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A Manual for Objective TAT Scoring

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Preface

This manual presents a concise but abbreviated statement of one objective TAT scoring system and its predictive efficiency. It is designed to facilitate application of this approach to TAT scoring. Although the rationale upon which this method is predicated derives from certain specific assumptions regarding personality, the clinical use of these categories does not demand any particular theoretical persuasion. The author recognizes two kinds of validity germane to projective instruments: (a) $validity_1$, prediction of clinical diagnosis; (b) $validity_2$, prediction of personality characteristics. This manual deals only with $validity_1$. As the material contained herein is still largely in tentative form, the author will welcome suggestions, ammendations, elaborations, criticism. This manual owes its existence to many individuals who helped collect the data, score the protocols, apply statistical techniques, and type the various manuscripts. Their combined efforts have made this manual possible.

Introduction

Clinical use of the TAT has been largely restricted to content analysis by the plethora of cumbersome scoring systems currently available. That scoring systems should be _simple, objective,_ employ _stimulus properties_ of the TAT cards, and be related to _personality theory,_ is becoming empirically evident. That TAT scoring can be a clerical procedure and interpretation a clinical skill is congruent with the _new look_ in projective testing. The use of objective scoring does not imply abandonment of content analysis but is merely a formal aid to this process.

Rationale

Discussion of the approach to personality theory which antedated the rationale for TAT scoring is not appropriate here (3). However, there are at least three aspects of test behavior to be considered in devising objective scoring systems (6): (a) approach to the situation (reflected, for example, in the manner standard test directions are followed); (b) normality of responses (abstractions of structural and content material included by specified percentages of "normal" $\underline{S}$s); (c) rarity of responses (those infrequent responses in a "normal" population which appear with significantly higher frequency in psychopathological conditions).

Scoring Categories

These three aspects of test behavior have been objectified as Perceptual Organization, Perceptual Range, and Perceptual Personalization, respectively.

1. Perceptual Organization (PO)

Description

This category reflects the $\underline{S}$'s ability to follow the standard directions to "tell a story." Seven possible components are included: (a) card des-

cription; (b) present behavior; (c) past events; (d) future events; (e)

feeling; (f) thought; (g) outcome.

PO Scoring Directions

You are scoring to see how closely the subject followed the original test directions. Score sheets are provided (Appendix A) which are used to record PO, PR and PP. The score sheet contains a list of the seven components (abbreviated as CD, PB, PE, FE, F, T, O respectively) and spaces to record presence or absence of each component for each card used. Columns have been labeled for cards 2, 3, 4, 6, 7 and space is left for any other cards which may have been administered. Each PO component present in story is scored by placing a plus (+) in the appropriate space on the score sheet. A minus (-) is scored for components not included. No score is given for frequency of appearance on each card.

Any of these components which appear after the first question by the examiner (additional scores) should be entered on the sheet and the entry circled.

All stories given by the subject may be scored. The total PO score is the sum of scores to the five stories from cards 2, 3, 4, 6, 7. Note that space is also provided for tallying frequency (f) of components for all cards. Circled PO components should not be added in obtaining the total PO score. Enter total score in box labeled T; enter total additional scores in box labeled T add.

a. Card Description (CD)

Physical description of two or more things or persons actually present in the picture. It may be a listing such as, "This is a man, a woman, a tree, etc." It may serve to introduce the story, "The boy is on the floor"...."The woman who is by the tree is...." In these cases there is never any action; merely description. If the word "picture" is used, then only one person or thing need follow, "This is a picture of a boy.". CD may occur anywhere in the story.

b. Present Behavior (PB)

Any activity or behavior that occurs in the present or is in the process of occurring within the picture. For example (card 2), "The man is plowing the field." Activity which occurs outside of the frame-of-reference of the picture is scored Past Events or Future Events.

c. Past Events (PE)

Things, events, situations which have taken place in the past, i.e., before the time of the scene pictured on the card and described in the story. These may be in the immediate or the remote past and must be specified and definite things, events, or situations.

d. Future Events (FE)

Things, events, situations which will take place or do take place in the future, i.e., after the time of the scene pictured on the card and described in the story. These may be in the immediate or remote future and must be specific and definite things, events, or situations.

e. Feeling (F)

Any expression of feeling or emotion on the part of the characters present in the story. This includes affect, i.e., sad, mad, in love, and desire, i.e., wishing and wanting (but not need).

f. Thought (T)

Any expression of thought, memory, dream or allied mental state present in the story. This includes decision, belief, realization, knowing, praying, figuring, etc.

g. Outcome (O)

The inclusion of a specific statement which indicates the ending, denouement, finale, or conclusion of the story. This may consist in behavior, feeling, thought or even, rarely, be present by implication in future events. If this does occur, both outcome and future events are scored. Usually appears at or near the end of the story, i.e., the last sentence or phrase.

2. Perceptual Range (PR)

Description

Empirical evidence has been used to establish criteria as to content a group of "normal" Ss will include in their TAT stories a given percentage of the time (11). Three separate stimulus properties were chosen for each card on the basis of inclusion by approximately 90 per cent or more of this "normal" group.

PR Scoring Directions

You are scoring to see how closely the subject adheres to norms for various aspects of the stories. The 15 stimulus properties for males are: Card 2 (a) family: young girl, woman, activity specified; adult male; (b) fields or farm; (c) books or school; Card 3 (d) figure, sex and age specified; (e) emotions noted; (f) activity specified; Card 4 (g) male; emotions noted, activity specified; (h) woman; activity specified; (i) conflict or cooperation; Card 6 (j) man; emotions noted, activity specified; (k) woman; emotions noted; (l) personality referrent; Card 7 (m) older male, activity specified, relationship specified; (n) male, emotions noted; (o) personality referrent. The 15 stimulus properties for women are:

Card 2 (a) family: young girl, activity specified; woman; adult male; (b) fields or farm; (c) books or school; Card 3 (d) female; (e) emotions noted; activity specified; (f) story: death, murder, illness, frustration; Card 4 (g) male; emotions noted; activity specified; (h) woman; activity specified; (i) conflict or cooperation; Card 6 (j) male, activity indicated; (k) female, emotions noted; (l) relationship indicated; Card 7 (m) adult female, activity specified, emotions noted; (n) child, female, emotions noted; (o) relationship specified. You have been provided with criteria lists on a score sheet (M or F).(Appendix A). All items included in each criterion must be mentioned for score to be earned. No score is given for indefinite or ambiguous statements. For example, in Card 2 (male), if the "family," the "young girl," the "woman," and the "adult male" are mentioned, no score is given because the "activity" of the "woman" is not specified.

Read each story once, then go back and look for each particular item in each criterion; finally, check off complete criteria on the score sheet, plus (+) for those present; minus (-) for those not included in story.

To obtain the total PR score, add the plus scores obtained for each story, and enter in box labeled T.

3. Perceptual Personalization (PP)

Description

Some expression, words, and phrases used in the story are incongruous and have no obvious reference to the story that S is trying to relate. These inclusions are clearly neither stimulus reproductions nor additions to the stimulus. PP are deviations from the relatively consistent, organized, coherent protocol-product, the TAT story. These deviations, in order to be scored, must be extreme. They may refer to things labeled performance adequacy, comments, parenthetical remarks, qualifications, picture criticisms, adventitious descriptions, vagueness, evasion, or direct personal reference.

PP Scoring Directions

As you read each story you will note that certain words and phrases do not seem to belong with the rest of the story. They do not add anything to the ideas and events in the story. These words and phrases include all questions and remarks concerning the way the subject feels about his performance, the picture, and himself. They may refer to things which have been called "adequacy of performance," "qualification," "picture criticisms," "vagueness and evasion," and "personal reference."

Examples of these "out of place" words and phrases follow:

Questions: "Is that a boy or a girl?" "What's that supposed to be?"

Adequacy of performance: "I can't figure that one out."

Qualifications: "Wait a minute...." "It's not really that at all."

Picture criticism: "This picture is silly." "There is no point to this at all."

Parenthetical comments: "That's about all on that." "There is not much connected with it."

Adventitious descriptive comments: Any remarks just thrown in without apparent connection to the rest of the story. These remarks often pertain to physical description of the picture, or the people in it.

Vagueness and evasion: "or....or," "either....or," "more or less," "or something," "........whatever it is."

Personal reference: Any reference to "I". Any inclusion of personal information which is identified as such by the subject.

List the words and phrases by number for each card scored on the appropriate score sheet (M or F).

List each word or phrase to be scored separately

One point is given for each word or phrase listed.

The PP score is the total number of points for all cards scored. Enter the total PP score in the box labeled T.

Card Selection

Five TAT cards were selected to compose the basic life situations: Cards 2, 3BM, 4, 6BM, and 7BM for males; cards 2, 3GF, 4, 6GF, and 7GF for females. The use of short-form TAT sets has been experimentally evaluated by comparing PO scores for short-form sets with the total set of cards (7). The inclusion of particular cards was found to be of less importance than the actual number of cards selected. TAT sets of as few as five cards, when scored for PO, provide data which is roughly equivalent to that from the entire series. PO scores from the short-form set for women correlated .91 with scores from the entire set.

Table 1 presents correlations of PO scores for each card with the scores

Table 1

Product-moment Correlations of PO Scores for

Each Card with PO Score for All Cards

(67 Normal Female Ss)

Card	r
1	.72
2	.68
3	.76
4	.69
5	.73
6	.64
7	.74
8	.74
9	.75
10	.77
11	.70
12	.70
13	.72
14	.78
15	.71
16	.60
17	.63
18	.63
19	.65
20	.64
Mean r	.70 (Z transformation)

for the entire set with Z transformations to provide a mean correlation.

Table 2 presents the product-moment intercorrelations of PO scores for normal female Ss. These data indicate that the stimulus-values of the selected TAT cards (in terms of N of PO items) are approximately equivalent.

Table 3 summarizes the product-moment intercorrelations of scoring categories PO, PR, PP, for three diagnostic groups in the male sample (2). Significant relationships obtain between all three categories. PO and PP are inversely related such that high scores on PO tend to occur with low scores on PP. To a considerably lesser degree PR and PP are also inversely related. These figures raise the question of overlap between PO and PR especially, and to a lesser extent between PO and PP. Further research must explore the significance of these interrelationships. The assumptions concerning personality which led to this TAT manual are thoroughly congruent with such associations among scoring categories.

Subjects

The Ss on whom this manual is based were from validation and cross-validation samples (4, 8, 9, 10). The validation sample contained 300 Ss, 150 males and 150 females, with 100 normals, 100 neurotics, 100 psychotics. The cross-validation sample contained 90 male Ss, 30 normals, 30 neurotics, 30 psychotics. The normal male Ss were college students with no history of psychiatric illness; the normal female Ss were student nurses with MMPI T scores all below 70. The neurotic and psychotic male Ss were chosen in terms of previously determined criteria: (a) hospitalized; (b) diagnostic agreement between psychiatrist and psychologist; (c) independent diagnostic formulations; (d) diagnosis: neurosis or schizophrenia. The neurotic and psychotic female Ss were chosen in terms of these same criteria with one exception; out patient clinic neurotics were used. The males in the cross-validation sample were

Table 2

Product-moment Intercorrelations

Between PO Scores on Five Cards

(67 Normal Female $\underline{S}$s)

Card	3	4	6	7
2	.62	.40	..50	.53
3		.61	.57	.58
4			.58	.57
6				.60

Note.—All figures are significant
at ⩽01 level of confidence.

Table 3

Product-moment Intercorrelations of

Categories PO, PR, PP for Three

Groups in the Male Sample

Category	PR	PP
PO		
Group:		
Normal	.25	-.40**
Neurotic	.43**	-.32*
Psychotic	.53**	-.40**
PR		
Group:		
Normal		-.18
Neurotic		.01
Psychotic		-.34*

*Significant at the .05 level

of confidence.

**Significant at the .01 level

of confidence.

chosen in terms of these same criteria with one exception; outpatient clinic neurotics were used. All $\underline{S}$s were between the ages of 20 and 40, with I.Q. scores of average or better.

Reliability

Two kinds of scorer reliability were used (5, 6): (a) scoring category reliability; (b) reliability of the items composing the categories. Scorer reliability was determined by means of percent of agreement. Both kinds of scorer reliability were calculated for all three groups, with various scorers, psychologists and clerks. From the male validation sample 75 stories, 25 from each group, were randomly drawn, coded, and scored for reliability. The same process were used for 150 stories from the female sample and 75 stories from the male cross-validation sample. In all the reliability tables the figures reported for the male·validation sample represent the average per cent of agreement for three scorers; the figures for the male cross-validation sample and the female sample represent the percent of agreement for two scorers.

Table 4 summarizes the per cent of agreement figures for scoring category reliability. The highest figures obtained for the male validation sample are reported. The reliability for PO ranges from 88 to 94 per cent of agreement; PR from 86 to 91 per cent; and PP from 75 to 86 per cent. The increase in reliability for the female and male cross-validation samples is attributable to: (a) additional practice in scoring; (b) formalization of scoring criteria on an easily used score sheet. It should be noted that although the PR criteria differ for male and female $\underline{S}$s that the reliability of scoring is almost identical.

The reliability of scoring separate PO and PR items is presented in Tables 5 and 6. The mean reliability figures (scoring category reliability) differ in

Table 4

Scoring Category Reliability (per cent of

agreement) for Male Validation,

Male Cross-validation (C), and

Female Validation Samples

Sample	Category		
	PO	PR	PP
Male	88	86	86
Male (C)	93	89	75
Female	94	91	76

Table 5

PO Item Reliability (per cent of agreement)

for Male Validation, Male Cross-validation

(C), and Female Validation Samples

Item	Sample		
	Male	Male (C)	Female
Card Description	91	91	91
Present Behavior	89	91	94
Past Events	90	91	94
Future Events	89	97	93
Feeling	89	90	95
Thought	81	89	96
Outcome	92	99	96
Mean	89	93	94

Table 6

PR Item Reliability (per cent of agreement)

for Male Validation, Male Cross-validation

(C), and Female Validation Samples

Item	Sample		
	Male	Male (C)	Female
1	69	93	87
2	86	93	100
3	100	100	87
4	93	100	100
5	86	87	93
6	71	87	83
7	82	87	93
8	95	87	93
9	93	80	90
10	60	93	93
11	82	80	87
12	62	87	87
13	84	80	80
14	69	87	97
15	69	93	100
Mean	80	89	91

.Table 7

PP Category Reliability (per cent of agreement)

by Sexes and Diagnostic Group

Sex	Group		
	Normal	Neurotic	Psychotic
Male	88	84	76
Male (C)	82	73	74
Female	78	77	76

some instances for the male sample from those reported in Table 4 because the component entries are themselves mean agreements of three scorers. No consistent or large differences appear between males or females and there were no significant differences in scoring the three diagnostic groups. Thus, the reliability figures for each diagnostic group are omitted. The reliability of scoring separate PO items (on all samples) ranged from 89 to 97 per cent of agreement; PR from 60 to 100 per cent of agreement.

Table 7 presents the reliability of scoring PP for males, females, and diagnostic groups. The lowered PP figures reflect ambiguity in the scoring directions, i.e., the absence of specified criteria to look for in the stories. PP reliability figures are reported by diagnostic group because ambiguity increases with bizarreness present in the TAT story. The selection of just what to score becomes difficult as little in the protocol relates to the continuity of the story.

Validity

Table 8 presents the means, ranges and standard deviations for each category from all diagnostic groups on all samples. Validity was estimated by a nonparametric, median, chi-square analysis (Tables 9, 10, 11). The statistical fact of significant differences between diagnostic groups does not indicate the predictive efficiency of a scoring system. For this reason prediction scores were developed by using as criteria (cut-off scores) the normal-neurotic and neurotic-psychotic medians for each sample (Table 12). The relatively small differences between male and female samples permit use of combined medians obtained from the total sample rather than separate cut-off scores for each sex. These combined medians (rounded for convenient clinical application) are 23 and 15 for PO; 11 and 7 for PR; 2 and 6 for PP. PO and PR scores above the normal-neurotic medians were given 0; scores between the

Table 8

Means, Standard Deviations(SD) and Ranges for Male (M),

Male Cross-validation (C) and Female (F) Validation

Samples of Normal, Neurotic, and Psychotic

Groups on Each Scoring Category

Category	Mean			SD			Range		
	M	C	F	M	C	F	M	C	F
PO Group:									
Normal	26.6	26.5	27.5	3.7	2.6	3.9	19-32	22-31	16-35
Neurotic	20.8	18.5	18.5	4.2	3.2	4.3	12-29	11-24	10-25
Psychotic	13.2	10.8	8.5	4.1	2.9	2.9	6-24	6-21	5-18
PR Group:									
Normal	12.1	13.4	14.2	1.8	1.3	1.0	8-15	11-15	11-15
Neurotic	9.8	8.8	9.7	2.2	1.5	1.7	4-15	5-11	5-12
Psychotic	4.9	5.2	5.4	5.8	1.6	1.9	0-12	1-9	1-11
PP Group:									
Normal	1.0	.3	.2	.5	1.3	1.1	0-6	0-6	0-13
Neurotic	5.9	3.8	6.1	2.7	4.3	6.0	0-17	0-29	0-30
Psychotic	12.1	5.0	8.5	9.1	6.0	6.6	1-43	0-40	0-29

Table 9

Summary of Median Test Results on PO, PR,

PP Scores of Male Validation Sample

Category	Combined Median	Above Median	X^2	p
PO				
Group:				
Normal	24.50	37.0	23.0	<.001
Neurotic		13.0		
Normal	20.25	46.5	73.9	<.001
Psychotic		3.5		
Neurotic	16.94	40.8	39.9	<.001
Psychotic		9.2		
PR				
Group:				
Normal	11.19	35.5	17.6	<.001
Neurotic		14.5		
Normal	8.90	46.8	76.0	≤.001
Psychotic		3.2		
Neurotic	7.68	42.7	50.1	<.001
Psychotic		7.3		
PP				
Group:				
Normal	1.90	12.6	24.6	<.001
Neurotic		37.4		
Normal	2.83	7.7	47.9	<.001
Psychotic		42.3		
Neurotic	7.37	17.9	8.1	<.01
Psychotic		32.1		

Table 10

Summary of Median Test Results on PO, PR,

PP Scores of Female Validation Sample

Category	Combined Median	Above Median	X^2	p
PO				
Group:				
Normal		43.5		
	22.50		47.7	<.001
Neurotic		9.0		
Normal		49.5		
	16.50		94.1	<.001
Psychotic		1.0		
Neurotic		44.7		
	12.10		59.3	<.001
Psychotic		6.2		
PR				
Group:				
Normal		48.2		
	11.90		49.5	<.001
Neurotic		14.1		
Normal		50.0		
	10.84		96.1	<.001
Psychotic		1.0		
Neurotic		44.3		
	7.68		33.9	<.001
Psychotic		15.8		
PP				
Group:				
Normal		6.5		
	1.50		62.6	<.001
Neurotic		46.0		
Normal		7.1		
	1.30		58.8	<.001
Psychotic		45.4		
Neurotic		23.8		
	6.84		1.3	----
Psychotic		29.5		

Table 11

Summary of Median Test Results on PO, PR, PP

Scores of Male Cross-validation Sample

Category	Combined Median	Above Median	x^2	p
PO				
Group:				
Normal		29.0		
	23.00		52.3	<.001
Neurotic		1.0		
Normal		30.0		
	21.50		58.0	<.001
Psychotic		.5		
Neurotic		28.0		
	14.00		45.1	<.001
Psychotic		2.0		
PR				
Group:				
Normal		29.8		
	11.07		58.0	<.001
Neurotic		.3		
Normal		30.0		
	9.50		56.1	<.001
Psychotic		1.0		
Neurotic		29.0		
	7.00		39.7	<.001
Psychotic		4.8		
PP				
Group:				
Normal		8.2		
	1.95		24.6	<.001
Neurotic		27.1		
Normal		6.2		
	2.60		30.4	<.001
Psychotic		27.4		
Neurotic		15.0		
	4.33		.6	—
Psychotic		18.0		

Table 12

Normal-neurotic and Neurotic-psychotic Medians for Male Validation,

Male Cross-Validation (C), Female Validation, Total

Male, and Total Male and Female Samples for

TAT Scoring Categories PO, PR, PP

Category	Median	
	Normal-neurotic	Neurotic-psychotic
PO		
Sample:		
Male	24.5	16.9
Male (C)	23.0	14.0
Female	22.5	12.1
Total Male	23.8	16.3
Total M & F	23.4	14.7
PR		
Sample:		
Male	11.2	7.7
Male (C)	11.1	7.0
Female	11.9	7.7
Total Male	11.1	7.3
Total M & F	11.4	7.5
PP		
Sample:		
Male	1.9	7.4
Male (C)	1.9	4.3
Female	1.5	6.8
Total Male	1.9	6.2
Total M & F	1.8	6.4

normal-neurotic and neurotic-psychotic medians were given 1; and scores below the neurotic-psychotic medians were given 2. PP scores <u>below</u> the normal-neurotic median were given 0; scores between the normal-neurotic median and the neurotic-psychotic median were given 1; and scores above the neurotic-psychotic median were given 2. Table 13 presents the percentages of $\underline{S}$s male (validation plus cross-validation samples) and female, in each diagnostic group receiving scores of 0, 1, 2. This table can be used directly to evaluate the probability that a particular scored TAT record (when translated into prediction scores) will fall into the normal, neurotic, or psychotic group. This table constitutes preliminary norms for these three TAT scoring categories.

Past TAT research (1) has indicated that length (number of words) may be related to objective scoring. The question of whether the median test differences were a result of length was raised in the male validation study. That is, would the groups have been alike in PO scores had their protocols been of equivalent length? The assumptions necessary for covarience adjustments are not satisfied and a crude test which provides a correction for regression and takes trend into account was used. A graphical procedure was employed analogous to the median test except that a kind of average regression line or "sliding dividing line" was used in lieu of the median. Regression lines were plotted for the three groups for PO on length, a line of split (sliding dividing line) was made for each pair of groups, the number of cases above and below were counted, and chi-square applied. No appreciable differences in PO were found. A less rigorous method would be to plot PO against length for the total sample, draw a line fitting the medians of the columns and compare by chi-square the proportion of the cases in each group falling above the line of medians.

Product-moment correlations were calculated between scoring categories and length for the male and female samples (Table 14). The magnitude of the PO-

Table 13

Percentage of Ss in Each Group Receiving

Scores of 0, 1, 2 on Each Category

Group	Category		
	PO	PR	PP
Normal			
Score:			
0	82	84	87
1	18	16	12
2	0	0	1
Neurotic			
Score:			
0	17	14	26
1	68	81	40
2	15	5	34
Psychotic			
Score:			
0	1	1	13
1	16	29	42
2	83	70	45

Table 14

Product-moment Correlations between Categories PO, PR,

PP, and Length for Two Samples, Male and Female,

Each of Three Groups, 50 Ss in Each Group

Length	Category		
	PO	PR	PP
Male			
Group:			
Normal	.23	.15	.16
Neurotic	.52**	.12	.11
Psychotic	.30*	-.02	.21
Female			
Group:			
Normal	.55**	.10	-.00
Neurotic	.34*	.50**	.40**
Psychotic	.42**	.20	.39**

*Significant at the .05 level of confidence.

**Significant at the .01 level of confidence.

length correlations for the male and female samples do not differ to any great extent. The marked similarity of the respective distributions indicates that the influence of length on median test differences for the female sample is not important. Some PR-length and PP-length correlations are significant for the female sample. However, neither correlation for the normal group approaches significance. This suggests that length does not influence the scoring categories per se but may be related to psychopathology. Again the magnitude of the obtained correlations in comparison with the magnitude of the chi-square differences between groups provides evidence against any appreciable constant effect on either PR or PP prediction scores.

Although consensus of experts has not considered intelligence to be related to TAT scores, product-moment correlations were calculated between scoring categories and intelligence as estimated by Wechsler-Bellevue, Form I, I.Q. scores (Table 15). The correlations between PO and PR scores and intelligence scores for neurotics were significant at <.05 and >.05 levels of confidence respectively. None of the correlations for the normal or psychotic groups were significant. It is suggested that I.Q. scores and these TAT scoring categories are not related per se but that those neurotics with higher intelligence tend to be more in contact and thus obtain better TAT scores.

T Scores

Several problems are involved in use of Table 13 as preliminary norms for these TAT scoring categories. The complexity of the clerical process, the absence of uniform procedure, and the use of unequal score units makes mandatory a more communicable method of presenting normative data. For these reasons conversion to T-score equivalents was undertaken.

T-scores assume a standard group of Ss. Although the total number of Ss remains relatively small (N-390) and may not be representative of "normal" or

Table 15

Product-moment Correlations between

PO, PR, PP and Intelligence Test

Scores for Three Female Groups

Intelligence	Category		
	PO	PR	PP
Group:			
Normal (N=50)	.02	-.04	.06
Neurotic (N=34)	.34*	.31	.05
Psychotic (N=40)	.22	.23	.00

*Significant at the .05 level of

confidence.

clinical populations over a broad range of situations, the advantages of T-scores are recognized. Primarily, however, the opportunity for maximizing differences between groups by use of combined scores was obtained. Thus, these scores when normalized become units common to psychological measurement and their meaning is enhanced.

Table 16 presents the T-score equivalents for each TAT scoring category. Table 17 contains T-score percentages of normal, neurotic, and psychotic samples for each scoring category. It will be noted that Tables 13 and 17 present highly similar percentage figures, differing only as a function of choice of cut-off points. However, when T-scores are added to provide the combinations for PO and PR, PO and PP, PR and PP, and PO, PR, PP, striking differences occur in the predictive efficiency of the scoring categories. Tables 18, 19, 20, 21 provide this information. When PO and PT T-scores are combined (Table 18), 79 per cent of normal Ss fall between scores of 112 and 145; 88 percent of neurotic Ss fall between 89 and 111; and 83 per cent of psychotic Ss fall between 49 and 88. Combinations of PO and PP (Table 19) and PR and PP (Table 20) do not provide any increments to prediction. When all three scoring categories are combined (Table 21), 88 per cent of normal Ss obtain combined T-scores of 166-to 203; 81 per cent of neurotic Ss obtain scores between 134-165; and 79 per cent of psychotic Ss obtain scores between 70 and 133.

It is suggested that scores from each category be transformed into T-score equivalents (Table 16), these T-scores added, and Table 21 be used directly to evaluate the probability of accurate diagnostic placement of a given individual S.

Discussion

This manual has presented TAT scoring categories which may be reliably scored by naive scorers and which provide "correct" prediction of a signifi-

Table 16

T Scores for Categories PO, PR, PP

T Score	Category		
	PO	PR	PP
78	35-37		
72	32-34		
67		15	
65	29-31		
62		14	
59	26-28		
58		13	0-2
56		12	
55	23-25		
53		11	
52	20-22		
51		10	
50			3-5
49	17-19	9	
47		8	
46	14-16		
45		7	6-8
43	11-13	6	
42			9-11
40		5	
39			12-14
38	8-10		
37		4	15-17
35			18-20
33		3	
32	5-7		21-23
30		2	24-26
28			27-29
26		1	30-35
25			36-38
24			39-41
19		0	42-44

Table 17

T Score Percentages of Normal, Neurotic and

Psychotic Ss for Each Scoring Category

T Score	Normal			Neurotic			Psychotic		
	PO	PR	PP	PO	PR	PP	PO	PR	PP
55-78	88	84	87	24	14	25	2	1	13
46-54	12	16	8	65	71	22	18	12	23
19-45	0	0	5	11	15	53	80	87	64

Table 18

T Score Percentages 6f Normal, Neurotic and Psychotic

S̲s̲ for Scoring Categories PO and PR Combined

T Score	Normal	Neurotic	Psychotic
112-145	79	6	0
89-111	21	88	17
49-88	0	6	83

Table 19

T Score Percentages 6f Normal, Neurotic and Psychotic

S̲s̲ for Scoring Categories PO and PP Combined

T Score	Normal	Neurotic	Psychotic
109-136	92	18	2
89-108	8	62	27
49-88	0	20	71

Table 20

T Score Percentages of Normal, Neurotic and Psychotic

S̲s̲ for Scoring Categories PR and PP Combined

T Score	Normal	Neurotic	Psychotic
108-125	92	14	1
91-107	8	65	23
38-90	0	21	76

Table 21

T Score Percentages of Normal, Neurotic and Psychotic

S̲s̲ for Scoring Categories PO, PR, PP Combined

T Score	Normal	Neurotic	Psychotic
166-203	88	9	1
134-165	12	81	20
70-133	0	10	79

cant percentage of three diagnostic groups. However, the information actually obtained by this scoring system goes considerably beyond prediction of clinical diagnosis. The scores of an $\underline{S}$ are believed to represent "degree of psychiatric illness." Thus, any expectation of 100 per cent distinction between groups would not be supported.

Mental illness, as tapped by this system, consists in deviations from normative TA^T behavior and represents changes in subjective, internalized meaning systems called "reality". Certain concomitants of mental illness are emphasized by this system: (a) awareness of reality is diminished; (b) experience can be organized with difficulty if at all; (c) the desire to give an acceptable account of oneself diminishes. These appear as attributes of a loss of psychic energy necessary for optimal individual function.

The manual can be considered an enterprise preliminary to the major responsibility of any projective technique, i.e., validity$_2$.

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Appendix A

Score sheet, male

Score sheet, female

TAT Score Sheet: Male

Perceptual Organization (PO), Perceptual Range (PR), Perceptual Personalization (PP)

Name_____   Age_____

PO	PR	PP
		(List by card #)

PO

Component	Card								Tot. F
	2	3	4	6	7				
CD									
PB									
PE									
FE									
f									
T									
O									
Total N									

Total Add. ⬜

Sum T ⬜

PR

Card	Criteria
2	⬜ a. Family: young girl, woman, activity specified; adult male.
	⬜ b. Fields or farm.
	⬜ c. Books or school.
3	⬜ d. Figure, sex and age specified.
	⬜ e. Emotions noted.
	⬜ f. Activity specified.
4	⬜ g. Male; emotions noted, activity specified.
	⬜ h. Woman; activity specified.
	⬜ i. Conflict or cooperation.
6	⬜ j. Man; emotions noted, activity specified.
	⬜ k. Woman; emotions noted.
	⬜ l. Personality referrent.
7	⬜ m. Older male, activity specified, relationship specified.
	⬜ n. Male, emotions noted.
	⬜ o. Personality referrent.

T ⬜

PP (List by card #)

_____
_____
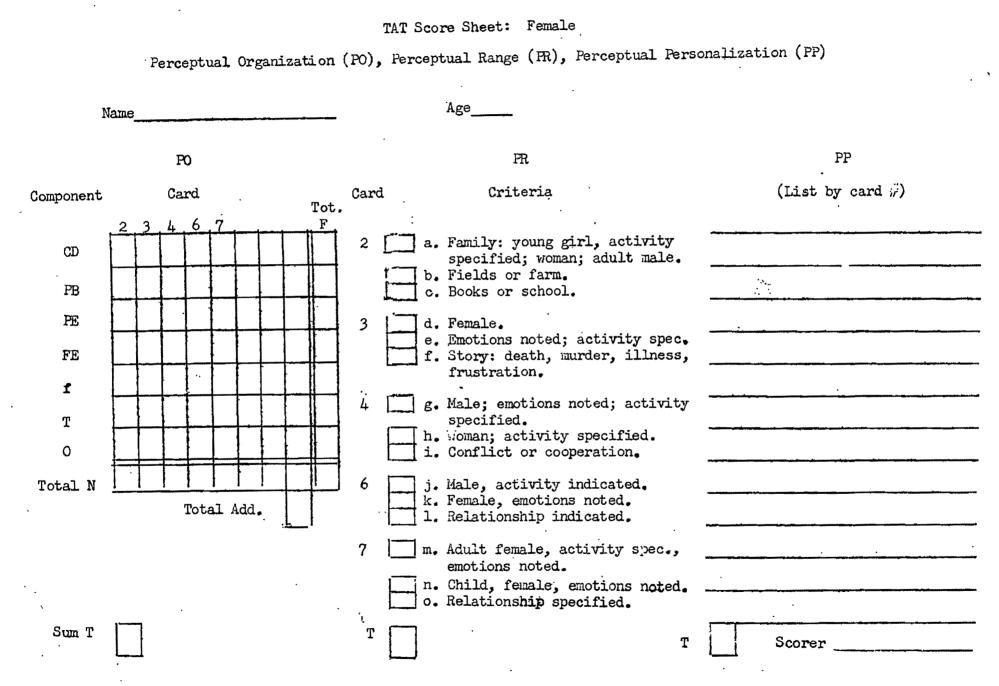_____
_____
_____
_____
_____
_____
_____
_____

T ⬜   Scorer_____

TAT Score Sheet: Female

Perceptual Organization (PO), Perceptual Range (PR), Perceptual Personalization (PP)

Name _____   Age _____

PO	PR	PP

PO

Component   Card   Tot.

	2	3	4	6	7				F
CD									
PB									
PE									
FE									
f									
T									
O									
Total N									

Total Add. _____

Sum T [ ]

PR

Card   Criteria

2 [ ] a. Family: young girl, activity
         specified; woman; adult male.
    [ ] b. Fields or farm.
    [ ] c. Books or school.

3 [ ] d. Female.
    [ ] e. Emotions noted; activity spec.
    [ ] f. Story: death, murder, illness,
         frustration.

4 [ ] g. Male; emotions noted; activity
         specified.
    [ ] h. Woman; activity specified.
    [ ] i. Conflict or cooperation.

6 [ ] j. Male, activity indicated.
    [ ] k. Female, emotions noted.
    [ ] l. Relationship indicated.

7 [ ] m. Adult female, activity spec.,
         emotions noted.
    [ ] n. Child, female, emotions noted.
    [ ] o. Relationship specified.

T [ ]

PP

(List by card #)

_____
_____   _____
_____
_____
_____
_____
_____
_____
_____
_____
_____

T [ ]   Scorer _____