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# Technical Report

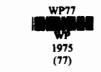


STEWART MATURITY SCALE MANUAL

by

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WP 1975/77





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bу

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T.R. Nc.77 July 1975

Indian Institute of Management
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#### STEWART MATURITY SCALE MANUAL

This manual describes a Scoring System for assessing the stages of psychological development of an individual through TAT stories. There are four stages of development or maturity. These four stages of development may be considered as stages of Psycho-Social maturity as they point out to the levels of social and psychological thinking depicted in the TAT stories. The term "Psychosocial-development" has also been used as the development of this system is based on researches indicating that the four stages of personality development outlined by Freud and Erickson (cral, anal, phallic and genital) get reflected in the stories written by youth and adults in response to TAT pictures. Broadly, this system will help find out the psycho-social developmental pattern of any individual and also to locate the general developmental level of his personality revealed through TAT stories.

In the following sections of the menual a brief theoretical background is presented that relates to the scoring system described here, followed by the description of the system, standardization, including its reliability and validity, practice stories and procedures for establishing reliability, validity, etc.

The four stages of development assessed here, have been found to be associated with certain career patterns, management practices, workhabits and other activities. Much of the research using this system is still in process, but the existing research indicates that the system is useful in describing the maturation levels of youth and adults just as freudien stages of development describe the developmental stages of children. Details of the system and its correlates are described in McClelland (1975) and Stewart (1975).

This manual is an adaptation of the original developed by Abigail J. Stewart. Adapted for India by T.V.Rao in consultation with A.J. Stewart.

This Indian version of the manual has been developed by A.J. Stewart and T.V. Rac. For developing this manual TAT stories from different occupational groups from India were collected and scored jointly by A.J. Stewart and T.V. Rac. The development of this Indian version was made possible through a grant organised by Professor D.C. McClelland, Harvard University.

## Background

Psychologists of cognition like Piaget, and of emotion, like Freud and Erickson, have proposed theories of development couched in terms of stages. The notion of stages suggests at one and the same time both a transitory and mutable stage and an orderly succession rather than a cathotic and accidental growth. Freud (1905) posited the theory that stages of emotional development are tied to physical, or zonal areas of gratification, and occur in the period up to age five.

After this time, further evidence of "oral" or "anal" behaviour is taken as evidence either of fixation of libido (an inadequate movement through the stages) or of regression (a slipping backward into familiar, safe, and satisfying vestigal behaviors). Later, both Freud (1908) and Abraham (1921, 1924, 1925) held that it was possible to have an oral or anal "character" — what we would now call personality — (making a psychology of individual differences possible), but they still held to the notion that this "character" was predicated on an abnormal or immature clinging to developmentally inferrior strategies of coping.

Later psychologists, within and outside the psychoanalytic tradition, questioned the notion that all important psychological development could take place in the sarliest years of childhood. While arguing that development in the sarliest years (when ego and cognitive development are weak) may have unique shaping power (cf. McClelland, 1951), many felt that nonetheless important emotional changes could and did occur later.

For example, Anna Freud (1946) proposed that while it was true that during the period of adolescence the issues of the Bepidus complex were revived, that nevertholess there were two important differences; genital maturity, and a coping and strengthened ego. Further, H.S. Sullivan (1953) and E.H. Erikson (1950) proposed that there were in fact further important psychological changes throughout adulthood. Their contribution—and no small one—was a recognition that mere successful negotiation of the issues arising up to age five was no guarantee of either a lack of later issues or successful negotiation of later issues. Thus the phenomena of adult and adolescent stresses and coping were recognised.

To

Chairman (Research)
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## Technical Report

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Moreover, Sullivan introduced the perhaps highly significant notion that "werps" in personality, caused by difficult or failed early development could be righted under the right conditions, without direct or planned intervention. He believed that there was no oncefor-all-time final development, and that the proper confluence of people, social structure, experience, and personal "warp" could lead to un-warping, the unhampering of personality limitations.

The limits of these important advances, however, seem to be that generally they represented a kind of "tacking on" of later stages that seemed reasonable or sensible within certain cultures, like the United States, but didn't appear to have the same universalistic explanatory power that Freud's original, biologically based stages had. Thus, "identity crisis" in adolescence, or the "juvenile era" may look and sound and be experienced very differently in cultures only moderately deviant from ours—cultures in which, for example, roles, and therefore social identity, are relatively more fixed and immutable. Thus, "tewart (1974) posited that the mere tacking on of additional stages that may "fill out the whole life cycle" is not a solution to the problem of personality development, despite the fact that it is an important advance in the recognition of the problem. (The theories discussed above are diagrammed in parallel terms in Figure 1.)

Stewart (1974), on the other hand, proposed that the Freudian stages may, in one sense, be "enough". That the four stages initially proposed by Freud, later elaborated by Jones (1918), Abraham (1921, 1924, 1925) and Reich (1928) are in fact (and partly due to biological and zonal facts in human development) all of the stages. Her divergence from this tradition, however, is that she suggested that the individual progresses through these stages—negotiates the issues associated with them—not once, but several times in the course of the life cycle.

This position borrows to some extent from the Piagetian motion of vertical decalage. According to this view, a repetition in mastery of a cognitive skill may occur at a new and different level: that is,

there is a formal similarity between the structures at the two levels on the one hand, and a similarity of identity in the contents to which the structures are applied, on the other. The crucial difference concerns the level of functioning: different kinds of operations are involved in the two cases. (Flavell, 1963, p. 22)

Thus, for example, a child may learn spatial relationships in a motoric sense quite early—he can avoid bumping into things.

nowever, it is only much later that he can learn these spatial relationships symbolically, and can, for example, represent them on a map. (see Piaget, 1954 and Piaget, Inhelder and Szeminska, 1960)

Similarly, according to Stewart (1975), the human being may negotiate the issues of receiving and getting (trust and mistrust) and taking and giving (autonomy and shame and doubt) on one plane as an infant, but that he is required by events of life to renegotiate these issues repeatedly at different levels throughout life. To be more precise, she proposed that the initial experience that throws us all into the first negotiation of the stages—birth—is operationally defined as the sudden and enormous increase in stimulation to be mastered, an onslaught of sensation or experience to be assimilated—in short, a "blooming, buzzing confusion". It seems likely, then, that later, similar "onslaughts" or "enormous increases" will again throw, or force, the human being into a reliving—possibly on a different plane—of the issues of those stages again. These experiences, may occur something like this:

Birth (stages lived through in context of family relations)

School (stages lived through in context of peers and teachers; this may handle the problem of "latency" so inadequately dealt with in psychoanalytic theory)

Puberty (stages lived through in context of individual sexual maturity and opposite sex pears)

College (for some, stages lived through in context of lack of family; first period of sole responsibility for self among peers)

Marriage/Career (stages lived through in context of intimate interpersonal relationships, work setting, and co-workers/competitors)

Failures in Career/Marriage

Career Changes

Moves

Retirement

It may be that a simple operational definition of these lifecrises, or stage-affecting, experiences may be taken from the high-stress experiences proposed by Rahe (1971) for estimating the potential of experiences to generate physical wear and tear on the organism: marriage, work, failure, moves, pregnancy, birth of a child—all of these are specified as physical-stress-inducing experiences. They may be so stressful precisely because they are experiences of an enormous increase in stimuli to be mastered, and because they do initiate a schsation of "back to square one" in terms of emotional life.

The theory outlined above is diagrammed in Figure 2. It is a theory which draws on the valuable and illuminating aspects of emotional and cognitive development, but which strives to encompass childhood and adult social-emotional development in a single, comprehensive theory which can be tested, without merely tacking on later stages tied largely to role-related, rather than subjective experience-related changes (as Erikson's, for example, is).

This theory has important theoretical and applied implications. Theoretically, the theory and its **emperical** testing may lead us away from the notions of fixation and the session, and clarify the role of experience, and external life charms s, in individuals emotional lives. Thus, Rapaport (1960, pp. 45-6) argued that

Psychoanalysis as a genetic psychology deals with the genetic roots of behaviours, with the degree of autonomy behaviours attain, and with the genetic roots of the subject's relation to the reality conditions which codetermine in the appearance of a behaviour at a given point in the person's life.

It is this last—the codetermination of reality and personality in governing the appearance of behavior—which psychoanalysis has not expanded precisely or carefully to specify. The approach presented here, however, should make it possible to specify:

- 1) the effect of prior highest level of development in speed of negotiating the stages anew under new conditions
- 2) the effect of immediately-prior level of development in speed of negotiating the stages anew under new conditions
- 3) the possible differential effect of new life changes on individuals at different stages of development in their old situation.
- 4) the kinds of environments which may facilitate or slow movement through the stages, either universally or for specific kinds of people

- 5) the kinds of experiences, or life crises, which do have major and substantial impact on the individual, throwing him into a new reliving of the life cycle of stages
- 6) the relative increase in consciousness of reliving the life cycle of stages, and it's effect on the movement through the stages: does the fact of previous experience, and greater cognitive skill; increase the self-consciousness, and therefore the speed, of movement through the cycle?
- 7) the kinds of environments which may tend to help the individual "unwarp" provious warps (of. Sullivan)

Thus the possibilities exist here for drawing from freud and Piaget that which is useful, but making a radical breakthrough in our understanding of emotional development throughout life. Moreover, this breakthrough might entail a possibility of specifying important applied consequences in the areas of education, management, counseling, organisational structure, psychotherapeutic practice, and retirement.

with this brief outline of the theory which underlies the socring system described in this manual, a brief description of the process of development of the measure is presented below.

#### Development of the Scoring System

Perhaps the first issue that arises is: why Freud's notion of stages rather than engane places? And close on it's heels, why develop another measure? Why not use one that pre-exists? In this section we will attempt to explore the reasons for choosing Freud's stages, and why the need to develop a new measure of those stages was felt.

First, Freud's ideas about stage development, unlike some others (e.g., repression) have seldom undergone empirical testing, although they have passed into popular culture. Since these ideas underlay most later revisions (Erikson, Sullivan, etc.), and are explicitly tied to biological developmental sequence, it seemed useful to attempt to examine them directly and empirically.

Secondly, the existing measures—in some cases are not satisfactory for various reasons. For example Loovinger's ego-development scale (1970) is based most directly on the ideas of people derivative from Fraud (Sullivan). In some cases the psychometric properties of the measure are not satisfactory. This is most accurate in the case of the Blacky test (Blum, 1949), a test defined by a priori notions (not empirical derivation), based on clinical insight, and scorable only after elaborate training. In part, the Loevinger measure suffers from all of these problems too. In addition, both measures are correlated with verbal fluency and with social class, preperties which make them of dubious usefulness for other cultures.

The initial effort, then, was to attempt to demonstrate empirically some validity to the Freedian stages. Stewart (1974) selected a series of behavioral criteria for classifying an individual as "oral, anal, phallic or genital". The individual was required to exhibit all of the criterion behaviours for one stage, and no more than one for any other. The behaviors were all chosen to be closely related to the Freudian zonal definitions of the sources of stage—related feelings and fantasies. That is, the selection was limited to strictly—defined zonal—related stage behavior. In a few cases it was difficult to be quite so stringent, but in all cases Stewart chose behaviors that even a superficial understanding of the Freudian stages would cause to be classified under one stage rather than another.

The choice of criterion behaviors was limited in two ways:

1) from a large body of archival data on college students available samples meeting relevant stage criteria were selected, and 2) the subjects were college students. So only some kinds of behaviors were available to them within the social role and setting of college student and college. The criterion behaviors are listed in Table 1.

Next, the TAT stories written by six subjects each, from each stages, were taken, with the intention of testing Freud's view that stage-related behavior stems from a psychological substrate (which be carafully specified). Using the McClelland-Atkinson method of amairical derivation, described by Winter (1973, Chapter 3), a scoring system was derived which captured the differences among the four groups. The differences, strongly confirmed Freud's statements as well as those of later analysts, about the subjective fantasy life of persons with a given stage-related "character". These fantasy, or subjective, differences are indicated briefly in Table 2, and are described at length in the scoring system presented in the next section.

Once the scoring system was derived, the stories were scored blindly for all 24 subjects for all stages. The results of the scoring are indicated in Table 3. These results seem to indicate that the scoring system did in fact tap major differentiating concerns of the four groups. Moreover, the exercise of developing the scoring system was seemed to constitute strong, if not definitive, evidence that Freud's notions of the significance of behaviour as an indicator of psychological concurns underlying individuals of each stage related character type were correct.

9.

## Tablo 1. Criterion Groups

Oral: all subjects must meet all of these criteria:

- report a regular (not occasional) after-dinner snack
- 2) which is more substantial than a "boverage"
- 3) snoke more than  $\frac{1}{2}$  hour/cay (more than pipe, 1 cigar, or 5 cigaretes)
- 4) eat broakfast on all class days

Anal: all subjects must meat all of these critoria:

- report more than 10 rituals performed each night before going to bed, including
- 2) all these connected with cleaning
- 3) reports regular time of getting up and going to bed

Phallic: all subjects must meet all of these criteria:

- 1) sex or enhancement of reputation reported as principle motivation for dating
- 2) deted in high school at least 2/3 times/month
- 3) "played the field" in high school (no girl friend)

Genital: all subjects must meat all of these criteria:

- 1) date only their "steady" (vs. reporting a steady, out reporting dating others too)
- 2) studying and talking reported as major activities with steady
- 3) "making love" reported as major activity with steady

Subjects were required to meet all criteria in one group for inclusion, and were not permitted to meet more than one criteria for inclusion in any other group. In fact no subject meeting all criteria for any one group also met all criteria for inclusion in another group.

Table 2
Categories of Social-Emotional
Development

Content Areas	Stage manifestations	
	Stage one	Stage Two
attitude to authority	authority is benevolent	authority is critical, reprimanding
feelings	loss, despair confusion	anxiety about competence, indecision
orientation to action	passivity	clearing of disorder
relations with others	immediate grati- fication	lack of gratification
	Stage Three	Stage Four
attitude to authority	opposition to authority	neutrality to authority
feelings	hostility, anger	ambivalence, complexity
orientation to action	failure, in face of confident attempt	work and planning
relations with others	flight and exploi- tation	mutuality, sharing, differentiation

11.

Table 3

Mean Scores of Derivation Criterion Groups

		Mean total of categories scored for:					
<u>Gro</u>	up:	Oral	Anal	Phallic	Genital		
Ora	1	8.5	.33	•50	0		
Ana	1 ·	•87	6•67	•17	•17		
Pha	llic	•50	•17	•17	6.00		

## Preliminary Research with the Measure

Although systematic research with the measure is in process, Stewart reports some encouraging pilot findings with it. In using it as a "dimension of individual differences in any given age cohort" (Losvinger, 1970, p 3), it was found on the basis of data collected at Harvard:

- Successful business men are more likely to be genital than less successful one
- 2) genitality among college females is associated with academic achievement
- orality among college students is associated with eating and smoking, as well as telephone use
- 4) anality among college students is associated with ritualistic work behavior, and detailed style in recounting facts
- 5) Phallic college students report that they drink liquor, talk louder than others, prefer the idea of having several simultaneous relationships rather than just one, and cut classes, and are often late
- 6) genital college students report that they like to debate issues with their friends, spend time with the opposite sex at parties (rather than same sex), and like to give gifts to people and social causes.

In addition, in pilot research Stewart (1974) found encouraging evidence that there may be stage-related change in college (consistent with the theory of vertical decalage, i.e., stage shift initiated by life change). In two samples, a significant difference was found in mean stage level between freshmen and seniors (with freshmen lower, seniors higher). This particular finding is now being investigated in three college samples of both men and women.

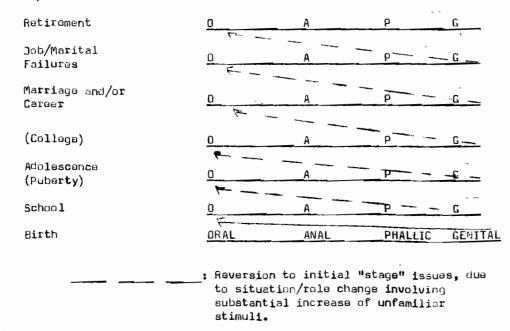
Figure 1
Stages According to Fraud, Erikson, and Sullivan.

ORAL	ANAL	PHALLIC	(LATENCY)		GENITA	L <b></b> -	-
receiving, getting	taking, giving	activity, individual assertion	(dormancy)		mutuality, "	love and wo.	k"
ORAL	AoN A L	GENITAL	LATENCY	PUBERTY	YOUNG ADULT HOOD	ADULT- HOCD	MATURITY
trust mistrust	autonamy shame & doubt	inítiative gu <b>il</b> t	in watry inferiorit	Identity y role-confus	intimacy sion isolation	gencrativi- ty stagnation	egn integrity despair
		F	RE-	EARLY	LATE		
INFANCY	Снігрносо	JUVENILE AD	OC LES	ADOLESCENCE	ADO 1285		
tatel dependence		of "Becoming em" social"	"chome" (same sax)	emergence of "lost" (cross-sex intimacy)		nt of fully cure, repento sonal relati	,

Figure 2

A Proposal Concerning the Repeated Negotiation of the Social—Emotional Stages Initiated by Major Life Changes.

## LEVEL/ROLE



Note. -- Related issues for each stage (at each level) are indicated in Table 2.

#### SCORING SYSTEM

This system is designed for scoring TATs, the Test of Insight, and other imaginative verbal productions for psychological stages of development or personal maturity. This system aims at locating the respondent's (a) level of psycho-social development and, (b) patterns of psycho-social orientations. For locating the developmental level, although continuity is assumed from Stages I to IV (i.e., Stage IV reflecting a higher order development than stage III, which is in turn higher than Stage I), each stage stands on its own. Any TAT story can be scored using this system.

The verbal content (or content of the story) is classified into four areas. These include:

- A. Content dealing with relationship to authority:
- B. Content dealing with relationship to other people;
- Content dealing with feelings of anyone; and
- D. 'Content dealing with action orientation.

Within each content area, the story may reflect stage I orientation, Stage III orientation and/or stage IV orientation. Hence each story is stored for one or more of the stage—behavior orientation(s) it reflects under each content area.

A single story can be scored for more than one stage-prientation under each content area. Thus under relationship to authority Stage I may be scored if "benevolent authority" is depicted; stage I may be scored if "critical authority" is depicted, stage III may be scored if "opposition to authority" is depicted and so on, as described below. If all the above relationships are depicted the story is scorable under the different stages where the authority relations fit in. Thus, the overall system contains 16 discrete scoring categories, none is mutually exclusive.

A sample scoring sheet is given at the end of this manual. The format suggested here, may be convenient for recording the scores. Each scoring sheet could be used for scoring 6 stories. Against each story 16 cells are provided. Under each content area there are four cells per story. First, look for the content area in the story. If the content area is reflected then score the stage

of orientation depicted under the content area. The best way to look for each content area is by seeing if any categories of that area are present. Thus look for each of the four content areas in the story one after the other untill the story is completely scored. Whenever a particular stage orientation is found under a given content area put a check mark () in that cell against that story number. Thus check marks for a particular story may range from 0 to 16. For each content area the total number of check marks may range from 0 to 4. For each stage (counted row-wise cells) they may range from 0 to 4. Score the stories using the criteria described below. Converting them into scores to locate the modal stage of development and corrected scale score are described in the latter sections of this manual.

In order to use this system independently for research, the scorer must obtain reliability coefficients of the order .85 to .95 with the expert scoring for the five sets of stories reproduced in Appendix. The formula for computing reliability is presented along with the expert scoring in Appendix. Using this formula if any of the reliability coefficients obtained by the practicing scorer are below .85, an independent use of the system is not advised. Practice till the reliability increases. It is advisable to check category—wise tallies and locate areas of difference and work on those till the differences are minimised.

## A. Relationship to Authority

Look for authority figures in the story. Parents, teachers, employers, police, etc., represent authority figures. Depiction of the authority figures and orientation of other characters to the authority figures are scored under this content area. There are four types of authority figure orientations that can be categorized into the four stages of development.

- Benevolent Authority (Stace I): Where the authority figure is depicted as directing the activities of one or the other characters in the story (visibly or invisibly) and the other character or characters follow the proposed action willingly. The authority may be depicted as protective.
- II. <u>Critical Authority</u> (Stage II): Where the authority in the story is depicted as critical of one or the other characters or their activities.
- III. Opposition to Authority (Stage III): Where the authority figure or his propositions and influence activities are depicted as being opposed or ignored by one or the other characters in the story.
  - IV. Removal from Personal Authority (Stage IV): Where the authority figure appears but depicts himself (herself) as irrelevant and thus removes himself(herself) from the directive role.

The dateilm criteria for each of these Stages are given below:

## Stage I: Benevolent Authority

explicitly proposes a course of action which is followed or carried out in the story and which leads to a good outcome. The course of action can be suggested, but do not score if the authority demands someone to do something. A good outcome may be inforred either from the authority being pleased, without a counter-indication that the subject is not pleased, or from the subject being pleased. O.g., The father is advising the son to apply for admission to engineering courses and the son likes the idea to be an engineer as his father says.

The employee wants to complete the work in the way suggested by his boss and satisfy him. (scored)

- 2. Score also if the authority figure in the story has a positive response to some outcome. Such a positive response is an indicator of an implicitly proposed course of action by the authority figure. If there are any counter-indicators suggesting that the authority figure is not involved in proposing such a course of action, then it is not scored.
- e.g., His parents are happy that their son has passed the examination. (secred)

His parents are happy as he is having a pretigious life after marrying this girl, although he married her against their wishes, (not scored)

- 3. Score this category if the authority helps, protects, or defends another character(s), when this help is specified and does not have corrupt tones.
- e.g., His boss is showing him easy ways of doing his work which will holp him a long way in his life. (scored)

The father is talking to his friend and requesting him to help his son who is unemployed. (scored)

Ho will bribe the principal for amploying his sen (not scored)

4. Score if general positive affect is expressed in the story by any character to the authority figures.

e.g., He does not want to leave the present job as he likes his superiors (scored)

He does not want to be away from his parents (scored)

## Stage II: Critical Authority

1. Score if the authority figura(s) are depicted as critical, i.e., if they reprimend or chastise without the positive outcome characteristic of Stage I, and without any counter—indication that the authority figure may be right. Scolding is critical but not correcting a mistake without a tone of criticality or reprimending or punishment.

e.g., The boss is scolding his secretary. The boss had a bad day in the meeting yesterday. He is taking his anger on his secretary. (scored)

The boss is scalding his secretary for the mistakes she made. (scored)

The teacher is pointing out the mistakes made by the student in his essay (not scored)

This category is also scored if the authority figure shows concern about the legality of either his own actions or the subjects' actions.

0.g., The father is thinking that his son is incapable of doing anything. (scored)

Boss thinks that he has got a chunk of fools to work with him (scored)

The teacher is telling his student that he must start working hard and not take life easy (scored)

He is worried if he did correct thing of reprimanding ... his subordinates (scored)

## Stage III: Opposition to Authority

This category is scored if the authority figure's interventions (wither suggestions or demands) are met with either the subject's outright refusal, or ignored.

i.e., the subject does not care for authority, or does not do what authority said he should, or does what the authority asked him not to do.

s.g., Father wants him to marry the girl he has found for him. Son leaves home to marry the girl he likes (scored)

Fether wants him to maintain family tradition by being a teacher. Son wants to decide on his own and would not be bound by traditions.(scored)

His employer refused leave for him. But he is going ahead with his plans (scored)

This category is also scored if the authority is described as corrupt.

e.g., The boss is trying to take advantage of his secretary's mistakes by asking her to go with him. (scored)

He wants a bribe to transfer this man to another department (scored)

## Stage IV: Removal from Personal Authority

This category is scored when an authority figure appears in the story, but describes himself as ambivalent, unable or unwilling to give definite help because it is impossible in the nature of things. Do not score if there is a doubt about the reason for the authority's inability to help or if he is described as incompetent. Score only if there is a clear implication that the authority figure is either not certain what to do, or believes that action by him would be inappropriate.

e.g., His son is asking his advice. Father does not want to impose his way of thinking and wants his son to feel a sense of independence. He asks him to take his own decision. (scored)

He is not sure what to advise his employee for any advice he gives may be interpreted in a different light (scored)

He thinks that he may not be the right person to suggest him the correct course of action (scored)

He does not have the ability to suggest anything because he has come up through corrupt ways. (not scored)

## B. Relationship to Others

There is no single common underlying theme in the four categories (stages) under this content area. First two categories deal with gratification of wants, needs and desires of the characters depicted in the story. The third category deals with exploitary relationships and escape from people. The fourth category deals with differentiation of the people and relationships between people in certain ways. The categories move from self-orientation to others!orientation of the characters depicted in the story. :The first category deals with characters concerned about immediate gratification of their needs. The second category deals with characters concerned with expressing their needs but not achieving them explicitly. The third category deals with characters concerned with escape from people and objects. The fourth category deals with characters expressing concerns about others and helping them, etc.

## Stage I: Immediate Gratification

1. Score if some one in the story explicitly says that he or she wants, desires or needs something, and in the course of the story achieves his desire, or has the need gratified. The desire can be anything — a job, a girl friend, completion of a task, to see someone fail, an assistance etc.

Want is not to be inferred from an activity, but it should have been stated by using the words - want, desire, or need.

Also if the story does not make clear what is wanted or needed then it is not scored.

If what is wanted is not received or attained in the story, then also it is not scored in this category. e.g., Father wants his son to give up bad company ...

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... The son becomes a good boy. (scored)

... The army major desires to conquer the enemy ...

... The major comes out victorious (scored)

He wants to marry her - - - they finally get married (scored)

He is locking for a job -- he gets it. (not scored)

He wants a job ... he gets it -- (scored)

He wishes that he may pass . . he passed (not scored)

He needs to pass ... he passed -- (scored)
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He needs to pass . . . he failed - (not scored)

#### Stage II: Lack of Gratification

Score if someone in the story wants something (as defined above for stage 1) but does not explicitly attain it by the end of the story.

If the "want" "desire" or "need" is mentioned in the story and nothing is said later about it, then also it is ecored here.

If the "want" or "desire" is stated not to have been achieved then it is scored here. All wants, desires, needs stated clearly but not achieved explicitly or by implication are scored in this category.

#### Detro

## Stage III: Flight from Other People and Objects

1. Score if someone in the story wants to escape the control of an authority, or is relieved to be escaped.

e.g., He wants to be away from his father and be independent as he does not want to be influenced by his father. (scored)

He wants to change his department as he does not get on well with his boss. (scored)

Score if any of the characters in the story express a generalised desire to escape and be away from people and objects.

e.g.. He wants to feel real freedom. (scored)

Hs disguised himself as he did not want to be identified. (scored)

He wants to go to a place where he is not disturbed by all these worries and problems (scored)

This category is also scored if a two-person relationship in the story is described or referred to in such a way that one person seems to lack interest in or concern about the other. This can be inferred from different kinds of dyadic relationships depicted. For example: exploitative approaches to the opposite sex; trying to use the second person for one's own ends, nor being concerned explicitly about the other, etc.

e.g., He invites her for dinner and wants to have good time enjoying her that night. (scored)

He is trying to take advantage of her mistakes and promises a reward if she spends the night with him. (scored)

The gentleman will get into the clutches of the other fellow (scored)

He is trying to use the other fellow for his own benefit. (scored)

## Stage IV: Differentiation of other Persons'/Objects:

Score if any character is identified by their full name Full names like Rakesh Agarwal, Vinod Gupta, Sambasiva Rao, Murugam Basappa, etc., are scored. At least two parts of the full name should be present like those cited above.

Do not score if the names are obvious fakes like Red, Blue, Sunday, Pongal, etc.

2. Score if any foreign name is mentioned, even if the full name does not appear. First, or last name is sufficient to be scored if it is a foreign name. e.g., Berelson, Flanagan, Arnold, Stewart, Alcock., etc.

Do not score if Christian names common to India appear singly. e.g. David, James, Jacob, Peter, Paul, etc., are not scored if they appear singly (without a title or surname).

- 3. Unusual famous names are scored. e.g., Pandit Nehru, Indira Gandhi, Mahatmaji or Gandhiji, etc., are scored.
- . 4. Do not score if only initials are given. Dr. P., Mr. VKP, etc., are not scored.
- 5. Socre if any of the characters is identified by titles like Mr., Dr., Prof., etc., even if they are followed by a single name.
  - a.g., Mr. David, Dr. Agarwal, Major Mani, Prof.Ratan, etc. are scored.
  - 6. Scor if any of the characters is identified as connected with some specific company, organisation, agency or other country, by name.
    - J.g., Shah and Shah Electricals, Manju Brothers Ltd., Indian Air Force, Dolhi Development Authority, etc.
- 7. Score if any one of the characters is depicted as recognizing the other character as a total object by; (a) helping the other character (other than in authority roles), or (b) describing a two-person relationship in such a way that both characters are mutually active vis-a-vis each other.
  - e.g., He want to visit his friend who is sick and gave him company (scored)

The Dector is sympathetic to the patient who lost her son and is trying to console her. (scored)

They are helping each other in their activities (secred)

The couple is planning their future together (scored)

## C. Feolings

This category deals with the feelings and the state of being of the characters depicted in the story. There are four sets of feelings that are characteristic of the four different stages. These include: loss, or despair, or confusion and the like (stage I); incompetence (Stage II); hostility (stage III); and complexity (stage IV). The scoring criteria for each of these are described below.

## Stage I: Loss, Despair, Confusion.

Score if there is an explicit mention of words which suggest a state of hopelessness, helplessness, separation anxiety, disappointment, confusion, loss, futility, dejection, regret, loneliness, confusion, surprise at the state of affairs as they exist, etc., on the part of anyone or more of characters.

e.g., He'is upset at his failure (smored)

He is feeling lonely (scored)

He is disappointed at his son's failure(scored)

He worried about his results (scored)

He wondered why there is so much corruption (scored)

## Stage II: Incompetence

Scorewthis category if there are references to feelings of foolishness, apprahensiveness, indecisiveness or hesitation in decision—making as an indicator of concern about competence.

e.g., He is not able to make up his mind (scored)

He is not sure if he can make a correct decision (scored)

He is torn (scored)

He feels shaky about taking a decision (scored)

Note that confusion (scored in stage I) and indecision (scored in stage III) are not the same. Indecision is hesitation or anxiety in the face of a choice.

## Stage III : Hostility

- hostility, or resentment on the part of any character in the story in response to some other person's action.
  - e.g., He is angry at the union leader who led the strike (scored)
  - He is annoyed because his suggestions were ignored (scored)
- Do not score if someone is bitter about something that the other person did to a third party.
  - e.g., The father is bitter that the teacher failed his son (not scored)

He is angry and wants to organise a strike, demanding his resignation for beating his close friend (not scored)

## 6tage IV Complexity

Complexity is scored when complexity of feelings is depicted for any of the characters in the story. This may be manifest in two ways:

- (a) a character makes mistakes but mistakes do not determine the outcome.
- e.g., He took a wrong decision of joining this organisation. However, he is doing well against all odds. (scored)
- He was socially inept, but the boss gave him a raise anyway because he was such a good worker. (scored)
  - (b) Different affects explicitly attributed to any subject in the story. Or the simultaneous recognition of two or more feelings is scored.
- e.g., He felt sorry for the boy, but felt that for his good, he should prod him (scored)
- He wanted to please, but also wanted to do the right thing (scored)

He is disappointed at his failure, but is confident that he will succeed next (scored)

He is unhappy that his frienc is leaving but happy that he is leaving for good (scored)

Complexity (scored here) is not the same as indecision (scored stage II). Complexity is the recognition of two different emotions, while indecision is the alteration between two different behavioural choices, or the avoidance of any behavioural choice.

## D. Orientation to Action

This content area describes the action—orientation of the characters depicted in the story. There are four different action types described that deal with the four stages.

Passivity (stage I) is scored when passive—action orientation is depicted on the part of any of the characters by using words as calm, quiet, bored, etc.

<u>Disorder</u> (stage II) is scored when the action taken by any one of the characters is criented to clear disorder in the environment.

Failure (stage III) is scored when the action taken by any of the characters in the story meet with failure inspite of all the character does to succeed.

<u>Work</u> (Stage IV) is scored when any of the characters is depicted as involved or concerned about work by thinking, planning, organising, scheduling, etc. The detailed criteria are described below.

## Stage I: Passivity

Score this category for an explicit mention of feelings of calm, quiet, tiredness, boredom, peace, being "on air", reassured, confirmed, etc. e.g.: He is resting after a day's work (scored)

He is relaxing (scored)

He is bored with doing some things (scored)

He is happy that he finished his work (scored)

 Marriage, as a state of future is also symbol of passivity and is scored here.

e.g.: He longs for the time when they are married (scored)

He wants to marry her (Not scored)

They are happily married (not scored)

3. References to water using terms as river, floating, washed up, etc. are also symbols of passivity and are scored.

e.g., He is boating in a Lake of Kashmir (scored)

He is boating in Kashmir (not scored)

He is sailing through Arabia (not scored)

Note specific bodies of water would be scored only if the appropriate water word is added (Thus "Lake Kashmir" is scored "Kashmir" is not scored, "Arabian Ocean is scored; "Arabia" is not scored, River Ganga is scored, Ganges is not scored.

## Stage II. Action taken to Clear Disorder

Score if any of the characters express concern about disorder. This may be manifested in several ways:

a) The character attempts to remove something from their environment that <u>disturbs</u> them but not something of which they are afraid.

e.g.: He wants to clean up his desk as lot of junk has been accumulated and he has to waste time to sort out things (scored)

He wants to smash the other party; he is afraid that they may kill him (not scored)

b) Any of the characters attempt to leave a situation that is disorderly.

e.g., He wants to leave—that organisation as it is difficult to work there due to disturbances (scored)

c) Invasion of personal space of one person by another person is also scored.

Intrusions, entering, interruptions, etc.

o.g.,: He is deeply immersed in thought and feels disturbed by his friend bumping into his room at that hour (scored)

d) Also score if the behaviour of a character is "disordered" and thereby becomes a problem: Someone does not work adequately, someone has bad family life and it reflects in work, oversleeping, lack of motivation, etc., any disorder whose consequences are a problem. Simple references to a messy room or house, or dirt in general without any indication that as a consequence that is a problem are not scored.

## Stage III: Failure of Action .

Score if a character attempts an action with confidence, but some error (not disorder in the environment) — in particular an error of judgement —leads to failure. That is, a character tries to do semething, in (implicit) expectation that he will succeed and then fails through some error of his own.

e.g., He went to see a movie but discovered that he forgot to bring the tickets (scored)

He tried his best but could not do it. He needs some more training (scored)

He can discover the phenomena but he is not getting the cluethat is the only hitch (scored)

He did his best for his son, but he did it too late (scored)

Ha is not able to finish work as there is something wrong with the machine (not scored)

He is not able to complete as he can't locate the mistake in the machine (scored)

## Stage IV: Work Scheduling

 Score if a character is thinking about, planning, or preparing for work. He may be organising his schedule, thinking about a work - problem, or organising himself mentally for work.

e.g.: They are planning the attack (scored)
He is thinking on how to approach the problem of meeting
the requirements in time - (scored)

He is preparing for the days work-(scored)

Ho is calming himself down so that we can start the work all over again (scored)

2. Also score if the character is anxious or werried about a work problem, or if he is proud of his work or his ability at work, or finds juy in work or devoted to work.

c.g.: He knows his abilities and is confident to .
complete the course (scored)

" Ho is anxious to finish the work (scored)

He is confident about himself and he can accomplish it (scored)

He is proud of his own skills - (scored)

He is worried that he may not be able to complete the work (scored)

## SUMMARY

To summarize, a person at the Stage I level perceives help as coming from a benevolent authority, expresses wants as being promptly gratified in fantasy, frequently feels abandoned or in duspair, and waits passively for things to happen to him. Freud called this the oral stage.

At stage II, the person perceives authority as critical and demanding, expresses wants that are not satisfied, feels incompetent to decide or control things, and acts to clear up disorder. Freud called this the analystage.

At stage III, the person actively oppresses authority which is perceived as wrong, wants to escape authority and be on his own, often he feels hostile, and acts confidently only to discover he has made a mistake. Freud called this the phallic stage.

At etage IV, the person perceives authority as distant and uncertain as to that it can or should do, differentiates carefully among different types of persons, feels that life and emotions are complex and contradictory, and schedules and plans his work. Freud called this the genital stage, when the person more readily takes the view of the other (authority, complex emotions in others, and so on.)

## Sample Stories Scored for Psychological Stages

Given below are a set of twelve demonstration TAT stories scored for the practicing scorer. The underlined words or phrases are the basis for scoring decisions, which are indicated in the left margin. The first set of six stories are based on the Indian version of McClelland's TAT pictures. The second set of six stories are based on D.F. Perera's TAT pictures.

These two sets are also used as examples for computing modal stage scores, and corrected scale scores in the next section.

## Demonstration Scoring (First Set)

(The language of the respondents is retained.)

## Story 1

Dector Rom comes to his clinic exact time every day. He has a wife and two children. He is a well devoted doctor as well as his family. The patients have a great love to their dictor. He finds joy in giving his time to the sick. Their happiness is his happiness. One day he got a telephone call. His youngest son is ill. He cannot go home because there was a serious patient. After long hours he hurried home and he could only see his mourning wife.

## Scoring

Doctor Ram: Differentiation, content area B- Relationship to others -Scored stage IV.

Patients have a great lawe to their doctor: Benevolont authority, content area A - Relationship to authority-scored stage I

Finds Joy in giving time to the sick: Work-orientation, content area D - orientation to action - scorod stage IV

Mourning wife: Loss, content area C - Feelings - scored stage I.

(Note in the demonstration scoring sheet provided at the end of this sat of stories, the category checks have been entered against story number 1. Read row-wise. The four total presented at the end against letters 0,A,P and G are stage totals obtained by counting the number of check marks in each row of cells)

## Story 2

Here the man seems to be asking something to the other fellow. The other man looks as though he is <u>little</u> doubtful and doesn't want to answer back.

- The officer is asking to the employee about something.
- 2. May be the employee didn't do the work properly.
- The <u>officer</u> wants an answer from the employee for doing some work. The <u>employee</u> is in doubt.
- 4. If the work is not done properly, probably he <u>may</u> get scolding from the officer, or he may be corrected for the mistaken deed.

#### Scoring

Ho is little doubtful: Incompetence, content area C - Feelimps,

Employee is in doubt: Scored Stage II

Dousn't want to answer:

Lack of gratification, content
area B - Relationship to others,
Scored Stage II. (it is not
stated explicitly that he
didn't answer in which case it
would have been stage I-immediate
gratification)

Officer wants an answer: (Same as above. B - Stage II. need not be entered in scoring sheet as already entered by above checking).

Get Scelding from officer: Critical authority, content area A - Relationship to authority, scored stage II.

This picture is very vague. To me it seems as though, the man sitting is scrolling up some papers. May be he wants the papers to be used as a file with regard to his work.

- 1. The man is scrolling the paper.
  - Doly one man is seen.
- 2. For convenience sake he is rolling the paper.
- 3. He takes the paper to put in his file for some purpose of his.
- 4. He will use up the paper to keep the record of what he is doing. I mean the work he is carrying out.

## Scaring

He wants the papers to be used

He will use up the paper: Immediate gratification, content area B - Relationship to others, Scored Stage I.

Vikram, throughout his college days had dreamt of becoming a pilot. The excitement of travel, of handling a large aircraft, the sense of power, exhiliarated his senses.

Brought up in a conservative business family, his hopes had found no encouragement in the family circle.

To distract his mind from what the family considered a wild ambition his father sent him to London for a post graduate Business Administration course.

Vikram returned much westernised filled with progressive ideas for improving the family business but undetered from his ambition.

In this ficture the father is expressing his disappointment at Vikram letting him down after all the trouble he has taken to send him for further studies.

Vikram, though hasteful in the face of his father's tirade, cannot relinquish his hopes and ambitions.

As his determination leads to a rift between him and his father, Vikram ultimately decides to leave his home, and find his own way. After training for his desired profession, he enjoys his work as a pilot till finally the family comes around and accepts him back.

#### Scoring

Expressing his disappointment at Vikram letting him down: Loss, Content area C - Feelings, Scored Stage I

#### Cannot relinquish hopes,

Loads to a rift between him and his father: Opposition to authority, content area A - Relation to authority, scored stage III

Decides to leave home and find his own way: Flight, content area 8 - Relationship to others, Store Stage III

Atul is a reporter for a <u>leading daily in North India</u>. Normally, his work covers reporting of political events, the movements of the Prime Minister, proceedings of Parliament etc.

This sphere of activity does not necessitate much travel and he enjoys a peaceful domestic life in a remote area of Delhi with his wife and young son.

Suddenly India became engaged in a confrontation with one of its mighty neibours on the North East frontiers. Large amount of coverage in the frontier area was required for daily reports in the newspaper.

As one of the most promising young journalists Atul. was selected to go to the border area to send regular reports of the daily fighting.

He used one of the small frontier towns as his base and travelled daily to the scene of the battles, returning periodically to his quiet hetel room to prepare his reports and send them off.

As the fighting increased in intensity, his chances of return diminished.

Here he is seen writing a story, looking at a picture of his family.

Shortly, an unexpected enemy bomb falls on the town and destroys all over there.

Scoring

Ashok was a young solicitor, intelligent, brilliant, and ambitious. After completing his law studies, he joined as an articled clark in a well-known firm of solicitors.

The firm already had other articled clerks, who had been serving their articles for a couple of years before him, but who had not made much headway as they lacked singularity of purpose and the application Shok brought to his work.

They often made fun of him for working so hard without break and tried to hinder his progress, and to belittle him in front of the superiors.

Ashok once was given a very important case which was a challenge to him and he was determined to prove his worth in the eyes of the senior partners. He worked all day, looking up references and collecting as much material and case history as possible.

Then, to avoid the sheering of his colleagues, he came back to the office late at night and worked all night at the brief for the lawyers. He tore up sheet after sheet, dissatisfied with the case he prepared till he came up with the startling solution.

As it happened, his seniors were very happy with his brief the case was won and Ashok became a solicitor before all the other articled clerks.

#### Scoring

Made fun of him: Hostility, content area C - Feelings,

Bolittle him: Scored Stage III.

Worked all day, looking up references — worked all might etc.:

Work, content area D - Crientation to action,

Scored Stage IV

## Demonstration Scoring

(Second set)

(The language of the respondent is retained)

## Story 7

The picture depicts Gopal and his son Ramu. Ramu had been sent by Gopal to the market place that morning to fetch a new pair of bullocks for this farm and had been given a thousand rupees. Ramu had gone to some friends' place before visiting the market. However at the market he finds to his horror that the money is missing. Hence he return sad and afraid what will happen. Now Gopal is being angry and questions Ramu as to where all had gone and where possibly he could have left the money. Ramu recallects where he went. Gopal tells him firmly that he should immediately get out and fetch the money.

#### Scorino

Return Sad: Loss, content area C - Feelings - Stage I

Gopal is being angry: Hostility, content area C-Feelings-Stage III

Questions Ramu where all he had gone; Recollects where he went; tells him firmly ... to go out and fetch the money: These are all actions to remove disorder, content area D - orientation to action -Stage II.

The scene is Ashoka foundry. The foundry manager Mr. D. Cruz is obviously upset. One of the very valuable order costing a substantial amount has not been executed well. There was a design mistake which was overlooked and now setting right the fault will consume both a lot of money and time. Since this has happened once before from the same team of people, Mr. D. Cruz decides that he should set things right before its too late. Hence he calls the team which was in change of the order and give them a warning as to what their carelessness was costing to the company and requests them to be more careful in future.

#### Scoring

Ashok Foundry: Differentiation, Content area B - Relation to others, Mr. D'Cruz: Stage IV

Upset: Loss, content area C - Feelings, Stage I

Decides that he should set things right: Disorder, Content area D - Orientation to action , - Stage II

This scene depicts the members of an informal social science club. They are planning out the next project which they are taking up. This deals with providing drinking water facilities for a slum located in the further corner of the town. The date has to be fixed and arrangements have to be made with the city water supply authorities have to be contacted. Being a sunday afternoon and since all of them are employed, people are falling tired and to tone up the proceedings. Someone was asked to go and order coffee. Two people got up. One went and the other (smiling) is about to take his seat again.

## Scoring

Planning out the next project: Work, content area D - Orientation to action, stage IV

People are falling tired: Passivity, Content area D - Orientation to action, Stage I

## Story 1D

Mr. Sharma, the chief Engineer is having a bit of mental agony. One after the other several blows have landed on him during the last one week. First was the kid which nearly died of whooping dough. Then came the bad news of the death of his best friend through drowning and now the workers are all on strike on behins issue and identifying him as a part of the management are dead against him. Not knowing what to do, Mr. Sharma is standing on the a per floor of the plant (where his office is situated) clutching the railing and wonder why all this bad luck together 1

### Scoring

Mr. Sharma: Differentiation, Content area 8 - Relationship to thers, Stage IV

Having a bit of mental agony: Loss, Content area c - Feelings, Stage I

Are dead against him : Hostility, content area C - Feelings, stage III

Not knowing what to do: Incompetence, content area C - Feelings, Stage HI

Mr. Vorghese the branch manager of the cosmetics firm is fed up with his Anglo-Indian Stenos' work with the typewriter. It seemed as though she could never try a single page without at least five mistakes in it. Moreover of late she's not been keeping proper track of his appointments due to which he faced a lot of problems in dealing with the concerned people. Hence be gives her the dressing down when she ruins an important reply to a large order form a prominent customer. Realising her fault and not knowing what to do, his secretary Juli just stands dumb as Verghese tells her that she'll be fired next time she errs.

#### Scoring

Mr. Verghese: Differentiation, Content Area B - Relationship to others, Stage IV

Is Fed up with his Anglo-Indian Steno's work: Critical authority, Content area A - Relationship to authority, Stage II also, Hostility, Content area-C Feelings, Stage III
Not knowing what to do ......

Juli just stands dumb: Incompetence, Content area C - Feelings, Stage II

He faced lot of problems ... Hence gives her dressing:

Action to clear Disorder, Content area D - Orientation to action, Stage II.

This picture depicts Ravi Verma, the artist working at an advertising agency. Very talented and sincere, Ravi is very well known among advertising agency people in this part of the country for his excellent work. The next assignment he is having at hand is the design of publicity posses for a well known cigarette manufacturer. Since this advertise has been requisitioned for the first time for his agency, Ravi has been asked to put his special effort. He never gets his ideas without good whiskey and of course 555 and hence when he got with these he becomes totally lost in a fantesy land of his own dreaming up ideas.

## Scoring

Ravi Verma: Differentiation, Content area 8 - Relationship to others, Stage IV

Lost in fantasy land dreaming up ideas: work, content area D - Orientation to action, Stage IV

(Note that dreaming ideas qualifies the phrase "lost in fantasy" to be grouped in Stage IV. Without that it becomes stage I)

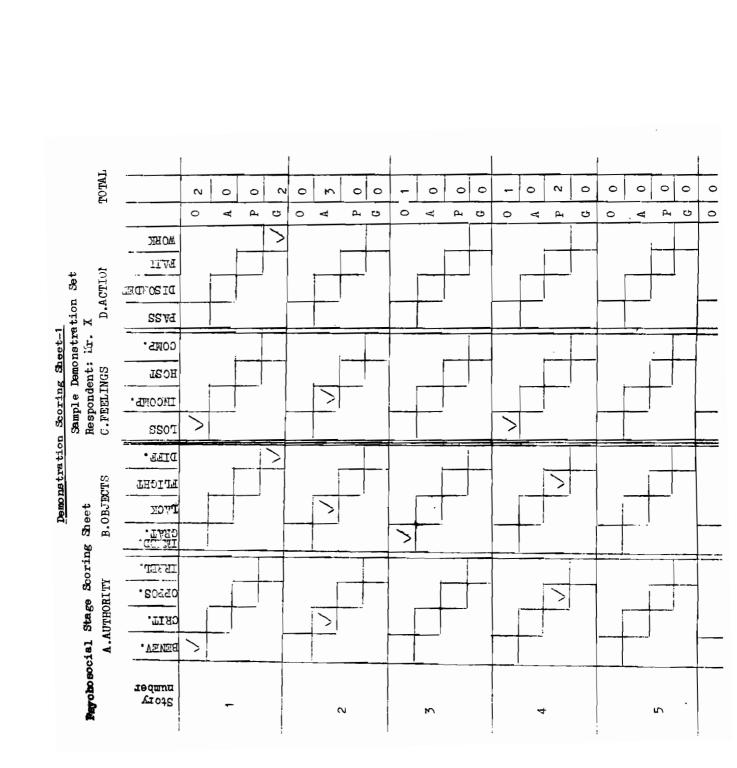
## SCORES

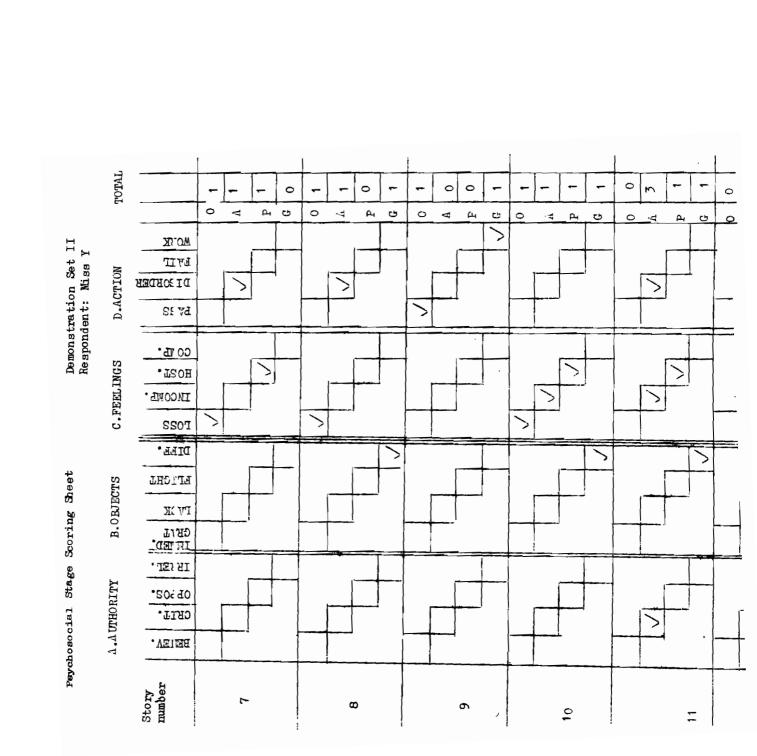
The procedure for scoring different categories is explained above. There are two types of scores used in determining the developmental stage level of the respondent: i. the modal stage, and ii. the average stage score.

It may be noticed in the demonstration score sheets at the end of each story the stage totals are given for that story. These are noted against the letters 0, A, P and G in the last column. (0 - oral A- anal; P = Phallic and G = Genital. These parallel to stages I, II, III and IV respectively). The total score for each stage in a story is obtained by counting the number of checks in that stage. The first row of four cell are stage I cells, the second row are stage II, third row stage III and fourth row stage IV. In each story the stage score for each stage cannot be more than 4 as there are only four cells that could be checked in each row.

After the set of six stories are scored the column-wise totals are presented in the last group of cells against the row-total. The numbers in the cells are obtained by counting the check-marks in each column of cells over all the stories of the respondent. As there are six stories in this case any cell in this row can have a maximum score of G. Only the last set of scores in this row against the letter O, A, P and G are the overall stage scores for the respondent. These are obtained by adding the cell-totals in each row of cells. They could also be obtained by adding up the numbers against all Os in the six stories (giving stage I total), all As in the six stories (giving stage II total) and so on. For example in the first demonstration sheet stage I score is 4 noted against "O" (last set of rows last column), and stage II score is 4 noted against "O" (last set of rows last column), and stage II score is 3 noted against A ... etc. This is obtained by just adding the numbers in that row of cells, i.e., for stage I or 0 - 1+1+2+0 = 4. For stage II or A = 1+1+1+0 = 3.

This set of total scores obtained over all the stories written by a respondent are his stage scores. These stage scores are used to compute modal stage and average stage scores.





Modal stage is that particular stage of development which gets depicted most frequently in the stores. Thus stage I got depicted 4 times in the first set of demonstration stories and all the rest occur less than that. Hence the modal stage of this respondent is stage I. The same is noted at the bottom right-hand corner of demonstration sheet 1.

Average stage score also referred to as corrected scale score is obtained through the following steps.

- a) multiply stage IV total score by 4
- b) multiply stage III total score by 3
- c) multiply stage II total score by 2
- d) take stage I total score as it is
- e) add a+b+c+d (sum of the products)
- f) divide the number obtained in 'e' by the sum of stage totals I through IV. (i.e., totals D+A+P+G over all the stories of the respondent).

For demonstration score sheet 1 the steps are carried out below.

- a)  $3 \times 4 = 12$
- b)  $3 \times 3 = 9$
- c)  $3 \times 2 = 6$
- d)  $4 \times 1 = 4$
- e) 12 + 9 + 6 + 4 = 31
- f) 31/3 + 3 + 3 + 4 = 31/13 = 2.34 (approximated to second decimal)

You may like to try it out for demonstration score sheet 2.

The above score 2.38 mean this respondent is between the second and third stages of development or maturity.

In general modal stages have been more useful than average stage scores. In some cases there may more than one modal stage.

For interpreting the developmental patterns, scores in each content area may be taken and examined to see if any content areas and categories are occurring over and over and if any are consistantly missing. Over-accurrence might be an indicator of fixation to that set of behaviours. Rare occurrence could be repression. However, such

interpretations cannot be general and clinical insight has to be used to supplement this. Therefore, trained psychologists with sufficient clinical insights are only suggested to use these interpretations. Also, there interpretations may be used more as supplementary to other observations of the clinician.

### Reliability and Practice Stories

Five sets of practice stories are given in the Appendix of this manual. Each set contains about 3D stories. At the end of each set scores of these stories are presented. Use the first two sets as practice stories. Use the last three sets for computing reliability coefficients with the expert scoring. The reliability coefficients should be of the order .85 and above. If any of the three reliability coefficients is less than .85 keep practicing on the practice stories (first two sets) till you get high reliability coefficients. In order to avoid memory effects while calculating reliability coefficients it is suggested that the practicing scorer calculates the reliability coefficients for the first two sets, practices on them till he gets coefficients above .90 and then goes on to score the last three sets for final reliability.

If reliability coefficients are low, a time gap of about a week is suggested for next scoring and computation of next set of reliability coefficients on the last three sets.

### Formula for computing Reliability with the expert scorer:

The expert scoring for the stories in this manual has been done by T. V. Reo. These have been done after achieving reliability coefficients of the order .90 and above with A. J. Stewart's (original author's) scoring on both American and Indian stories. Hence the scoring presented in this manual for the five sets of stories may be considered as the expert scoring.

To compute inter-scoror reliability with the expert scoring use the following formula for each set of 30 stories.

Reliability 2 x Number of agreements between yourself with Expert = and expert on the presence of different scorer categories in the 30 stories.

Number of times you scored a category + Number of times expert scored

This formula is conservative as it does not take into consideration agreement between you and the expert on the absence of a category.

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