Development of a Modification and Interjudge Reliability of a Tat Scoring System for Adolescents

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DEVELOPMENT OF A MODIFICATION AND INTERJUDGE RELIABILITY OF A TAT SCORING SYSTEM FOR ADOLESCENTS

by

Aaron Cooper

A Thesis Submitted to the Faculty of the Graduate School of Loyola University of Chicago in Partial Fulfillment of the Requirements for the Degree of Master of Arts

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1976
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Special appreciation goes to Cheryl Rampage, whose services as final judge required the investment of considerable time and thought.
VITA

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In September, 1973, he entered Loyola University of Chicago to pursue a masters and doctorate in clinical psychology. From September, 1973 through September, 1976, he held a traineeship in psychology at the Loyola Guidance Center.
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INTRODUCTION

Part of the value of most psychological tests—objective and projective alike—is in the user's ability to evaluate the degree to which a subject's response deviates from the normative response of his particular population. Recognizing this value, test developers typically administer their instrument to samples from varying populations as part of the standardization procedure in test development. Objective tests like the Minnesota Multiphasic Personality Inventory (MMPI), Wechsler Adult Intelligence Scale (WAIS), and Illinois Test of Psycholinguistic Abilities (ITPA) derive most of their usefulness through the normative data which enables psychologists to make nominative as well as ipsative analyses. Less simple is the development of normative data for projective tests, particularly those tests which lack a uniform system of interpretation and scoring. The Rorschach, with the Beck, Klopfer and Piotrowski scoring systems, has proven a relatively agreeable instrument on which to collect normative data. Ambitious researchers like Ames, Metraux and Walker (1959), for example, administered the Rorschach to sample groups of children and adolescents, thereby establishing norms
for these ages. On the other hand, after nearly 40 years of widespread clinical use and diverse scoring approaches, the Thematic Apperception Test (TAT) has no established norms and consequently remains a poorly understood instrument in this sense. This lack of standardized and published norms has nevertheless not precluded the clinician's utilization of the TAT in a quasi-normative fashion. The clinician typically ascertains the extent to which a particular fantasy story deviates from some undefined "norm" that he has developed through his own experience and training in TAT administration. This approach, however, poses a serious dilemma: clinicians routinely administer a greater number of protocols to a clinical (hospitalized or outpatient) population, so that true norms for non-hospitalized, non-treatment groups remain largely undefined and unavailable for nominative analysis and interpretation.

While the desirability of establishing normative TAT data was recognized over 25 years ago (Rosenzweig & Fleming, 1949), little effort has been extended in this direction in a unified, methodologically rigorous approach. Impeding this task has been primarily the absence of a single widely used and clinically meaningful scoring system, one which is sufficiently objective as to have acceptable interjudge reliability, and at the same time broad enough to present a thorough analysis of the raw data. The original system
of needs and press developed by Murray (1943)—a broad scoring approach but with only moderate interjudge reliability—rarely has been utilized in its entirety in TAT studies, with researchers preferring to select several of the need-press variables for investigation (Lindzey & Herman, 1955; McClelland, Clark, Roby & Atkinson, 1949; Murray, Seagull & Geisinger, 1969). As might be expected, it was primarily Murray and his associates who most often retained the complete need-press system in their early studies, none of which undertook the development of norms for a major population group, however,

Subsequently, several scoring systems based on the Murray model were developed (Aron, 1949; Stein, 1948; Symonds, 1949) but these have not gained any greater acceptance than Murray's original system, owing probably to their often complicated and lengthy scoring procedures.

Apart from a needs-press approach, alternative systems have been developed which examine additional features of story construction or test performance besides manifest content per se. Dana (1956) developed an approach in which the more general aspects of perception (i.e., what does the subject perceive on the card?) and perceptual organization (i.e., how much does the subject follow test directions?) became the focus. His approach looks to the degree to which any single story deviates from perceptual
norms for that card; unfortunately, the body of normative data which would increase the utility of this method is unavailable; only norms for limited samples have been obtained. At the same time, this approach has doubtful clinical usefulness as it is not directly concerned with thematic content and has limited value as an instrument of personality interpretation.

The remaining systems for TAT scoring incorporate greater or lesser amounts of scorer subjectivity that—lacking a clearly defined system which can be easily communicated to other psychologists—all but preclude their usefulness for large-scale normative studies. We must distinguish then, between systems which "score" the response proper, that is, systematically classify or categorize, and systems which interpret the response, that is, offer inferential statements about the subject on the basis of the story content. Approaches like Arnold's (1962) and Henry's (1956) lean towards this latter procedure as their aim extends beyond the organization and classification of manifest content. Normative data need not extend beyond the manifest content level to be clinically useful, however. It is this writer's view that clinical inferences based on TAT stories result from the weighing and evaluating of manifest level content which precedes inference in the interpretive process. The
analysis of manifest content, however, is usually not performed quantitatively, through explicit procedural rules, but is a process which the psychologist performs mentally and, with experience, automatically. A system which orders and makes explicit the manifest content might make clinical inference more systematic and thus more reliable.

Such a system was utilized in a normative study of adult TAT responses (Eron, 1950). Incorporating several scales and classifications by which the manifest content of the stories is categorized into themes, perceptual identifications, levels of interpretation, and emotional tone of story and outcome, Eron's approach represents the most extensive categorization of TAT manifest content in the literature. It also features a degree of simplicity lacking in most of the scoring approaches discussed earlier, a major advantage in terms of both its clinical and research potential. The thematic checklist is sufficiently broad so as to be a comprehensive index of the various story possibilities, an additional feature lacking in some of the other systems.

For any given scoring system to be useful, however, it must prove sufficiently reliable that different judges can obtain similar scores for identical data. "The scoring reliability of a test always sets an upper limit on the effective reliability of the test." (Murstein, 1963,
p. 143). It is the "minimum information one should have concerning a test." (Guilford, 1954, p. 388). At least two additional types of test reliability—stability and consistency—cannot be established until adequate scorer reliability is achieved. Stability, the degree to which a single score remains stable from a first to a second administration of the same instrument, and internal consistency, (equivalence), the degree to which the test supports a particular score equally throughout its length, depend upon adequate interjudge reliability for their own development. Additionally, all three of these forms of reliability set a limit on the validity of a test.

Interjudge reliability ought necessarily to be easier to achieve with a system which attempts solely to quantify the data (the "scoring" system) rather than interpret the data (drawing more heavily on clinical inference and judgment). But while on the face of it Eron's system appears to lend itself to high scorer reliability, several researches which measured this factor reached somewhat different conclusions. In his original study, Eron viewed the thematic analysis procedure as an objective process—"merely a counting procedure with a minimal judgmental function" (Eron, 1950, p. 4). He consequently scored all protocols himself, without determining the degree of scorer reliability which can be attained for his thematic
checklist. Three independent studies appear in the literature which utilize Eron's checklist, citing interjudge reliability ranging from .67 to .88. A study by Eron, Sultan and Auld (1955) presents interjudge reliability of .89.

The present investigation reports on the development of a modification of Eron's thematic checklist and emotional tone scales to more accurately reflect the fantasy concerns of an adolescent population. As Eron's original checklist was developed empirically from an adult male population, it was expected that adolescent TAT responses would vary in content from the adult group, and that certain categories would need to be added while others dropped. Furthermore, as two TAT cards were administered in this study that were not used in the adult normative study, some additions to the emotional tone scales were necessary.

Following the development of such scales, and an associated scoring manual for the modified thematic checklist, sufficiently high interjudge reliability needed to be established so that the system would be deemed acceptable for the establishment of norms. The absence of acceptable scorer reliability has characterized a large number of TAT scoring approaches in the past; it serves to limit the usefulness of any approach as it calls into
question the validity of performance scores at a fundamental level. This study reports on the factors contributing to the eventual establishment of adequate scorer reliability: the amount of training and expertise of the judges, and the addition of specifications into the scoring manual to reduce scoring ambiguity and overlap.
REVIEW OF THE LITERATURE

Interjudge reliability is far less frequently cited in TAT studies than would be dictated by sound research methodology. Of the large number of TAT studies since 1940 involving the TAT solely or as one of several measures, few examine the interjudge reliability of the particular system they utilize. Frequently, reference to the scoring system is altogether lacking in these reports; often the scoring approach is highly subjective and ill-defined, precluding an interjudge reliability test. Interjudge reliability is occasionally cited, but the system for which reliability was measured too often remains unknown. At other times, interjudge reliability is determined for judges using several approaches, thereby telling us little about the reliability of any single method. The absence of interjudge reliability data is typically found in TAT validity studies, where additional tests are used as criterion measures of specific variables examined through the TAT. Studies such as these often assume that the scores obtained on the TAT are themselves reliable, but need to be validated prior to gaining acceptance. (Henry & Farley, 1959; Shipman, 1964). Of course, for those reports establishing validity, reliability can
typically be inferred. More common, however, are those studies which fail to establish validity and fail to consider the absence of reliability as a limiting factor.

Combs (1946), in one of the earliest studies concerned with interjudge reliability, reported after reviewing the relatively limited extant literature, that independent judges, using different scoring approaches, on the average agreed 60% of the time on single TAT protocol interpretations. Four raters, independently using different interpretive techniques, ranged from .16 to .49 in interjudge reliability in a later study (Samuels, 1952). Magnusson (1959) supported these earlier results by establishing interjudge reliabilities of .21 to .82 for four independent raters using different approaches. "When two persons compare the analyses of TAT material and have an opportunity to discuss them, there can be a high degree of correspondence" (Combs, 1946, p. 246). A joint approach, however, skirts the question of the interjudge reliability of a single system, and with reliability among differing systems reported to be so low, one might look to the single, well-supported scoring approach for more positive findings.

While some studies cite interjudge reliability data for a single technique, but either fail to specify the technique or give only a brief explanation of it, (e.g.,
Harrison & Rotter, 1945), TAT studies typically omit reference to interjudge reliability altogether. Silverman (1964) had only one rater make determinations of thought and perceptual disturbance, and impairment of behavioral control for a sample of residential treatment adolescents. Mitchell (1968) similarly used a single rater to score stories first as pathogenic, benign, or unscorable, then to determine which fantasy characters were dominant and dependent, and finally to determine whether or not a dominant character met his own needs at the expense of the needs of the dependent character. These latter determinations were made without the use of an explicit scoring manual, making the procedure even less reliable in all probability.

Utilizing the Murray and Atkinson scoring systems, respectively, Goodman (1952) failed to cite interjudge reliability in a study undertaken to validate a scoring system similar to that of Aron (1949), and Murray et al. (1969) cited interjudge reliability for some aspects of his research, but omitted such data as it concerned the judgment of achievement, affiliation, power and aggression needs. Child, Frank and Storm (1956) examined the internal consistency and intrajudge reliability of their data, but failed to report the interjudge reliability for a scoring system of 20 variables based on both overt and covert aspects of the stories.
McNeil (1962) and Silver (1963), both investigating the fantasy responses of delinquent males, found limited support for only several of their hypotheses. One possibility in such cases may be an inadequate comprehension of the scoring procedure. Interjudge reliability tests, in light of comparative data indicating the maximal degree of reliability obtained in other studies, may reveal poorly utilized systems prior to a researcher's execution of his complete design.

Only a handful of researches were found in the TAT literature which both make explicit the scoring approach used, and cite interjudge reliability as part of the statistical procedures. The earliest study to fulfill these requirements was undertaken by Sanford, Adkins, Miller and Cobb (1943). Using Murray's detailed manual, four judges rank-ordered the subjects with respect to 30 needs and 25 press, with average interjudge reliability correlations of .57 for needs and .54 for press. Stein's modification of the Murray need-press system was used in a study of boys' racial prejudices (Mussen, 1950). Two judges rated all the stories with an interjudge reliability of .83, considerably higher than the results of Sanford's investigation. Stein's results represent one of the highest interjudge reliability levels to be found for the Murray or Murray-like needs-press method, which characteristically obtains only moderate interjudge agreement.
Friedman (1957) attempted to increase interjudge reliability by deriving a "broad, descriptive" set of rating instructions making explicit many of the subjective clues used in the interpretation of the TAT in clinical practice. A set of 80 statements were scored by three judges in reference to the characteristics of the designated hero of the stories (e.g., "obeys parents," "sometimes feels like crying," etc.). Average interjudge reliability was .74.

A detailed scoring system for feelings, outcomes and interpersonal relationships was utilized by Fine (1955) in his study of asthmatic children and their siblings. Based on the percentage of agreement between two judges, Fine obtained correlations of .79, .76, .70, .68, and .64 between himself and each of five judges after a one-hour training session. Following a two-hour second training session, interjudge reliability rose to the high 80s.

Among the studies with the consistently highest interjudge reliability is the work of McClelland, Atkinson and associates. In one research (McClelland, Clark, Roby & Atkinson, 1949) interjudge reliability of .91 was attained. McClelland's work with the achievement motive raises the question of the comparability of interjudge reliability data based on the scoring of a single variable
(e.g., achievement, power, sex, etc.) versus the scoring of a broad system incorporating a larger number of variables. The above mentioned studies by Fine, Friedman, Mussen and Sanford approached story analysis from a broad framework, incorporating a relatively large number of variables into their system. McClelland's work with the achievement motive, on the other hand, is far more focused in its concern. It's detailed scoring system may lend itself to higher scorer reliabilities by the very fact of this focus. The majority of TAT studies citing reliability data follow this latter approach; their scoring systems often demand fewer discriminations by the judges as a result.

Feld and Smith (1958) reviewed 14 studies employing the McClelland-Atkinson system for scoring achievement, affiliation and power motives. The interjudge reliabilities for these studies ranged from .66 to .96 with a median of .89. Even with so-called "novice" scorers with a maximum of 12 hours' training, a median reliability of .87 was obtained for these studies. The judges used by Veroff, Atkinson, Feld, & Gurin (1961), scoring approximately 3,200 stories in a national study of achievement, affiliation and power needs, obtained interjudge reliability of .77.

Coleman (1947), utilizing a 5-point classification scheme, obtained 94% exact agreement between judges on
this scale. Terry (1952) obtained interjudge reliability of .88 using a similar 5-point level-of-response scale. Also in 1947, Mayman and Kutner evaluated the stories of male undergraduates in five areas, with varying scales applied for each area. Interjudge reliability coefficients obtained for the five variables were .89, .81, .56, .91, and .83. Those two variables containing the largest number of components and demanding the greatest number of discriminations—variables 2 and 3—produced the lowest reliabilities. This points up the fact that scorer reliability based on composite, or total scores, tends to be higher in some designs than scorer reliability for the single component variable measured separately. For example, in measuring alienation, the judges in Davids and Rosenblatt's research (1958) rated the following eight variables as present or absent a maximum of once for each story: sociocentricity, optimism, trust, egocentricity, pessimism, distrust, anxiety, and resentment. Judges obtained reliability of .87 for total alienation scores. Agreement on any single component may be lower than the total score agreement, however, which has the benefit of being an average score raised by component scores at the high end of the range. The highest interjudge reliability potential, however, is offered by single variables measured on a narrow—3 or 5 point—scale. (Goldstein, 1970;
Lindzey & Herman, 1955; Wolowitz & Shorkey, 1969). This is especially true when a scoring manual offers explicit instruction in procedure. Such was the case for some of the nine scoring approaches to measure hostility, for which Murstein (1968) obtained independent interjudge reliabilities ranging from .81 to .96.

What becomes apparent through a literature review is the overall absence of supportive reliability data for a broad scoring system, one with sufficient scope to be clinically meaningful for personality interpretation, and at the same time objective enough to assure high reliability. Several systems have the benefit of at most two or three researches with acceptable reliability data; the remaining systems deal with only one or several personality constructs and do not as such constitute broad scoring systems.

With the appearance of Eron's (1950) "Normative Study of the Thematic Apperception Test," a broad, quantitative approach to story analysis was introduced which seemed to offer the potential for high interjudge agreement and, consequently, research and clinical application. Eron's system rates responses on four different levels: (1) emotional tone of story and outcome; (2) level of interpretation (comparable to level of response in studies discussed above); (3) thematic content; and (4) perceptual
identifications. In the original normative study with adult males, Eron reported reliabilities of .86 for emotional tone of story and .75 for emotional tone of outcome. For the thematic analysis, he wrote:

The thematic analysis was done by the experimenter, since it is actually merely a counting procedure with a minimal judgmental function—a theme is either present or not, and the sole criterion is the verbal statement of the subject (Eron, 1950, p. 4).

Following the publication of this study in 1950, a number of researches reported reliability data for Eron's system. Eron, Sultan and Auld (1955) analyzed the stories of 100 sailors, and obtained the following interjudge reliabilities: correlations of .89 for emotional tone of story, .81 for emotional tone of outcome, .80 for the thematic checklist, and 85% agreement for level of interpretation. Sarason and Sarason (1958) obtained reliabilities of .87 and .79 on the emotional tone of story and outcome scales, respectively, in their comparison of female and male fantasy productions. Liccione (1955), utilizing the thematic checklist in a study of the parent-child relationship in the stories of 250 adolescent girls, obtained reliabilities of .87 and .88. At the same time he obtained reliability of .93 for emotional tone of story. Again using Eron's checklist, Kaplan (1969) obtained reliability of .84 in a study of the ambiguity value of individual TAT cards.
Finally, Irvin and Vander Woude (1971) studied the stimulus value of the complete set of cards by rank-ordering them according to number of themes elicited. Interjudge reliability of .67 was obtained, the lowest reported for the thematic checklist.

A literature review makes apparent the fact that of the various broad TAT scoring approaches, Eron's has in recent years been among the most frequently used and studied, and the single broad approach to claim a majority of highly acceptable reliability findings. Several broad systems—those of Aron, Henry, and Murray, for example—have realized through the years a limited research potential due to their complicated or time-consuming scoring methods. As a result, less than satisfactory interjudge agreement characterizes a number of studies based on these systems, as discussed earlier. The favorable research history of Eron's approach supported its selection as the system of choice for further development and research applicability.

In sum, the selection of Eron's scoring system for the establishment of normative data was influenced by two considerations: the broad scope of activity contained within the thematic checklist, and the relative objectivity and ease of scoring it offers in comparison to other systems. These two criteria were considered jointly in
reviewing TAT scoring approaches which have been developed. Breadth of information was viewed from the start as an important characteristic in a system ultimately to be used for establishing norms. This immediately eliminated those approaches which emphasize a small number of specific variables, such as power, aggression, or achievement (e.g., McClelland, Atkinson, Clark & Lowell, 1953). Furthermore, because the long-term objective was in obtaining manifest content norms, systems emphasizing other than manifest level aspects of response were eliminated, such as Pine's analysis of impulse expression and ego control (Pine, 1960). Finally, with research applicability a major objective, systems lacking acceptable interjudge reliability were deemed unsatisfactory. This eliminated the majority of nonquantitative systems, which are sometimes so complex in their approach that they are rarely communicable (e.g., Henry, 1956; Piotrowski, 1950), or so time-consuming that they are impractical (e.g., Murray, 1943).

Eron's quantitative approach—assigning to stories numerical scores—remained the most easily communicable, efficient and comprehensive scoring system boasting a generally favorable interjudge reliability record. Furthermore, the content categories were derived empirically from the data, rather than inferentially from personality theory. A broader sampling of thematic categories can be
construed for this approach than for non-empirically derived thematic lists, since the stories themselves are exhaustively analyzed for the thematic content upon which the system is built.

In the course of adapting Eron's system for use with an adolescent population, significant modifications had to be made to the thematic checklist, while lesser modifications were made to the emotional tone scales in cases where adult TAT cards used by Eron were replaced by appropriate "boy" cards. In addition to the modification of these scales, sufficiently high interjudge reliability was sought as a preliminary step in the use of this modified system for the later collection of normative adolescent data.
METHOD

Subjects

The subjects of the present study were 25 males, ranging in age from 13.5 to 14.5 years. They were randomly selected from the population of a predominately white, middle to upper-middle class suburban high school. Table 1 presents family composition, size and religious background data for this sample. Eliminated from the population prior to subject selection were individuals with learning disabilities or mental retardation, so as to qualify them for a special education classroom, and individuals with serious emotional disturbance as determined subjectively by the school counselors.

Procedure

All 20 TAT cards recommended for "male-boy" were individually administered: 1, 2, 3BM, 4, 5, 6BM, 7 BM, 8BM, 9BM, 10, 11, 12BG, 13B, 14, 15, 16, 17BM, 18BM, 19, and 20. Only the subject and this examiner were in the testing room during the administration. The complete set of cards was administered in one session, with all subjects tested over the course of seven consecutive school days. Stories were recorded electronically and
Table 1

Family Composition, Size, and Religion (by percentage)

*N = 23*

<table>
<thead>
<tr>
<th>Family Composition</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Parents Married</td>
<td>83%</td>
</tr>
<tr>
<td>Parents Separated</td>
<td>0%</td>
</tr>
<tr>
<td>Parents Divorced</td>
<td>13%</td>
</tr>
<tr>
<td>Mother Widowed</td>
<td>4%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
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<table>
<thead>
<tr>
<th>Sibling Status</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>S is only child</td>
<td>4%</td>
</tr>
<tr>
<td>S has 1 sibling</td>
<td>30%</td>
</tr>
<tr>
<td>S has 2 siblings</td>
<td>39%</td>
</tr>
<tr>
<td>S has 3 siblings</td>
<td>9%</td>
</tr>
<tr>
<td>S has 4 siblings</td>
<td>9%</td>
</tr>
<tr>
<td>S has 5 or more siblings</td>
<td>9%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Religion</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Jewish</td>
<td>78%</td>
</tr>
<tr>
<td>Protestant</td>
<td>13%</td>
</tr>
<tr>
<td>Catholic</td>
<td>9%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
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*The background data on two subjects could not be determined.*
transcribed later for analysis. Directions to all subjects were identical as follows:

This is a project about imagination. I have a set of cards here, and each card has a picture on it. I'm going to show you the pictures one at a time, and what I'd like you to do is to make up a story about the picture. Tell me what could be happening in the picture, what was going on before, and how it's all going to turn out next. In other words, try to have a past, present and future when you tell your stories. Also try to say something about what the characters in the picture are thinking or feeling. Everyone tells different stories—there are no right or wrong stories. The story that you make up is the right one. You can have as much time as you'd like for each story.

Each subject was prompted when any of the elements of the story as given in the directions—past, present, future, thoughts or feelings—was omitted. After the first ten cards were completed, the following instructions were given:

Those were very good stories. The pictures I'm going to show you now are a little different. These require you to use even more imagination when you tell your stories. So try to make your stories as interesting as you can, sort of like a fairy tale or a dream. Here's the first one.

Special instructions were given preceding card 16, the blank card:

Now I want you to take a look at this blank card. I want you to imagine some kind of picture or scene on this card, and then tell me the story that goes along with the picture that you imagine.
During the testing, examiner recorded on a standardized form the reaction and card times for each story, as well as significant affective responses subjects may have had to the pictures.

Following completion of the 20 cards, subjects were asked which cards they recalled as most and least liked, and for what reasons. They were not permitted to look back to the cards to make their choices during this task.
Modification of Eron's Original System

Following the procedure described by Eron (1950) in his normative study of adult TAT responses, the transcriptions of the 500 stories gathered in this research were read and analyzed by the investigator for thematic content. Eron's original checklist was used as a foundation: themes were checked on this list as they appeared, while additional themes specific to the adolescent stories were indicated separately. Eron's checklist divides all themes into three areas of activity; interpersonal, intrapersonal, and impersonal. Within each area, the activity is further designated as disequilibrium or equilibrium, referring to the state of tension or adjustment of the story characters. The interpersonal division is further broken down into four sub-categories defining the object of the interpersonal activity: parent (or authority), opposite sex, same sex, and sibling. Every story is analyzed for the presence of each theme, with reference to the central character (i.e., the hero) of the story unless otherwise stated in the manual. Only the manifest content is evaluated—the actual behavior of the characters or overt description
of feeling-states, regardless of covert significance or presence of strong implication. The complete scoring manual is found in Appendix A.

After all 500 adolescent stories were read and analyzed, those new themes occurring at least twice were retained and incorporated into the thematic checklist. Furthermore, themes present in Eron's checklist but occurring not even once in the adolescent sample were eliminated. Through this process, the thematic checklist was modified and expanded so as to more accurately reflect the fantasy stories of adolescents. Themes like "Concern about parent," "Rejection by parent," "Drunk-drugs," "School or work concern," "Affection for parent," and "Affection from parent" were added to the original list. These themes reflected frequently occurring and potentially clinically meaningful concerns that found no independent scoring categories on the original checklist. The greatest number of additions were made under the general heading of Intrapersonal Themes. Here a number of feeling-states were empirically observed in the stories and incorporated into the checklist: "Frustration," "Depression," "Confusion," and "Worry," to name several. The definitions of these themes in the manual emphasize the focus on manifest content in rating, as these themes are especially inclined to be "observed" through the judge's
inference. (In some instances, these Intrapersonal Disequilibrium themes can only be scored if the author specifically states the theme word; for example: "John was bored practicing the violin," or "She was worried about the outcome of the exam.")

The modification of the thematic checklist included also the elimination of several themes which failed to appear at least once in the 500 adolescent stories. Examples of these include "Incest," "Collusion," "Illicit sex," "Restraint," and "Intra-aggression." In certain cases, themes were modified by altering for clarification the name of the theme, or by expanding what previously was one theme into several separate themes. An example of this is the differentiation of "Danger" and "Obstacles" from "Generalized restriction" in the earlier system. This change seemed warranted after a considerable number of "Danger" concerns occurred that differed in nature from and were observed independently of "Obstacles" themes as it was defined. The complete revised thematic checklist is contained in Appendix B.

The thematic checklist provides within each section for the addition of new themes that might occur in the analysis of the stories of different age-groups. The selection of 14-year-olds as the baseline for a scoring system modification was intended to provide a representative
though not necessarily exhaustive sampling of adolescent TAT fantasy. Additional concerns may occur when this system is later applied to the TAT stories of age-groups falling at the extremes of the adolescent range.

Several additions were also made to the emotional tone scales for story and outcome. As the original group in Eron's study was adult males, two cards inappropriate to adolescents—12M and 13MF—were administered. The corresponding cards intended by Murray (1943) for the younger male—12BG and 13B—were administered in this research. As each story told to these cards was read, its activity was gauged according to the general scale for emotional tone developed by Eron (see Appendix C). The actions on these cards for the complete sample of 25 protocols were sorted according to the general emotional tone scale into the appropriate levels of the 5-point scale. New scales were thereby defined for rating the emotional tone of the story for pictures 12BG and 13B. Emotional tone of the outcome was scored according to the single outcome scale appropriate to all the cards. Lesser additions were made to the pre-existing standards for some of the other cards, by way of expanding definitions or including a tone level not observed in the adult data of Eron's study,

**Interjudge Reliability**

Interjudge, or scorer reliability was examined both
in relation to the scoring of themes according to the thematic checklist, and the emotional tone scales.

During a first one-hour training session with the thematic checklist, the investigator instructed two undergraduate psychology majors in the use of the system. Instruction took the form of a basic explanation of the scoring system, the principles underlying its application, with emphasis on the need to differentiate manifest from latent content, and a cursory review of the organization of the checklist. Twenty practice stories were scored and discrepancies discussed so as to resolve differences. The scoring manual was reviewed continually during this trial period and difficult categories explained to the novice judges. Following this session, the judges independently rated 80 stories.

For each complete protocol, total theme scores were computed by summing pictures for each of the approximately 160 themes. As each theme might by definition occur a maximum of once per story, total theme scores ranged from zero through twenty. Each judge then had 160 totals with which to compare the totals of the other judges. Pearson product-moment correlations were run on these total scores in computing interjudge reliability.

After the first training session, reliability coefficients of .50 and .57 were obtained for each judge with
the examiner, averaging .53. This low interjudge reliability reflected the judges' limited familiarity with and training in the use of the scoring system. Errors were of a gross nature, indicative of a relative ignorance of the available thematic categories, rather than an inability to make some of the fine scoring discriminations (which later presented itself as a major difficulty).

A second training session subsequently was held. This session was approximately three hours long, followed by the independent rating of 40 new stories. During this session, the investigator reviewed carefully the entire manual, discussing with the judges examples from the previously scored sample stories which presented some scoring difficulty. The judges offered feedback concerning scoring difficulties which they recollected from the earlier session. A number of ambiguities in the manual came to light at this point, and more specific definitions were written in certain instances to reduce such ambiguity. Primarily, however, the greatest obstacle to interjudge agreement seemed to be the judges' inconsistent ability to distinguish manifest and latent content. Interjudge reliability following this second training period rose to .64 and .70, averaging .67.

A third approach was subsequently undertaken in seeking to establish higher interjudge reliability. In
place of the earlier judges (who were college undergraduates), a third year graduate student in clinical psychology was given 15 hours of instruction and practice in the use of the system. Nearly 100 stories were scored jointly during this training period, a process which brought to light the still considerable number of ambiguities in the scoring manual. Consequently, additional scoring rules were incorporated into the manual as needed to resolve such ambiguities and secure greater interjudge agreement.

Following completion of the 15 hours of training, 40 stories were scored independently by this judge and the examiner. An interjudge reliability coefficient of .88 was attained.

An acceptable level of interjudge reliability was attained more easily for the emotional tone scales. A single judge (college undergraduate) was given two hours training in the definitions and use of the emotional tone scales. Forty stories were scored jointly by this judge and the examiner, during which time discrepancies in scoring were discussed and resolved. The only significant scoring difficulty was differentiating the story proper from the outcome in cases where these two elements did not occur distinctly and in strict chronological sequence. Some stories contained two outcome references, usually a first occurring briefly towards the beginning of the story,
with a more elaborated outcome at the end. It was necessary to establish a rule that the sequentially final outcome would be scored as the sole outcome if it clearly received the greater focus. When the comparative degree of focus was difficult to ascertain for two outcomes of differing emotional tone, the "alternative outcomes" category was scored. Following this training period, 100 stories were scored independently by the investigator and judge for the purpose of ascertaining interjudge agreement.

Interjudge reliability for these scales was determined with the use of Cohen's Kappa, $k$, (Cohen, 1960). This statistic was developed specifically as a measure of interjudge agreement for scoring systems utilizing nominal scales. While the emotional tone of story and outcome scales contain 5-point ordinal scales ranging from -2 (very unhappy) to +2 (very happy), both scales include also a sixth, discrete category signifying alternative emotional tones, and the outcome scale adds a seventh discrete category indicating "no outcome given." Treating these scales, then, as nominal, Cohen's $k$ represents an advance over previously utilized statistics (typically, simple percentage of agreement) by considering the presence of chance agreement. Cohen's $k$ is defined as follows:

$$k = \frac{P_o - P_c}{1 - P_c}$$
in which \( p_o \) = the proportion of units for which the judges agree, and \( p_c \) = the proportion of units for which agreement is expected by chance. As the scale for story tone contained six categories, and the scale for outcome tone contained seven, the value of \( p_c \) for these two scales was \( 1/6 \) of the 20 cards, or 3.33 agreements, and \( 1/7 \) of the 20 cards, or 2.86 agreements, respectively.

Applying Cohen's \( k \) to the ratings of 100 stories scored independently by one judge and the investigator resulted in an acceptable level of agreement. The \( k \)s were .83 for story tone and .81 for outcome tone.
DISCUSSION

• Despite the assertion that thematic analysis is simply a counting procedure "with a minimal judgmental function," (Eron, 1950, p. 4), this study has pointed up the relatively substantial degree of subjectivity involved in the use of a thematic checklist. Ten hours of training and scoring experience proved insufficient in obtaining high reliability, with correlations in the mid.60s after this amount of practice. When judges are insufficiently trained in the use of the manual, resulting subjectivity and error can prove great enough to preclude acceptable interjudge reliability. This is a particular concern when the judges are inexperienced in TAT methods, psychological testing, interpretation and clinical inference. For example, in a system which attempts to classify strictly the manifest level of fantasy stories, it is important for a judge to differentiate objective scoring from clinical inference. The relatively poorer ability of the undergraduate judges in this study to recognize their own use of subjective inference, in comparison to the advanced graduate student, is partially responsible for the lower interjudge agreement obtained after the first and second training sessions. This problem was
brought to light during the group practice scoring session. While discrepancies among judges were sometimes based on ambiguities or omissions in the scoring manual, more often they resulted from the judges' failure to recognize their own tendency to infer attributes to the characters or qualities to the stories. A certain description of behavior and use of language in a story might give to one judge the clear impression of depression, to another guilt, or to a third regret. Without strict adherence to the scoring rules in the manual, subjective inference serves to reduce reliability. The judge must distinguish not only his own inferential processes as they apply to the manifest level content, but the manifest and latent content levels of the story proper. Latent content may be very strongly suggested and yet have no support in the actual words used by the storyteller—the level on which this scoring system operates.

Beyond a judge's ability to differentiate manifest and latent content levels, a second criterion for establishing high scorer reliability would seem to be sufficient training of judges in the system. As the present thematic checklist contains over 160 themes, each of which can potentially be scored for every story, the number of definitions which must be learned is substantial enough that without adequate practice and familiarity
the system can prove exceedingly detailed and difficult. In certain cases there are rather fine distinctions to be made in selecting one theme or another. A minimum of 10 hours of training (not including scoring experience apart from training sessions) seems necessary before these distinctions become familiar. Undoubtedly the low scorer reliabilities after the first and second training sessions reflect not only the judges' lesser experience with clinical instruments, but the insufficient time spent in training and practice.

Studies reviewed earlier rarely indicate the amount of training and experience judges have had before a reliability test is made on any single scoring system. Undoubtedly in some cases a test's reliability would increase if judges were given additional instruction and experience. Ideally, the judges' scoring experience ought to be uniform before a test is designated unreliable, lest the observed differences be a function less of the scoring system and more of the judges' differences. This factor may account for some studies reporting greater reliability than others. McClelland, recognizing that the amount of instruction and practice given to his judges would influence interjudge reliability, wrote—

Since agreement is almost certainly a function of amount of the judges' experience with the scoring system, a measure of it was taken at
the end of the scoring, after one of the judges had had a years previous experience with the system amounting to scoring of at least 3000 stories, and the other had scored at least 1000 stories. . . . At the time the test was made they were spending on the average of 2-3 minutes per story. (McClelland et al., 1949, p. 249).

The degree of specificity of the scoring manual proved to be an additional element affecting scorer reliability. Ambiguities became apparent during practice scoring sessions, when an effort was made at resolving inter-judge differences. Through the addition or clarification of certain definitions, the number of scoring discrepancies decreased sharply from the time of training of the first judge to the running of the last reliability test. For example, in Eron's manual, "Retribution" is defined as "forced to atone or be punished for some anti-social act," while "Legal restriction" is defined as "individual is incarcerated, arrested or detained against his will."

There proved to be a considerable overlap between these themes, requiring more specific clarification as to how they differ and when they should be scored. "Retribution" was redefined as "forced to atone or be punished for some act, short of being sent to jail; hero must undo for something said or done" and two distinct categories concerning incarceration were elaborated under Impersonal-Disequilibrium (see manual, Appendix A).
In other instances, Eron's manual was by omission of definitions so broad as to encourage subjective interpretation if the category was to be scored at all. The definition of "Guilt" as "remorse," for example, fostered the scoring of guilt for a variety of different reasons, many lacking a basis in observable fact at the manifest content level. Objectivity of scoring in the case of "guilt" and other largely inferential constructs was attained by requiring that the storyteller use the word "guilt" or "guilty" to warrant the score.

The level of scorer reliability ultimately attained for the thematic checklist—.88—approximates the highest reported reliability attained on Eron's original checklist. With the expanded number of themes for this adolescent population, and the manual considerably altered in the direction of greater specificity, this reliability coefficient, rather than offering further support for the reliability of Eron's checklist, more accurately stands alone as a first indicator of interscorer agreement on a specifically adolescent scoring checklist.

The literature survey of interjudge reliability using the emotional tone scales disclosed uniformly acceptable levels. The findings of the present research are consistent with the literature, although somewhat lower than average interjudge reliability across all studies. This
may be due to the relatively limited amount of training and scoring experience of the judge in this study, who had no prior experience with the scale. Certainly the use of Cohen's Kappa as the reliability statistic served to reduce somewhat the reliability coefficient, as it subtracts the percentage of interjudge agreement expected by chance alone, from the total observed agreement. Previous studies typically computed a simple percentage of agreement or Pearson-$r$, without giving consideration to chance agreement—a factor especially influencing interjudge agreement when scales of limited range are used.

An acceptable level of interjudge reliability was easier to achieve here for the emotional tone scales than for the thematic checklist. Undoubtedly this is due to the very specific definitions which are provided for each individual card in scoring emotional tones. A similar addition of greater specificity to the scoring manual for the thematic checklist might enhance the reliability of the scale, but would call into question whether such benefit is worth the increased training and user difficulty which a more extensive manual implies.
CONCLUSION

This study undertook the modification of a scoring system for the Thematic Apperception Test, to be used in later work in establishing normative data for selected adolescent groups. After 500 TAT stories were collected from a sample of 25 14-year-old males, the stories were analyzed for thematic content. Modifications based on this analysis were made to the thematic checklist developed originally by Eron (1950) from his adult male sample. A number of themes were added to and omitted from the earlier list so as to accurately reflect the fantasy content for this particular sample. The rating scales for emotional tone of story and outcome were also modified to include TAT cards 12BG and 13B in place of the corresponding adult cards used by Eron.

Following the modification of these scales, several judges were trained in their use. Stories were scored so as to determine interjudge reliability, the initial reliability which must be established in test development and standardization. After training and practice sessions totalling about four hours with two college undergraduate judges, reliability of .67 was attained for the thematic checklist. Alterations were made during this period to
the scoring manual so as to make more explicit the various rules which served to objectify—as much as possible—an otherwise often subjective system. The single greatest difficulty encountered during this period was the judges' inability to distinguish manifest story content from either their own subjective interpretation, or the often "apparent" latent content level of the story. Regardless of the likelihood that the subject had in mind a particular idea or motive, the latent level is unacceptable for scoring in this system.

Subsequently, an advanced graduate student in clinical psychology—familiar with test interpretation and clinical inference—was given 15 hours of training and scoring practice. Over 100 stories were scored jointly by this investigator and the judge during this practice period. More additions and specifications were incorporated into the scoring manual during this period, with each modification serving to increase the interjudge reliability of the system as ambiguities were resolved and procedures made more explicit. A number of non-mutually exclusive themes were modified so that difficulties in scoring would be reduced and objectivity—hence reliability—increased.

The interjudge reliability for the thematic checklist reached .88 for 40 stories scored independently by
a graduate student judge and the investigator. Interjudge reliability for the emotional tone of story and outcome scales were more easily attained than had been the case for the thematic checklist. Cohen $k_s$ of .83 and .81 were reached for the two scales, respectively, indicating sufficient agreement between the judges. With acceptable levels of interjudge reliability established, the system was deemed acceptable for normative studies.
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APPENDIX A
THEMATIC APPERCEPTION TEST
Scoring Manual for
Thematic Checklist

INTERPERSONAL - DISEQUILIBRIUM

PARENT (includes parent substitutes such as older
authority figures, boss, teachers, etc.)

1. Pressure - parent or authority figures are prohibitive, compelling,
censuring, punishing, disapproving, interfering, checking up, dis­
agreeing with, restraining or unduly influencing, criticizing,
placing strong expectations, or holding something against hero.

2. Succorance - hero seeks, requests or receives aid, gift, help,
advise, consolation or understanding from parent.

3. Nurturance - hero bestows or offers aid, gift, advice, consolation
or understanding to parent.

4. Aggression from - physical harm inflicted or intended upon hero by
parent. (Note: Do not also score Pressure #1 and themes 4, 5, 6
or 7 for the same reason in a story.)

5. Aggression to - physical harm inflicted or intended upon hero by
parent.

6. Anger from - parent feels or expresses hostility towards hero with­
out physical expression of aggression. (Note: Do not score themes
4 or 5, and 6 or 7 for the same reason in a story, as themes 4 and
5 presume 6 and 7, respectively.)

7. Anger to - hero feels or expresses hostility towards parent without
resort to physical expression of aggression.

8. Departure from - hero is taking leave of parental home (or environs
representing the authority figure); is separated from parents.

9. Disregard - hero disregards parental instruction; transgresses
parental rule; disobeys precept of authority figure; consciously
inattends to parent. (Note: With physical separation from parents,
score also Departure #8).

10. Rejection by - hero is abandoned or dismissed by parent; parent re­
pudiates some aspect of parent-hero relationship or overtly ignores
hero; parent knowingly fails to gratify hero's needs. (Note: Spe­
ific action or lack thereof on part of parent must be present,
indicating a conscious decision.)

11. Rejection of - hero repudiates parent qua parent. (Note: This must
signify a greater repudiation of the individual or the hero-parent
relationship so as to be differentiated from Disregard #9. When
accompanied by physical separation or leave-taking, score also
Departure #8).

12. Death or illness of parent
13. Death or illness of child
14. Disappointment to - parent is disappointed in hero's behavior or
accomplishments; hero anticipates parental disappointment (with or
without accompanying conflicted feeling on part of hero).
15. **Disappointment by** - hero is disappointed by parent, parent's behavior or accomplishments.

16. **Filial obligation** - hero feels it is his duty to remain with, comply with, or support parents. *(Note: The obligation must concern something the hero can do for the parent.)*

17. **Confession to** - hero tells parent of some misdemeanor or crime he has committed; hero anticipates confession or is troubled by inability to confess to parent.

18. **Bad news** - hero brings bad tidings to parent; friend brings tidings of death of son to parent.

19. **Marriage** - hero tells parent of past or impending marriage, or of indefinite marriage plans; parent objects to marriage.

20. **Parental conflict** - hero is concerned over marital problems of parents; hero witnesses parents in argument; parents contemplate or obtain a divorce.

21. **Concern about** - hero worries over physical or mental well-being of parents; wonders about parent's whereabouts *(Note: Not scored as Curiosity #129)*; worries about state of relationship with parent.

22. **Concern from** - parent worries over physical or mental well-being of hero; wonders about hero's whereabouts *(Note: Not scored as Curiosity #129)*; worries about state of relationship with hero.

**OPPOSITE-SEX** (refers to wife, sweetheart, opposite-sexed peers, etc.)

24. **Pressure** - opposite-sexed person is prohibitive, compelling, censuring, punishing, disapproving, interfering, checking up, disagreeing with, restraining or unduly influencing, criticizing, placing strong expectations on hero.

25. **Succorance** - hero seeks, requests or receives aid, gifts, help, advice, consolation or understanding from opposite-sexed person.

26. **Nurturance** - hero bestows or offers aid, gifts, advice, consolation or understanding to opposite-sexed person.

27. **Aggression from** - physical harm inflicted upon or intended for hero from opposite-sexed person. *(See note, theme #4).*

28. **Aggression to** - physical harm inflicted upon or intended for opposite-sexed person.

29. **Anger from** - opposite-sexed person expresses or feels hostility towards hero, without physical expression of aggression. *(Note: For "fight" or "argument" between two people, score both themes Anger from #29 and Anger to #30).*

30. **Anger to** - hero expresses or feels hostility towards opposite-sexed person.

31. **Departure from** - hero is leaving opposite-sexed person either temporarily or permanently.

32. **Disregard** - hero disregards opposite-sexed person; disregards instructions from opposite-sexed person; transgresses her rules.

33. **Rejection by** - hero is abandoned by opposite-sexed person; hero is repudiated. *(Note: The expression of anger or aggression by opposite-sexed person is insufficient in itself to warrant this score).*
34. **Rejection of** - hero repudiates opposite-sexed person with whom he is presently involved; decides to terminate relationship. (See note, theme #11).

35. **Death or illness of opposite-sexed person.**

36. **Disappointment to** - opposite-sexed person is disappointed in hero's behavior or accomplishments.

37. **Disappointment by** - hero is disappointed by behavior or accomplishments of opposite-sexed person.

38. **Jealousy** - hero is jealous of wife or girlfriend's attention to others.

39. **Competition** - hero is object of competition between two or more admirers.

40. **Infidelity** - hero discovers or has known that wife or girlfriend has been unfaithful or she has had an affair.

41. **Decision** - hero must choose between marriage and not, or between two partners; hero debates seeking a divorce.

42. **Pursuit** - hero is wooing or trying to get partner to submit.

43. **Seduction** - hero is being talked into relationship or is being actively pursued by a new person.

44. **Unrequited** - hero's affection is unreturned by particular opposite-sexed person.

45. **Bad news** - hero brings bad tidings to wife, girlfriend, etc.

46. **Concern about** - hero worries over physical or mental well-being of opposite-sexed person; hero wonders about her whereabouts (Note: Not scored as Curiosity #129); worries about state of the relationship.

47. **Concern from** - opposite-sexed person worries about physical or mental well-being of hero; wonders about hero's whereabouts; worries about the state of the relationship.

**SAME SEX** (peers at school, work, etc. Not to be confused with same-sex authority figures.)

49. **Pressure** - same-sexed person is prohibitive, compelling, censuring, punishing, disapproving, interfering, checking up, disagreeing with, restraining or unduly influencing, criticizing, placing strong expectations on hero.

50. **Succorance** - hero seeks, requests or receives aid, help, advice, consolation or understanding from same-sexed person.

51. **Nurturance** - hero bestows or offers aid, gift, advice, consolation or understanding to a same-sexed person.

52. **Aggression from** - see #27.

53. **Aggression to** - see #28.

54. **Anger from** - see #29.

55. **Anger to** - see #30.

56. **Departure from** - hero is leaving same-sexed peers, abandoning a social or work group, etc.

57. **Disregard** - see #32.
58. **Rejection by** - hero has been deserted by companions; hero has had his ideas repudiated by same-sexed persons; hero is unappreciated or disliked by same-sexed persons.

59. **Rejection of** - hero repudiates specific individuals, to be differentiated from leave-taking of a group (scored as Departure #56) when changing jobs, schools, etc.

60. **Death or illness of same-sexed person.**

61. **Disappointment to** - see #36.

62. **Disappointment by** - see #37.

63. **Competition** - hero is competing with same-sexed persons in game or contest. (Note: Theme #167 Achievement should not always also be automatically scored.)

64. **Bad news** - see #45.

65. **Revenge** - hero is anxious to exact revenge from a same-sexed person for some past deed; hero is taking revenge; hero files lawsuit to recover damages.

66. **Envy** - hero is envious of peer's accomplishments or abilities.

67. **Concern about** - see #46.

68. **Concern from** - see #47.

**SIBLING**

70. **Pressure** - see #24.

71. **Succorance** - see #25.

72. **Nurturance** - see #26.

73. **Aggression from** - see #27.

74. **Aggression to** - see #28.

75. **Anger from** - see #29.

76. **Anger to** - see #30.

77. **Departure from** - hero is either leaving or is presently separated from siblings.

78. **Disregard** - see #32.

79. **Rejection by** - hero has been deserted by sib; hero has been repudiated or has had his ideas repudiated by sib; hero is unappreciated or unloved by sib.

80. **Rejection of** - hero repudiates particular sibling or relationship with that sib through specific actions so intended.

81. **Death of illness of sibling.**

82. **Rivalry** - hero and sibling are competitors for the same objective.

83. **Concern about** - see #46.

84. **Concern from** - see #47.

85. **Confession to** - see #17.

**INTERPERSONAL - EQUILIBRIUM**

**PARENT**

87. **Cooperation** - parent is working with hero towards his goal, or visa-versa.
88. **Affiliation** - hero is interested in making amends or resolving conflict with parent so as to come together again; apology given or received; hero is motivated by a desire to be reunited with parent.

89. **Fulfillment** - hero lives up to expectations of parent, teacher, employer, etc.

90. **Contentment with** - hero feels or expresses satisfaction with parental relationship.

91. **Ordinary activity** - hero is engaged with parent in routine activities which a majority occurs alone, without additional themes that distinguish the story.)

92. **Affection for** - hero feels or expresses affection, love, caring for parent.

93. **Affection from** - parent feels or expresses affection, love, or caring for hero.

94. **Admiration for** - hero admires, respects or idealizes parent, teacher, employer, etc.

95. **Approbation from** - parent approves of hero's actions, accomplishments, decisions, purposes, etc.

**OPPOSITE SEX**

97. **Cooperation** - see #87.

98. **Contentment with** - hero feels or expresses satisfaction with relationship with opposite-sexed person; hero feels or expresses affection for opposite-sexed person. (Note: For "feeling close," score contentment with #98 and Approbation from #102.)

100. **Affiliation** - hero is interested in making amends or resolving conflict, so as to come together again with opposite-sexed person; hero is interested in social activity (Note: Not to be confused with Pursuit #42 or Seduction #43); apology given or received; desire for marriage to a particular person; reunion with opposite-sexed person.

101. **Fidelity** - hero chooses to be faithful to wife, girlfriend, etc.

102. **Approbation from** - hero is appreciated, loved, wanted or respected by opposite-sexed person.

**SAME SEX**

104. **Cooperation** - see #87.

105. **Ordinary activity** - see #91.

106. **Contentment with** - hero feels or expresses satisfaction with relationship with same-sexed person, or group of same-sexed persons.

107. **Affiliation** - see #100. (Note: Score also when theme is expressed without objects.)

108. **Approbation from** - hero is lauded, appreciated, or respected by friends and peers.
110. Contentment with - see #87.

111. Affiliation with - see #100.

**IMPERSONAL - DISEQUILIBRIUM**

114. Economic pressure - hero is compelled to, or prohibited from, or limited in doing something because of the lack of money; bankruptcy.

115. Legal restriction, fair - hero is incarcerated, arrested or detained against his will for some antisocial act committed. (Note: Unless the antisocial act is explicit and part of the story, do not also score Aggression towards environment #119.)

116. Legal restriction, unfair - hero is incarcerated, arrested or detained against his will for some act which he did not commit; frame-up.

117. Danger - environment harbors some dangerous element, or is felt to be dangerous by hero, without specific reference to elements falling under Aggression from and towards environment, #118 and #119.

118. Aggression from environment - impersonal source of aggression or difficulty (i.e. non-specific individuals or groups), accident, animal, nature, disease, etc. (Note: There must be an identifiable object of the aggression to be scored.)

119. Aggression towards environment - hero aggresses against an unidentified person or group in the form of criminal actions, robbery, murder; accident.

120. War - to be scored when the presence of a war involves the characters or has some impact on their lives, behavior, relationships, etc.

121. Escaping peril - hero is in the act of getting out of an unfavorable situation or danger; hero attempts to escape from jail (Note: There must be no positive specified outcome; if outcome is successful, score Rescue #125.)

122. Obstacles - environment or life is generally frustrating in past, present or anticipating future; non-specific factors interfere with or impede satisfaction or success; a combination of different elements create frustration and hopelessness towards hero's situation; bad luck or fate; opportunities or choices are limited by the environment or by imposition of custom or law. (Note: Not to be confused with Duty #170).

**IMPERSONAL - EQUILIBRIUM**

124. Favorable environment - hero is being helped by favorable circumstances; hero is enjoying his surroundings, is content with impersonal aspects of life; hero lives "happily ever after."
125. Rescue - hero makes successful escape from perilous environment or jail; cessation of noxious stimuli.

INTRAPERSONAL - DISEQUILIBRIUM

126. Aspiration - dreaming of distant future; hoping for future; wishing. (Note: When fulfilled, score also Achievement #167).
127. Fantasy - daydreaming unrelated to future plans; dreaming.
128. Inadequacy - realization; whether justified or not, of lack of success; hero is at a loss to cope with situation; hero has failed in some effort; hero feels personally inadequate or ashamed; hero strives to maintain self-esteem, hero is lazy.
129. Curiosity - wondering about the nature of an occurrence, place, individual, contents of a room, etc.; desire to observe, inquire, explore, investigate; to acquire facts; seeking someone or something either for the first time, or to retrieve something that is or was lost; retrospective questioning of an event or fate. (Note: When specific interpersonal object is mentioned, not to be confused with 'concern about' themes).
130. Behavior disorder - personal maladjustment of all sorts; neurosis, psychosis, sleeplessness, hallucination, eccentricity, morbid preoccupation, psychopathy, gangster. (Note: Should be based on a specific behavioral manifestation or explicit label, so as not to be confused with Inadequacy #128.)
131. Suicide - attempted or completed; preoccupation with. (Note: Do not also score Death or illness of central character #138).
132. Moral conflict - concern over what is right and wrong; hesitancy in indulging in some act because of ethical proscriptions.
133. Guilt - hero is described as "guilty."
134. Drunk-drugs - hero is described as drunk; hero acts out of drunkenness; hero expresses intention to use or takes drugs.
135. Fear - hero is apprehensive, alarmed, terrified of someone or something. (Note: To be distinguished from Confession to #17.)
136. Rumination - hero is deep in thought; hero spends time in solitary thinking; hero is concerned with philosophical questions of life; hero contemplates what the future will bring without imagining specific future plans or goals, in a philosophic attitude.
137. Work-school - deciding between jobs; discontent or worried about school, chores, etc.; refusal to do certain work, chores, or attend school; being fired; worry over obtaining job. (Note: Worry about business should be scored Worry #160).
138. Death or illness of central character - other than suicide, and other than when in the context of a relationship falling under Interpersonal Themes.
139. Retribution - hero is forced to atone or be punished for some act, short of being sent to jail (which is scored as Legal restriction #115 or #116); hero must undo for something said or done.
140. Reminiscence, sad - hero is unhappy in his memories of the past, or his daydreams of the past.
141. Religion - prayer; seeking consolation from God; religious conflict; religious awakening.
142. Loneliness - hero misses someone; hero is an outcast, friendless, or homeless; hero is mourning.
143. Compensation - when hero has one characteristics or stroke of fortune to make up for another negative characteristic or misfortune; making up for failing or insecurity.
144. Vacillation - hero fluctuates between opposing sides of a debate; hero suffers an inability to make a decision (Note: To be distinguished from Confusion #156, which often is unrelated to debate or issue-resolution.)
145. Acquisition - desire expressed by hero to acquire material things; hero is working for possession of goods or wealth, miserliness.
146. Denial - hero does not want to admit to or face a difficult situation; hero acts in a manner than enables him not to face a certain situation; hero wants to forget something.
147. Revenge - hero is preoccupied with the wish to retaliate for some past wrong from an unspecified individual; hero takes revenge.
148. Sadness - hero is described as "sad," "dejected," "discouraged," "unhappy," feeling "sorrow."
149. Self-pity - hero feels sorry for himself.
150. Resurrection - returns from the dead.
151. Frustration - hero is described as "frustrated."
152. Depression - hero is described as "depressed," "down in the dumps."
153. Boredom - hero is described as "bored."
154. Regret - hero feels sorry for some past action or present situation; hero will never forgive himself for something.
155. Upset - hero is described as "upset," "disturbed," "feeling bad," "distraught," "crying," or having "hurt feelings."
156. Confusion - hero is described as "confused," or "bewildered."
157. Anger - hero feels hostility, not directed towards specific interpersonal object(s).
158. Anger at self
159. Perseverance - hero keeps trying to master a task, reach a goal, or solve a problem, in the face of discouragement, difficulty or obstacles. (Note: Emphasis is on the hero's repeated attempts. Do not score if hero quits trying.)
160. Worry - hero is concerned with the future; hero is concerned with the outcome of some present action; hero fears some negative occurrence which may transpire; hero worries about some issue in life (which cannot reasonably be scored elsewhere); pessimism.
161. Surprise, shock - hero is described as "shocked," "surprised," "stunned" or "startled."

INTRAPERSONAL - EQUILIBRIUM

162. Self-esteem - hero manifests or feels confident or optimistic; believes in own superiority; achieves success in endeavors which reinforce feeling of superiority (Note: Score "success" without this accompanying feeling as Achievement #167.)
163. **Tranquility** - peace of mind; content with self, own accomplishments, aesthetic appreciation; happy.

164. **Reminiscence, happy** - hero is pleased with memories.

165. **Resignation** - hero has resigned himself to whatever situation he faces; with the passing of time, life comes back to the way it was before; hero forgets earlier pain or loss; equilibrium reached after conflict. (Note: This theme presumes the prior presence of a conflict or problem.)

166. **Ordinary activity** - hero is alone and pursuing ordinary activity. (Note: Card description is insufficient to qualify as ordinary activity.)

167. **Achievement** - hero succeeds in completing a project, gaining fame or notoriety in some endeavor, reaches a goal; individual expresses a desire to achieve, succeed, etc. (Note: The desire to reach the goal of being rich should be scored Acquisition #145.)

168. **Power** - hero desires control over self, others, environment; hero desires to be influential, to leave a mark, to make an impact, to direct or influence; hero has attained a position of power.

169. **Overcome problem** - hero is able to solve or otherwise extricate himself from a problem situation. (Note: Some specific effort on the part of the hero is required here, so as to be differentiated from Resignation #165 where time accounts for the change.) Hero recovers, due to his, the doctor's, or some other source's efforts; hero expresses desire to overcome problem or illness. (Note: If problem is environmental or impersonal, score Rescue #125. Do not score if hero is undertaking a mission with an objective in which he succeeds, even in the face of obstacles; this should be scored Achievement #167.)

170. **Duty** - hero feels moral or other obligation to act in a certain positive way, or take a particular stand; hero feels compulsion to behave in particular way without specified external source for motivation in terms of a person or law.

**NOTES:**

1. Where the identity of a person is uncertain, and several alternative possibilities are named within the story, the first choice named should be scored.

2. The particular sentence or words in a story should only be awarded one score. That is, two or more themes should not in most cases be based on a single set of words in the story.

3. If there is some doubt as to the sex of characters in the story, score as SAME SEX.

4. Where there are alternative outcomes in a story, score all the alternatives equally. When alternative themes appear at the very start of a story, reflecting the storyteller's determining which direction to pursue with his story, do not score the various alternatives. Score only the major idea chosen for elaboration within the body of the story.
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APPENDIX C
RATING SCALES FOR EMOTIONAL TONE OF TAT STORIES*

Key for all scales

-2 Very sad
-1 Sad
0 Neutral
+1 Happy
+2 Very happy

General Rating Scale for Emotional Tone of Stories:

-2 Complete failure, submission to fate, death, murder, suicide, illicit sex with violence, revenge, aggressive hostility, severe guilt, complete hopelessness.
-1 Conflict with attempt at adjustment, rebellion, fear, worry, departure, regret, illness, physical exhaustion, resignation toward death, loneliness.
0 Description, lack of affect, balance of positive and negative feelings, routine activities, impersonal reflection.
+1 Aspiration; desire for success and doubt about outcome, compensation for limited endowment. Description with cheerful feeling, reunion with friends, contentment with world, feeling of security.
+2 Justifiably high aspiration. Complete satisfaction and happiness. Reunion with loved ones.
? Can't make up a story.

General Rating Scale for Outcomes:

-2 Complete failure, submission to fate, death, murder, suicide, extreme punishment, extreme remorse.
-1 Some frustration; incomplete success in attaining goal, goal attained at expense of happiness, disappointment to friends and family, acceptance of unsatisfactory situation or submission to authority.
0 Continuation of ordinary situation, balance of happy and unhappy situations.
+1 Moderate success, reunion with friends, recovery from temporary disability or depression, happiness in success of others.
+2 Great success, discovery, and/or happiness. Extreme contentment, marital bliss, unusual good fortune, reunion with loved ones.
? Conditional (if) outcomes, alternative outcomes of different emotional value.
N No outcome.

*Italicized items indicate additions to Eron's original scale.
Rating Scales for Emotional Tone of Individual Cards:

(1)
-2 Complete frustration and hopelessness with no resistance.
-1 Dejected, inadequacy with attempt to adjust.
0 Frustration with no depression. Aspirations balanced by conflict. Lack of feeling tone.
+1 High aspirations with cooperation but some hindrance.
+2 High aspiration with approbation and no conflict.

(2)
-1 Conflict between ambition and duty to family with some feelings of guilt or apprehension, disappointment with lot, jealousy.
0 Description of picture, planning for future with no apparent affect.
+1 Future planning, description with cheerful feeling.
+2 Complete satisfaction with present status and life's accomplishments.

(3BM)
-2 Uncontrolled emotionality, murder, mentally ill, complete frustration, death of loved one, suicide.
-1 Self-pity, aggressive parental pressure, transitory depression, adolescent confusion, physical incapacity.
0 Balance, no affect.

(4)
-2 Desire for revenge, murder, aggressive hostility.
-1 Disillusionment, occupational failure, conflict over extra-marital relations, jealousy, pressure from mate.
0 Balanced affect
+2 Marital bliss, success in war.

(5)
-2 Overdominant parent or mate, extreme parental or partner pressure, aggressive hostility, murder.
-1 Parental or partner pressure without aggression, loneliness, slight frustration, shock, nervous, fright.
0 Checking on room or occupants, doing household duties.
+1 Unexpected gift, welcome guest, good news.

(6BM)
-2 Death, bad news, severe guilt, conflict over social acceptance of sexual role.
-1 Parental pressure, filial obligation, conflict over desires and duties, departure from parental home.
0 Balanced or no affect.

(7BM)

-2 Disappointment of parents in child, guilt, repeated failure.
-1 Disagreement, recalcitrance, rebellion against parental authority, feelings of inadequacy.
0 Parental advice, impersonal discussion, counselling.
+1 Aspiration with encouragement and/or advice.
+2 Parental approval and satisfaction.

(8BM)

-2 Murder, death, extreme guilt.
-1 Worry and concern about accident and operation, frustration of ambitions.
0 Descriptive, perfunctory, lack of emotional involvement, impersonal reflection.
+1 Aspiration, hope and planning for future.
Adventurous daydreaming.
+2 Very high aspiration.

(9BM)

-2 Dead in combat, rest after crime.
-1 Economic misfortune, physical exhaustion, danger of combat, social disapproval, nightmare.
0 Men at rest, pure description, no emotional involvement.
+1 Comradely feeling, contentment, carefree, happy-go-lucky, lack of concern for convention.

(10)

-2 Death, extreme sorrow, tragedy.
-1 Departure, leaving loved ones, personal failure, being comforted for minor misfortune.
0 Lack of affect, balance of conflict.
+1 Reunion, happiness, acceptance, feelings of pleasure.
+2 Marital bliss, extreme contentment, satisfaction and good adjustment.

(11)

-1 Struggle against aggressive forces, animals fighting, story detached from reality.
0 No emotional involvement, little interpersonal action, description.
+1 Vacation, pleasure trip, happy people, successful hunting trip.

(12BG)

-2 Complete destruction, death, drowning.
-1 Theft of boat, loss, aggressive environment, injury, near drowning.
0 Card description, ordinary activity.
+1 Success in activity.

(13B)

-1 Resignation or frustration with personal situation, boredom, loneliness, conflict over personal condition, hates school.
0 Balance of positive and negative affect, lack of affect; card description.
+1 Description with cheerful affect, planning for future with positive affect.

(14)

-1 Resignation to death of relative. Reflection on worldly conflicts, with or without appeal to religion, loneliness.
0 Daydreaming without emotional involvement, any other theme with no emotional involvement, adolescent reverie.
+1 Contentment with environment, appreciation of world around.
+2 Happy, well-adjusted hero, vacation, planning for happiness.

(15)

-2 Death of close relative, loneliness for deceased, mourning, hopelessness, hero rejected by society, suicide.
-1 Impersonal speculation on death, return of dead to cemetery, visiting grave of friend.
0 Description of painting or picture, no affect.

(17BM)

-2 Large scale disaster.
-1 Vindictiveness, revenge, trying to escape from unfavorable environment, fear, inadequacy.
0 Vacillation in plot (balance of happy and sad themes), doing routine job of acrobatics.
+1 Compensation for limited endowment, desire for success with uncertainty about outcome.
+2 Hero happy and successful. Display of physical prowess, adulation of crowd, winning of contest.
(18BM)

-2 Suicide, manslaughter, thwarted escape, hallucinations, delusions, revenge completed, kidnap.
-1 Environmental frustration, accident, ordinary drunkenness, personal sorrow not of serious proportion, mugging.
0 Description of poster or painting. No emotional involvement.
+1 Aspiration.

(19)

-2 Death due to forces of nature or war, emotional disturbance.
-1 Fear (child's fear of supernatural), bad storm with little or no emphasis on comfort of home.
0 Description of picture.
+1 Comfort of home during storm, feeling of security, enjoyment of winter games.

(20)

-2 Death of loved one, suicide.
-1 Disappointment in love, worry, feeling of rejection, economic pressure, disillusionment, loneliness, drunkenness.
0 Out for a walk, description, no feeling tone.
+1 Aspiration.
APPROVAL SHEET

The thesis submitted by Aaron Cooper has been read and approved by the following Committee:

Dr. Patricia Barger, Chairman
Professor, Psychology, Loyola

Dr. Alan DeWolfe
Professor, Psychology, Loyola

The final copies have been examined by the director of the thesis and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the thesis is now given final approval by the Committee with reference to content and form. The thesis is therefore accepted in partial fulfillment of the requirements for the degree of Master of Arts.

Date January 77

Director's Signature

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