 (age 31-45) scoring over 15 T points higher than age group #4 (age 61-85). Some reasons for this may have to do with the likelihood of the younger (working age) group to interaction more frequently with others, which could possibly increase the likelihood for suspiciousness about other's motives, in both work and social situations. Also, it could be that individuals within the younger group tend to be more socially active, as compared to the older group, much of whom would be retired. Interaction on multiple social levels may tend to increase the opportunities for distrust and suspiciousness. Within the Delaware sample and in support of this social-interaction theory, scores among all age groups except the eldest were clinically elevated. It may simply be that retired American Indian individuals, or those of retirement age, who are less socially (and potentially multi-culturally) active are less prone to suspiciousness due to fewer ambivalent social interactions. In that the overall scores on Scale 6 for all Indian samples were clinically higher than the standard, interpersonal suspiciousness seems to be an Indian trait and may stem from negative interactions with the dominant society or with people in general.

#### **Scale 7 (Pt)**

Scale 7, Psychasthenia, comprised of 48 items, assesses the amount of worry or distress in handling one's responsibilities and/or problems, tapping obsessive-compulsive symptoms, abnormal fears, self-criticism, concentration problems, and excessive guilt (p.



160-163). It shares items with the following Supplementary subscales: A (13), Es (9), Do (6), Mt (14), GM (5), PK (17), and PS (17), and with Content Scales, ANX (6), OBS (5), DEP (9), and LSE (4). Scores for all samples, were generally higher although none reached clinical significance. Although any of the samples' T-scores would be within the normal range, in that some of the contributing supplementary and content scale scores were much higher or lower than the standard, these will be discussed in light of the subscale items these samples tended to uniquely endorse. For example, scores on Mt, PK, and PS were all 5 points higher than the standard for one Indian sample or another, whereas scores on Es and Do were 5 points or more lower.

Scores on Mt were clinically higher for the EWO sample and scores on PK and PS, discussed previously, were clinically higher in all samples except the Delaware sample. Higher scores on Mt, PK, and/or PS indicate the presence of generalized distress and adjustment problems (p. 249-250 and 252-254), as discussed in previous sections. Scores on Es were clinically lower for the SWPO sample and scores on Do were lower in all samples although scores for the Delaware sample did not meet clinical significance.

Reasons for the Delaware sample's consistently lower scores on these subscales might be due to less general distress or to greater assimilation, although a general conclusion is not possible, given that the participants came from two completely separate geographic locations and have very different histories beyond the late 1700s (Weslager, 2000).

The Content subscale ANX score, which assesses generalized distress and negative emotionality (p. 185-187), was clinically higher in the EWO sample and scores for both the SWPO and EWO samples were clinically higher on DEP, standard

interpretation of which infers a higher degree of chronic, characterological negative emotionality (p. 189-191).

#### Scale 8 (Sc)

Scores on Scale 8 (Schizophrenia; 78 items) were consistently higher, ranging from about 4.50 to over 12 T points higher in the American Indian samples than the standard. Scores for only the Delaware sample did not reach clinical significance. Scale 8 assesses the acknowledgement of unique experiences and thoughts, in the functional sense, and social detachment and psychotic thought processes, in the dysfunctional sense p. 163-167). Standard interpretation of a T score of 62 (obtained in the SWPO sample) would indicate an avoidance of reality through fantasy, psychosis, or very unique and creative ways of thinking (p. 167). Since is doubtful that the entire SWPO tribal sample is psychotic, alternate explanations might be obtained by looking at contributing subscale scores. Six Harris-Lingoes, Sc1 through Sc6, six Supplementary (A, Es, Mac-R, Mt, PK, and PS), and six Content (ANX, DEP, HEA, BIZ, FAM and WRK) subscales share items with Scale 8 scores (Table 12).

For the Delaware sample, scores on four of the subscales sharing items with Scale 8 met clinical significance. For the SWPO and EWO samples, scores on 14 and, for the Combined AI sample, scores on 11 of the 18 above subscales were clinically different from the standard. Scores on the Harris-Lingoes subscale Sc1, (*Social Alienation*), were clinically higher in all samples except the Delaware, indicating a tendency to withdraw from relationships due to lack of rapport with others (Ibid). Sc2, *Emotional Alienation*, which assesses the degree of rapport with oneself with higher scores implying lack of rapport (p. 168) was clinically elevated in the SWPO sample only. Sc3, *LEM (lack of*

*ego-mastery*) *Cognitive*, assesses strangeness of thought processes (Ibid) and scores were clinically elevated in all samples, ranging from 7 to 9.5 T points higher than the standard. Sc4, *LEM Conative*, assesses 'psychological weakness', defined as the inability to exercise will power to elicit changes in one's life (Ibid). Scores on this subscale were clinically higher in both the SWPO and EWO samples. Scores on Sc5, *LEM Defective Inhibition*, which assesses the experience of one's emotions as strange and of one's impulses as uncontrollable (Ibid), were clinically higher in all samples but the Delaware, the average score of which was not much different than the standard.

The last Harris-Lingoes subscale, Sc6, *Bizarre Sensory Experiences* (formerly Sensorimotor Dissociation), was elevated more so than any other Scale 8 subscale, ranging from 7 to almost 15 T points higher. Standard interpretation of Sc6, infers feelings of depersonalization and estrangement, or dissociation, from one's personal or body image (Ibid). From these results, it appears that the SWPO sample is consistently stranger than the EWO sample, which is stranger than the Delaware sample, which, in Indian circles, tends to be the stuff many jokes are made of. Seriously though, the possible meaning of elevations on the six Harris-Lingoes subscales is difficult to address without going into a long, drawn out description of cultural values and beliefs. The issue of group determinism, the history of oppression and discrimination, and issues related to biculturalism or marginality may be involved in these scales' elevations. It may be that, compared to Euro-Americans, some thoughts, thought processes, and beliefs *are* considered strange or unique. Supported by common cultural beliefs that include the presence of other forces upon one's thoughts and actions and a more willing acknowledgement of intangible influences (Choney et al, 1995), a higher level of

'depersonalization' is likely, yet, whether this is pathological or simply an accurate description of a group-oriented, culturally diverse society is quite another issue.

Scores on some Supplementary scales that share items with Scale 8 also differed from the standard. For the EWO sample the score on Mt, college maladjustment, which assess generalized distress and has been discussed before, was clinically higher and scores on Mac-R were clinically higher for all samples. PK and PS, which share more items with this scale than any other clinical scale, were clinically higher in all samples but the Delaware, and scores on Es, ego strength, were clinically lower in the SWPO and combined AI samples.

Scores on many of the Content subscales that share items with Scale 8, ANX, DEP, HEA, BIZ, FAM, and WRK, differed clinically from the standard in one sample or another. Interpretation of elevated scores on ANX were discussed relative to Scales 2 and 7, those for DEP were discussed relative to scales F, 2, 4, 6, and 7, and those for HEA were addressed in Scale F, 1, 2, and 3 discussions. As BIZ shares items with both F and Scale 6, specific cultural, social, and historical information can be obtained by viewing the discussion on these scales as can information relative to FAM and WRK, by reviewing Scales F, 2 and 3.

The issues of whether or not American Indians in general are more distressed and maladjusted and/or experience more traumas was addressed several times in other sections of this paper; it can be concluded that this appears to be true of the Indian people in this study, whether due to historical events, perception thereof, to cultural factors, or a combination of all of the above.

### Scale 9 (Ma)

Scale 9, (Hypomania; 46 items), is a general measure of psychomotor excitement and flight of ideas and was clinically elevated in the combined AI, the SWPO, and the EWO samples. Although only scores above a T of 65, which no sample reached, infer pathological over-activity or impulsivity, because subscale scores varied widely among the samples, discussion of possible interpretations is warranted. Scores elevations on the four Harris-Lingoes subscales that contribute to interpretation of Scale 9 were unique to each sample although only Ma4 reached clinical significance. Scores on Ma1, *Amorality*, were higher in all tribal samples, the score on Ma2 (*Psychomotor Acceleration*) was higher in only the EWO sample, and scores on Ma3 (*Imperturbability* or social confidence) did not differ from the standard. Scores on Ma4 (*Ego Inflation*) scores were clinically higher in all samples except the Delaware. Elevations of this degree are interpreted as presence of grandiosity and/or manic behavior (p. 172). Scores on this subscale appears to conflict with (low) scores on Es (Ego Strength) and (high) scores on D4 (Mental Dullness), Hy3 (Lassitude/Malaise), and Sc4 (LEM Conative). It is interesting to note that even though these normal participants are can be described as distressed, lacking ego integration, the ability to think clearly, and the ability to self-activate, they also feel self-important to the point of grandiosity. It may be that this instrument is assessing other traits, characteristics, or constructs in these samples than those implied by these subscales.

Scores on the Supplementary scale Es were clinically higher in the combined AI and SWPO sample, scores on Do were higher for both the above and the EWO sample, and the GF (Gender-Role Feminine) score was low for the SWPO sample. Es assesses

the absence of distress and negative emotionality and a low score indicates the opposite (p. 224-227). It is of interest to note that, although Es was clinically lower than the norm, ego inflation (Ma4) was clinically higher, indicating that the two scales must measure separate ego characteristics. Although the meaning of this apparent contradiction is unclear, it may be that these American Indian samples are proud of who they are regardless of the chronic problems and distress they have experienced.

Low Do scores, interpreted in a standard fashion, indicate perceived lack of personal strength, dominance, leadership abilities, initiative, and influence upon others (247-248). As discussed relative to previous clinical scales, domineering qualities may differ between Indian and Euro-American cultures. Leader and leadership abilities tend to be acquired through past behaviors wherein others, not ones self, grant or bestow leadership or position of authority and the roles therein to an individual (Choney, et al, 1995).

Scores on GF were clinically lower in the SWPO sample. This subscale contains items depicting very stereotypical feminine behaviors; a high score indicates the presence of very feminine interests and activities, high social responsibility, and ease of social engagement. Low scorers on GF are described as having little interest in typical feminine activities and as potentially abusing substances (p. 251-252). Scores on this scale also tend to increase with both age and education, although in comparisons within the Delaware tribe, age was not a mediator of scores. It appears, at least in the SWPO sample, that typical, appropriate, and/or valued feminine behaviors differ between Indian and Euro-American cultures.

Scores on Mt and PS, both of which assess either past or present maladjustment,

trauma, or generalized distress (p. 249, 252), tended to be higher for all samples but the Delaware. Clinically higher scores, as discussed previously, were found in the EWO sample on Mt and in all samples except the Delaware on PS. These may indicate meaningful differences in either the frequency with which distress is experienced or in the perception of experiences as distressful. Considering the negative past and present state of health and well being for Indian individuals discussed throughout this paper, it is likely that high scores on Scale 9 are at least in part due to a higher degree of distress.

Scores on the other Supplementary scale that shares items with Scale 9, APS, were lower than average for all samples but the EWO sample although only the SWPO score met clinical significance. This scale assesses addiction potential and low scores imply that these samples lack proneness to substance abuse due to negative emotionality, distress, resentment, and self-deprecation (p.255-256). Although scores indicate that these samples admit using substances at a higher rate than the norm (Mac-R, AAS), abuse may be due to reasons other than those assessed by this subscale.

Scores on Content Scales ASP and FAM were generally higher for all samples, although lower for the Delaware sample than for the other two tribal samples. A higher admission of antisocial practices, or disregard for rules and social conventions for these samples, as discussed relative to scales F, 5, and 6, may be due to negative past and present relations with various levels of society. Higher scores on FAM, found in all samples but the Delaware, indicate more family problems which, at least in part, may be due to close family proximity and a greater likelihood for both negative and positive family interactions. The rationale for the Delaware sample scoring lower than the other two samples on this scale is difficult to explain but could, at least partially, be related to

the 'peacekeeping' value of the tribal culture.

In the normative MMPI-2 sample scores on Scale 9 tended to decrease progressively with age, although this pattern was not necessarily true for the Delaware sample. Although scores did eventually decrease with age, age group #2 (age 31-45) scored higher than age group #1 (age 18-30), the rationale for which is difficult to explain without an item analysis or consultation with tribal experts.

#### Scale 0 (Si)

Scores across samples did not differ clinically from the standard on Scale 0, Social Introversion (69 items), which assesses attitudes and beliefs regarding socialization (p. 171-175), yet scores on subscales sharing items with this scale varied from the standard and are discussed below. Harris Lingoes subscales contributing to Scale 0 are Si1, Si2 and Si3, upon which there were no clinical differences. Scores on the Supplementary scales Es, Do, Re, Mt, GM, PK, and PS and scores on the Content subscales ASP, CYN, and WRK differed clinically in one sample or another. Scores on Es, Ego Strength, as discussed relative to all basic scales but Scale 6, were lower than the standard across all samples. As mentioned before, a high score on this scale assesses absence of distress rather than ego strength, per se, and a low score would indicate the opposite, or the presence of distress. As scores in all samples were low, the experience of distress was endorsed frequently and is supported by scores on other scales assessing the same thing.

Scores on Do (Dominance) and Re (Social Responsibility) were very low across samples, reaching clinical significance in all samples except the Delaware (on Do). Even though overall scores on Scale 0 for these participants did not differ from the norm, there



appear to be differences in how social situations are approached or avoided. Low scores on Do, as discussed previously, may indicate that Indian cultures neither value nor condone the same type of 'dominant' behavior in social interactions, which may support the concept that Indians tend to be 'reserved' in social situations. It may be more socially acceptable among Indians to set behavioral examples in efforts to gain a reputation, and thereby social support, for being a trustworthy leader than it is to verbally or behaviorally convince others that one's opinion or leadership abilities are more valid or valuable than is another's.

As discussed in previous sections, scores on the scales assessing general maladjustment or distress, Mt, PK, and PS, were higher for all samples; EWO scores were clinically higher on all and SWPO scores were clinically higher on all but Mt. In this instance as well as several previous ones, scores for the Delaware sample were lower on average than the other two tribal samples. Scores on GM were lower than the standard in the SWPO and EWO samples yet did not meet clinical significance. It may be that the constructs of the GM scale differ from culture to culture. For example, many American Indian men, especially those that hold traditional beliefs, also hold very traditionally masculine views and behaviors, yet apparently these differ from those measured by the GM subscale. Interestingly, scores on GF tended to be lower in these samples than the standard although scores on Scale 5 were higher. Although this contradiction is unclear, it appears to support the notion that the MMPI-2 gender-role scales fail to adequately assess gender values and behaviors across cultures.

## **Conclusion**

This study, compared scores of a sample of normal members of the Delaware Indian tribe to those of the MMPI-2's normative sample. Basic and validity scores and Harris-Lingoes, Supplementary, and Content subscales scores were compared to a standard T-score of 50. Within the Delaware sample, analyses were undertaken to ascertain meaningful differences between participants for the variables gender, age, acculturative status, and education. Additionally, comparisons were made between the standard ( $T = 50$ ) and two other Indian tribal samples as well as between the standard and all Indian samples combined. Baseline scores for the three different Indian samples and the Combined American Indian samples were obtained and are considered to be valid and accurate estimates of normal scores for these samples. The intent of this study was both to help explain culture-bound personality differences between Euro-American and Indian cultures and to contribute to the MMPI-2's valid use with American Indian populations. Most importantly, the results of this study are intended to extend the cultural knowledge base from which to infer pathology, or more culturally sensitive use of the MMPI-2 with American Indian clients.

For the Delaware tribe, scores on three Basic scales, on three Harris-Lingoes subscales, on three Supplementary subscales, and on two Content subscales. In comparing demographic variables, no clinically significant differences between genders or education levels were found on any of the Basic Scale. Age differences were obtained on Basic Scales, 6 and 9.

In comparing the three Tribal samples, clinically significant differences were obtained on two Basic Scales, seven Harris-Lingoes, two Supplementary, and five

Content subscales. Upon combining all Indian samples, clinical differences were found on six Basic Scales, nine Harris-Lingoes subscales, nine Supplementary scales, and on five Content subscales. Many clinically significant differences were obtained between at least one Tribal sample and the standard, which can be found in tables 6 through 9.

Interpreted in a standard fashion, high scores on the L-scale indicate excessive guardedness; the SWPO sample's score only differed clinically from the standard.

Scores on the F-scale, for all samples, were clinically higher, indicating either a higher degree of pathology or the more frequent endorsement of unusual and/or distressing experiences. Because scores on several subscales sharing items with F were different from the standard as well as between samples, alternate interpretations of a high F-scale score might be related to Tribe-specific cultural differences as well as cultural differences between American Indian and Euro-American beliefs and values.

Generally, scores on the K-scale were lower than the standard, which, according to standard interpretation, indicates fewer coping abilities, lower educational level, and/or lack of psychological mindedness. Yet, because many Indian cultures are intact today, the question of coping ability is questionable. Also, in contrast with what was found in the normative sample, education did not mediate K scores in the Delaware sample. Differing scores on subscales contributing to K may be attributable to cultural differences in the nature of coping resources utilized and considered applicable and valuable. It may also be that the specific MMPI-2 items assessing coping resources, such as personal insight and psychological mindedness, differ from what are taught and applied in Indian cultures.

All three tribal samples clinically elevated Scale 1, Hs, indicating the experience

of several physical and health problems and/or a greater propensity to convert psychological symptoms to physical ailments and all samples elevated the Content subscale HEA, which assesses general health problems. Endorsement of items on these scales likely reflects real health issues, evident in the high incidence of diabetes, coronary heart disease, hypertension, stress, suicide rates, alcoholism rates, and accidental death among American Indian groups. Although scores on this scale tended to be higher among females and in older individuals in the normative sample, neither age nor gender mediated scores in the same manner within the Delaware sample. There appear to be more health problems among all members of this sample, regardless of age or gender.

Scores on Scale 2, which assesses attitudes and behaviors that reflect depression, did not differ from the standard although scores on several subscales did. Standard interpretation of the subscales that were elevated (in all samples except the Delaware) indicates greater pessimism, lower morale, and more general health concerns.

Although scores on Scale 3, which assesses somatic symptoms and proneness to conversion, were not different from the standard, scores on many of the contributing subscales were. All samples endorsed items depicting a lower level of trust and optimism and a greater concern about health problems.

Higher scores for all samples on Scale 4 may indicate general social maladjustment, concerns about family members, and conflict with or hostility toward authority figures. These samples tended to endorse items related to family conflict, non-conventional behaviors, feelings of isolation and externalization of blame, lack of self-integration, admission of guilt, and loss of heart and hope. All samples indicated a lower sense of commitment and obligation to society and lesser confidence and trust in the

world. Whether the findings for these samples are supported by historical events, cultural perceptions, or to a higher incidence of 'deviance' is not certain without further analysis and qualitative information. It may be that scores were, at least in part, affected by close family proximity and interaction, by resentment of society and authority figures, and pressures, demands, and issues of identity development in a multicultural society.

Scores on Scale 5 were higher, although not clinically higher than the standard, which may indicate atypical endorsement of 'masculine' and 'feminine' interests, attitudes, and behaviors and/or differences in the concept of personal strength and well-being. All samples endorsed more items assessing cynicism, or the belief that others are dishonorable, unprincipled, and corrupt, as well as more items pertaining to non-conventional behavior.

Scores on Scale 6, which measures interpersonal sensitivity and suspiciousness and moral self-righteousness, were clinically higher among all samples. Scores on related subscales appear to indicate externalization of blame, frustrations, and failures and persecutory ideas. Because Indians are and have always been externally controlled, at least by the US government, scores may reflect resentful perceptions of this situation. The higher level of persecutory ideas may also be supported by the above and may also be an appropriate survival response, given the past 600 years of history. Scores on contributing subscales indicated over-sensitive feelings, lack of trust in others, and endorsement of items pertaining immoral or unethical behavior. It may be that these individuals lack trust in and obligation to societal values and rules and are therefore likely to defy them. Additionally, scores indicated the presence of a higher degree of distress and trauma, as well as culturally different thought processes and experiences. Age

differences were found in the Delaware sample, wherein younger, working-age individuals scored higher than those of retirement age.

Scale 7 assesses levels of distress in handling one's responsibilities and problems and taps obsessive-compulsive symptoms, abnormal fears, self-criticism, concentration problems, and excessive guilt. For the most part, scores on this scale were higher, albeit non-clinically, indicating indecision, chronic, negative emotionality, feelings of incapability, and inadequacy.

Scores on Scale 8 were consistently higher in all samples; all samples acknowledged many unique experiences and thoughts. Since it is doubtful that the entire sample is psychotic, cultural characteristics and beliefs may be applicable in participants' item endorsements on this scale. Scores on the subscale *Bizarre Sensory Experiences* were elevated above and beyond all others and may be supported by cultural differences in spirituality, such as a willingness to entertain the notion that intangible forces are as present and influential in one's life as are tangible ones. Also, as assessed by this scale, higher levels of distress, maladjustment, and traumatic experiences were found. These may also be due to historical events, perceptions thereof, to cultural factors, or a combination of all of the above, yet, whether this is pathological or simply an accurate description of a holistic, group-oriented, culturally diverse society is quite another issue.

Scale 9, which measures psychomotor excitement and flight of ideas, was clinically elevated in all samples but the Delaware. Subscale scores, interpreted in a standard manner, indicated global callousness about one's own and others' motives and goals as well as feelings of hyperactivity and lack of personal strength, dominance, leadership abilities and initiative. Considering the lifestyle of many American Indian

tribes in the recent past, it may be that these Tribal samples are still adjusting to, and resent, a sedentary lifestyle. Also, overtly expressed dominance and leadership abilities may not be as valued or expressed in many Indian cultures in the same way that they are other cultures. Contrary to the popular belief that Indians are socially reserved, scores in level of social confidence or independence did not vary from the standard. Also, in the normative MMPI-2 sample, scores on Scale 9 tended to decrease steadily with age, which did not follow the same pattern in the Delaware sample. Scores within the eldest age group were, in fact the lowest of the samples, yet scores in the 31 - 45 age group were higher than those of the youngest age group. The meaning of this finding is unclear and cannot be determined without additional analyses and/or consultation with tribal experts.

Lastly, although scores on Scale 0, Social Introversion, did not differ clinically from the standard, for the most part subscale scores indicated that these participants are neither more shy nor more embarrassed around others and do not tend to avoid group activities. Scores on other subscales did indicate that these participants tended to lack 'self-confidence' in social situations and tended to question their own judgment. Although this scale does not allow for between-social-group distinction, because most of these participants indicated bicultural identification, the social group with which one is interacting may tend to affect comfort level. These participants endorsed items indicating unique approach/avoidance social patterns. Higher scores on subscales assessing anxiety and general distress share may have tended to counter low scores on subscales assessing ego-strength, dominance, and social responsibility.

## **Research Strengths, Weaknesses, and Future Directions**

Little, if any, research exists on American Indian scores on the MMPI-2 subscales; this research expands what is known about how American Indian individuals score on and differ from what are considered to be normal scores on this instrument. Information contained within this paper will allow more appropriate assessment and more appropriate treatment recommendations for American Indian individuals. Although interpretations are tentative, most were broached with consideration of the unique histories and attributes of each Indian culture. Both history and culture should be considered not only in profile interpretation but also in treatment recommendation, in test and test item development, and in theoretical conceptualizations of pathology.

Differences in group size and lack of data, on some occasions, contributed to the inability to directly compare Tribal and normative samples in this study. Additionally, the meaning of high and low scores were not confirmed with tribal experts and are tentative. An item analysis may have enhanced this study; it would have been helpful to discern which items, if any, were more frequently endorsed by each sample, as would tribal-expert input as to historic or culture-specific reasons for item endorsement. Further statistical analyses, such as multiple regression using relative subscale score contribution to each Basic scale, would also enhance the findings in this study. Lastly, as variability in response among those of different age, socioeconomic status, education, and acculturative levels may occur, it may be necessary to construct several different descriptive profiles, for a more accurate description or baseline for each variable level.



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## Appendix A

**INFORMED CONSENT FORM  
UNIVERSITY OF OKLAHOMA, NORMAN CAMPUS  
AGREEMENT TO PARTICIPATE IN RESEARCH PROJECT**

This is to certify that I hereby voluntarily agree to participate in the research project entitled:

**The Minnesota Multiphasic Personality Inventory - Revised: Extending American Indian Norms.** I understand that the persons responsible for this project are Terry M. Pace, PhD. and Kathleen Lacey, M.Ed., Department of Educational Psychology, the University of Oklahoma, Norman. Dr. Pace and Ms. Lacey can be reached at (405) 325-5974.

The purpose of this study is to establish Native American normative characteristics on the included instruments. I will be asked to complete self-report questionnaires that assess my acculturation status and my personality traits and will allow researchers to use this information for research purposes only. I will receive no feedback; I will receive \$10 for my completion of the test material and a chance at a larger prize, to be awarded at a future date.

I will be completing paper and pencil tasks and there are no known risks of physical, emotional, or societal harm associated with my participation. In the unlikely event that I am physically or emotionally harmed, I will receive no compensation. By participating in this study I am helping to improve the usefulness of these devices for Native American individuals.

I understand that I am free to refuse to participate and to withdraw from the experiment at any time without detrimental consequences.

I also understand that all information identifying me or my Tribal affiliation will be kept in a secured University office at all times. Once data are collected, scored, and tabulated and the prize is awarded, all identifying information will be destroyed; there will be no way for the experimenters, or anyone else, to personally identify me. Furthermore, all findings will be presented as group averages only. If I have any questions about my rights as a participant or any questions/concerns during or following my participation, I can contact Dr. Pace or Ms. Lacey at the phone number above or the University of Oklahoma Office of Research Administration, 1000 Asp Ave., Ste. 314, Norman, OK 73019-4077, (405) 325-4757.

\_\_\_\_\_  
participant signature

\_\_\_\_\_  
date

**CONFIDENTIAL INFORMATION**

packet # \_\_\_\_\_

Please answer as honestly as possible the following questions about yourself.  
The answers you provide will be completely confidential; no one except the researchers will have access to the following information. Your name is not required.

---

**Personal Information:**

How old are you? \_\_\_\_\_ What language(s) did you first learn to speak? \_\_\_\_\_

What is the highest grade you completed in school? \_\_\_\_\_

Are you currently \_\_\_\_\_ married? \_\_\_\_\_ divorced? \_\_\_\_\_ single?

What is your current **personal** income (circle one letter, A through F)?

- |                                |                                |
|--------------------------------|--------------------------------|
| A. under \$11,999              | D. between \$35,000 - \$49,000 |
| B. between \$12,000 - \$19,999 | E. between \$50,000 - \$64,999 |
| C. between \$20,000 - \$34,999 | F. above \$65,000              |

What is your current **family** income (circle one letter, A through F)?

- |                                |                                |
|--------------------------------|--------------------------------|
| A. under \$11,999              | D. between \$35,000 - \$49,000 |
| B. between \$12,000 - \$19,999 | E. between \$50,000 - \$64,999 |
| C. between \$20,000 - \$34,999 | F. above \$65,000              |
- 

**Counseling History:**

Have you ever gone to see a counselor/therapist *other* than a school counselor? yes no

If you have, what was the year of your last counseling session? \_\_\_\_\_

Were you ever told by a counselor that you had a *personality* disorder? yes no

If you were told you had a personality disorder, what type? \_\_\_\_\_

Have you ever taken a personality test? yes no If so, what test? \_\_\_\_\_

Have you ever felt that you were severely depressed? yes no Suicidal? yes no

Have you ever used alcohol? yes no Do you now? yes no Used drugs? yes no

Do you think you now have or have ever had a **drinking problem**? yes no

**Drug problem?** yes no

---

**Tribal Affiliation and Cultural Involvement:**

Are you an enrolled member of the Delaware Tribe? yes no

What is your degree of Indian Blood? \_\_\_\_\_ (i.e. 1/4, 1/2, etc.)

Check one statement that best describes your involvement with **Delaware** and/or **White** cultures:

- \_\_\_ Strong involvement with Delaware culture; weak involvement with White Culture.
- \_\_\_ Strong involvement with White culture; weak involvement with Delaware Culture.
- \_\_\_ Strong involvement with **both** Delaware and White cultures.
- \_\_\_ Weak involvement with **both** Delaware and White cultures.

## **Appendix B**

**Table 1****Basic Scales  
Delaware Tribe**

<b>Scale</b>		(mean score)	t	df	sign. (2 tailed)	mean diff.
L	Lie	53.61	2.427	74	.018	3.61
F	Infrequency	*59.05	4.085	74	.000	9.05
K	K	47.72	-1.383	74	.171	-2.28
1 Hs	Hypochondriasis	*56.09	4.765	74	.000	6.09
2 D	Depression	50.88	.691	74	.538	.88
3 Hy	Hysteria	52.17	1.533	74	.130	2.17
4 Pd	Psychopathic Deviate	54.67	3.366	74	.001	4.67
5 Mf	Masculinity/Femininity	53.21	2.157	74	.034	3.21
6 Pa	Paranoia	*56.32	3.865	74	.000	6.32
7 Pt	Psychasthenia	52.23	1.526	74	.122	2.23
8 Sc	Schizophrenia	54.67	2.908	74	.005	4.67
9 Ma	Hypomania	54.08	3.686	74	.000	4.08
0 Si	Social Introversion	49.27	-.684	74	.496	-.73

\* indicates a *clinically* significant difference ( $\geq 5$  T points).

**Table 2****Harris-Lingoes Subscales  
Delaware Tribe**

<b>Scale</b>		(mean score)	t	df	sign. (2 tailed)	mean diff.
D1	Subj. depression	50.08	.062	74	.951	.08
D2	Psychomotor retardation	49.41	-.494	74	.623	-.59
D3	Phys.malfunctioning	50.88	.674	74	.503	.88
D4	Mental dullness	52.68	1.925	74	.058	2.68
D5	Brooding	50.12	.091	74	.927	.12
Hy1	Denial social anx.	50.60	.544	74	.588	.60
Hy2	Need for affection	47.45	-2.194	74	.031	-2.55
Hy3	Lassitude-malaise	51.71	1.312	74	.194	1.71
Hy4	Somatic sympt./complaints	54.57	3.259	74	.002	4.57
Hy5	Inhibition aggression	47.88	-1.558	74	.123	-2.12
Pd1	Familial Discord	50.13	.121	74	.904	.13
Pd2	Authority Problems	54.49	3.616	74	.001	4.49
Pd3	Social Imperturb.	52.89	2.652	74	.010	2.89
Pd4	Social Alienation	54.89	3.660	74	.000	4.89
Pd5	Self Alienation	53.56	2.481	74	.015	3.56
Pa1	Ideas External Infl.	*57.67	4.056	74	.000	7.67
Pa2	Poignancy	51.21	.848	74	.399	1.21
Pa3	Naivete	48.84	-1.010	74	.316	-1.16
Sc1	Social Alienation	52.31	1.496	74	.139	2.31
Sc2	Emo. Alienation	52.80	1.635	74	.106	2.80
Sc3	L E M-Cognitive	*56.84	4.049	74	.000	6.84
Sc4	L E M-Conative	52.99	1.965	74	.053	2.99
Sc5	L E M- DefectInhibition	51.52	1.016	74	.313	1.52
Sc6	Biz. Sensory Exps	*57.37	4.306	74	.000	7.37
Ma1	Amorality	52.57	2.210	74	.030	2.57
Ma2	Psychomotor Accel.	51.00	.903	74	.369	1.00
Ma3	Imperturbability	51.07	1.079	74	.284	1.07
Ma4	Ego Inflation	53.78	3.413	74	.001	3.78

\* indicates a *clinically* significant difference ( $\geq 5$  T points).



**Table 3****Supplementary Scales  
Delaware Tribe**

<b>Scale</b>		(mean score)	t	df	sign. (2 tail)	mean diff
<b>A</b>	<b>Anxiety</b>	<b>50.72</b>	<b>.544</b>	<b>74</b>	<b>.588</b>	<b>.72</b>
<b>R</b>	<b>Repression</b>	<b>50.95</b>	<b>.824</b>	<b>74</b>	<b>.413</b>	<b>.95</b>
<b>Es</b>	<b>Ego Strength</b>	<b>45.49</b>	<b>-2.492</b>	<b>74</b>	<b>.015</b>	<b>-4.51</b>
<b>Mac-R</b>	<b>MacAndrew Alcoholism-Rev.</b>	<b>*56.41</b>	<b>5.301</b>	<b>74</b>	<b>.000</b>	<b>6.41</b>
<b>AAS</b>	<b>Addict'n Admiss'n</b>	<b>54.75</b>	<b>3.293</b>	<b>74</b>	<b>.002</b>	<b>4.74</b>
<b>APS</b>	<b>Addict'n Potential</b>	<b>47.68</b>	<b>-1.459</b>	<b>74</b>	<b>.149</b>	<b>-2.32</b>
<b>MDS</b>	<b>Marital distress</b>	<b>54.65</b>	<b>3.363</b>	<b>74</b>	<b>.001</b>	<b>4.65</b>
<b>O-H</b>	<b>Overcontrolled Hostility</b>	<b>53.81</b>	<b>3.127</b>	<b>74</b>	<b>.003</b>	<b>3.81</b>
<b>Do</b>	<b>Dominance</b>	<b>46.00</b>	<b>-2.712</b>	<b>74</b>	<b>.008</b>	<b>-4.00</b>
<b>Re</b>	<b>Social Responsib'lty</b>	<b>*44.85</b>	<b>-2.714</b>	<b>74</b>	<b>.008</b>	<b>-5.15</b>
<b>Mt</b>	<b>College Maladj.</b>	<b>51.41</b>	<b>1.159</b>	<b>74</b>	<b>.250</b>	<b>1.41</b>
<b>GM</b>	<b>Gender Role Masc.</b>	<b>50.77</b>	<b>.571</b>	<b>74</b>	<b>.570</b>	<b>.77</b>
<b>GF</b>	<b>Gender Role Fem.</b>	<b>48.39</b>	<b>-1.288</b>	<b>74</b>	<b>.202</b>	<b>-1.61</b>
<b>PK</b>	<b>PTSD-Keane</b>	<b>53.01</b>	<b>2.125</b>	<b>74</b>	<b>.037</b>	<b>3.01</b>
<b>PS</b>	<b>PTSD-Schienger</b>	<b>52.88</b>	<b>2.002</b>	<b>74</b>	<b>.049</b>	<b>2.88</b>
<b>Si1</b>	<b>Shyness/Self- Consciousness</b>	<b>48.28</b>	<b>-1.528</b>	<b>74</b>	<b>.131</b>	<b>-1.72</b>
<b>Si2</b>	<b>Social Avoidance</b>	<b>49.25</b>	<b>-.521</b>	<b>74</b>	<b>.604</b>	<b>-.75</b>
<b>Si3</b>	<b>Alienation-Self &amp; Others</b>	<b>50.93</b>	<b>.846</b>	<b>74</b>	<b>.400</b>	<b>.93</b>
<b>Fb</b>	<b>Back-F</b>	<b>*57.55</b>	<b>3.189</b>	<b>74</b>	<b>.002</b>	<b>7.55</b>

\* indicates a *clinically* significant difference ( $\geq 5$  T points).

**Table 4****Content Scales  
Delaware Tribe**

<b>Scale</b>		(mean score)	t	df	sign. (2 tail)	mean diff.
ANX	Anxiety	52.27	1.700	74	.093	2.27
FRS	Fears	51.83	1.492	74	.140	1.83
OBS	Obsessiveness	50.56	.433	74	.666	.56
DEP	Depression	52.31	1.691	74	.095	2.31
HEA	Health Concerns	*56.32	4.731	74	.000	6.32
BIZ	Bizarre Mentation	*58.68	5.638	74	.000	8.68
ANG	Anger	50.19	.157	74	.876	.19
CYN	Cynicism	54.00	3.125	74	.003	4.00
ASP	Antisoc.Practices	53.44	2.853	74	.006	3.44
TPA	Type A Persnlity	49.56	-.468	74	.641	-.44
LSE	Low Self-esteem	50.44	.365	74	.716	.44
SOD	Social Discomf.	49.73	-.245	74	.807	-.27
FAM	Family Problems	52.07	1.752	74	.084	2.07
WRK	Work Interf.	51.53	1.283	74	.204	1.53
TRT	Neg. Tx Indicators	53.03	2.276	74	.026	3.03

\* indicates a *clinically* significant difference ( $\geq 5$  T points).

**Table 5****Clinically Significant Within-(Delaware) Group  
Differences  
Basic Scales**

Variable	Group/Average		stat. test	sign.
<b>Gender</b>	<i>Male</i>	<i>Female</i>	<i>F-Ratio</i>	
5 Mf	48.33	56.47	7.81	.007
<b>Age</b>			<i>Tukey HSD Mean Diff.</i>	
6 Pa	Group 2 (31 - 45): 63.50	Group 4 (61 - 85): 48.00	15.50	.013
9 Ma	Group 1 (18 - 30): 56.08	Group 4 (61 - 85): 47.43	8.65	.028
	Group 2 (31 - 45): 57.44	Group 4 (61 - 85): 47.43	10.01	.019

**Table 6**                      **Clinically Significant Differences**  
**Between Tribes and Standard**  
**Basic Scales**

Scale		Combined AI (N= 246)	SWPO (N= 89)	EWO (N= 82)	Delaware (N = 75)
L	Lie	54.90	*57.53	53.32	53.61
F	Infrequency	*63.24	*69.66	*60.33	*59.05
K	K	47.24	47.09	46.98	47.72
1 Hs	Hypochondriasis	*56.87	*58.70	*55.65	*56.09
2 D	Depression	52.06	51.64	53.57	50.88
3 Hy	Hysteria	51.06	50.08	51.07	52.17
4 Pd	Psychopathic Deviate	*55.20	*55.71	*55.13	54.67
5 Mf	Masculinity/Femininity	54.04	54.64	54.16	53.21
6 Pa	Paranoia	*57.72	*60.02	*56.56	*56.32
7 Pt	Psychasthenia	54.09	54.83	52.23	52.23
8 Sc	Schizophrenia	*58.48	*62.23	*58.00	54.67
9 Ma	Hypomania	*57.10	*59.23	*57.60	54.08
0 Si	Social Introversion	50.42	50.82	51.07	49.27

\* indicates a *clinically* significant difference ( $\geq 5$  T points).

see Table 10 for t-score comparisons to T = 50 on all scales

see Table 11 for clinically significant differences between Tribes on all scales

**Table 7**                                      **Clinically Significant Differences**  
**Between Tribes and Standard**  
**Harris-Lingoes Subscales**

Scale		Combined AI (N= 246)	SWPO (N= 89)	EWO (N= 82)	Delaware (N = 75)
D1	Subj. depression	52.80	53.61	54.44	50.08
D2	Psychomotor retardation	50.33	50.48	51.00	49.41
D3	Phys.malfunctioning	52.74	53.30	53.85	50.88
D4	Mental dullness	53.71	53.43	54.96	52.68
D5	Brooding	51.70	51.41	53.44	50.12
Hy1	Denial social anx.	48.71	47.63	48.13	50.60
Hy2	Need for affection	45.60	*44.59	*44.98	47.45
Hy3	Lassitude-malaise	53.26	53.08	54.88	51.71
Hy4	Somatic sympt./complaints	*56.91	*59.84	*55.95	54.57
Hy5	Inhibition aggression	46.14	*43.37	47.48	47.88
Pd1	Familial Discord	54.67	*57.01	*56.33	50.13
Pd2	Authority Problems	*55.04	*56.70	53.78	54.49
Pd3	Social Imperturb.	50.99	50.28	50.00	52.89
Pd4	Social Alienation	*56.44	54.95	*55.46	54.89
Pd5	Self Alienation	54.69	*55.01	*55.27	53.56
Pa1	Ideas of Ext. Infl.	*61.06	*65.10	*59.88	*57.67
Pa2	Poignancy	53.57	54.85	54.38	51.21
Pa3	Naivete	46.93	45.52	46.69	48.84
Sc1	Social Alienation	*56.44	*59.67	*56.79	52.31
Sc2	Emo. Alienation	54.91	*57.40	54.23	52.80
Sc3	L E M-Cognitive	*58.06	*59.43	*57.73	*56.84
Sc4	L E M-Conative	54.94	*55.32	*56.32	52.99
Sc5	L E M- DefectInhibition	*55.38	*57.92	*56.22	51.52
Sc6	Biz. Sensory Exps	*61.14	*64.83	*60.67	*57.37
Ma1	Amorality	53.48	54.92	52.77	52.57
Ma2	Psychomotor Accel.	51.81	50.16	54.30	51.00
Ma3	Imperturbability	51.29	52.1149	50.6463	51.07
Ma4	Ego Inflation	*57.43	*59.8046	*58.2317	53.78

\* indicates a *clinically* significant difference ( $\geq 5$  T points).

**Table 8**                      **Clinically Significant Differences**  
**Between Tribes and Standard**  
**Supplementary Scales**

Scale		Combined AI (N= 244)	SWPO (N= 87)	EWO (N= 82)	Delaware (N = 75)
A	Anxiety	52.79	53.40	54.02	50.72
R	Repression	50.65	51.24	49.76	50.95
Es	Ego Strength	*44.59	*42.53	45.96	45.49
Mac-R	MacAndrew Alcoholism-Rev.	*57.05	*59.01	*55.54	*56.41
AAS	Addict'n Admiss'n	*56.06	*57.38	*55.85	54.75
APS	Addict'n Potential	47.48	*44.53	50.44	47.68
MDS	Marital distress	*57.30	*59.20	*57.71	54.65
O-H	Overcontrolled Hostility	52.50	52.03	51.79	53.81
Do	Dominance	*44.02	*43.31	*42.95	46.00
Re	Social Responsib'lty	*43.45	*41.47	*44.27	*44.85
Mt	College Maladj.	53.66	54.24	*55.12	51.41
GM	Gender Role Masc.	47.97	45.44	48.11	50.77
GF	Gender Role Fem.	46.07	*42.91	47.30	48.39
PK	PTSD-Keane	*56.10	*57.80	*57.11	53.01
PS	PTSD-Schienger	*56.49	*58.43	*57.73	52.88
Si1	Shyness/Self- Consciousness	50.17	50.71	51.33	48.28
Si2	Social Avoidance	48.31	47.36	48.46	49.25
Si3	Alienation-Self & Others	53.48	*55.33	53.83	50.93
Fb	Back-F	*64.79	*72.64	*63.07	*57.55

\* indicates a *clinically* significant difference ( $\geq 5$  T points).

**Table 9**                      **Clinically Significant Differences**  
**Between Tribes and Standard**  
**Content Scales**

Scale		Combined AI (N= 246)	SWPO (N= 89)	EWO (N= 82)	Delaware (N = 75)
ANX	Anxiety	54.14	54.68	*55.27	52.27
FRS	Fears	54.17	*57.33	52.94	51.83
OBS	Obsessiveness	52.54	53.30	53.54	50.56
DEP	Depression	54.99	*56.68	*55.65	52.31
HEA	Health Concerns	*58.16	*60.32	*57.54	*56.32
BIZ	Bizarre Mentation	*60.53	*63.59	*58.98	*58.68
ANG	Anger	52.04	53.48	52.21	50.19
CYN	Cynicism	*55.95	*57.67	*55.90	54.00
ASP	Antisoc.Practices	*55.39	*57.09	*55.37	53.44
TPA	Type A Persnlity	51.91	53.36	52.52	49.56
LSE	Low Self-esteem	53.04	54.53	53.84	50.44
SOD	Social Discomf.	50.70	51.09	51.16	49.73
FAM	Family Problems	54.33	*55.82	54.83	52.07
WRK	Work Interf.	53.96	54.53	*55.59	51.53
TRT	Neg. Tx Indicators	*56.42	*58.91	*56.89	53.03

\* indicates a *clinically* significant difference ( $\geq 5$  T points).

Table 10

## One-Sample T-test

## Combined AI Scores Compared to T = 50 Standard

Scale		(mean score)	t	df	sign. (2 tailed)
Basic					
L	Lie	54.90	6.392	245	.000
F	Infrequency	*63.24	9.255	245	.000
K	K	47.24	-3.720	245	.000
1 Hs	Hypochondriasis	*56.87	8.808	245	.000
2 D	Depression	52.06	2.625	245	.009
3 Hy	Hysteria	51.06	1.344	245	.180
4 Pd	Psychopathic Deviate	*55.20	6.822	245	.000
5 Mf	Masculinity/Femininity	54.04	5.149	245	.000
6 Pa	Paranoia	*57.72	8.435	245	.000
7 Pt	Psychasthenia	54.09	4.984	245	.000
8 Sc	Schizophrenia	*58.48	8.254	245	.000
9 Ma	Hypomania	*57.10	8.936	245	.000
0 Si	Social Introversion	50.42	.690	245	.491
HarrisLingoes					
D1	Subjective depression	52.80	3.594	245	.000
D2	Psychomtr retardation	50.33	.450	245	.653
D3	Physical malf	52.74	3.408	245	.001
D4	Mental dullness	53.71	4.504	245	.000
D5	Brooding	50.12	2.286	245	.023
Hy1	Denial of social anxiety	48.71	-1.995	245	.047
Hy2	Need for affection	46.60	-6.532	245	.000
Hy3	Lassitude-malaise	53.26	4.377	245	.000
Hy4	Somatic symptoms	*56.91	7.781	245	.000
Hy5	Inhibition of Aggr	46.14	-5.547	245	.000
Pd1	Familial Discord	54.67	6.255	245	.000
Pd2	Authority Problems	*55.04	7.461	245	.000
Pd3	Social Imperturbability	50.99	1.576	245	.116
Pd4	Social Alienation	*56.44	6.623	245	.000
Pd5	Self Alienation	54.59	6.058	245	.000
Pa1	Ideas of External Infl	*61.06	9.728	245	.000
Pa2	Poignancy	53.57	4.743	245	.000
Pa3	Naivete	46.93	-4.718	245	.000
Sc1	Social Alienation	*56.44	6.554	245	.000
Sc2	Emotional Alienation	54.91	4.969	245	.000
Sc3	L E M-Cognitive	*58.06	8.567	245	.000
Sc4	L E M-Conative	54.94	5.508	245	.000
Sc5	L E M- DefectInhib	*55.38	6.018	245	.000
Sc6	Bizarre Sens Exp	*61.14	10.381	245	.000
Ma1	Amorality	53.48	5.014	245	.000
Ma2	Psychomotor Accel	51.81	2.792	245	.006
Ma3	Imperturbability	51.29	1.992	245	.047
Ma4	Ego Inflation	*57.43	9.716	245	.000

**Table 10 (continued)****One-Sample T-test****Combined AI Scores Compared to T = 50 Standard**

<b>Scale</b>		(mean score)	t	df	sign. (2 tailed)
Supplementary					
A	Anxiety	52.79	3.681	245	.000
R	Repression	50.65	.997	245	.320
Es	Ego Strength	*44.59	-6.771	245	.000
Mac-R	MacAndrew Alcoholism-Revised	*57.05	10.514	245	.000
AAS	Addiction Admiss'n	*56.06	7.053	245	.000
APS	Addiction Potential	47.48	-3.520	245	.001
MDS	Marital distress	*57.30	8.903	245	.000
O-H	Overcontroll Hostility	52.50	3.855	245	.000
Do	Dominance	*44.02	-8.561	245	.000
Re	Social Responsib'lty	*43.45	-8.231	245	.000
Mt	College Maladjustment	53.66	4.996	245	.000
GM	Gender Role masculine	47.97	-2.773	245	.006
GF	Gender Role feminine	46.07	-5.641	245	.000
PK	PTSD-Keane	*56.10	7.086	245	.000
PS	PTSD-Schienger	*56.49	7.337	245	.000
Si1	Shyness/Self- Consciousness	50.17	.267	245	.790
Si2	Social Avoidance	48.31	-2.597	245	.010
Si3	Alienation-Self/Others	53.48	5.060	245	.000
Content					
ANX	Anxiety	54.14	5.597	245	.000
FRS	Fears	54.17	5.562	245	.000
OBS	Obsessiveness	52.54	3.483	245	.001
DEP	Depression	54.99	6.483	245	.000
HEA	Health Concerns	*58.16	10.281	245	.000
BIZ	Bizarre Mentation	*60.53	11.577	245	.000
ANG	Anger	52.04	2.921	245	.004
CYN	Cynicism	*55.95	8.558	245	.000
ASP	Antisocial Practices	*55.39	7.519	245	.000
TPA	Type A Personality	51.91	2.636	245	.009
LSE	Low Self-esteem	53.04	3.887	245	.000
SOD	Social Discomfort	50.70	1.059	245	.291
FAM	Family Problems	54.33	5.823	245	.000
WRK	Work Interference	53.96	5.139	245	.000
TRT	Negative Tx Indicators	*56.42	7.704	245	.000



**Table 11** **Tukey's HSD**  
**Clinically Significant Mean Differences between Tribes**

Scale	Tribe	(mean difference)	Standard Error	Sign.
<b>Basic</b>				
8 Sc	SWPO / Del.	7.56	2.478	.007
9 Ma	SWPO / Del.	5.15	1.926	.022
<b>Harris Lingoes</b>				
Hy4 SomSympt	SWPO / Del.	5.27	2.16	.041
Pd1 FamDiscord	SWPO / Del.	6.88	1.78	.000
	EWO / Del.	6.20	1.81	.002
Pa1 Persec.Ideas	SWPO / Del.	7.44	2.78	.022
Sc1 SocAlienatn	SWPO / Del.	7.36	2.39	.006
Sc5 LEMDef.Inhib	SWPO / Del.	6.40	2.16	.009
Sc6 Biz.SenseExp	SWPO / Del.	7.45	2.61	.013
Ma4 EgoInflatn	SWPO / Del.	6.02	1.85	.004
<b>Supplementary</b>				
APS AddctnPotentl	EWO / SWPO	5.91	1.66	.001
Fback	SWPO / Del.	15.10	3.86	.000
	SWPO / EWO	9.57	3.77	.031
<b>Content</b>				
GM GndrRoleMas	Del. / SWPO	5.34	1.79	.009
GF GndrRoleFem	Del. / SWPO.	5.48	1.68	.004
PS PTSD-S	SWPO / Del.	5.55	2.16	.029
FRS Fears	SWPO / Del.	5.53	1.82	.007
TRT NegTxInd	SWPO / Del.	5.88	2.10	.015

**Table 12 Breakdown of Subscales T-Scores via shared items with Basic Scales  
(Harris-Lingoes, Supplementary, Content Subscales)**

(see Greene (1991), Ch. 4 and tables 5-3, pg. 186, and 5-15, pg. 206 or  
Greene (2000) Ch. 4 and tables 5.6, pg. 206, and 6.13, pg. 240)

SubScale	Combined AI	SWPO	EWO	Delaware
L (15 items)	54.90	*57.53	53.32	53.61
APS (4)	47.52	*44.53	50.44	47.68
O-H (3)	52.53	52.03	51.79	53.81
F (60 items)	*63.24	*67.66	*60.33	*59.05
Es (2)	*44.60	*42.53	45.96	45.49
MAC-R (5)	*57.08	*59.01	*55.54	*56.41
APS (5)	47.52	*44.53	50.44	47.68
PK (5)	*56.11	*57.81	*57.11	53.01
PS (4)	*56.47	*58.42	*57.73	52.88
DEP (3)	*55.02	*56.68	*55.65	52.31
HEA (3)	*58.13	*60.32	*55.65	*56.32
BIZ (10)	*60.51	*63.59	*58.98	*58.68
ASP (3)	*55.42	*57.09	*55.37	53.44
WRK (3)	53.96	54.53	*55.59	51.53
K (30 items)	47.24	*47.09	46.98	47.72
A (5)	52.80	53.40	54.02	50.72
R (5)	50.63	51.24	49.76	50.72
APS (6)	47.52	*44.53	50.44	47.68
Mt (4)	53.66	54.24	*55.12	51.41
CYN (5)	*55.92	*57.67	*55.90	54.00
1-Hs (32 items)	*56.87	*58.70	*55.65	*56.09
Es (7)	*44.60	*42.53	45.96	45.49
Mt (6)	53.66	54.24	*55.12	51.41
GM (5)	47.96	45.44	48.11	50.77
PK (5)	*56.11	*57.81	*57.11	53.01
PS (5)	*56.47	*58.42	*57.73	52.88
HEA (23)	*58.13	*60.32	*55.65	*56.32
2-D (57 items)	52.06	51.64	53.57	50.88
D1 (32)	52.79	53.61	55.44	50.08
D3 (11)	52.70	53.30	53.85	50.88
D4 (15)	53.71	53.43	54.96	52.68
R (10)	50.63	51.24	49.76	50.72
Es (10)	*44.60	*42.53	45.96	45.49
Mt (16)	53.66	54.24	*55.12	51.41
PK (13)	*56.11	*57.81	*57.11	53.01
PS (13)	*56.47	*58.42	*57.73	52.88
ANX (6)	54.13	54.68	*55.27	52.27
DEP (9)	*55.02	*56.68	*55.65	52.31
HEA (10)	*58.13	*60.32	*55.65	*56.32
WRK (5)	53.96	54.53	*55.59	51.53

Table 12 (continued)

**Breakdown of Subscales T-Scores via shared items with Basic Scales  
(Harris-Lingoes, Supplementary, Content Subscales)**

<b>SubScale</b>	<b>Combined AI</b>	<b>SWPO</b>	<b>EWO</b>	<b>Delaware</b>
3-Hy (60 items)	51.06	50.08	51.07	52.17
Hy1 (6)	48.74	47.63	48.13	50.60
Hy2 (12)	45.62	*44.59	*44.98	47.45
Hy3 (15)	53.29	53.08	54.88	51.71
Hy4 (17)	*56.88	*59.84	*55.95	54.57
Hy5 (7)	46.11	*43.37	47.48	47.88
A (4)	52.80	53.40	54.02	50.72
R (4)	50.63	51.24	49.76	50.72
Es (11)	*44.60	*42.53	45.96	45.49
MAC-R (5)	*57.08	*59.01	*55.54	*56.41
APS (4)	47.52	*44.53	50.44	47.68
O-H (4)	52.53	52.03	51.79	53.81
Mt (11)	53.66	54.24	*55.12	51.41
PK (10)	*56.11	*57.81	*57.11	53.01
PS (12)	*56.47	*58.42	*57.73	52.88
GM (5)	47.96	45.44	48.11	50.77
DEP (4)	*55.02	*56.68	*55.65	52.31
HEA (16)	*58.13	*60.32	*55.65	*56.32
CYN (6)	*55.92	*57.67	*55.90	54.00
WRK (5)	53.96	54.53	*55.59	51.53
4-Pd (50 items)	*55.20	*55.71	*55.13	54.67
Pd1 (9)	54.65	*57.01	*56.33	50.13
Pd2 (8)	*55.12	*56.70	53.78	54.49
Pd4 (13)	*55.16	54.95	*55.46	54.89
Pd5 (12)	54.68	*55.01	*55.27	53.56
FAM (6)	54.36	*55.82	54.83	52.07
DEP (6)	*55.02	*56.68	*55.65	52.31
Mt (5)	53.66	54.24	*55.12	51.41
PK (11)	*56.11	*57.81	*57.11	53.01
PS (9)	*56.47	*58.42	*57.73	52.88
MDS (8)	*57.34	*59.20	*57.71	54.65
MAC-R (8)	*57.08	*59.01	*55.54	*56.41
Es (6)	*44.60	*42.53	45.96	45.49
APS (5)	47.52	*44.53	50.44	47.68
Do (6)	*44.02	*43.31	*42.95	46.00
Re (5)	*43.43	*41.47	*44.27	*44.85
5-Mf (56 items)	54.04	54.64	54.16	53.21
CYN (3)	*55.92	*57.67	*55.90	54.00
ASP (3)	*55.42	*57.09	*55.37	53.44
R (8)	50.63	51.24	49.76	50.72
MAC-R (8)	*57.08	*59.01	*55.54	*56.41
APS (8)	47.52	*44.53	50.44	47.68
Es (7)	*44.60	*42.53	45.96	45.49
O-H (4)	52.53	52.03	51.79	53.81
Re (5)	*43.43	*41.47	*44.27	*44.85
GM (9)	47.96	45.44	48.11	50.77
GF (16)	46.09	*42.91	47.31	48.39

Table 12 (continued)

**Breakdown of Subscales T-Scores via shared items with Basic Scales  
(Harris-Lingoes, Supplementary, Content Subscales)**

<b>SubScale</b>	<b>Combined AI</b>	<b>SWPO</b>	<b>EWO</b>	<b>Delaware</b>
6-Pa (40 items)	*57.72	*60.02	*56.56	*56.32
Pa1 (17)	*61.07	*65.10	*59.88	*57.67
Pa2 (9)	53.69	54.85	54.38	51.21
Pa3 (9)	46.95	45.52	46.69	48.84
Mt (4)	53.66	54.24	*55.12	51.41
PK (7)	*56.11	*57.81	*57.11	53.01
PS (6)	*56.47	*58.42	*57.73	52.88
DEP (4)	*55.02	*56.68	*55.65	52.31
BIZ (8)	*60.51	*63.59	*58.98	*58.68
CYN (7)	*55.92	*57.67	*55.90	54.00
ASP (6)	*55.42	*57.09	*55.37	53.44
7-Pt (48 items)	54.09	54.83	52.23	52.23
A (13)	52.80	53.40	54.02	50.72
Es (9)	*44.60	*42.53	45.96	45.49
Do (6)	*44.02	*43.31	*42.95	46.00
Mt (14)	53.66	54.24	*55.12	51.41
GM (5)	47.96	45.44	48.11	50.77
PK (17)	*56.11	*57.81	*57.11	53.01
PS (17)	*56.47	*58.42	*57.73	52.88
ANX (6)	54.13	54.68	*55.27	52.27
OBS (5)	52.56	53.30	53.54	50.56
DEP (9)	*55.02	*56.68	*55.65	52.31
LSE (4)	53.04	54.53	53.84	50.44
8-Sc (78 items)	*58.48	*62.23	*58.00	54.67
Sc1 (21)	*56.43	*59.67	*56.79	52.31
Sc2 (11)	54.89	*57.40	54.23	52.80
Sc3 (10)	*58.02	*59.43	*57.73	*56.84
Sc4 (14)	54.94	*55.32	*56.32	52.99
Sc5 (11)	*55.35	*57.92	*56.22	51.52
Sc6 (20)	*61.10	*64.83	*60.67	*57.37
A (8)	52.80	53.40	54.02	50.72
Es (10)	*44.60	*42.53	45.96	45.49
MAC-R (7)	*57.08	*59.01	*55.54	*56.41
Mt (9)	53.66	54.24	*55.12	51.41
PK (19)	*56.11	*57.81	*57.11	53.01
PS (27)	*56.47	*58.42	*57.73	52.88
ANX (5)	54.13	54.68	*55.27	52.27
DEP (7)	*55.02	*56.68	*55.65	52.31
HEA (6)	*58.13	*60.32	*55.65	*56.32
BIZ (8)	*60.51	*63.59	*58.98	*58.68
FAM (6)	54.36	*55.82	54.83	52.07
WRK (4)	53.96	54.53	*55.59	51.53

Table 12 (continued)

**Breakdown of Subscales T-Scores via shared items with Basic Scales  
(Harris-Lingoes, Supplementary, Content Subscales)**

<b>SubScale</b>	<b>Combined AI</b>	<b>SWPO</b>	<b>EWO</b>	<b>Delaware</b>
9-Ma (46 items)	*57.10	*59.23	*57.60	54.08
Ma1 (6)	53.49	54.92	52.77	52.57
Ma2 (11)	51.78	50.16	54.30	51.00
Ma3 (8)	51.28	52.11	50.65	51.07
Ma4 (9)	*57.40	*59.80	*58.23	53.78
Es (5)	*44.60	*42.53	45.96	45.49
Do (5)	*44.02	*43.31	*42.95	46.00
Mt (4)	53.66	54.24	*55.12	51.41
GF (5)	46.09	*42.91	47.31	48.39
PS (5)	*56.47	*58.42	*57.73	52.88
APS (4)	47.52	*44.53	50.44	47.68
ASP (4)	*55.42	*57.09	*55.37	53.44
FAM (4)	54.36	*55.82	54.83	52.07
0-Si (69 items)	50.42	50.82	51.07	49.27
A (11)	52.80	53.40	54.02	50.72
R (8)	50.63	51.24	49.76	50.72
Es (7)	*44.60	*42.53	45.96	45.49
Do (5)	*44.02	*43.31	*42.95	46.00
Re (4)	*43.43	*41.47	*44.27	*44.85
Mt (6)	53.66	54.24	*55.12	51.41
GM (8)	47.96	45.44	48.11	50.77
PK (9)	*56.11	*57.81	*57.11	53.01
PS (6)	*56.47	*58.42	*57.73	52.88
Si1 (14)	50.16	50.71	51.33	48.28
Si2 (8)	48.30	47.36	48.46	49.25
Si3 (17)	53.49	*55.33	53.83	50.93
ASP (5)	*55.42	*57.09	*55.37	53.44
CYN (5)	*55.92	*57.67	*55.90	54.00
SOD (18)	50.69	51.09	51.16	49.73
WRK (6)	53.96	54.53	*55.59	51.53

\*total subscale items may exceed total clinical scale items, as there is item overlap between subscales

## **Appendix C**



## *The University of Oklahoma*

OFFICE OF RESEARCH ADMINISTRATION

April 12, 2002

Ms. Kathleen Lacey  
1001 Parsons Street  
Norman, OK

Dear Ms. Lacey:

Your research application, "The Minnesota Multiphasic Personality Inventory-Second Edition (MMPI-2) Establishing Native American Norms," has been reviewed according to the policies of the Institutional Review Board chaired by Dr. L. Laurette Taylor, and found to be exempt from the requirements for full board review. Your project is approved under the regulations of the University of Oklahoma - Norman Campus Policies and Procedures for the Protection of Human Subjects in Research Activities.

Should you wish to deviate from the described protocol or the research is to extend beyond 12 months, you must notify this office, in writing, noting any changes or revisions in the protocol and/or informed consent document, and obtain prior approval or request an extension of this ruling. A copy of the approved informed consent document is attached.

Should you have any questions, please contact me at [rlb@ou.edu](mailto:rlb@ou.edu).

Sincerely,

Susan West Sedwick, PhD  
Director of the Office of Research Administration and  
Administrative Officer for the  
Institutional Review Board - Norman Campus (IRBA-Norm)

SWS:jk  
FY2002-2003

Dr. L. Laurette Taylor, Chair, Institutional Review Board  
Dr. Terry M. Pace, Educational Psychology