SEX DIFFERENCES IN PATTERNS OF EMOTION

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ABSTRACT

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by

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Previous research has shown that females begin themes with negative emotion (deprivation), and move to positive emotion (enhancement), while males produce the opposite emotional sequence. The female response has been called a positive D/E pattern, and the male response, a negative D/E pattern. Dissatisfaction with traditional sex role expectations on the part of both males and females has been associated with D/E scores which are most extreme in the pattern typical of each sex. The present study was conducted to assess the influence of instruction set, sex role dissatisfaction and biological sex on D/E patterns, and to investigate the possible relevance of assumed similarity between self and picture hero.

Sixty males and sixty females received either dramatic or control instructions to determine if earlier findings were an artifact of instructional set. Subjects were also divided into low, moderate and high dissatisfaction groups on the basis of a sex role questionnaire. Among females, D/E scores showed a marginal increase in positivity with sex role satisfaction.

Subjects were also asked to choose the pictures which were

"most" and "least" similar to themselves. Males were expected to tell positive D/E stories to the "most" similar pictures because of high identification with the picture hero, and negative stories to the "least" similar pictures because of dissociation of self from the picture hero. No differences were found in D/E score on the basis of similarity alone. However, a significant sex X sex role dissatisfaction X similarity interaction was found, in which the moderately dissatisfied subjects of both sexes produced the D/E pattern appropriate for their own sex on pictures they judged as being "most" similar to themselves. They told the pattern expected of the opposite sex on pictures they judged as "least" similar to themselves. This pattern was most clear among males. Highly dissatisfied subjects told stories to pictures they judged as "most" similar to themselves which obtained D/E scores expected of the opposite sex.

A further analysis of the protocols involved scoring the turning point in the action of the story for autonomy-heteronomy. The majority of subjects told autonomous stories, and there was some evidence of a mild picture effect.

Stories were scored for the nature of the final outcome. Results showed that males ended their stories with more collapse while females showed more evidence of ultimate hero resurgence.

The discussion emphasized that D/E sex differences are not an artifact of instructional set, but that the relationship between D/E scores and sex is not a simple one. D/E scores reflected within-sex variations in degree of dissatisfaction with sex roles.

The behavior of the moderately dissatisfied subjects was interpreted as strain to conform to their own sex role model, and the reversal among highly dissatisfied subjects reflected their rejection of the sex role appropriate for their own sex.

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INTRODUCTION

The outcome of a thematic story is traditionally considered one of the most important aspects of protocol production. The relative strengths of needs and press are ultimately inferred from the hero's success or failure and the conditions under which either fate is likely to occur. The precise meaning of an outcome is nebulous without a corresponding analysis of the preceding events, which not only provide a context for the outcome, but are considered meaningful in themselves as expressions of the author's emotions, conflicts and needs (Murray, 1943).

Whereas content analysis is concerned with motivational influences, structural aspects of the thematic apperception test (TAT) protocol are considered reflections of thinking style and the general modus vivendi of the author (Rapaport, 1942). Generally, structure has proven a more fruitful criterion for eliciting sex differences than content, and has illustrated potential individual difference variables dealing with ways of organizing one's world, tendencies to attribute emotions and thoughts beyond the immediate stimulus situation (Weisskopf, 1950) and tendencies to think in affective terms (Kagan, 1961).

A structural analysis of emotion assumes that the manner in which subjects deal with emotion in written protocols has meaning

relatively independent of story content. The pattern of emotional movement in a story, i.e., the number and quality of references along a time line, is designed to tap consistencies in the trajectories of events imposed on the stimulus card. These trajectories are "emotional paths" which do not have to vary appreciably with the specific content of thought. To the extent that intra-individual consistencies do exist in these trajectories, a structural analysis of emotion can be said to measure affective "habits."

The idea that emotional experiences occur and change over time according to a learned sequence implies that emotions are not only experienced but are retrievable as memories separate from the events that originally produced them. This idea is described by Tomkins (1962) in his concept of emotional chaining. The conditioning of emotions in chains occurs through repeated contiguity of events which are unconditioned stimuli for affective responses. After the chain is formed through classical and higher order conditioning processes, triggering of the initial emotion(s) leads to the later emotions rather automatically. Through these chains, which may consist of only two links, emotions can become functionally autonomous in Allport's (1937) sense of motive independence.

Although many factors operate in emotional chaining and several chains may form simultaneously on different levels, an illustration will make the process more clear. Both Infant A and Infant B are distressed due to hunger. The mother of A quickly provides the external stimulus needed to relieve distress.

This child learns over time that relief follows distress. Presumably, of course, relief is the outcome in other need areas as well, so that the pattern becomes established as a general phenomenon. The critical aspect of the learning in the example is the formation of the child's expectation that when he is distressed, relief occurs.

Let us assume that the mother of Infant B waits a very long time before attending to her child's needs. B learns that distress leads to more distress, to more intense crying and to the ultimate termination of the signals from exhaustion or inability to get attention. In this case, distress leads to expectations of failure and more intense negative emotion.

The assumption here is that these learned expectations will affect the cognitive interpretation of events which precipitate distress later in life, as well as influence assumptions of personal competence to overcome the emotion-producing events. For child B, the precipitating events are catastrophic since his or her experience has been that distressful occurences are seldom overcome. The experience of child A, however, should lead to the expectation that the precipitating event can be overridden.

The individual's emotional expectations are here suggested to play a part in determining the overall subjective probability that a person will engage in any of a set of behaviors to obtain a goal. Whereas past experience in success and failure and the individual's perception of the success probability of a certain behavior are commonly accepted determinants of whether or not

a person will perform a behavior (Atkinson, 1958; Rotter, Chance, and Phares, 1972), emotional expectations, built up as underlying assumptions about the way the world is, are simultaneously experienced with personal success and failure. As Infant A learns that relief follows distress, he also learns that "I bring relief," or even "I am relief." Feelings of personal competence or incompetence and emotional chains thus reinforce each other. The emotional "habits" that become developed, then, yield a particular trajectory because the events with which they were originally intimately tied actually occurred in that order.

Deprivation-Enhancement as Emotional Trajectory

Trajectories can differ in the quality of emotion, the quantity of references to emotion, and the location in time of the references. In order to describe variations in trajectories completely, all three of these characteristics must be measured. The quality and quantity are content-determined additive scores that necessitate only general positive and negative scoring categories. The temporal problem, however, demands some kind of dissection of the story into temporal units, i.e., some reference point from which positive and negative affective references can be tabulated and assigned values to contribute to an overall trajectory score.

May (1966) introduced a scoring system which fulfills these requirements, called "deprivation-enhancement" (D/E). Deprivation refers to various types of physical and psychological discomforts, while enhancement includes positive emotions, success and eminence. The pivotal incident (PI) is the anchor point in time which

determines the weight to be assigned to positive and negative references. The PI can be identified as the event which leads to the final outcome in the story, the turning point in the action (May, 1970). There are two models of emotional chaining which serve as criteria in the scoring of D/E, although a large domain of possible trajectories obviously exists. A positive D/E sequence is defined as a progression from deprivation to the PI to enhancement, and the second model is the reverse, initial enhancement to PI to deprivation. The latter is arbitrarily assigned a negative D/E score. Any D/E score represents the pattern of emotion references rather than the absolute presence of either positive or negative emotion per se. Thus, a weight of +1 is assigned to each deprivation reference occurring before the PI, AND also to every enhancement unit following the PI. A weight of -1 is assigned to every enhancement unit prior to the PI AND to every deprivation unit after the PI. The difference between these two patterns is the final D/E score for any given protocol. Hence, the D/E score assigned to a story represents the relative adherence of the story to each of the criterion trajectories. This way of viewing a D/E score is fruitful because very few "pure" D/E stories exist, in the sense that the only scorable references that exist are consistent with either pattern alone. Most stories involve varying degrees of cancellation of scorable references on each side of the PI.

Deprivation-Enhancement as a Sex-Linked Variable

The greater emphasis of positive D/E over negative D/E has occurred most frequently and to the greatest degree among females, both of college age (May, 1966, 1969), and through the middle elementary grades (Cramer and Bryson, 1973). In these studies, males consistently produced stories emphasizing the negative D/E pattern, or stories which were significantly less positive than those written by females. May (1966) suggested that the differences in D/E emphasis parallel both physiological cycles and socialization practices which differentially impinge on the sexes through development, and hypothesized that D/E can be used as a projective measure of feminine and masculine gender identity.

According to this framework, a positive D/E score evolves from life experiences which are most consistently feminine in this culture. The important similarity across these experiences is the repetition of a sequence of events wherein inhibition of aggression and direction of activity inward leads to societal approval and parental love. The female acceptance of pain and suppression of self mediate the ultimate possession of joy, love and opportunity. Concomitant with this sequence of actual events is the development of the emotional chain of negative-to-positive affective expectations. According to May (1966), the sequence of inhibition followed by reward is also mirrored in the physiological functions of sexual intercourse and giving birth. The contribution of these physiological processes is dubious, as will be pointed out in the empirical evidence review. The fundamental

point is that the female is constantly reliving the deprivation-to-enhancement cycle, which molds her assumptions about the ultimate desirable consequences of psychological and physical discomfort, and which also imply the "price," to be paid in advance, for enjoyment.

The factors in personal experience associated with the negative D/E pattern (from enhancement to deprivation) are identical to those which produce the positive D/E pattern, i.e., socialization stresses and awareness of bodily processes. The physiological experience of tumescence and detumescence and the constant pressure to succeed and the fear of failure which males experience in this culture lead to an emphasis on being successful and on winning. Awareness of downfall, however, always accompanies such emphasis on personal competence, either as a fear of failure or just a realistic admission that an upward thrust cannot continue indefinitely. This fear of downfall is pervasive, if not intense, and becomes manifest in male fantasy as the ultimate defeat in a negative D/E story.

One premise of this paper is that the pressure to succeed which males experience in this society might well be as valid if used to justify positive D/E scores. Pressure to succeed is a negative state (and is scored as such in the deprivation-enhancement system), and the ultimate successful outcome is mediated by movement from the initial state of deprivation to one of enhancement. One of the questions explored in this study involves the conditions under which males might be expected to relate each type of story.

May (1966) has drawn theoretical parallels between positive D/E and feminine masochism (Deutsch, 1944), and between negative D/E and the classic myth of Icarus (Hamilton, 1942). In the female case, the distinction between the deprivation portion of the fantasy and the enhancement is blurred by the analogy to masochism since the latter implies positive rewards arising from the deprivation itself. Questions can also be raised about the necessity of the enhancement phase of the fantasy at all. May bridged the gap between masochism and a sequence from deprivation-to-enhancement by agreeing with Deutsch that female fantasy can be divided into two parts, "...the negative tension and the subsequent release" (Deutsch, 1944, p. 255). What appears to be occurring in this line of argument is a declaration that the negative and positive phases of a fantasy sequence are not separable, even though they appear to be, followed by the erection of an artificial barrier to insure that such a separation can be achieved. The proposition that some enhancement exists in the deprivation may well be valid, but the author fails to see any greater explanatory power commanded by invoking self-punitive tendencies than by the simple conditioning of expectations of success to the goal-directed activities.

In the case of negative D/E, the prototype is the Greek mythological hero, Icarus, who plummeted to his death after flying too close to the sun with wings made of wax. Whereas the classical myth is an interesting example of the negative sequence, the analogy appears to have been an unfortunate one because of the existence of an actual clinical syndrome of Icarianism which was proposed

and most fully elaborated by Murray (1938). Icarians are relatively rare clinical types, who produce very bizarre and extravagant fantasies marked by unrealistic goals and ambitions. They commonly have fantasies of being female (Murray, 1938; Fried, 1972). They are described as being very contemptuous of reality demands, immature and impulsive. The downfall which besets the hero of true Icarian fantasy is often unrealistically overcome, as through reincarnation.

From May's perspective, Icarianism properly reflects negative D/E because of the widespread experiences of most males which suggest a similar sequence, while he does not necessarily imply, in the author's point of view, that most males espouse the remaining characteristics of Icarianism. This interpretation of May's viewpoint receives support from some empirical work reported in a later chapter, and avoids the confusing implication that negative D/E is simultaneously a mirror of basic sex differences in the population and characteristic of the fantasy patterns of one of the most feminine and extreme groups among males.

EMPIRICAL EVIDENCE

Replications of the D/E patterns include developmental studies, construct validation studies using clinical groups, and replications using both college and non-college individuals. This chapter will begin with May's original studies and then expand to include the clinical and developmental findings.

D/E studies have used TAT-like stimuli devised by May (1966) or selected pictures from the standard TAT set. Originally, May developed four pictures, only two of which have been consistently used. These are the first two pictures in Appendix A, coded and described as follows.

A. A pair of trapeze artists performing
B. Bullfighter in full costume

The remaining four stimuli in the appendix were pictures selected by the author for a pilot D/E study conducted in the Spring, 1973, and which were included in the initial picture pool for selecting the stimuli for the present experiment.

E. A man and woman walking down a busy downtown street
F. A man and woman sitting together in a quiet room
G. A man and woman in eveningwear at a fancy restaurant
H. A teen-age couple gazing into each other's eyes

There has been no consistent use of any standard TAT cards in D/E research. Only Card 1 (boy with violin) has been used more than once. Usually, protocols given to TAT cards have been scored for D/E because they were already in existence, as with various clinical groups. The majority of the results presented here were obtained with Pictures A and B, and the use of other pictures will be noted when appropriate. The detailed scoring method for D/E appears in Appendix B.

May (1966) administered his four original pictures to males and females from two eastern colleges. The mean D/E score for females was +.804 and -.235 for males. The sex difference could not be explained as general optimism of females or pessimism of males, since the total number of deprivation and enhancement units did not differ between the sexes, nor was the difference a secondary consequence of verbal fluency sex differences. The correlation between length of story and D/E was +.19 for females, and +.14 for males. Finally, the possibility that females simply preferred "happy endings" was discounted since females related significantly more deprivation than enhancement units prior to the PI than did males.

A replication of this original study was designed to investigate personality characteristics of subjects who wrote extreme positive and negative stories. May (1969) reported that extremeness in D/E score, in the direction predicted for each sex, correlated with the subject's sex role satisfaction, as measured by a lengthy personal interview. A negative correlation was found for males

between D/E score and sex role satisfaction; hence, those males who were most dissatisfied with the male sex role told the most negative D/E stories. May reported that during the interviews, these males expressed envy of the female's greater warmth and freedom not to compete. They felt they could not achieve societal expectations for males.

The relationship between the females' interview data and D/E score was not significant, but they related stories expressing resentment about traditional female role expectations, and a dislike of passivity. During the interviews, the dissatisfied females expressed envy of the male's more active role in society, while the satisfied females did not feel they were being pressured into a traditional female role, but rather that society's expectations were natural for them and meshed with their own personal desires.

From May's perspective, the most dissatisfied individuals tell the most clear patterns for their own sex because they feel an acute strain to overcompensate for their dissatisfied feelings, and this tension makes the cognitive patterns more extreme than they might be otherwise. This conclusion was reached after May made the assumption that D/E was a basic sex difference, and constituted an attempt to incorporate the sex role satisfaction finding into that framework. This only makes sense if one assumes that most females fall into the misfit category and most men resemble the insecure, tense males described in the interview material, since this is the only way that the two D/E patterns can be "characteristic" of the sexes. Furthermore, the fact exists that

the sex difference in D/E has been repeatedly found in previous studies without categorizing subjects on sex role satisfaction. This can only mean that the majority of subjects were dissatisfied, or that the proportion of the sample that was dissatisfied produced such extreme scores in each direction as to override the nondifferentiated scores of the satisfied subjects.

The crux of the problem is this: if D/E is a basic and implicit part of being male or female, why did the more satisfied members of each sex fail to exhibit clear-cut examples of the patterns? May (1969) completely avoided the fact that his "satisfied" subjects did not produce significant sex differences in D/E, and concentrated on how different the D/E scores were of the dissatisfied subjects. Yet, the very fact that the satisfied subjects did not produce significantly different D/E scores in the 1969 study clarified the D/E variable. Rather than being a measure of a basic sex difference, D/E measured dissatisfaction with one's own sex. The empirical data showing variations in D/E score with sex role dissatisfaction provided evidence that May's theoretical ideas about the origin of D/E sex differences are somewhat incorrect. May had hypothesized that both physiological functions and socialization experiences produced sex differences in the D/E variable. Since physiological experience is constant across levels of sex role satisfaction, physiology must be a less important determinant of emotional pattern than social experience.

However, Winter (1969) reported findings which contradict the suggestion that physiological functions have little to do

with variations on D/E scores. She obtained protocols from women while breastfeeding, and compared them to women the same age who had breastfed, but who had recently weaned their infants. She found that women who were currently breastfeeding produced stories significantly more positive in D/E than the comparison group. These results support May if one assumes that the currently breastfeeding female is more cognizant of her distinctly feminine biological activity than is the mother who has weaned her infant. The importance of the ongoing nature of the breastfeeding activity in yielding more positive D/E scores is puzzling for May's thesis, because it implies that the memory of physiological activity no matter how vivid, was not sufficient to maintain more positive patterns. The women in the comparison group had weaned their infants only two weeks before the study. If physiological experience has an effect on D/E only as it occurs, the explanatory power of the sex differences in sexual processes does seem severely limited.

A second possible explanation of Winter's data should be noted. Both experimental and control groups in Winter's study were conforming to traditional sex role expectations, at least temporarily. From May's interpretation of the sex role interview data, one might hypothesize that the woman who is currently breastfeeding may feel a temporary increase in dissatisfaction with the female role and resentment of the increased demands made upon her. The increase in dissatisfaction would then produce more positive D/E scores.

Further evidence suggesting that biological functions are less important than sex role expectations was found in the developmental studies. Three major experiments with children were reported by May (1971), Saunders (1970) and Cramer and Bryson (1973). They included samples of seventy-five, one hundred and ninety, and eighty-nine children, respectively, and spanned an age range from nursery school through eighth grade.

Both Saunders and Cramer and Bryson tested for age differences as well as sex differences, and both reported a significant main effect for age for females only. The main effect for sex reached significance only among the older children, i.e., children falling in an age range from eight years to eleven years, nine months. Both studies reported significant sex differences for each picture (Cramer and Bryson used TAT Cards 1 and 17BM as well as A and B.), as well as for overall mean scores.

The existence of sex differences in D/E in the child studies, then, appears to be due to the increase in positivity of D/E scores of females over time. The male pattern revealed no such age change. Younger males either produced slightly negative scores (Saunders, 1970; Cramer and Bryson, 1973), or mildly positive scores (May, 1971). In either case, protocols written by older boys did not increase significantly in the negative direction. Comparing the scores obtained by male children with those of adult males from May (1966) shows that both means are the same and slightly negative. Since May only refers to molar bodily processes, such as puberty, sexual relations and childbirth, as being analogous to the positive

D/E sequence, the occurrence of the female pattern by eight years of age suggests that cultural norms are more important determinants of D/E than physiology.

The fact that the female group is largely responsible for the stable sex difference in child studies on D/E is unusual since investigators of sex role identification and sex role preference have reported that females are more unpredictable than males. Brown (1957) developed the IT Test as a projective measure of sex role identification and reported that female children are quite divided in choice between male and female-associated objects and behaviors until around nine or ten years of age, when a stronger feminine identification appears. The male children showed very early preference for masculine activities (Kagan, 1964).

The development of IT Test preferences closely resembles the development of D/E differences, and occurs at about the same age among females. Male children show an early and stable plateau on both measures. The fact that these variables develop so similarly suggests that D/E may be more a measure of sex role identification than of gender identity. Whereas gender identity is a term usually used to refer to the cognitive self-categorization as a male or female, identification involves more of an incorporation of the behavior patterns and attitudes of members of the chosen sex. The relationship between gender identity and sex role identification is unclear, and constitutes an arena for a lively debate within developmental psychology (Kohlberg, 1966; Mischel, 1966; Kagan, 1964; Freud, 1961), but most points of view basically

agree that the child has formed the necessary cognitive and behavioral connections for both gender identity and sex role identification by the time he enters school (Money, 1972; Kagan, Hosken and Watson, 1961). The absence of D/E sex differences and the lack of consistency in IT Test preferences in girls until at least third grade are incongruent with these theoretical points. Kohlberg (1966) offered one hypothesis that IT Test inconsistency among females is attributable to societal preferences for males. Especially at the younger ages, children operate at a level of cognitive development whereby a girl's choice to play with male toys "makes" her a boy. The shift to feminine choices in later childhood occurs when the girl realizes that females have subtle advantages in the culture and she incorporates these advantages as values. The IT Test has been criticized for its susceptibility to social desirability, the influence of which could mask female sex role identification of girls in the early grades. The absence of D/E sex differences in the early school years might be attributed to the young child's inability to meet minimal verbal fluency requirements in the story-telling task. The increased verbal repertoire of children in the middle years might be necessary to produce the individual variations in D/E score that reflect sex role identification, even though the identification had existed several years before.

May's concept of gender identity, as measured by D/E, appears to be a hybrid of the traditional concepts of gender identity and sex role identification. To the extent that D/E would reflect

the person's experience of his or her own body, it is an inner "awareness of self." D/E also reflects socially acceptable roles in society, and to that extent it would be mediated by modelling and reinforcement processes. In this way, D/E could be considered an emotional correlate of identification.

In practice, May's own work suggests that the subject's level of satisfaction with that sex role designated by biological sex is more important than pure gender identity in predicting D/E scores. May (1970) predicted that homosexual males should relate more positive D/E stories than heterosexual males because "...of a more traditionally feminine role both in childhood experiences and in adult fantasy" of homosexual men. The hypothesis was supported. The homosexual group yielded the most positive score of any male group tested up to that point, with a mean score of +.71. Yet, one cannot conclude that the homosexual men in this sample lacked male self-categorization.

Furthermore, the conclusion does not seem warranted that those males in the 1969 study, who were classified as dissatisfied by the interview data, and who related the most negative D/E stories, had more intense male gender identity than the satisfied group. May did not describe those males who were "satisfied" as well-adjusted, which has been the implication so far in this discussion. Rather he referred to their lack of strain in being male as a "bland and flaccid acceptance of their gender and the social expectations that go with it" (May, 1969, p. 468). This placidity was then associated with a weak or intermediate D/E score. Presumably,

those males intermediate between "flaccid acceptance" and "conscious strain" are most representative of the male population, as are those females half-way between actively disliking the female role and total contentment with it. Still, the reasons why those males and females who are most incongruent with the sex roles assigned to them by biological sex should most clearly exhibit the D/E patterns predicted for their own sex remain unclear.

One should note in passing here that May's prediction of more positive D/E scores from the homosexual males than the heterosexual males supports the author's interpretation of the relationship between negative D/E and Icarianism. Homosexual tendencies are salient aspects of the Icarian personality, and should logically lead to greater negativity if the entire Icarian dynamic is applied to May's system. Hence, May's analogy to Icarus must be specifically limited to the rise-and-fall quality.

One further finding from the study with homosexual males is important in view of the approach taken here that positive and negative D/E patterns are models for a variety of subpatterns. A detailed analysis of the protocols focused on the sex of the hero. Stories were categorized into "she," "he" and "they" groups. Since only Picture A (the trapeze artists) was used, each subject had a choice between the male or female, or possibly a nebulous "they" hero. The positivity of the D/E score increased linearly with the femaleness of the hero, for all subject groups. The reason why the homosexual male group received significantly more positive D/E scores than heterosexual males was the greater

preponderance of "she" stories produced by that group, while heterosexual males wrote more stories with the male artist as the focus of attention. Also, heterosexual males wrote negative D/E stories to "they" stories, while homosexual males wrote positive D/E stories for nebulous heroes. A comparison of the mean D/E score for homosexual males and heterosexual males on each of these three groups of stories showed that the differences were not negligible. The mean D/E score for homosexuals when the hero was male was -2.00. When the story was classified in the nebulous hero group, the mean was +.71, and +1.80 when the hero was female. The same means for the heterosexual males were -3.14, -3.33 and +1.67, respectively.

The final study done by May (1970) was a construct validation experiment with samples of hospitalized hysterics and obsessive-compulsives, who wrote stories to Picture A and took the Embedded Figures Test (EFT) and the Block Design subtest of the Wechsler Adult Intelligence Scale as measures of field independence. May hypothesized that the hysterical subjects would produce more positive D/E scores because hysterical traits correspond to exaggerated stereotypes of feminine traits. The obsessive-compulsive traits emphasize the male stereotype. Almost all the obsessive-compulsive persons were males and the majority of hysterics were female. Although mean D/E scores were in the predicted direction, the variance was very large. The EFT also failed to differentiate the sexes. However, when the EFT scores (average number of seconds required to locate the figure in twelve complex designs) of males

and females divided into High and Low D/E score groups were compared, the results supported the predictions for field independence. Namely, those females scoring most positively on D/E were significantly more field dependent than females with low positive D/E scores (n = 12, n = 10, respectively). The results for men were in the opposite direction, as predicted. The results for Block Design performance were similar.

The final study in this section was based on theoretical predictions which this author has already argued are incorrect interpretations of May's position, yet the study contains some information which is useful in this paper. Fried (1972) administered Picture A (trapeze) to groups of diagnosed Icarian males (IM), non-Icarian males (NIM) and sadomasochistic females (SMF), and rescored their TAT protocols for D/E. He hypothesized that the IM group should produce the most negative D/E scores, since they were clear examples of the Icarian personality type. Less negative scores should be produced by NIM subjects and the SMF group should obtain positive D/E scores. In addition to scoring for D/E, Fried also assigned a separate score for Resurgence-Collapse (R-C). A detailed description of the R-C scoring system occurs in Appendix B. Briefly, R-C assigns an intense or mild score to the absolute ending of a story, since Fried believed that the specific occurrence of resurgence or collapse was the essence of what D/E was designed to measure. Fried hypothesized that SMF subjects should write stories receiving more Resurgence (R) scores and males should obtain more Collapse (C) scores.

The results showed that the female subjects did obtain the most positive D/E scores, while the IM and NIM groups either did not differ from each other, or the IM subjects received more positive scores. Occasionally, the difference between IM and NIM group means, for a given picture, was greater than that between males and females.

The individual picture patterns did not support May's predictions nearly as well as the overall means. Four of the standard TAT cards (4, 11, 13MF and 14) produced no D/E differences at all, while Pictures A (trapeze) and B (matador) were associated with the most clear-cut support of May's predictions. Both IM and SMF subjects received more C ratings than NIM males, and did not differ from each other, while IM males received the largest number of R scores. These R-C findings show that positive D/E scores do not automatically imply that resurgence is involved, nor do negative D/E scores imply collapse.

Fried concluded that D/E sex differences are too dependent on specific stimulus cards to be considered a general phenomenon. He pointed out that selection of subject samples to underscore factors that May considers basic to D/E did not magnify the D/E effect, nor did it overcome stimulus cue factors. Fried suggested that stimuli which elicit D/E have characteristics in common, such as danger and depression, and that they are "loaded" in favor of Icarian themes, such as the flying themes elicited by Picture A.

When D/E differences did occur, Fried proposed that they resulted from the alternation between the two complementary processes

of story-telling, the receptive and counteractive. These correspond to acceptance or inhibition of the emotion in a story, and can produce D/E differences because learned sex differences in empathic ability exist. A female is initially receptive of the dark, depressive mood of the stimulus. She is more willing to operate on an emotional level. Later in the story, the female comes to grips with the emotion and works through to a solution. This reversal from passive reception to active working is the counteractive phase. Since males learn to suppress feelings, they begin with the counteractive phase. Continuous exposure to the stimulus, however, compels them to recognize the depressing character of the situation, and the "unhappy" conclusion is devised. Fried suggested that fantasy is the same for both sexes, i.e., an alteration between reception and counteraction, and whichever tendency occurs first in a particular case ultimately yields to the other. The stimuli which elicit D/E focus on content areas where females are particularly receptive and males are not; hence, these pictures consistently differentiate the sexes by exerting control over which of the phases of fantasy production occurs first.

In sum, Fried's study supports May's thesis in an overall sense, but neither the D/E nor R-C analysis gave unqualified support to the predictions. Fried considered his data more damaging to May than this author is prone to do, because Fried relied heavily on the literal interpretation of May's analogies to Icarianism and masochism. Given the combination of characteristics found in true Icarian personalities, including homosexual tendencies,

Fried's result that IM subjects occasionally related more positive D/E stories than NIM males was quite in accord with May's study comparing homosexual and heterosexual males.

The stimulus card issue is an important one, and a chapter is devoted to it later. Whereas several studies have investigated the meaning of TAT cards, there have been no published studies on the nature of Pictures A and B. A factor analysis of these two pictures is part of a preliminary study to determine the semantic structure of the pictures used in this experiment, and will be discussed in the first section of the Results chapter. Maintaining control over the stimulus cues in the pictures, is a more realistic way of proceeding than denouncing D/E because it fails to overcome stimulus differences, as Fried (1972) suggested. Such generality is never found with psychological variables studied through the thematic medium. The author doubts if Fried would reduce all these measures to pseudo-variable status. Secondly, the criterion that picture cues be irrelevant to the variable is equivalent to demanding that changes in principle stimuli to which a subject responds have no effect on the dependent variables. This criterion is a stiff one for any branch of psychological research, and may well be an undesirable one.

STIMULUS CUES

Clear stimulus-correlated differences in fantasy patterns and relatively widely varying thematic baselines between pictures necessitates a full understanding of the stimuli used to elicit D/E patterns. Murstein (1963) suggested that the stimulus characteristics are by far the most important determinants of the response to a TAT card and this opinion is upheld by statements of other TAT investigators (Eron, Terry and Callahan, 1950; Dollin and Sakoda, 1962). Fortunately, attempts to scale the TAT stimulus cue values for differences in pull for a variety of need states, structural characteristics and emotional tones have been fairly successful, and illustrate that the TAT is quite amenable to standard scaling procedures. Given the large amount of story variance potentially controlled by stimulus cues (up to half, according to Murstein, 1963), such scaling attempts warrant constant use to avoid confounding of stimulus cues with other experimental manipulations.

The issue of scaling stimulus pull is complicated by interactions between card values and subject variables (Clark, 1952; Lubetsky, 1960). Two heavily researched examples of this interaction are relationships between stimulus pull and need state or motivational arousal (Epstein, 1961), and between stimulus

characteristics and sex of the subjects (McClelland, Atkinson, Clark and Lowell, 1953). In the final analysis, a TAT response can be considered a product of picture cues, subject variables and background characteristics, such as instruction set.

The kind of complexity inherent in these interactions can be exemplified by a brief discussion of the problems involved in a stimulus cue and sex of subject interaction. A long standing assumption in projective theory has been that picture characters which are similar to the subject in sex and age facilitate projection (Murray, 1943; Combs, 1946). Whereas this belief has not been proven false, it has undergone considerable sophistication and modification. Males have consistently illustrated greater projection to same-sexed than opposite-sex heroes (Murstein, 1963), but the reverse is not always true of women and depends considerably on the particular variable being measured. In the literature on need for achievement (nAch), for example, high scores have been obtained by women more readily when the scene included a male rather than a female (Veroff, Wilcox and Atkinson, 1953), even when the female character was depicted in an achievement-oriented scene. Evidence suggests that this result can be modified by the quality of the achievement scene and the education level of the female subject (Veroff, 1961). Part of the problem with assessing this issue is the large between-card differences in achievement cues even within the sexes, and the lack of precise knowledge of just how equivalent the parallel forms of some pictures are when the people depicted in them are the opposite sex.

Overall, studies of projection of both sexes to figures of both sexes shows that females often project more to male figures than to female figures, while males seldom show as much projection to female heroes. McIntyre (1954) used similarity of answers given to the Minnesota Multiphasic Personality Inventory for the self and for characters depicted in short films as an index of projection and found no evidence for greater projection onto same-sexed figures for either males or females. In a somewhat different design format, Silverstein (1959) corroborated McIntyre's findings. Both authors reported that a more important variable in determining the degree of projection exhibited by either sex was the similarity of the depicted scene to their everyday lives.

Both Lubetsky (1960) and DeCharms, Morrison, Reitman and McClelland (1955) reported that females exhibited greater projection to the male heroes than to the female heroines. Lubetsky noted that projection of female subjects remained constant regardless of the age of the male hero, whereas projection was negatively correlated with age when the heroine was the central character. In a study specifically of women's responses to the TAT, Eron (1953) found that the majority of stories written to cards depicting both a male and a female (notably TAT Cards 4 and 13MF), centered around the male figure. Two judges categorized each story for sex of the central character and found, with 94% agreement, that 26% of all stories written to Card 13MF centered on the female. Eron concluded that a list of apperceptive norms for female subjects may ignore story hero differences, while this is not true for

male subjects.

Perceptual prominence of male and female characters in pictures is conspicuously absent from discussions of hero choice. The female character in Card 13MF is not as perceptually salient as the male, while the female in Card 4 is more dominant than in 13MF, but still somewhat secondary. Eron's data does suggest that female subjects more often choose the female character when that character is prominent in the stimulus, but that they definitely do not "search out" a perceptually obscure female character and formulate their stories around her. Males may exhibit a similar behavior, which is overshadowed by the larger number of male-dominant TAT cards. This would mean that males are not more sex-specific in their choice of heroes, but merely responding to the dominant figure. An example of a TAT card which features a dominant female is Card 2, and the male themes for this picture suggest that the female character is the main figure in the stories, i.e., themes of conflict between educational aspirations and parental conflict are popular.

Whether or not sex differences are real in hero choice, there are replicated stimulus cue effects and stimulus cue X sex of subject interactions for measures of emotional quality. Emotional tone has been one measure of emotional quality, usually rated along a five-point continuum from very happy to very sad (Eron, Terry and Callahan, 1950; Eron, 1953). The ratings have been determined either directly, using ranking procedures and rating scale methods, or more indirectly through the kind of apperceptive norms associated

with each stimulus picture. The direct methods require subjects to make decisions concerning the properties of the cards themselves, and either to rank them on some dimension or rate them on the criterion of interest for relevance, direction and degree. The indirect approach assumes that the emotional tone of the stories told to each stimulus reflect the subject's perceptions of the stimulus cue characteristics, and relies on measures of the emotional tone obtained through judges' agreement in rating the stories on a relative scale of emotional level.

Results obtained using direct rating procedures suggest that subjects can agree quite unanimously on the objective nature of the stimulus characteristics, despite the wide range in ambiguity of the pictures (Bijou and Kenny, 1951). Correlations between rankings of males and females on a variety of objective dimensions range from +.75 (Bijou and Kenny, 1951) to +.96 (Newbigging, 1955).

Despite high similarity in ratings, significant sex differences have often been found in emotional tone of stories written to these same pictures (Eron, Terry and Callahan, 1950; Sarason and Sarason, 1958; Newbigging, 1955). All these studies report that females tell sadder stories than men. Sample or picture differences cannot account for the discrepancy between ratings and stories on emotional tone, because both measures have been taken with the same subjects (Newbigging, 1955).

Newbigging's results were obtained under instructions to tell "happy" stories. The response time for males increased as the happiness rating of the picture decreased, and males also showed

tendencies to avoid definite outcomes in their stories under the sadder stimulus conditions (see also Lindzey and Heinemann, 1955). These results suggest that males experienced greater difficulty with the more negative stimuli, and that females did not remove themselves from the nature of the stimulus to the degree that males did. Possible reasons for this difference include the hypothesis that females are more stimulus-bound than males, or that they are more willing to accept the negative emotional situation than males. Fried's (1972) reception-counteraction analysis of the story-telling process is congruent with the latter. The case for stimulus binding is supported by normative data on the TAT, since large samples of college men and women judged the stimuli to be sad and depressing. The sadder female protocols are more accurately reflecting the stimulus nature of the material.

The fact that males relate happier stories than females does not imply that the pictures rank differently for each sex, when the rankings are determined from story analysis. Table 1 illustrates the consistency in judgments of pictures, using both direct and indirect ranking methods. Only those stimuli which have demonstrated the capacity to elicit D/E are included in the table.

The nature of the agreement between the studies listed closely parallels intuitive logic. Stimuli judged least sad in several studies, for example, were the same stimuli which Lebo's subjects reported liking the most. Pictures judged least sad in the Eron, et al. (1950) study elicited stories with positive emotional tones in studies by Eron and Garfield (1948) and Eron (1953).

TABLE 1

Summary of Stimulus Cue Value Data

Stimuli	Studies		
Eliciting D/E:	Garfield and Eron (1948) (Indirect)	Eron, Terry and Callahan (1950) (Indirect)	Dollin and Sakoda (1962) (Direct)
1		One of the happiest cards for men. Intermediate for women.	
2		Intermediate on happiness for both sexes.	
3BM	Very sad stories. Very passive hero.	Very sad.	Very sad.
4	Greatest positive shift of any picture.	Member of the saddest group.	
13MF		Member of the saddest group. Negative stories by both sexes.	
14	Least unhappy stories.	Happiest picture.	
17BM		Very happy for both sexes. Females saw 17GF.	Happiest picture.
Not Eliciting D/E:			
11		Intermediate on happiness.	Intermediate.
16		Very happy.	

TABLE 1 (cont'd.)

Stimuli	Studies			
Eliciting D/E:	Lebo (1955) (Direct)	Bijou and Kenny (1953) (Direct)	Eron (1953) (Indirect) Emotional Tone	Outcome
1	High liking.	Low on ambiguity.	-1	+1
2	High liking.	Intermediate on ambiguity.	-1	+1
3BM	High dislike.	Intermediate-high on ambiguity.	-1	+1[a]
4	Intermediate.	Intermediate.	-1	+1
13MF	High dislike.	Intermediate.	-2	-2
14	High liking.	Low on ambiguity.	0,-1	+1
17BM	High liking.	Low on ambiguity.	0	+1
Not Eliciting D/E:				
11	Intermediate.	Highest on ambiguity.	-1	+2
16	Intermediate.	No information.[b]	+1	+1

[a] The stimulus used in Eron's study was 3GF.

[b] TAT Card 16 was not included in Bijou and Kenny's study. Evidence from other sources suggests that Card 16 is not ambiguous, although it is totally unstructured (Murstein, 1965).

The last column on the second page of Table 1 summarizes Eron's (1953) results for "emotional shift." Emotional tone ratings were obtained by a general rating of the whole story, but a separate rating was assigned to the outcome itself, and together these ratings were called "shift."

Emotional shift is a primitive D/E measure. The most common female pattern, as shown in the Table, was a shift from a slightly negatively toned story to a slightly positive outcome. Of the stimuli listed, only Card 13MF ends with strong negative affect. No data exist for males, since the Eron study was done with females only.

The difference in emotional tone of stories told by males and females suggests possible hypotheses concerning the nature of the D/E variable. If males tell happier stories than females do, even though both sexes agree on the objectively "sad" nature of the pictures, the differences in initial starting points of stories may account for the first half of D/E differences. Males begin with enhancement and females begin with deprivation.

The importance of reviewing studies on TAT card cues lies in their use as guidelines to assess the nature of stimuli eliciting D/E differences. Control of the cues is desirable not only as a technique for controlling variance in pull, but also to provide clues as to the nature of real life situations which may trigger D/E kinds of cognitive sequences.

The task at this point is to isolate similarities among the standard TAT cards which have elicited D/E differences. If such

similarities can be found, the trapeze and matador pictures should rate highly on the same salient dimensions, and perhaps even more highly to be commensurate with the degree of D/E differentiation of which they have proven capable. An attempt to find patterns in semantic meaning among pictures will be the focus of a preliminary study.

For high confidence to be placed in the patterns which might come out of this preliminary study, not only should the trapeze and matador pictures rate highly along the same dimensions as the TAT cards which have successfully elicited D/E differences, but stimuli with little power to elicit D/E should not rate highly. The problem with establishing discriminant validity in this case is the severely limited number of TAT cards which have been used in D/E studies.

The first step in accomplishing the task of assessing stimulus cues is a close examination of those TAT stimuli which have elicited the strongest patterns. Cards 1 and 3BM have been most differentiating, while Cards 2, 4, 14, 13MF and 17BM have elicited smaller pattern differences (Fried, 1972; Cramer and Bryson, 1973). The D/E differences in these cards is relative, so that the female mean to Card 13MF in Fried's data was almost at the zero point (+.27), while the male mean was strongly negative (-2.00 and -1.42 for the NIM and IM groups, respectively).

The studies in Table 1 provide some information on the semantic meaning of stimuli which have elicited D/E, for ratings of happiness, emotional tone, liking and ambiguity. The stimuli cover the entire

range of happiness-sadness and of liking, while most of them seem low on ambiguity. These studies strongly suggest, therefore, that the stimulus cards do not have to be liked (or disliked), nor do they have to be either happy or sad in order to elicit D/E differences. A study by Goldfried and Zax (1965), which was the most inclusive of all the experiments on stimulus cues, supported these conclusions. These authors used the entire set of TAT cards, except Card 16, and obtained subject ratings for each card on ten adjective dimensions. Male and female ratings were kept separate, but the patterns in the ratings were similar for each sex.

The objective ranking data on semantic dimensions from Goldfried and Zax' study and the others show that the stimuli from the TAT which have elicited D/E sex differences fall into distinct categories. The first group includes Cards 14 and 17BM. Both stimuli are pleasant, liked, and usually elicit positive or neutrally-toned stories from both sexes. Both cards elicit thema concerning power relationships with the world, success and failure, ambition and control over environmental forces.

The remaining cards in the "D/E TAT" ---Cards 1, 3BM, 4 and 13MF --- yield an impression of sadness. All four rate significantly on the same dimensions, although not in a uniform direction. These continua are aggressive-passive, impulsive-controlled and pleasant-unpleasant. Whereas Card 1 and 13MF and "impulsive," both 3BM and 4 receive "controlled" ratings. Cards 1 and 3BM are "passive," and Cards 4 and 13MF are "aggressive." This second group of stimuli appears to be quite sad in tone and to emphasize concerns with

personal aggressiveness and impulsiveness.

In sum, both sad and relatively less sad stimuli have elicited D/E differences, but all the stimuli seem concerned with issues of personal control or personal effectiveness in the world. The degree to which Pictures A (trapeze) and B (matador) can be meaningfully described by the same dimensions is an empirical question.

WITHIN PATTERN ANALYSES

The theoretical position espoused in the initial chapter of this paper is that the positive and negative D/E patterns are two model emotional chains which represent, to varying degrees, a larger number of possible emotional chains. Evidence supporting this viewpoint showed that meaningful within sex variations can be discerned (May, 1969). Interview material on sex role satisfaction differentiated the high negative scoring males from those who received scores closer to zero. The females in May's experiment who received the most positive scores related more themes of dislike of passivity, of resentment over the female role, and envy of men. Females who scored more moderately on D/E related themes in which the story characters were less concerned with sex roles and accepted societal expectations.

Although a dissatisfied female would seem to possess a very different kind of sex role attitude and belief about what her gender identity implies for her than the more satisfied female would, the data suggest that this difference is reflected only in relative amounts of positivity on the D/E scale. Actually, the number of deprivation and enhancement units is the only measure that has been scrutinized, so no information about other possible differences exists.

The basic characteristic which differentiated satisfied and dissatisfied females was their attitude toward passivity. The dissatisfied woman told themes in which she expressed dislike of having to wait for men to do things for her, while the satisfied female expressed a belief that there is a certain virtue in being passive, in accepting rather than initiating, and in not "getting worked up" over things.

The most likely candidate for measuring different beliefs about passivity is the PI, since the PI is that point in the story where the subject must make a decision about the character's role in mediating the outcome. The subject must decide whether the story hero will engage in some action to bring about the outcome, or if some event will befall the hero which automatically creates the outcome.

Attributions to personal causes imply that the impetus for behavior was generated from within the actor. Presumably the actor intended the behavior, and hence a unit relation occurs between the actor and the event with its consequences. From an observer's point of view, a unit relation often occurs because the person whom the event affected is assumed to deserve his fate (Heider, 1958). This unit relation was the foundation for the later elaboration of the "just world" hypothesis (Lerner, 1965), which may be defined as the belief that individuals deserve the events which befall them.

Of course, there are degrees of personal causality, in which relative amounts of responsibility can be assigned to personal and

environmental forces in producing effects in individual cases (Heider, 1958). Variables such as effort and luck can determine the nature of an attribution (Weiner, Frieze, Kukla, Reed, Rest and Rosenbaum, 1971), but Heider (1944) also suggested that individuals have "attributional styles" from which they consistently create certain causes to make sense of incoming information with the least amount of disturbance to their cognitive system. Kelley (1972) also suggested that immediate attributions are largely a function of the kind of attributions one has made in the past.

The importance of personal causation and just world beliefs in this paper is their utility in analyzing the proposed differences within the D/E pattern between females who are satisfied and dissatisfied with the female role, and the extent to which the female author may see herself (or the story hero) as instrumental in achieving the final state of enhancement.

PI's of satisfied and dissatisfied females are assumed to reflect differences in their attributional styles. When the thematic story begins on a note of deprivation and the hero engages in some personal act which causes enhancement, the author implies that (1) deprivation is an undesirable state, and (2) the hero can, and does, succeed in overcoming the negative affective state in favor of a more pleasant set of circumstances. The female who feels more comfortable with the traditional role should manifest her acceptance of passivity in her attributional style and her PI choice. She should relate more stories with heteronomous PI's, even though the emotional pattern of her story, like that of the dissatisfied female,

is still positive in D/E score.

The implications of the heteronomous PI for the author's attitudes about deprivation and enhancement differ from those of the autonomous PI. The hero who exhibits passivity in the face of deprivation accepts the deprived state, although not necessarily as inherently desirable or for masochistic reasons. A theme with a passive hero and a heteronomous PI leading to enhancement resembles the traditional female fairy tale. This story type is epitomized by the standard female "Cinderella syndrome," in which some lowly working girl is one day carried away by a prince charming (who just happened by). The state of initial deprivation is glorified by the assumption of just world. Those who endure are worthy of praise, proven by the simple fact that a highly beneficial chance event has befallen them. The central character in heteronomous D/E stories is passive, awaiting the whims of the peripatetic prince, and is rewarded for the acceptance of the deprivation which made it all possible.

Two different D/E patterns, then, are proposed to exist in the female population. The pattern where deprivation is terminated by a personally caused PI is proposed to characterize the female who is dissatisfied with traditional female passivity, and a positive D/E pattern with a heteronomous PI is characteristic of women who find the female role more acceptable.

A measure for assessing sex role satisfaction will be used that is based directly on the dimensions which May (1969) used to describe dissatisfied males and females. The dissatisfied males focused on

their dislike of the pressure to succeed, while females emphasized resentment of the passivity expected of them. The questionnaire used in the present study is included as part of Appendix C, and is labelled as P7. A detailed presentation of the scoring system appears in Appendix B.

Applying this analysis of PI differences to the male pattern yields a less clear cut distinction between personally caused and heteronomous PI's. According to just world, the occurrence of a chance event leading to deprivation implies that the hero was deserving of downfall, because of a fatal character flaw or perhaps a sin of omission. A personally caused PI leading to downfall ultimately implies the same unworthiness, although the nature of the flaw would probably be ignorance of the facts, a flaw in logic or mental derangement.

Since the PI itself has not been studied in previous experiments, the feasibility of scoring D/E stories for personal and heteronomous causality was determined by reviewing pilot data on D/E and classifying the PI's into personally caused, heteronomous and doubtful categories. The majority of PI's were clearly classifiable. Examples of the autonomous and heteronomous PI's obtained from this analysis appear in Appendix B. This list was used to aid the raters in the main study in understanding the nature of personal and heteronomous PI's, but more emphasis was placed on rating the entire story than on blanket scoring of the PI's according to the list. Raters assigned an Autonomous-Heteronomous (A-H) score to each story in the main study, according to the scoring

system described in Appendix B.

The downfall of the hero in a negative D/E story suggests that males are dealing with a certain kind of deprivation in their protocols, more of a "trait deprivation," which will be defined as the attribution of causality for the downfall to some inherent flaw in the hero himself. Females seem to be describing what ultimately proves to be "state deprivation," which is situational and overcome either through personal or heteronomous causation. To make a positive D/E sequence meaningful, the initial deprivation experienced by the hero must be temporary and not due to any dispositional source. Hence, the story author maintains hope that the future will improve because the hero possesses the inner capacity to elevate himself or herself to enhancement, or because the hero is worthy of the heteronomous event promised for inner goodness.

Attribution of trait versus state deprivation is crucial in understanding one hypothesis for the sex difference in D/E scores. Dispositional attribution most clearly enables the subject to dissociate himself or herself from the actor, while state deprivation does not imply a necessary distinction between self and other. This is a restatement of the defensive attribution hypothesis (Walster, 1966), where the observer of another's fate can either assure himself that the same will not happen to him because the other had some personal trait which caused the bad luck or made him worthy of the bad outcome, or the observer can convince himself that similar good luck may be his any minute because he and the recipient of the good luck are very much alike. Ultimately, then, both the

positive and negative D/E patterns reflect the story author's desires for the future to be an improvement over the present, although they are very different ways of expressing this feeling.

In order for attributional events to explain sex differences in D/E scores, a sex difference must exist in the degree to which the story author assumes similarity between himself and the story hero. Since the story hero is a static figure in a picture, there is very little objective evidence for assuming either similarity or dissimilarity. The subject's attributions, then, are basically projections of the self.

Evidence exists showing that females assume greater similarity, i.e., project more, to the picture characters than males do, and indirect evidence also exists that females either perceive less trait deprivation than males do, or are less ready to admit it. Women, for example, have been reported to assume greater similarity to others than males, as measured by the degree of parallelism between "self" ratings and "other" ratings, to describe others more favorably, and to differentiate less among significant others than males do (Smith, 1963; Kohn and Fiedler, 1961; Shapiro and Tagiuri, 1959). In the Kohn and Fiedler study, males were more willing to express strong negative affect towards others and saw themselves as quite unlike others on the Construct Repertory Test.

In thematic studies, several projection indices suggest that females do become more involved in the procedure of telling stories (Murstein, 1963). Females produce consistently higher output in terms of story length (Lindzey and Silverman, 1959; Sanford, 1943;

Lindzey and Goldberg, 1953), and obtain higher scores on indices which depend indirectly on verbosity, such as the Transcendence Index (TI) (Weisskopf, 1950; Prola, 1972). Although verbal fluency is undoubtedly a looming factor in TI scores, high scores also reflect egocentric perception and the assumption that the situation is the same for the other as for the self, and a greater consequent willingness to attribute emotion and cognition to the other.

OVERVIEW AND THE PILOT STUDY

A total of three studies were conducted that relate to the theoretical ideas that have been presented. First, a pilot study was run, for three purposes: to give the author practice in scoring TAT protocols for D/E, to replicate the sex difference found in past research, and to explore the possibility that pictures emphasizing male-female relationships might increase the sex difference in D/E scores. This prediction was made because opposite-sex relationships constitute one area where a person is made very aware of his or her own sex. Using pictures in which these relationships are salient may be one way to elicit "male" and "female" ways of feeling and reacting. The results of the pilot study will be discussed shortly.

The second study was a factor analytic study, conducted eight months later. This study was concerned with the semantic meaning of a large pool of pictures of potential use in the main D/E study. The semantic differential ratings obtained in this experiment were examined to help select the pictures used in the main study, and to provide information about the meaning of pictures that have been used in previous D/E work. The method for the factor analytic study is included in the Method chapter, and the results are reported in the first section of the Results chapter.

The main study directly tests a group of hypotheses concerning the effects of instructions, sex role dissatisfaction and the subject's assumed similarity between himself and the picture hero on D/E scores, R-C scores (Resurgence-Collapse), and the PI's. The detailed description of the method for the main study appears in the Method chapter. Briefly, subjects wrote stories to four thematic pictures, rated the pictures on similarity to self, and filled out a sex role questionnaire. Ratings of similarity were used because past attempts to control investment of self by men and women in picture heroes by using same-sex figures have not always been successful. Thus, subjects were asked to judge each picture on similarity to self. Hypotheses concerning similarity deal only with the stories written to the pictures judged as "most" and "least" similar to the self.

The pilot study. In the Spring of 1973, forty-seven undergraduate volunteers at Michigan State University wrote TAT stories to a set of six thematic pictures, including May's Pictures A (trapeze) and B (bullfighter), and four other pictures chosen for this study. These pictures are coded E-H in the Appendix. The pictures were collated in several random orders, with story sheets interspersed between them. Instructions followed the procedure outlined by McClelland, Atkinson, Clark and Lowell (1953).

Protocols were scored for D/E and later rescored for R-C. Mean D/E scores for males and females for each picture are given in Table 2. The mean D/E scores from May (1966, 1969) on Pictures A and B are included for comparison.

Table 2

Mean D/E Scores for Pilot Study
With Comparable Means from May (1966, 1969)

Sex	Stimuli						May Studies	
	A	B	E	F	G	H	(college)	(noncollege)
Males	+ .76	+ .71	+1.55	+ .41	- .55	- .35	-1.17	-2.25
Females	+ .16	+ .59	+1.08	+1.62	-1.04	+ .52	+ .40	+ .89

The pilot study did not support May's earlier findings, either over all pictures or for individual pictures. Only Pictures F and H elicited even a trend in the predicted direction. Also, the hypothesis that D/E sex differences would be increased by direct reference to male-female relationships was not supported.

The mean age of the males in the pilot study was 21.9 years and the mean female age was 20.0 years, both equal to May (1969). The only factors which made the pilot study procedure different from earlier work were the inclusion of additional pictures and the instruction set. May instructed his subjects, in both the 1966 and 1969 study, to write stories which "are as dramatic and psychologically meaningful" as possible.

The effect of dramatic instructions might well be to establish an extremity response set in the subjects. If so, the D/E differences which May found were apparent only because the subjects were asked to invest effort in the creation of a special sequence of events, and would not necessarily appear when such a response set is not evoked. Thus, one logical hypothesis for the lack of support in the pilot study for May's predictions is the change from dramatic to control instructions.

The hypothesis that D/E differences are created in part by the instruction set is supported by the fact that the major problem with the pilot data was the large number of very bland, actionless stories. Many of these protocols were difficult to score, just because of the absence of a clear cut PI. Instructions to be dramatic may serve to enhance D/E differences because they yield

a higher percentage of scorable stories with definite PI's and outcomes rather than through the content of the instruction set *per se*.

The blandness of the protocols was also a major problem when the stories were rescored for Resurgence-Collapse (R-C), according to Fried (1972). A very large number of stories obtained "0" ratings, one hundred and eight out of two hundred and eighty-two. Seventy-five stories were not scored for R-C at all because of a lack of story ending or a very ambiguous ending. Thus, the pilot data cannot provide much information about the relative value of D/E and R-C scoring systems, except to illustrate most emphatically that the task of scoring either D/E or R-C is most difficult when the protocols lack dramatic action. This conclusion maximizes the crucial nature of the instruction set.

Further evidence for the importance of the instruction set comes from the fact that sex differences in D/E, under dramatic instructions, are consistent with the finding that females tell sadder stories than males. May (1966) had found that females told significantly more pre-PI deprivation units than males, and males told more pre-PI enhancement units than females. At that time, this fact was used to argue against the hypothesis that D/E scores reflected general attitudes of optimism or pessimism. However, since the PI usually occurs toward the end of a protocol, the emotional tone sex differences are congruent with the pre-PI units difference. This occurs since the major portion of the protocol is prior to the PI, and this same portion contributes the most to an overall rating

of emotional tone.

The first hypothesis of the present study is based on the idea that D/E sex differences and emotional tone differences are identical, and the post-PI reversal in emotion is the subject's attempt to conform to a dramatic instruction set. If a subject initiates a story with deprivation, enhancement is the only ending which satisfies the instructions, and the same is true of a story which begins on a note of enhancement. The hypothesis is made even more plausible by the lack of support for D/E differences in the pilot study, where stories were obtained under control instructions. This hypothesis basically questions whether the appropriate unit for study is the entire pattern or the emotional starting points of males and females. If the hypothesis presented here is supported by finding significant sex differences in D/E only under dramatic instructions, then the sex difference to be studied is the initial perception of the picture, and the rest of the D/E pattern is artifact.

THE MAIN STUDY

Statement of the problem. The hypotheses of the main study address three different issues. The mechanical explanation of D/E differences focuses on the initial perception of the stimulus card and the accompanying demand from the instruction set to write dramatic stories. This hypothesis implies that the D/E variable is best studied by separating it into components, pre-PI and post-PI, and dealing with each as a relatively self-contained unit.

The second hypothesis assumes that D/E is a pattern which must be studied as a whole. Here, differences in D/E scores are hypothesized to reflect variations in the subject's identification with the hero, and conversely, the degree to which the subject might actively disengage himself or herself from the picture character. Assumed similarity to the self was proposed as a measurable indicator of this process.

The third issue concerns the subject's feelings about his or her own sex role and the relationship between these feelings and the type of events chosen to mediate stories. May (1966, 1969) suggested that females learn to be passive and introspective because they learn that suppressing themselves leads to reward. Further, females who are unhappy with the female role resent the passivity expected of them. This belief in passivity or activity should be

reflected in the nature of the PI, independent of D/E score, since the story author should posit a sequence for the story hero that reflects the way she views the world. Hence, a female who feels comfortable with the passivity should write stories wherein the hero is passive, and the events which occur are heteronomous, or externally-caused.

The highly dissatisfied females, who by definition are rejecting the traditional female self-inhibition and are more emphatic about personal activity, should mediate their stories with personally caused PI's.

Hypotheses. The specific hypotheses of the present experiment can be stated as follows:

1. The sexes will differ in their initial perceptions of the stimulus. Females will write stories with significantly more deprivation units and significantly fewer enhancement units prior to the PI than will males. This prediction is based on emotional tone differences found in earlier work, and on May's (1966) work reporting similar findings.

2. Initial perceptions of males and females will interact with instructions to yield the D/E sex differences. Specifically, significant sex differences in D/E will exist only when subjects are given dramatic instructions and not with control instructions, where subjects are asked just to write stories. This hypothesis is based on the absence of sex differences in the pilot data, and the proposition that dramatic instructions are a demand characteristic that produces the reversal in emotion after the PI.

3. In addition to D/E sex differences under dramatic instructions, Resurgence-Collapse (R-C) will distinguish the sexes, so that females will obtain significantly more R scores than males and males more C scores.

4. Dissatisfaction with sex role, as measured by a sex role dissatisfaction questionnaire, will be positively related to extremeness in D/E score. Dissatisfied males will relate the most negative D/E scores, and dissatisfied females the most positive. This prediction is based on May (1969), who found a linear relationship between dissatisfaction and extreme D/E scores. May argued that the more extreme D/E scores reflected overcompensation of the dissatisfied individuals.

5. Females receiving mean D/E scores above the median female score should produce a significantly greater number of personally caused PI's than females with D/E scores below the median. The latter group should produce more heteronomous PI's. This hypothesis is based on the proposition that the positive D/E pattern can be meaningfully subdivided to represent two groups of females on sex role attitudes, and that the PI is a logical variable to reflect these differences.

6. Both sexes will relate positive D/E stories for those stimuli judged most similar to the self. This prediction is based on the assumption that the subject will project his or her own wishes and desires onto the picture hero, when the stimulus is rated as highly similar to the subject. Hence, the picture hero will be ultimately successful and will overcome the present difficulties.

According to this hypothesis, a positive or negative D/E score is not sex-related, except insofar as females assume greater similarity between themselves and others than males do.

Males will relate less positive D/E stories, or negative D/E stories, to pictures they judge as being least similar to themselves. This prediction is based on the proposition that the mechanism underlying negative D/E stories is dissociation of the self from the picture hero. The evidence reviewed in an earlier section suggested that males are more likely to dissociate themselves from others than females are.

Females are expected to relate positive stories to all pictures. Since females have a strong tendency to assume similarity between themselves and others, the level of dissimilarity occurring for females on the pictures they judge as least similar to themselves may not be strong enough to produce negative D/E stories.

METHOD

Stimulus cue study. A preliminary study on the semantic structure of some thematic pictures was conducted to determine the meaning of pictures which have been used in past D/E studies and to help select pictures for the main study. A group of fourteen TAT cards were included in the picture pool, along with May's Pictures A and B, and those used in the pilot study (Pictures E, F, G and H). The following criteria were used in deleting TAT pictures from the original set. The reader may wish to refer to verbal descriptions of the TAT pictures, in Appendix A.

Criteria for Deleting Stimuli

1. Pictures without readily identifiable human figures were deleted. This criterion eliminated Cards 11, 12BG, 16 and 19.

2. Pictures designed for use with children were deleted, including 13B and 13G.

3. Cards which were especially unrealistic were omitted, including 8BM and 18BM.

4. Several TAT pictures have male and female counterparts. Only one of each pair was included. Since the male cards have been used in the past research, Cards 3GF, 6GF, 7GF, 9GF 12F, 17GF and 18GF were eliminated. Card 8GF was included in the pool because 8BM was eliminated under Criterion 3.

A procedure similar to that employed by Goldfried and Zax (1965) was used. Twenty-five males and twenty-five females rated each of

the twenty stimuli on ten adjective dimensions taken from Osgood, Suci and Tannenbaum (1957). Four of the adjective dimensions were evaluative, three represented the activity factor and three the potency factor. The evaluation adjectives were: accepting-rejecting, happy-sad, pleasant-unpleasant, and hopeful-hopeless. The activity dimensions were active-passive, impulsive-controlled and excitable-calm, and the potency dimensions were dependent-independent, safe-dangerous and lenient-severe.

Each subject had a booklet containing twenty sheets with a randomized order of the ten adjective dimensions on each sheet, and a folder containing the twenty pictures. All subjects viewed the range of pictures before beginning the rating task, and the order of pictures was shuffled after each subject. The subject's task was to place the identification number of each picture at the top of the rating sheet and then to make all ten ratings for each picture. The ratings were made on a seven-point scale. A copy of the rating sheet can be found in Appendix C(P12).

The data to be analyzed consisted of ten ratings made by each of fifty subjects on each of twenty pictures, totalling two hundred ratings for each subject. Since the purpose of the preliminary study was to obtain the factor structure for individual pictures, especially for Pictures A and B, a separate factor analysis was done on the ratings of each picture. A principle axis solution was used, followed by a varimax rotation of exactly three factors. Three factors were rotated rather than setting an eigenvalue threshold because the three factors of evaluation, potency and activity were expected to

appear in the ratings. The results of the factor analyses are presented in the Results chapter.

Overview of the method of the main study. In order to test the main hypotheses, a 2 x 3 x 2 factor experiment was conducted using two levels of instructions, three experimental procedures and both sexes in each instruction X procedure combination. Half of the subjects wrote D/E stories under instructions used by May (1966), to be as "dramatic and psychologically meaningful as you can." The rest of the subjects received control instructions, which were identical to the dramatic instructions except that no statement about the manner of writing stories was included.

Three different procedures insured that any effects on the dependent variables of the order of writing stories and rating the pictures on similarity to self could be assessed. In one procedure, subjects wrote stories and then rated the pictures on similarity to self. This was called the Story-Rate group. The second procedure, Rate-Story, reversed these two phases of the study and subjects rated the pictures on similarity to self before writing their stories. The third procedure involved writing stories without rating, the Story-Only condition. All subjects filled out the sex role dissatisfaction questionnaire at the end of their respective procedures. It should be noted that, at the point of writing the stories, both the Story-Rate and Story-Only subjects who were given dramatic instructions provided a replication of May's earlier procedures.

Four stimuli were selected for use in the main study, according to the following criteria. (1) Only pictures which have previously

elicited D/E sex differences, to some degree, were considered. This criterion insured a basic comparability between the present study and past work. Whereas the factor analytic results of other pictures can be used in the future to help determine the important stimulus characteristics for eliciting D/E differences, this kind of research question necessitates a separate study. (2) Stimuli were selected which represent the range of evaluative adjective dimensions, and which also show a range on impulsivity-control and dependence-independence. This criterion was developed out of the review of semantic ratings of TAT pictures presented in the stimulus cue chapter. This review illustrated that the pleasantness of the stimuli was not crucial to D/E, and that the power and activity dimensions did seem relevant, but the pictures used in past studies have varied along these dimensions. (3) After pictures which fit the above criteria were identified, several were omitted from further consideration by their highly situational nature. Examples of this kind of picture were TAT Cards 9BM (men sleeping in a field) and 13MF (man standing and covering eyes, and woman in bed). Although all the pictures are situational to some degree, an attempt was made to select those for which the subjects could readily identify some personality traits in the rating task.

The four pictures that were selected from the pool were May's Pictures A (trapeze) and B (matador), Picture H (couple gazing into each other's eyes) and Card 3BM (huddled figure). The first three are included in Appendix A. Four pictures were chosen because several experiments have shown that four pictures are optimal for measuring

different kinds of thematic variables, such as need for Achievement (nAch), or affiliative tendencies (Reitman and Atkinson, 1958). Murstein (1963) summarized the issue of the optimal number of cards by saying that a lengthy TAT in research studies probably defeats its purpose by mitigating the subject differences through factors such as fatigue.

Of course, D/E may not behave like nAch since D/E is not scored by the mere addition of the number of references in a protocol, nor is D/E conceived of as being a drive. However, previous D/E studies have not demonstrated any optimal number of cards. The number of stories written has ranged from two (May, 1971) to eight (Fried, 1972). Four pictures were used in this study so that more than just May's two pictures could be used, for comparison purposes, but more than four did not seem necessary. To test the possible effect of number of stories on D/E score, a separate study would have to be designed. Four counterbalanced orders were used in this study to control for possible position effects. The four orders were as follows, and were randomly assigned within each experimental condition.

1. A, B, H, 3BM
2. B, A, 3BM, H
3. H, 3BM, A, B
4. 3BM, H, B, A

Two subjects in each of the twelve experimental cells wrote stories in each order, and the two remaining subjects in each cell were assigned randomly to one of the orders. There were ten subjects in each of the twelve cells, and three-to-four subjects were run in an experimental session.

Subjects

Sixty males and sixty females enrolled in introductory courses in psychology at Michigan State University volunteered for the experiment entitled, "Personality Expression." All subjects received two experimental half-credits for participation.

Apparatus

The experiment was conducted in a 9'x12' room equipped with two tables and four chairs. Each subject was provided with a set of instruction sheets and a folder containing the four pictures, an order sheet listing one of the four counterbalanced orders, and a stapled booklet of four story sheets. The set of instructions was comprised of a series of pages which guided each subject through his randomly assigned procedure in a step-by-step fashion. The procedure section below will describe the Story-Rate group in detail. The first seven instruction sheets in Appendix C constitute the instruction set for this group (with dramatic instructions). The eighth sheet in the Appendix is an example of the story sheets for writing the protocols, and number nine is an order sheet. The remaining pages in the Appendix were used for other experimental cells to make the step-by-step procedure move smoothly. For all subjects, the first page (P1) of the instruction set was a general introductory comment.

Procedure

After reading P1, the Story-Rate subjects moved immediately to P2, looked at all the stimulus materials, and arranged the pictures according to the order sheet in the folder. Subjects then read P3,

which described the procedure for writing stories. The experimenter (E) reiterated the important aspects of the story-telling task, such as writing a whole continuous story for each picture, including a statement of the outcome, and when appropriate, writing very dramatic stories. (In the control instruction groups, no statement was made of the nature of the stories to be written.) When all subjects indicated that they understood the story-writing procedure, they looked at the picture on top for twenty seconds and then turned it face-down on the table and began writing their story on the first of the four stapled story sheets. The E watched the time for the subjects, indicating when five of the six allotted minutes had elapsed. This procedure continued until all four stories were written. Subjects were asked to place their booklets back into the folder and to move on to their next instruction sheet.

The next sheet (P4) was the first of three pages that comprised the similarity to self rating task. Subjects were asked to take the four pictures and study them, asking what personality characteristics were being exhibited by the individuals in the pictures. The subjects were not asked to write their impressions, but only to get an idea firmly in mind for at least one of the people in all four pictures. After doing this, subjects moved on to P5. They selected the picture containing an individual who was "most" like them, and placed the code letter for that picture on the first line at the bottom of P5. From the remaining three pictures, they selected the one they felt was "least" like them and placed its code letter on the last line. Then, they placed the code letter of the picture they

considered to be more like them of the remaining two pictures on the second line, and the code of the last picture on the third line.

The order of the pictures from P5 was copied on P6. Then the subjects were asked to estimate just how similar or dissimilar to themselves these pictures really were. P6 contained four Likert scales, ranging from "1" to "9." The extremes were labelled "very unlike me" to "very much like me." Subjects were asked to rate each picture on a separate scale.

After P6 was completed, the E asked all subjects to place all the materials in the folder except for the last page of their instruction set (the sex role questionnaire). E explained that the purpose of the questionnaire was to obtain information about what being male or female is like in this society. Subjects were asked to answer the questions in whatever way best expressed how they really felt, and were asked not to answer any questions with just one word but to elaborate on their feelings. Subjects were allowed to complete the questionnaire at their own pace, and were encouraged to ask if they were unsure at any time about the meaning of the questions. After the questionnaire was filled out, subjects placed all materials inside the folder, and any questions were answered.

For subjects in the Rate-Story groups, P10 followed the general introductory comment. P10 is identical to P4, in that both sheets instruct the subject to study each picture and make a judgment concerning the personality traits being exhibited there, except that P110 also includes information about the contents of the folder. This information had been given to Story-Rate subjects on the second

instruction sheet, when they were asked to open the folder and arrange the pictures in the order for writing stories. The different sheets were necessary to guarantee that all subjects had the information they needed at the appropriate time. P11 was inserted between the similarity to self judgment task and the story-telling task. The Story-Only subjects moved directly to the sex role dissatisfaction questionnaire after finishing the story-writing task.

After the experimental session, the folders were opened and the instruction pages were separated from the rest of the materials and prepared for the next experimental group. All the sheets completed by a subject were given a common number. After all subjects were run, the story sheets were unstapled, randomly sorted and distributed to the raters.

RESULTS

Factor analysis of the picture ratings. Separate factor analyses were performed on the ratings for each of the twenty stimuli and three factors were rotated using the varimax method. The complete set of rotated factor structures for the pictures used in the D/E study are presented in Table 3. The factor structures of the remaining sixteen pictures appears as Table 20 in Appendix D. The actual mean ratings obtained on each of the adjective dimensions for each picture are also included as Table 21 in Appendix D. A rating of "4" in Table 21 indicates neutrality or irrelevance of the adjective pair. A rating below "4" indicates that the picture was more often described by the adjective on the left-hand side of the bipolar pair. A rating above "4" indicates the opposite. An asterisk (*) marks the factor with the highest loading.

The most striking feature of the factor structures of Pictures A and B (May's trapeze and bullfighter pictures) is the high similarity in the direction of their loadings. The only adjective dimension which is reversed in direction is "dependence-independence." Both stimuli were rated as happy, hopeful and pleasant on the evaluative factor, and as dangerous, controlled, excitable and active.

Picture H differed from Pictures A and B on the "safe-dangerous" and "impulsive-controlled" continua. Picture H was rated as safe

TABLE 3

Factor Structure of Stimuli Selected for D/E Study

Semantic Differential Factors	Adjective Dimensions	Stimuli A I	A II	A III	B I	B II	B III
Evaluation	accepting-rejecting	.5782*	.3016	-.2205	.6627*	.2809	.0545
	happy-sad	.8340*	.1232	.2279	.9035*	-.1112	.0412
	hopeful-hopeless	.6616*	-.3322	.1019	.7854*	-.0653	-.0149
	pleasant-unpleasant	.7481*	.3304	-.0834	.6290*	.2141	.0395
Potency	dependent-independent	.1131	-.4565	-.5372*	-.0345	-.1261	-.6967*
	safe-dangerous	.0769	.6169*	.0592	.1805	.2423*	.1113
	lenient-severe	.0594	.6927*	-.2926	.2951	.2046	.5369*
Activity	active-passive	.6490*	-.3450	-.0442	.0853	-.3675	-.6049*
	impulsive-controlled	.0589	-.0386	.5491*	-.0602	-.6465*	.0205
	excitable-calm	.0380	-.6537*	-.2721	-.0065	-.6960	-.1246
	Proportion of variance:	.3571	.2802	.1259	.3390	.1829	.1659

TABLE 3 (cont'd.)

Semantic Differential Factors	Adjective Dimensions	Stimuli H I	H II	H III	3BM I	3BM II	3BM III
Evaluation	accepting-rejecting	.8823*	.0807	-.0728	.5578*	-.1931	.3279
	happy-sad	.8302*	-.0981	.2952	.8203*	-.1029	-.3149
	hopeful-hopeless	.2965	-.2548	.7191*	.8903*	-.0322	-.1687
	pleasant-unpleasant	.8534*	-.1293	.3054	.8380*	-.3165	.1564
Potency	dependent-independent	.0907	.0322	.6167*	-.0501	.0721	.7121*
	safe-dangerous	.5710*	.0309	.0830	.5499	-.6276*	.0625
	lenient-severe	.1179	.6610*	-.2449	.3026	-.7622*	-.0351
Activity	active-passive	.3678	-.7158*	-.2697	.0991	.7799*	.0907
	impulsive-controlled	.1119	-.6284	.2878	-.5891*	.4370	-.0724
	excitable-calm	-.1017	-.7230	-.0729	-.3532	.7610*	-.0127
	Proportion of variance:	.3467	.2443	.1629	.4034	.3013	.0944

and impulsive, and dependent (like Picture A). Including Picture H in the D/E study provided a mild test of Fried's hypothesis that danger is one of the most important characteristics of thematic stimuli capable of eliciting D/E. This test was weakened by the fact that the "impulsive-controlled" dimension also differentiated Picture H from Pictures A and B. None of the other stimuli in the picture pool were identical to A and B except for the "safe-dangerous" dimension.

Card 3BM differed from Pictures A and B in two ways. First, the evaluative ratings were uniformly in the opposite direction from those of A and B, toward rejecting, sad, hopeless and unpleasant ratings. Card 3BM was also described as impulsive rather than controlled. The factor structure found for Card 3BM was totally consistent with that reported by Goldfried and Zax (1965).

In sum, all four pictures were described as excitable and active, and they grouped into different combinations on the other adjective dimensions. Pictures A, B and H were rated positively on evaluation, while 3BM was described as sad and hopeless. Pictures A, B and 3BM were all considered dangerous and severe. Picture H was considered safe. Finally, Pictures H and 3BM were similar in that both were described as impulsive, while Pictures A and B were controlled.

Results from the main study. The three raters scored all protocols independently. Correlations between raters on D/E scores and R-C scores were based on random samples of one hundred stories each. The percentage of perfect agreement between raters was determined

for Autonomy-Heteronomy (A-H) scores. The results are presented in Table 4. After all protocols were scored by each rater, agreement sessions were held to settle disagreements before the data analysis was begun.

TABLE 4

Rater Reliability/Agreement
For All Story Measures

Measures	Raters		
	R_2	R_3	
D/E	.88	.89	R_1
R-C	.88	.94	
A-H	.91	.95	
D/E		.83	R_2
R-C		.89	
A-H		.91	

All three raters agreed that 95% of the stories were scorable. The independent decision of a rater that a certain story was unscorable, however, was often not supported by the other raters. Consequently, the consensus on unscorability of the remaining 5% was only about 40%. Phi coefficients were calculated to determine agreement on scorability and the correlations for each pair of raters was as follows: $r_{12}=.34$, $r_{13}=.53$, $r_{23}=.48$. After the agreement sessions, a total of sixteen stories were considered unscorable and the mean score of each of these subject's other three stories was assigned to replace the missing value. The sixteen unscorable stories comprised 3.3% of the total story pool. Four subjects were

replaced because two or more of their stories were unscorable.

In the results that follow, multivariate analyses of variance were often performed, but the F values that are reported are the univariate statistics after an overall multivariate F value with a probability of .05 or less was found. This is always true, unless an a priori prediction was made concerning a specific comparison.

Story length. Females wrote significantly longer stories than males for each of the four pictures. The mean number of words for each picture is given in Table 5. When story length was

TABLE 5

Mean Story Length (Words)
For Each Picture

	Pictures				
Sex	A*	B	H	3BM	Overall Mean**
Males	106	110	105	109	107
Females	122	121	127	123	123

*Tests for sex differences on each picture are as follows:
Picture A: F=10.08, 1 and 108 df, p<.001.
B: F=4.48, 1 and 108 df, p<.03.
H: F=21.32, 1 and 108 df, p<.0001.
3BM: F=7.31, 1 and 108 df, p<.007.

**t=7.00, p<.001.

correlated with D/E score, however, no significance was found. Rank order correlations were computed for each sex and each picture, and are presented in Table 6. Since both R-C and A-H scores depend on qualitative aspects of the protocols, they are independent of story length.

TABLE 6

Correlations Between Story Length and D/E Score

	Pictures				
Sex	A	B	H	3BM	Mean
Males	+.12	+.03	-.13	+.03	+.01
Females	+.04	+.18	+.04	-.13	+.03
Mean	+.08	+.10	-.05	-.05	

Picture effects. Within each treatment condition (instructions X procedure X sex), subjects were randomly assigned to write stories in one of the four counterbalanced orders. A sex X order multivariate analysis was performed on the D/E scores for each picture and on the D/E scores summed across pictures. The separate test on each picture would reveal whether any systematic differences occurred in D/E score for a specific picture as a result of when that story was written. The analysis of the summed D/E scores was a test of the overall order effect. There were no significant findings.

A sex X pictures repeated measures analysis of variance was also done on the D/E scores to assess any picture effects irrespective of order. No significance was found.

Effects of procedure. Subjects were run in one of three procedures so that the effects of the rating task and story-writing on each other could be assessed. The three procedures were Story-Rate, Rate-Story and Story-Only. Multivariate analyses were performed on the D/E and R-C scores and on the A-H classification of the PI, for the effects of procedure. No significance was found. Also, the effect

of procedure on the D/E scores of the "most" and "least" similar stories was tested, as well as any effect on the similarity ratings themselves. Again, no significance was found. In the results that follow, procedure is omitted from further consideration.

Results for hypothesis 1. The first hypothesis predicted that stories written by females would contain significantly more deprivation units prior to the pivotal incident (PI) than stories written by males, and also fewer enhancement units prior to the PI. Both hypotheses were supported. The mean number of pre-PI deprivation units for females was 2.91, and 1.86 for males ($t=3.00$, $p<.001$), using a one-tailed t-test. The mean number of enhancement units prior to the PI was 2.35 for females, and 3.56 for males ($t=3.40$, $p<.001$). Thus, the males and females in this study did differ in their emotional starting points when writing stories.

Results for hypothesis 2. The second prediction stated that a significant sex difference in D/E scores would be found, such that females would tell significantly more positive D/E stories than males. This sex difference was hypothesized to occur in those experimental cells replicating the procedure used in former studies, i.e., the Story-Rate and Story-Only groups with dramatic instructions. Subjects in the Story-Rate and Story-Only groups receiving control instructions were expected to show no significant sex differences.

Table 7 presents the means for this specific comparison, with $n=24$. An instructions X sex multivariate analysis was performed on the D/E scores for each picture, and on the mean scores across

TABLE 7

Mean D/E Scores for Instructions and Sex(Story-Rate and Story-Only Cells)

Instructions	Sex	Pictures				
		A	B	H	3BM	Mean
Dramatic	Males	.40	.25	.50	.15	.33
	Females	1.60	3.70	1.65	-1.60	2.67
Control	Males	.00	- .50	1.65	1.40	1.27
	Females	1.30	2.60	1.20	3.05	2.04

pictures. Two main effects for sex were noted. First an analysis of the mean D/E scores across pictures showed that the females told significantly more positive D/E stories than males ($F=4.53$, 1 and 76 df, $p<.03$). The second main effect for sex occurred for Picture B ($F=7.53$, 1 and 76 df, $p<.007$). This difference was also in the predicted direction. The mean D/E score for females was +3.15 on Picture B, and the mean for males was -.12.

Although these results showed that the predicted sex difference in D/E did occur, it did not happen for the reason presented in the second hypothesis. There was no effect of instructions on D/E score. In order to test for the possible effects of instructions in the experiment as a whole, a multivariate analysis of variance was performed on D/E, A-H and R-C scores, using instructions as an independent variable. The only effect of instructions was a main effect on the D/E scores of stories written to Card 3BM ($F=6.50$, 1 and 108 df, $p<.01$). The mean D/E score for stories written to 3BM under dramatic

instructions was -.55, and under control instructions, the mean score was +2.03. Thus, dramatic instructions produced a negative D/E pattern while control instructions yielded a positive pattern. This result did not interact with sex, nor was it apparent on any picture other than 3BM. Finally, instructions did not interact with either sex or procedure on any of the dependent measures.

Two other analyses were performed as part of the second hypothesis, both testing for sex differences in D/E scores, but without instruction level as a factor. First, an analysis for sex differences was done using only those subjects in cells that replicated earlier studies, i.e., those cells comprising the top half of Table 7. The analysis was again performed on each picture and the mean across pictures. A significant sex difference was found for Picture H only ($F=3.76$, 1 and 38 df, $p<.05$). The test on the means across pictures was not significant, undoubtedly because of the reversal in direction that occurred for females on Card 3BM. This reversal, however, was not significant.

A separate test for sex differences was performed on the D/E scores of Pictures A and B combined, since these two pictures together have been used in most of the past research. Together, Pictures A and B did differentiate the sexes in the predicted direction ($t=2.09$, $p<.025$).

An analysis of D/E scores, using all twelve experimental cells combined, showed a main effect for sex for the mean across pictures ($F=4.51$, 1 and 118 df, $p<.03$) and for Picture B (bullfighter) individually ($F=5.42$, 1 and 118 df, $p<.02$). The data showing these

effects are given in Table 8. All the pictures except H showed trends in the predicted direction, although only Picture B was significant by itself.

TABLE 8

Mean Male and Female D/E Scores
For All Cells and the Mean Across Pictures

Sex	Pictures				
	A	B	H	3BM	Mean
Males	+ .68	+ .30	+ .88	+ .36	+ .55
Females	+1.71	+2.63	+ .61	+1.11	+1.52

Results for hypothesis 3. The third hypothesis predicted that the Resurgence-Collapse (R-C) dimension developed by Fried (1972) would differentiate the sexes. The female mean R-C scores were expected to be more positive than those obtained by males (i.e., in the Resurgence direction). The tests were performed on the scores of all stories, and the hypothesis was supported both for Picture A ($F=4.88$, 1 and 118 df, $p<.02$), and for Picture B ($F=8.60$, 1 and 118 df, $p<.004$). The mean scores on R-C for all pictures are given in Table 9, based on n=60.

TABLE 9

Mean R-C Scores For All Pictures

Sex	Pictures			
	A	B	H	3BM
Males	-.18	-.15	-.02	-.54
Females	+.05	+.24	-.08	-.32

Results for hypothesis 4. Dissatisfaction with sex role was expected to be positively related to extremeness in D/E score, in the appropriate direction for each sex. Dissatisfied females would write the most positive D/E stories and dissatisfied males the most negative.

The sex role questionnaire yielded the distribution of scores given in Table 10. As might be expected from a sample of university students, the female subjects were, as a group, more dissatisfied than the males ($F=50.61$, 1 and 118 df, $p<.0001$).

TABLE 10

Distribution of Sex Role Scores

	Sex	
	Males	Females
Mean	2.57	4.55
s. d.	1.28	1.66
Range	0.0 - 5.5	1.0 - 9.0

To test the fourth hypothesis, high and low sex role dissatisfaction groups were formed for each sex. Subjects classified into each group had sex role dissatisfaction scores above and below the median score for their sex. The median score for the male sample was 2.5, and the median for the females was 4.5. The average D/E score of each subject was used to calculate the means given in Table 11. The number of subjects in each group is given in parentheses. A sex X sex role dissatisfaction analysis of variance was not significant.

TABLE 11

Mean D/E Scores of Sex Role Dissatisfaction Groups

Sex	Dissatisfaction Scores	
	Above Mdn.	Below Mdn.
Males	+ .37 (28)	+ .71 (25)
Females	+1.04 (25)	+1.81 (28)

Note.—Seven females and seven males with dissatisfaction scores on the median values were omitted.

The large differences in dissatisfaction scores, especially among females, meant that a single division into high and low groups created highly heterogeneous categories. In order to make the sex role groups more uniform, subjects were re-divided into three levels of dissatisfaction: low, moderate and high. This procedure produced the distribution shown in Table 12. In creating these groups, the author attempted to compromise between equal ranges of scores and equal numbers of subjects in each level. The resulting intervals are of unequal size, and hence, the comparability of the sexes at any level is unknown. The three levels can only be interpreted comfortably on a within-sex basis without further evidence for their comparability. However, in order to determine whether the three-way classification distorted a relationship between dissatisfaction and D/E scores in the sample as a whole, the correlation between these two variables was calculated, and found to be +.006. Even when sex is partialled out of this correlation, the result is -.13. These correlations provided evidence for

TABLE 12

Three-way Classification of
Sex Role Dissatisfaction Scores

Sex		Sex Role Scores	n
Males	Low	0.0 - 2.0	25
	Moderate	2.5 - 3.0	20
	High	3.5 - 5.5	15
Females	Low	1.0 - 3.0	12
	Moderate	3.5 - 4.5	23
	High	5.0 - 9.0	25

concluding that the three-way classification does not distort any relationship in the data and is thus acceptable as a method for breaking down the sample into more homogeneous cells.

The mean D/E scores for the six dissatisfaction groups are given in Table 13. Note that "high" refers to high dissatisfaction.

TABLE 13

Mean D/E Scores for Sex Role Groups

Sex		Picture				
		A	B	H	3BM	Mean
Males	Low	+ .84	+1.80	+ .40	+ .80	+ .96
	Moderate	+ .35	-2.40	+ .60	+ .75	- .18
	High	+ .86	+1.40	+2.06	- .86	+1.73
Females	Low	+1.50	+3.75	+ .50	+4.41	+2.54
	Moderate	+1.82	+3.34	+1.73	- .78	+1.53
	High	+1.72	+1.44	- .36	+1.28	+1.02

The first analysis of the data in Table 13 was a sex X sex role dissatisfaction multivariate analysis on the D/E scores for each picture and on the mean scores across pictures (last column). No significance was obtained. Then, the D/E scores of the different sex role dissatisfaction levels suggested that the scores might be following certain patterns. For example, the means given in the last column of Table 13, for females, seemed to be decreasing linearly with increases in dissatisfaction, and the same means for males appeared to resemble a quadratic curve. Although patterns could be discerned in some of the means for individual pictures, they were not consistent across pictures or sex. Tests for linear and quadratic effects were performed on the data in Table 13, using sex and sex role dissatisfaction as independent factors. Any results from this analysis are strongly tempered by the fact that the tests are totally post hoc. The tests were performed because the author felt that finding strong linear and/or quadratic patterns would be important for future research considerations.

The D/E scores of the three dissatisfaction levels of males on Picture B fit a quadratic curve ($F=7.73$, 1 and 114 df, $p<.006$), and a quadratic curve was also found for female scores on Card 3BM ($F=5.84$, 1 and 114 df, $p<.01$). For both sexes, the pattern was one in which the moderately dissatisfied subjects produced negative D/E scores, while the other two dissatisfaction groups wrote positive stories. In addition to these two specific findings, the overall mean D/E scores for females were marginally linear ($F=2.96$, 1 and 114 df, $p<.08$). For females, then, D/E scores decreased in

positivity with increased dissatisfaction.

As stated, then, the fourth hypothesis was not supported. The operational definitions of "satisfied" and "dissatisfied" subjects were considered unsatisfactory, however, because they did not reflect the large range of sex role dissatisfaction scores that was obtained. When dissatisfaction levels were redefined, significant patterns for dissatisfaction levels appeared on two pictures, one for each sex. In both patterns, the moderately dissatisfied subjects related quite negative D/E stories, while the low and high groups obtained positive D/E scores. There was a borderline linear pattern for the overall mean D/E scores for females, in which the most positive D/E stories were told by the least dissatisfied females. This last relationship is the exact opposite to that reported by May (1969).

Results for hypothesis 5. Females who obtained mean D/E scores above the median female score were expected to produce a significantly greater number of personally caused PI's than females with mean D/E scores below the median. The latter group was expected to mediate their stories with heteronomous PI's.

The frequency of autonomous and heteronomous PI's in stories with D/E scores above and below the median for each sex is given in Table 14. The median D/E score for both sexes was +1.0. There was a strong preference for autonomous PI's in stories with D/E scores above the median, but both kinds of PI appeared equally likely in stories with D/E scores below the median. The Chi-square was not significant.

TABLE 14

PI Classification for D/E Groups

Sex	D/E Scores			
	Above Mdn.		Below Mdn.	
	A	H	A	H
Males	88	15	48	62
Females	91	27	49	52

Note. Frequencies exclude seven unclassifiable stories and all stories with D/E scores on the median score for each sex.

Hypothesis 5 was based on the assumption that the females who wrote the most positive D/E stories were also those females who were most dissatisfied with the female role. These females were expected to mediate their stories with autonomy, because autonomy verifies their belief in personal effectiveness. In this study, the dissatisfied females did not relate significantly more positive stories than the relatively more satisfied females (Hypothesis 4). Therefore, the fifth hypothesis was restated to directly express the relationship expected between dissatisfaction with sex role and PI classification. Those females who were classified as highly dissatisfied, according to the three-level grouping, were expected to relate more autonomous PI's than the females who were less dissatisfied.

The frequency of autonomous and heteronomous PI's in each sex role group is given in Table 15. Since the number of subjects in each sex role group was different, the proportions represented by the frequencies appear in parentheses. A Chi-square was performed

on the largest difference, i.e., the frequencies in the low and moderately dissatisfied male groups, which was not significant.

TABLE 15

Proportion of Type of PI of Sex X Sex Role Groups

Sex	Sex Role Groups	PI Type	
		A	H
Males	Low	73 (.73)	26 (.27)
	Moderate	43 (.54)	37 (.46)
	High	39 (.66)	20 (.34)
Females	Low	32 (.67)	16 (.33)
	Moderate	60 (.68)	29 (.32)
	High	61 (.61)	39 (.39)

Note.—Frequencies exclude two male stories and four female stories with unclassifiable pivotal incidents.

Finally, the frequency of autonomous and heteronomous PI's occurring in stories told to each picture was examined. As can be seen from Table 16, both sexes related more autonomous PI's to all the pictures except for Card 3BM. The reversal from autonomous

TABLE 16

Frequency of PI Classification

Sex	Pictures							
	A		B		H		3BM	
	A	H	A	H	A	H	A	H
Males	47	13	38	22	51	8	20	40
Females	44	13	42	17	44	15	22	38

Note.—Table excludes six unclassifiable PI's.

to heteronomous PI's in writing stories to Card 3BM was not significant.

Results for hypothesis 6. The sixth hypothesis predicted that the D/E pattern would be dependent on the story author's assumption of similarity between himself or herself and the picture hero. Males were expected to write stories to those pictures they rated as being most like themselves which produce significantly more positive D/E scores than stories written to pictures they rated as being very unlike themselves. Although females were not specifically included in this hypothesis, since assumed similarity was not expected to affect their scores, both sexes were included in the analysis.

The mean D/E scores for stories written to the stimuli selected as "most" and "least" similar to the self are given in Table 17. There was no effect of procedure (Story-Rate or Rate-Story) on the selection of pictures, and all four pictures were chosen, at some time, for both the "most" and "least" positions. Males told stories with D/E scores well within the "male" range on D/E regardless of similarity to self. Therefore, the hypothesis that males

TABLE 17

Mean D/E Score of Stories Told To
Pictures Judged Most and Least Similar to Self

Sex	Similarity	
	Most	Least
Males	+ .52	+ .51
Females	+1.62	+ .72

write less positive D/E stories than females because they assume "dissimilarity" between themselves and the story hero was not supported.

A further analysis was conducted on the "most" and "least" ratings because the effect of similarity judgments on D/E score was potentially quite different, depending on the sex role dissatisfaction level of the subject. For example, a story which a dissatisfied female writes to a picture she judges as being very similar to herself may be quite different in D/E than a story written to the "least" similar picture, or a story written to a "most" similar picture by a female who is less dissatisfied with the traditional role. For this reason, a sex X sex role dissatisfaction X similarity analysis of variance was performed on the D/E scores. A significant three-way interaction was found ($F=3.17$, 2 and 148 df, $p<.04$). The means are presented in Table 18.

TABLE 18

Mean D/E Scores of Sex Role Groups on Most and Least Similar to Self Stories

Sex	Sex Role Groups	Similarity	
		Most	Least
Males	Low	+1.46	+1.00
	Moderate	-1.46	+1.60
	High	+2.10	-1.30
Females	Low	+1.70	+ .90
	Moderate	+2.40	- .33
	High	+ .80	+1.33

Tests of simple effects revealed that those subjects who were classified as moderately dissatisfied showed a sex X similarity interaction ($F=4.74$, 1 and 56 df, $p<.03$). Table 19 contains the means for this specific comparison.

TABLE 19

Mean D/E Scores for Similarity Levels For Moderately Dissatisfied Subjects

Sex	Similarity	
	Most	Least
Males	-1.46	+1.60
Females	+2.40	- .33

These results showed that the degree of similarity to self had a strong effect on the D/E scores within the moderately dissatisfied groups. Both sexes told stories to the "most" similar picture which obtained D/E scores extreme in the direction appropriate for their own sex. They also told stories producing the opposite pattern score for those pictures they judged as being "least" like themselves. This sex X similarity interaction was not significant for either the low or high dissatisfaction group.

The male subjects also showed a marginal sex role dissatisfaction X similarity interaction ($F=2.91$, 2 and 74 df, $p<.06$). The means for this finding appear in the top half of Table 18. T-tests were run on the difference in D/E score between "most" and "least" similar stories within the moderately and highly dissatisfied groups, and on the difference in D/E between moderately and highly dissatisfied groups within the "most" and "least" similar categories. All

of these comparisons fell short of significance. One should note, however, the complete reversals in D/E score that occurred with differences in similarity judgments for both moderately and highly dissatisfied subjects. The moderately dissatisfied subjects told stories which obtained D/E scores in the direction predicted for their own sex on those pictures they judged as "most" similar to themselves, and they told stories to the "least" similar pictures which obtained scores expected of the opposite sex. These findings were exactly reversed for the highly dissatisfied individuals.

The sex X similarity interaction among moderately dissatisfied subjects is very similar to the findings of May (1969). May found that dissatisfied subjects told stories significantly more extreme in the direction predicted for their own sex. The data from this study, however, does not totally replicate May's finding because it is based on those two of the four stories which were written to the "most" and "least" similar to self pictures. If one can assume that May's subjects identified with the picture heroes in their stories (and hence, their stories would be comparable to those written to the "most" similar pictures in this study), then May's subjects were very much like the low and moderately dissatisfied subjects in this experiment.

DISCUSSION

Effect of instructions. The D/E sex difference cannot be explained by differences in initial perception combined with the reversals in emotion produced by a dramatic instruction set. Analysis of the initial portions of TAT protocols did show that females began their stories on a more negative tone than males, but instructions to tell a dramatic story did not produce the reversal in emotion documented by May. In fact, the sex difference in D/E, over all four pictures, which was not significant using only the dramatic instruction subjects, was magnified by the control instructions and was significant. Since the sex difference was not significant when only the control instruction groups were used, the significant overall sex difference from the combined groups was probably the result of a larger sample size. Also, the fact that no differences in D/E were found in the control instruction groups of the main study means that the pilot study and the main experiment were consistent with each other.

One conclusion to be drawn from comparing D/E scores under control and dramatic instructions is that the males behaved much the same as the females, although they showed less variation. Males told positive stories with control instructions, and the effect of dramatic instructions was to dampen this positivity. The sex

difference reported in this study is comparable to that found in previous work, since it resulted from extremeness of female responses rather than from a female positive pattern versus a male negative pattern. The males in this study exhibited such positive D/E scores under control instructions ($\bar{X}$=2.55) that they were well within the range of female scores in earlier work. The strength of the female pattern in this experiment is congruent with the implications from the developmental work cited in the empirical evidence chapter showing that the female response pattern is more stable and extreme than that of the male.

Resurgence-Collapse. Despite the fact that the mean D/E score for males was positive, males were more negative in Resurgence-Collapse (R-C) than females, who obtained positive scores. This was found on Pictures A and B only. Males ended their stories with significantly more downfall episodes than females.

Negative R-C scores are possible even though the same stories produce positive D/E scores because the D/E scoring system depends heavily on the location of deprivation and enhancement units within the protocol and not just on the qualitative nature of the ending, as does R-C. Of course, R-C is not a pattern difference, and it could reflect sex differences in preferences for certain kinds of endings, such as a female preference for "happy endings." This hypothesis was discounted in May's early work as an explanation for D/E differences. However, the fact that females produced significantly more deprivation units prior to the PI than males, and males produced more enhancement units prior to the PI than females,

indicated that more happened in the protocols than just a mere difference in endings.

The principle drawback of the R-C scoring system is its inability to differentiate the majority of stories. Fried (1972) did not report the proportion of stories obtaining R and C scores as opposed to "0" scores, but in both the pilot data and the present study, we found that the majority of stories had to be assigned to the heterogeneous zero category. In the main study, a total of 131 out of 240 stories written by females and 133 of 240 stories written by males were assigned the "0" rating.

Stimulus effectiveness. Although there were no picture or order effects, the matador (Picture B) elicited the largest sex difference when any differences were found. If one could order the stimuli used in this study for degree of eliciting the D/E difference, Picture B would be first, then Picture H, A and 3BM. Picture H was the only stimulus that produced significant sex differences by itself under dramatic instructions. Picture H, of course, was the most similar to the subjects both in age of the figures, and in the relevance of the scene it depicted for their everyday lives. Although Picture A (trapeze) consistently elicited mean differences in the predicted direction, it was not significantly discriminating by itself in any of the comparisons. This seems unusual, given past research, since Picture A has been used most often and has been the principle stimulus for finding significant sex differences.

A factor analysis provided no clues for determining why Pictures B and H would differentiate the sexes more clearly than the other two

stimuli. They were not alike in any way that distinguished them from the other pictures. Although Picture H was slightly more popular than the others in the most-similar-to-me ratings, Picture B was chosen as often as Picture A or 3BM.

Card 3BM showed a trend in the hypothesized direction in D/E score when all experimental cells were combined, but the females in the replication groups exhibited a total reversal in D/E pattern to Card 3BM from their scores on the other pictures. Their mean score on Card 3BM revealed a quite negative sequence, while female stories to the same picture were very positive in D/E when the subjects were given no specific directive to write dramatic stories. Males showed the same trend toward greater negativity in stories to 3BM under dramatic instructions. (Together, the more negative scores of both sexes produced the significant main effect for instructions on stories written to 3BM.)

The reversal in D/E pattern on Card 3BM may have occurred because the emotion depicted in the picture was so intense and so "dramatic"; that is, the picture illustrated that something dramatic had already happened, and that the dramatic event had led to negative consequences. Since females usually show more consistency between their emotional starting points and the objective ratings of the pictures, they were more likely than males to respond directly to the dejected state shown in the stimulus. Under dramatic instructions, responding directly to the stimulus means focusing on the immediate past in an attempt to describe the drama surrounding the huddled figure. The fact that females told quite positive

stories under control instructions implied that, in the absence of specific instructions, the females emphasized the present state of the figure and the ways in which the person coped with and overcame the situation.

This explanation of the D/E reversal in stories to Card 3BM suggests that the effect of dramatic instructions was not to produce a change of ending so much as a change in the time frame of the story. This time change is probably not a necessary result of dramatic instructions, but of the emotion in Card 3BM which compelled the subject to devise an explanation. The reason why dramatic instructions had no effect on stories written to the other pictures is unclear. Perhaps producing a story with an intensity level so different from that existing in the picture is very difficult. The stories written to 3BM under control instructions may have been no less dramatic than those written under dramatic instructions, even though the PI occurred in a different chronological place.

Card 3BM was also different from the rest of the stimuli because subjects produced a majority of heteronomous PI's in their stories to 3BM, and a majority of autonomous PI's to the rest of the pictures. Although enough subjects related autonomous PI's in stories to 3BM and heteronomous PI's in stories for the remaining pictures to seriously qualify any conclusion that a picture effect existed here, the high heteronomy on Card 3BM seems quite consistent with the factor analytic results. Besides being rated negatively on the evaluative dimensions, the only difference between Pictures A and B and 3BM was the impulsivity-control dimension. The former cards were

"controlled," while 3BM was rated as "impulsive." Impulsivity alone did not produce heteronomy, since Picture H was also rated as "impulsive," and H elicited a clear majority of autonomous PI's. But, Picture H was also rated as "safe" and as "pleasant," while 3BM was described as "dangerous." Impulsivity had quite different connotations in story content when in context of safety and happiness than in context of danger and unhappiness.

The kinds of themes told to Pictures 3BM and H support the hypothesis that impulsivity has different implications for story content depending on its context. In stories written to 3BM, the impulsivity was almost invariably attributed to the figure's immediate past. The person acted "out of control," from rage or ignorance, for example. Picture H, however, elicited very little emphasis on the past and much more on the future of the couple. The impulsivity in Picture H was present- or future-oriented and usually occurred from the love that the individuals felt for each other and not from an uncontrollable outburst of emotion. Returning momentarily to Pictures A and B, subjects responded with very action- and achievement-oriented stories, which usually involved some degree of personal control. Heteronomous themes to Pictures A and B usually revolved around the hero's ignorance or submission to family tradition.

Autonomy-Heteronomy. The results from the A-H measure showed that the majority of themes were autonomous. There were two factors which probably influenced that fact more strongly than sex role identification level. First, the sample was drawn from a university population,

where autonomy is probably more prevalent than in the general population. Repeating the PI analysis with a wider sample of people might produce the larger number of heteronomous PI's needed to test the hypothesis more fairly. Secondly, the pictures used may have had an unexpectedly strong influence on the nature of the PI. This means that beliefs in different levels of causality, as reflected in the PI, are easily masked and should be measured in a different way.

Similarity to self. The method of measuring similarity appears to have worked quite well. None of the stories written to "most" or "least" similar pictures had to be eliminated because the ratings indicated that subjects really did not view the stimuli they chose for either category as being "like" or "unlike" themselves. Only two subjects chose a rating as low as "6" on the 9-point scale for the "most" like me rating, and the highest rating for the "least" like me picture was "3." Most ratings were 8-9 for the "most" like me judgment, and 1-3 for "least" like me.

Sex role satisfaction and similarity. There was no significant sex difference in D/E scores when stories written to "most" and "least" similar to self pictures were compared. However, similarity did have a strong effect on D/E scores when the sexes were subdivided according to members' satisfaction with the sex roles society has defined for them. The most clear effect of similarity occurred for the moderately dissatisfied subjects. Males in this group told negative stories to the "most" similar picture, and positive stories to the "least" similar picture, and the moderately dissatisfied

females did the opposite. This finding could be interpreted as strain felt by both sexes to incorporate the appropriate role model. Both males and females who are moderately dissatisfied are in a state of tension because they do not feel comfortable in their roles but they also do not reject them entirely. Hence, they exert effort to conform as an attempt to increase belongingness. This conformity interpretation would also explain the change in direction in D/E score that occurred for each sex in writing stories to the "least" like me picture.

The questionnaire data on which the sex role groupings were based provide support for the contention that moderately dissatisfied subjects feel strain. The males in this group said they were glad they were males, that they enjoyed the advantages of males, but that they also felt that males were very limited in some respects. Their most frequent complaint was the social dictum against the open expression of emotion by males. Many males in the moderately dissatisfied group resented the expectation that they succeed materially.

Among females, the moderately dissatisfied subjects' questionnaire responses left the impression, sometimes stated directly, that these females felt confused. They expressed desires to have some kind of career or independent time, but they also wanted marriage and the traditional advantages. They were confused about how to direct their lives to obtain the best of both worlds. These females expressed some resentment over tradition, but also felt strain to conform because they did not reject traditional values

outright. They only wanted to adapt the norms to their personal ambitions.

Those subjects who were highly dissatisfied with their sex roles wrote stories which produced D/E scores expected of the opposite sex for those pictures they judged as being "most" similar to themselves. This makes intuitive sense if one assumes that the highly dissatisfied subjects have rejected the sex role that accompanies their biological roles. This conclusion seems justified by the intensity of the statements on the sex role questionnaire that obtained the highest ratings, and by the fact that several of these intense statements had to be present if the total score was to be included in the high dissatisfaction group. However, the conclusion that the highly dissatisfied subjects preferred the role of the opposite sex is not justified from the data, but only that they did feel strong rebellion against the role associated with their sex.

Those subjects who expressed no dissatisfaction with their roles told stories which were quite uniform in emotional pattern for both "most" and "least" similar pictures. This D/E pattern can occur when the fantasy is relatively balanced on both sides of the PI. Rather than describe these individuals as "bland and flaccid," as May (1969) did, it is more descriptive to refer to them as people who expressed no unhappiness about being their particular sex, and who seemed quite comfortable living within their defined roles. These subjects may have told similar D/E stories to "most" and "least" similar pictures because their lack of tension about sex roles has

not resulted in emotional boundaries between themselves and the opposite sex.

In order to assess the discrepancies between this study and that reported by May (1969), two facts must be considered. First, May reported a direct linear relationship between dissatisfaction with sex role and extremeness in D/E score in the direction for each sex. This finding was based on all protocols. In this study, an analysis of all the stories showed that the only relationship between dissatisfaction and D/E scores occurred for females, and it was both weak and in the opposite direction from that described by May. The mean D/E scores for some individual pictures were significantly quadratic in form, but this finding did not occur for most of the pictures and should not be considered representative.

Secondly, the linear relationship between dissatisfaction and extremeness in D/E score found in this study was limited to the low and moderately dissatisfied groups, and also it appeared only when stories written to the "most" similar pictures were included. Thus, May was not supported when the procedure was the same as in his 1969 study, and was supported when the new variable of similarity to self was included in the analysis. In sum, when the subject's identification with the picture hero was held constant at a high level, the low and moderately dissatisfied individuals in this study produced D/E patterns similar to the satisfied and dissatisfied people in May's experiment.

The "most" and "least" similar judgments demonstrated that the degree of assumed similarity between the subject and picture hero was

an important determinant of the direction of D/E score, especially if the subject was at all dissatisfied with his or her own sex role. Both moderately and highly dissatisfied subjects related stories to pictures they felt were unlike themselves that obtained D/E scores expected of the opposite sex. The moderately dissatisfied subjects, especially the males, told stories to pictures they judged as "most" similar to themselves that fit the male pattern. Although the highly dissatisfied males told positive D/E stories to pictures they judged as "most" similar to themselves, the reason may not be because they were straining toward a female identification. They may merely have felt less resentment toward a female role than toward the male role. There is no evidence from this study that the highly dissatisfied subjects felt a phenomenological identity with the opposite sex.

In context of interpreting the behavior of subjects classified into different levels of sex role satisfaction, one should note that the questionnaire grouped individuals into categories according to the number and intensity of statements of dissatisfaction. Hence, subjects who obtained low scores, and even zero scores, cannot be said to be more "satisfied," necessarily, than people who obtained a higher score. People with very low scores may be defined only as those individuals who responded to the questionnaire without mentioning any source of dissatisfaction. These individuals are interesting in a relative way. The fact that no females completed the questionnaire without stating ways in which they were dissatisfied is of psychological import when one also recognizes that several

males did expound on the items without any such reference. However, the fact remains that no conclusions can be drawn here about the D/E behavior of highly satisfied people, except insofar as one is willing to assume that the absence of statements of dissatisfaction mirrors that psychological state.

Since the range of scores on the questionnaire was smaller for males than for females, the defining points for the intervals of the three dissatisfaction levels differed for each sex. As a result, the classifications are only comfortably interpreted on a within-sex basis. However, the similarity in D/E behavior of the moderately dissatisfied males and females (in reverse directions) provided strong support for their comparability, as did the parallel behavior between the two highly dissatisfied groups. More evidence from some other independent source would be even more convincing.

It is possible that the greater number of dissatisfied females than males may have partially resulted from the tendency of females to disclose more about themselves than males do (Cozby, 1973; Jourard, 1964). This tendency may have resulted in higher dissatisfaction scores for females because their longer answers would increase the probability that a scorable statement would be made. However, when males and females do not differ in the length of their statements, females still disclose more intimate information about themselves than males do (Pederson and Breglio, 1968). The quality of the information given by males and females would produce the differences found in this study, since females are prone to relate more about their anxieties and worries than males, while the sexes do not differ

in the number of pleasant feelings they report (Levinger and Senn, 1967). On the basis of past research, then, we should expect a certain proportion of the variance in the questionnaire data to mirror sex differences in self disclosure. Hopefully, however, a greater proportion of the variation in the questionnaire responses does reflect differences in dissatisfaction. The point concerning self disclosure provides more evidence in favor of a within-sex interpretation of the dissatisfaction scores.

Generalization. The problem of generalizing to broader populations from this study involves two issues. First, the representativeness of the subject sample for the overall college population must be considered. The portion of the study which would be most damaged by a biased sample is the sex role dissatisfaction data. Since no norms exist for "dissatisfaction," the questionnaire scores can be interpreted only according to their position within the distribution obtained in the study. This problem could be alleviated by administering a standard masculinity-femininity (M-F) test twice to the subjects, both with instructions to answer the questions honestly and to answer them in a way that describes their ideal selves. The discrepancy score would be a measure of dissatisfaction.

The second issue for generalizability concerns the influence of the total university environment on the distribution of sex role dissatisfaction scores, as compared to the general population. The university sample probably included more females who were openly dissatisfied with the traditional norms of dependency and passivity than a noncollege sample the same age. Also college men are more feminine in their orientation than males not in college (Dahlstrom

and Welsh, 1960). Secondly, there were probably more dissatisfied people who were willing to state their feelings on the questionnaire than was the case in May's 1969 study. Since a great deal of consciousness raising has occurred for both males and females in the last four years, there is really no way to determine just how comparable the groups used here were to those defined in 1969. The effect of liberation movements would be to provide a psychological "haven," especially for females who are highly dissatisfied, and to help them feel capable of living in a world where deviation from the female pattern would not evoke as much pressure to conform. Expression of viewpoints running counter to tradition might also be accepted more now than in 1969, which would alter the criterion for being called "dissatisfied." Consequently, the highly dissatisfied subjects in this study were probably a very different group of people than May could encounter, and most importantly, they were people who felt free to admit high dissatisfaction, and free to create a fantasy pattern very much like that expected of the other sex when they felt that similarity between themselves and the subject person of their fantasy was high.

The final problem for generalizability is the issue of volunteer status of subjects. This issue is difficult to assess because little is known about the exact nature of the differences between volunteers and nonvolunteers. However, there have been no inconsistencies in D/E studies for which a "volunteering" bias might be solicited as a partial explanation. May's original study in 1966 utilized one hundred and four nonvolunteers, while the 1969 study was conducted

with individuals from the general population who responded to a newspaper ad describing "a study in imagination." These two experiments represent the extremes of volunteer status, yet the data obtained in both studies were consistent. In fact, not only was the sex difference replicated in the 1969 study, but the males produced an even more extreme negative D/E mean score than the males in other experiments using college students. This finding supported the results often obtained on M-F tests that males in college populations are more feminine than males in the general population.

Reception-counteraction. The results of this study help evaluate Fried's hypothesis that D/E differences are produced by magnifying the empathic ability of females and males' inhibition of spontaneous emotional expression. Fried suggested that the pictures which elicit D/E involve danger and depression, which the female subject can readily accept and express in the initial parts of a story. This direct emotional expression is called the "receptive" phase. Males, however, cannot express the negative emotion, and they "counteract" the depressive mood with positive emotion. Only through continued exposure to the stimulus do the males come to ultimately accept the negative emotion. Fried implied that pictures which are not dangerous and depressing would not elicit D/E differences.

The present study provided clear evidence against the "danger and depression" thesis. Pictures B and H elicited D/E most clearly and neither was rated as sad or depressing. Actually, the factor

analysis showed that both pictures loaded positively on the adjective dimensions of pleasantness, happiness and acceptance. Also, Picture H was described as quite "safe," suggesting that the danger dimension is also unnecessary for D/E differences.

Fried's receptive-counteractive hypothesis to explain D/E sex differences only works when the pictures are depressing. If the stimuli are pleasant, the female pattern of moving from relatively more negative to more positive emotion cannot be explained since there is no reason for her to begin on a negative tone. The male pattern of increased negativity later in the story sequence would also be without theoretical foundation.

Future considerations and speculations. Since the D/E sex difference is not a commonly known stereotype, the sex X sex role dissatisfaction X similarity to self interaction cannot easily be explained on the basis of social desirability. The fact that the moderately and highly dissatisfied subjects of both sexes relate stories to the "least" similar pictures that obtained D/E scores in the opposite direction from those of the "most" like me pictures cannot be explained by any of the standard experimental demand characteristics. This finding can only be interpreted by saying that the D/E variable is tapping a phenomenological self-identification of males and females, which occurs on an emotional level. The most exciting suggestion from this experiment was that subjects reflected the sex difference in D/E through their intra-individual distinctions between stories written to "most" and "least" similar pictures. This means that the subjects were cognizant, on some

level, of the emotional world of the opposite sex, and were aware of the differences between their own and the other's emotional reality. Substantively, this finding represents a firm step beyond previous work, in which only inter-individual differences had been demonstrated.

This experiment suggests several avenues for more work. The sex role questionnaire needs to be refined and reliability needs to be established. The relationship of scores on the dissatisfaction questionnaire to scores on other instruments dealing with adherence to sex roles needs to be determined. Also, the raw data from this study should be rescored for statements of satisfaction. As explained earlier, the extent to which the scores on dissatisfaction are reciprocal to scores on satisfaction is unknown at this time. Perhaps, in light of the research cited above that reported a lack of sex differences in related positive affect, the distributions of satisfaction scores might be very similar for both sexes.

Finally, the semantic differential results from the stimulus cue study identified some picture characteristics which were not crucial in eliciting D/E, such as danger and depression. The main experiment was too limited to provide much evidence on the necessary elements of the pictures. There was a considerable amount of unused information from the stimulus cue study that could be used to design a more systematic set of studies to scale the pictures along relevant dimensions.

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APPENDICES

Appendix A

THEMATIC STIMULI

Picture A

Picture B

Picture E

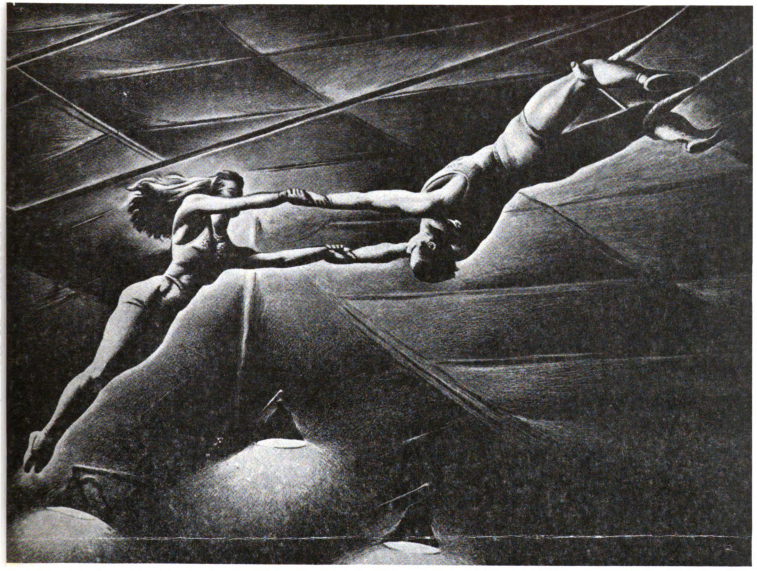
Picture F

Picture G

Picture H

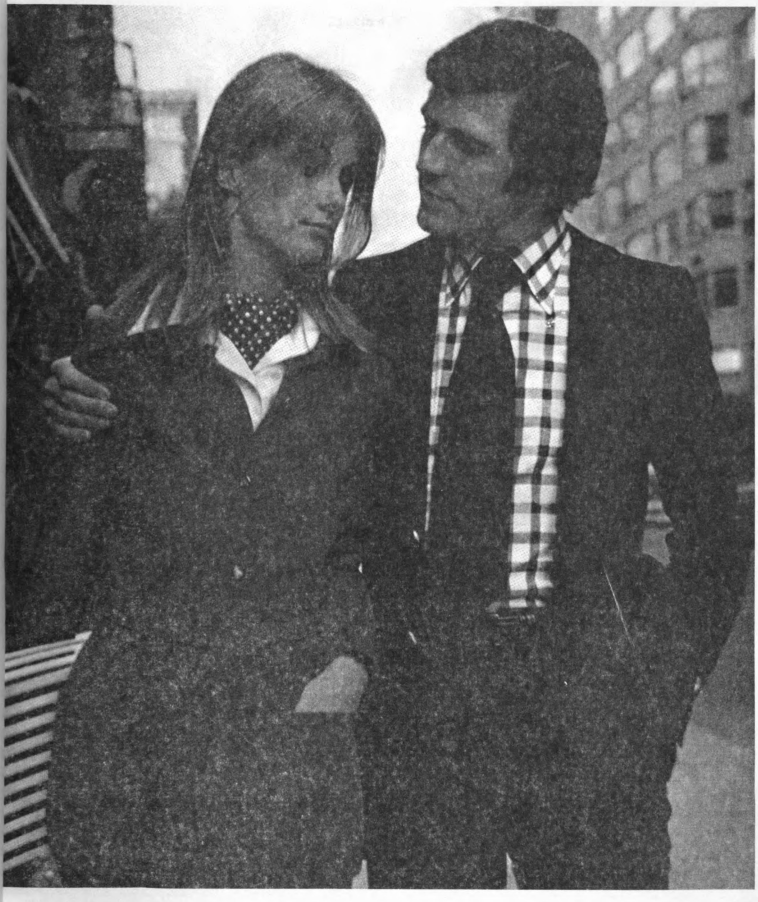
Verbal Description of TAT Stimuli

Picture A



Picture B

Picture E



Picture F

Picture G

Picture H

Verbal Descriptions of
Standard TAT Pictures

Card	Description
1	A boy contemplating a violin laying in front of him.
2	A girl holding books with a farm scene in the background.
3BM	A huddled figure next to a couch with an unidentified object on the floor.
3GF	A girl in a doorway, covering her face with her hand.
4	A woman holding a man's arm as he turns away from her.
5	A woman standing at an opened door looking into a room.
6BM	An elderly woman is standing at a window with her back to a young man.
6GF	A woman is sitting and looking over her shoulder at a man. The man is looking at her.
7BM	An elderly man is looking toward a young man close to him.
7GF	A little girl sitting with a woman on a couch. The girl holds a doll and is looking away from the woman.
8BM	A young man in the foreground with a surgical operation taking place behind him. There is a rifle on the side.
8GF	A young woman sitting in a chair gazing off into space.
9BM	Men sleeping in a field.
9GF	Two women running along the seashore.
10	A man and a woman in an embrace.
11	A narrow stone path surrounded by rocks and steep cliffs. In the distance, figures are rushing over a bridge. The head and neck of a dragon appear on the side of the cliff.
12M	A man reaching toward the forehead of a boy who is lying on a bed. The boy appears to be sleeping.

Verbal descriptions of the standard TAT Cards, cont'd.

Card	Description
12BG	A forest scene with a rowboat on the ground next to a stream.
12F	A young person in the foreground looking off into space. An old woman appears in the background.
13B	A small boy sitting in the doorway of a wooden house.
13G	A small girl climbing a long, winding staircase.
13MF	A man standing and covering his face with his arm. A woman is lying in bed next to him.
14	A silhouette of a man standing in an open window.
15	A darkly-clad gaunt figure standing in the midst of a field of tombstones.
16	The blank card
17BM	A young muscular man climbing a rope.
17GF	A girl looking over a bridge. Below her, a group of men appear to be unloading something from a boat.
18BM	A man being held by three hands touching his shoulders and arms.
18GF	A woman with her arms around the throat of another person. Both are standing at the bottom of a staircase.
19	A picture of clouds surrounding a snow-covered dwelling.
20	A man standing under a single street lamp.

Appendix B

THE SCORING SYSTEMS

Appendix B

The Scoring Systems

This chapter includes detailed descriptions of the procedure for scoring Deprivation-Enhancement (D/E), Resurgence-Collapse (R-C), the Autonomy-Heteronomy (A-H) of the pivotal incident, and the scoring method for the sex role dissatisfaction questionnaire.

Scoring for Deprivation-Enhancement. The initial task in scoring any protocol for D/E is identification of the pivotal incident (PI). The PI is the turning point in the action, the central act or feeling that mediates between what went before and the final outcome. This author's experience in scoring showed that the term "PI" is acceptable as a general name for the "time immediately prior to the outcome," since this broader definition includes the PI's of some stories which do not have a dramatic, critical "incident" as such. These stories are scorable because they do contain a chronological development and an ending, but the subject's manner of writing the story occasionally does not provide a fitting statement that qualifies for a narrowly-defined PI. Hence, the PI refers to an overt act or event whenever possible, but on occasion it refers to a strong statement of feeling or desire or, rarely, the interim before the outcome. Feelings and desires are acceptable as PI's in May's system as long as they directly relate to the outcome. Action statements, however, always take precedence over feelings in choosing a PI. Stories which defy identification of a PI are not scored, and usually comprise 5-10% of the total story pool.

After the PI has been identified, the story is separated into pre-PI and post-PI sections and the number of references to deprivation in the pre-PI and the number of enhancement units in the post-PI sections are summed and given a positive score. The number of references to enhancement in the pre-PI section is added to the number of deprivation units in the post-PI section and given a negative score. The difference between the positive and negative scores is the final D/E score for that protocol. A positive score, therefore, indicates that more deprivation units were found in the pre-PI AND more enhancement units were found in the post-PI sections of the story, while a final negative D/E score indicates that more pre-PI enhancement units AND more post-PI deprivation units were counted.

Deprivation units can be a variety of story references. Statements qualifying as deprivation units describe psychological or physical discomforts, needs, poverty, professional obscurity (being a newcomer), harm, exertion, failure or falling out of control. Negative psychological states are also scorable, such as most negative emotions, pressure from external sources, ignorance, self-sacrifice, and generalized desires when they mean "hope for" or "yearn for" rather than "expect."

Enhancement is scored when the story author refers to physical satisfaction if a desire for this had been previously established. Enhancement references also include flying and other references to height, positive emotions, positive shifts in tension level,

anticipation, receiving help or affection, success, fame, retaliation, successful resistance, insight and realizations (even if the realization is of something bad or undesirable). Growth is scored as enhancement when the implication is good rather than growing fat or ugly.

Separate units in a story are given separate scores if the references have distinctly independent meanings. A phrase such as, "He is poor, tired and sad..." would receive three separate deprivation scores because each of the conditions is independent of the others. However, a statement that "She was shunned and humiliated by her lover..." would receive only one deprivation score, since "shunned and humiliated" are close in meaning and the implication is that they are simultaneous with one occurrence of rejection.

A few examples of protocols help make the scoring procedure more clear. The following examples were taken from data collected by the author. The reasons for each score are listed in order, under the appropriate heading.

Sample Protocols

"Aurelio Rodrigues, a beginning fighter (D, +1), has just fought his first bullfight (E, -1). It was very tense (D, +1), but exciting (E, -1). Aurelio came from a poor family (D, +1) but he had always dreamed of being a bullfighter (D, +1). However, bullfighting has always been an occupation reserved for the elite and prestigious. Thus, Aurelio's dream was next to impossible (D, +1), but he was a being of great fortitude and determination (E, -1). Though he had to overcome many obstacles (D, +1), he succeeded (PI), and today he has a right to be proud, as he is (E, +1), for his great accomplishment (E, +1)."

Final score: +5

Deprivation Units:	Enhancement Units:
1. professional obscurity	1. success
2. tension	2. positive emotion

Deprivation Units:

3. poverty
4. strong yearning
5. desire is directly denied
6. difficult battle

Enhancement Units:

3. ability/resistance
4. positive emotion
5. success

"The man is the leading trapeze artist in the world (E, -1) and the girl is more or less just learning the trade (D, +1). He is performing for a large circus (E, -1), and is well-known for being very daring (E, -1). After practicing for a long time (D, +1), they become very good (E, -1) and they also fall in love (E, -1). The man doesn't want the girl to perform and he wants to marry her (E, -1). She agrees but wants to perform once just to prove herself. The setting is the night before the wedding and her premiere performance. The man is thinking of how beautiful the girl is (E, -1) and about the wedding the following day (E, -1). He doesn't concentrate (PI) and so he fails to catch her (D, -1) from a triple sommersault (E, +1) and she falls (D, -1) to her death (D, -1)."

Final score: -8

Deprivation Units:

1. professional obscurity
2. physical exertion
3. failure
4. falling
5. reference to death

Enhancement Units:

1. accomplishment
2. attention, publicity
3. skill and daring
4. ability/precision
5. love
6. concern for well-being
7. physical excellence
8. positive anticipation
9. elaborate trick

Scoring of Resurgence-Collapse. Fried's (1972) R-C scoring system assigns a single score to each story, based on the outcome. Collapse ratings may be strong (-1.5) or weak (-1.0). Strong collapse refers to extreme and irreversible negative reaction to crisis, such as death, insanity or mutilation. Weaker collapse scores are assigned when the outcome is marked by unrelieved negative affect. A mild resurgence rating (+1.0) is assigned to a realistic recovery from a negative experience, while a strong resurgence score (+1.5) is warranted only when the resurgence is extreme and spectacular.

A strong resurgence score would be assigned to a story in which the hero, who is frustrated here on earth, leaves to become ruler of another planet.

R-C scores of zero are reserved for cases where no real action occurs, for ambiguous outcomes, for passive acceptance of conditions, and for such low-key action that no crisis can be said to have occurred.

D/E and R-C scoring systems are similar but they are not redundant. D/E is much more sensitive to the events in the story than R-C, especially in the zero range of the latter measure. On the other hand, the only way in which intensity of the positive and negative references can be reflected in D/E score is through quantity of references, and even then, the references must be located in the right places to avoid cancellation. R-C is basically an intensity measure and is therefore independent of story length.

In most cases, the direction of D/E and R-C ratings are consistent with each other. Some specific kinds of stories, however, are instructive because they illustrate the large discrepancy that can occur between the two scoring systems. One particular story, occasionally told to Card 3BM, is an example. The individual is described as overcome by some misery. He decides to take his own life (PI). The story ends with a description of relief. This sequence is likely to receive a mildly positive score, but the R-C rating is -1.5.

Autonomy-Heteronomy Scoring. The examples of autonomously caused and heteronomously caused pivotal incidents collected from the pilot

data are listed below. The criterion for classifying a pivotal incident (PI) as autonomous or heteronomous was basically one of whether the protagonist in the story obviously was the source of the event, i.e., was the necessary condition for occurrence of the event, regardless of intention. The hero's effort in obtaining the goal state or outcome, or of avoiding it, had to be clear. In the case of heteronomy, the PI had to be clearly beyond the protagonist's direct influence or control. Occasionally, the same PI could be either autonomous or heteronomous, depending on the author's implications in writing the story. Such a PI might be "time." Examples of how time might be classified as both autonomous and heteronomous are given below. In scoring A-H, autonomous PI's were given a +1, and heteronomous PI's were given a +2.

Autonomous Categories

Social competence
- explaining one's feelings
- active effort to solve marital problems
- being attractive to opposite sex (when intent is stated)
- doing what others want (as social manipulation. Actor's free choice must be clearly present.)
- control over interpersonal relationships
- "tuning in" on each other

Task effort
- working hard
- skill, eg. in the bullring
- overcoming great obstacles
- persistence
- making decisions
- time (when context implies that the actors will "work it out")
- willingness to compete

Self control
- moving into a new house (thereby gaining independence)
- maintaining one's head through tragedy
- nonconforming acts
- maintaining moral standards

Autonomous incidents, cont'd.

Self control, cont'd.
- voluntary role playing
- positive thinking
- self confidence
- keeping secrets

Heteronomous Categories

Victim of circumstances
- tragedy
- poverty
- overwhelming physical attraction (implication is one of being "possessed," of uncontrollable passion)
- immaturity (implication is that person cannot control world)
- sudden appearance of new lover
- accidental pregnancy
- loss of job (for "no" reason)
- God's bestowal of gifts

Impelled by external forces
- the "show" must go on
- family tradition
- pride (forces one to act)
- confusion
- time (implication is that time "will tell me if I love you")

Blindness
- ignorance of important facts
- blindness:
  - to one's own stupid way of life
  - to interpersonal relations and feelings
- role playing (emphasis on going through the motions without emotion)

Impelled by social forces
- inability to say "no"
- living for another's approval
- being "told," criticized or given attention

Falling
- out of control

Scoring of the sex role dissatisfaction questionnaire. A copy of the questionnaire appears in Appendix C, but the questions and examples of answers and the scores they received are presented below. The questionnaire was scored so that statements indicating satisfaction with traditional norms received a score of "0." The higher the score, the greater the number of statements expressing dissatisfaction with traditional role expectations. Also, only statements showing that their authors were desirous of the traditional role of the other sex were scored. Specifically, statements referring to the activity-passivity dichotomy in sex role norms, to independence-dependence or to concerns with personal effectiveness were scored because these issues focus on the same kinds of complaints made by subjects classified as "dissatisfied" by May (1969). Answers which were irrelevant to sex role norms were not scored.

Six questions appeared on the questionnaire and five were scored. The fifth question, "What do you think society's expectations are of you as a male (as a female)?" was asked as a reference point in scoring the final question, "Do you think that living up to those expectations is difficult?" Obtaining the subjects' answers to the former question helped to guard against scoring the second question incorrectly in case the subjects were not referring to the traditional expectations.

Whereas most scorable questions received either a "0," "1" or a "2" rating, the first question received either a "0" or a "1." The answers were invariably short and most expressed satisfaction with being a male or female. If any comment was included indicating

negative feeling about being a man or a woman, the answer received a "1" rating.

Question 1: "How happy are you about being a man or a woman?"

Answer	Score
I'm happy about being male because my traits fit those of a male, dominant, 215 lbs., etc.(Male)	0
Very content. Wouldn't want to be a male. (Female)	0
Being a woman, sometimes I think you get the raw end of the deal... in a relationship with a guy, you have to go along letting him make the first moves. (Female)	1

The second question asked the subject to describe growing up as a boy or a girl. Descriptions of childhood experiences usually considered traditional for the opposite sex received either a "1" or a "2," depending on the intensity of the statement, or in some cases, multiple references to opposite sex activities. A "0" rating was assigned to statements expressing satisfaction or participation in same sex activities.

Question 2: "What was it like growing up as a boy or a girl?"

Answer	Score
Exciting, adventurous, football, irresponsible..(Male)	0
As a girl, you always had to help out with the housework, where as a boy, you didn't. I would get more attention from my father. (Female)	1
I was jealous, because Dad would let my little brother do things, but not us girls just 'cause he was the boy. (Female)	2

The third question asked subjects to describe the advantages of being a member of their own sex. Answers were scored according to the sex role norms for adults in this society. References by a male to being satisfied with the greater activity, independence and

assertiveness expected of him were given "0" ratings. Similarly, a "0" rating was assigned to a female's answer if she said the best thing about being a female is being passive, and being taken care of. Scores of "1" and "2" would be assigned to a male's response to Question 3 if he stated that the best thing about being male is not having to be active or independent. Whereas these scores were never used for male answers, females occasionally remarked that the best thing about being female is not having to be passive and dependent. Hence, the female data necessitated the "1" and "2" ratings. Answers which were irrelevant to activity-passivity and/or independence-dependence were not scored.

Question 3: "What do you see as being the advantages of being a male or a female?" (Answer only with respect to your own sex.)

Answer	Score
A male has more freedom to do what he wants. (Male)	0
I can do more athletic things than a girl. (Male)	0
To be able to do things for someone I like or love. To accomplish something in life. (Male)	0
I don't have to try to be best at everything. Women are supposed to be inferior. (Female)	0
Bringing up children and teaching them. (Female)	0
Having guys pick up the tab. (Female)	0
A female has a lot of options. She can have a career or be a housewife. (Female)	1
The best thing about being a female is proving to a guy you're just as good as he is. (Female)	2

The fourth question asked subjects to describe what they think would be the best thing about being a member of the opposite sex. If males referred to the absence of pressure on females to succeed, or to other traditional advantages of females, they received scores of "1" or "2," depending on the intensity or number of references.

Males who said that females didn't have any advantages, or who mentioned things irrelevant to the activity and independence dimensions received "0" scores.

Females received scores of "1" or "2" on Question 4 if they mentioned male freedom or success potential as being the best thing about being male or some related aspect of the male norm, such as being protective, or strong. Females received "0" ratings if their answers were irrelevant to these dimensions, or if they could not think of any advantages of males.

Question 4: "What do you think would be best about being a member of the opposite sex?"

Answer		Score
(Example of irrelevant answer) Women are able to get along well with each other.	(Male)	0
Women are less restricted by society in terms of emotional expression.	(Male)	1
The only advantage that the opposite sex has in American society is that they are pampered and constantly put on a pedestal. Men have to prove themselves.	(Male)	2
The major advantage of being a girl would be that you wouldn't have to work as much as a man. The man spends most of his money on women.	(Male)	2
(Irrelevant answer) Men aren't as gossipy, and get along with each other better.	(Female)	0
Maybe as far as job opportunities go, I'd like to be a man. The ability to travel alone without society saying it's deviant.	(Female)	1
Getting to ask a member of the other sex out on a date.	(Female)	1
That you could go wild, mostly. Playing in sports and being more aggressive. Just having the freedom.	(Female)	2

Almost all subjects described the traditional norms in response to Question 5, "What do you think society's expectations are of you as a male or a female?" This question was not scored, but served as

an anchor for the last question, "Do you think that living up to these expectations is difficult?" For those subjects who did describe the traditional norms, the last question was scored as "0," "1" or "2" for the degree of strain expressed in the answer. Specifically, scores of "0" were assigned for answers which implied that the expectations were not difficult and were well within reach. Scores of "1" were given for answers which reflected a belief that the expectations were difficult, but obtainable. Scores of "2" were assigned for answers indicating rejection of the norm, or an inability to meet sex role criteria.

Those subjects who did not express the traditional norms in response to Question 5 invariably stated their belief that no expectations exist. These subjects fell into two groups. One group answered the last question as if they had described the traditional norms under Question 5, or they elaborated on the traditional norms under Question 6. The second group responded to Question 6 by reiterating that no expectations exist. Scores of "2" were assigned to all of these answers for Question 6.

Question 6: "Do you think living up to those expectations is difficult?"

Answer	Score
No, it's easy and natural. (Male)	0
Sometimes I feel like I will never get ahead, but then I look at how lucky I've been, and things have always worked out for me. (Male)	1
Oh, yea, they're so unrealistic to say the least. Can't do it. (Male)	2
I think that it isn't too hard to live up to society's expectations. I like to be a girl. I'm looking foreward to raising a family. It isn't hard taking care of a home if you enjoy doing these things. (Female)	0

Answers to Question 6, cont'd.

Answer	Score
Yes, and especially if you'd like to have fun and not get married right away. (Female)	1
Difficult? Yes, because I couldn't stand it. (Female)	2

Appendix C

INSTRUCTION SHEETS

Appendix C

Instruction Sheets

(P1)

PERSONALITY EXPRESSION

This study is concerned with individual differences in personality and in personality expression. We are asking your cooperation in examining the relationship between some of your personal characteristics (as you see them), and the way you organize and express the meaning of a complex stimulus situation. Other studies have shown that people organize experience in many different ways which are meaningful to them, and to which they can "relate." We wish to look for patterns in these operations and their connections with other personality variables.

The first portion of this study enables you to attach meaning to ambiguous situations. This "organization" is not something you will have to work at, but will occur rather easily when you look at the stimuli. After this part of the study, the experimenter will explain to you what specific kinds of information we need, and you will be provided with paper for your answers. We wish to assure you that all information is greatly appreciated and is totally anonymous. When you leave, your materials will be assigned a random number completely unconnected with your name. Thank you for your cooperation.

(P2)

The folder in front of you contains four pictures, in no specific order. Each picture has an identification letter/number on the back. When you open the folder, look at all the pictures, and place them in the order given on the separate sheet inside your folder. When the pictures are in order, turn them face down on the table in front of you. (The picture corresponding to the first number on the order sheet should be on the bottom.)

(P3)

For this portion of the study, you are to write a story for each picture. Please write stories that are as dramatic and psychologically meaningful as you can. You will be given six minutes for each story and the experimenter will watch the time for you. First, you will be asked to pick up the picture on top and look at it for twenty seconds. When this time is up, you will be asked to place the picture face-down on the table, not on top of your other pictures. You may begin writing your story immediately on the first of four sheets of paper provided in the folder. There are questions on the sheets to help guide you in writing the story, but please do not merely answer the questions rather than write a story. It is very important that you write a continuous, whole story. Make sure, however, to include answers to the questions at some point in the story. BE SURE to include a clear statement of what happens (or did happen, or will happen) in your story that leads to the outcome. Concentrate on writing as dramatic a story as you can.

When you begin writing your story, try to spend the entire six minutes allotted to that picture on the story for that picture. Do not move on to the next picture before the time period is up, and do not go back to any previously written story for any reason. Finally, please do not pick up the picture again and look at it after the twenty seconds for viewing it are over. The experimenter will tell you when the six minutes has elapsed. The same procedure will be followed for each picture.

(P4)

For this portion of the study, take all four pictures and look at them. Order is not important. As you look at them, ask yourself what the person (or people) in the picture is (are) like. In pictures containing more than one person, you may wish to select only one, but you do not have to. Specifically, ask yourself to identify what traits or personal characteristics the person possesses that makes or enables him (her) to behave as he(she) is. You might feel, for example, that the person is being honest, naive, perhaps aggressive, bold or careless. There is a very large number of possible characteristics you might choose. Basically, <u>trust your feelings</u> about the person in the picture to select the most obvious characteristics shown there. Think about at least one person in all four pictures. Make sure you don't skip any of the pictures.

(P5)

Now, select the picture that includes a person who best represents some characteristic(s) that you believe you yourself possess. Your selection here should not necessarily be the picture that shows your "best" traits, but simply the picture that comes closest to showing a trait of yours. Please do not state what that trait is. Rather, place the identification number/letter of the picture on the FIRST line below. BE CAREFUL not to let the activity of the person in the picture confuse you. Do not choose a picture on the basis of whether you do the same specific activity, or ever would. (Many people with very similar traits do not do similar things!) Choose the picture according to how well the personal characteristics of the person shown there match yours.

Look at the remaining three pictures, and select the picture containing the person who you feel exhibits traits which are LEAST like you. Place the number of that card on the LAST line. From the remaining two cards, select the picture including the person who is more like you, and place that number on the second line from the top. Fill in the number of the last card on the third line.

Now, look to see where you have placed cards A and H. Next to them, indicate which person in the picture led you to place the card in that position.

_____

_____

_____

_____

(P6)

Copy the picture numbers from the preceding page on the four lines below. Make sure to copy them in the same order. Next to each line, you will find a scale ranging from "1" to "9." Number "1" means "very unlike me" and number "9" means "very much like me." Taking each of your four choices, estimate where that picture would be on the scale by circling the appropriate number.

Picture No.									
1. _____	1 very unlike me	2	3	4	5	6	7	8	9 very much like me
2. _____	1	2	3	4	5	6	7	8	9
3. _____	1	2	3	4	5	6	7	8	9
4. _____	1	2	3	4	5	6	7	8	9

(P7)

Please be as honest as you can. Your cooperation is greatly appreciated.

How happy are you about being a man or a woman?

What was it like growing up as a boy or as a girl? (You can just list adjectives if you wish.)

What do you see now as being the advantages of being a male or a female? (Answer only with respect to your own sex.)

What do you think would be best about being a member of the opposite sex?

What do you think society's expectations are of you as a male or as a female?

Do you think living up to those expectations is difficult?

(P8)

The questions below are guidelines. Write a whole story.

Who are the people? What has led up to the situation in the picture?

What is happening now? What are they feeling and thinking?

What happens next? What is the outcome? Remember: include a clear statement of what happens that leads to the outcome.

(P9)

Place the pictures in the following order.

B

A

3BM

H

(P10)

The folder in front of you contains four pictures, in no specific order. Each picture has an identification letter/number on the back. For this portion of the study, take all four pictures and look at them. Ask yourself what the person (people) in the picture is (are) like. In pictures containing more than one person, you may wish to select only one, but you do not have to. Specifically, ask yourself to identify what traits or personal characteristics the person possesses that makes or enables him (her) to behave as he (she) is. You might feel, for example, that the person is being honest, naive, perhaps aggressive, bold or careless. There is a very large number of possible characteristics that you might choose. Basically, <u>trust your feelings</u> about the person in the picture to select the most obvious characteristics shown there. Think about at least one person in all four pictures. Make sure you don't skip any of the pictures.

(P11)

Now, look at all the pictures again. Place them in the order given on the separate sheet inside your folder. When the pictures are in order, turn them face down on the table in front of you. (The picture corresponding to the first number on the order sheet should be on the bottom.)

(P12)

PICTURE NUMBER _____

accepting	____;	____;	____;	____;	____;	____;	____	rejecting
	1	2	3	4	5	6	7	
active	____;	____;	____;	____;	____;	____;	____	passive
	1	2	3	4	5	6	7	
dependent	____;	____;	____;	____;	____;	____;	____	independent
	1	2	3	4	5	6	7	
happy	____;	____;	____;	____;	____;	____;	____	sad
	1	2	3	4	5	6	7	
hopeful	____;	____;	____;	____;	____;	____;	____	hopeless
	1	2	3	4	5	6	7	
impulsive	____;	____;	____;	____;	____;	____;	____	controlled
	1	2	3	4	5	6	7	
pleasant	____;	____;	____;	____;	____;	____;	____	unpleasant
	1	2	3	4	5	6	7	
safe	____;	____;	____;	____;	____;	____;	____	dangerous
	1	2	3	4	5	6	7	
severe	____;	____;	____;	____;	____;	____;	____	lenient
	1	2	3	4	5	6	7	
calm	____;	____;	____;	____;	____;	____;	____	excitable
	1	2	3	4	5	6	7	

STOP!!! Before turning the page, make sure you have placed the picture number on the line above.

Appendix D

FACTOR ANALYSIS DATA

Table 20. Factor structure of stimuli from stimulus cue study: Remaining pictures

Table 21. Mean ratings of pictures on semantic differential

TABLE 20

Factor Structure of Stimuli From Stimulus Cue Study

Semantic Differential Factors	Adjective Dimensions	Stimuli 1 I	1 II	1 III	2 I	2 II	2 III
Evaluation	accepting-rejecting	.3586*	.0573	.2236	.6489*	.5079	-.1051
	happy-sad	.8241*	.1804	.2204	.8659*	-.0197	.1186
	hopeful-hopeless	.6667*	-.1347	-.1256	.4906*	.3127	.2199
	pleasant-unpleasant	.8104*	.0965	.2758	.7431*	-.1075	.3480
Potency	dependent-independent	.0772	.7074*	.1338	.2330	.0630	.3826*
	safe-dangerous	.2417	-.2192	.2804*	.6011*	-.2886	.4354
	lenient-severe	.3402	-.1041	.6124*	.1986	-.6798*	.0555
Activity	active-passive	.2839	.5853*	-.2064	.2379	.7266*	-.0769
	impulsive-controlled	.0144	.0262	-.6460*	-.0718	.0088	-.7775*
	excitable-calm	-.2852	.5552*	-.2812	-.1362	.4212	-.6694*
	Proportion of variance:	.3350	.1896	.1787	.3467	.2251	.2209

TABLE 20 (cont'd.)

Semantic Differential Factors	Adjective Dimensions	Stimuli 4 I	4 II	4 III	6BM I	6BM II	6BM III
Evaluation	accepting-rejecting	-.2177	.1600	-.7653*	.0851	.0912	.6112*
	happy-sad	.1948	.8257*	-.2376	-.2230	.6402*	-.0094
	hopeful-hopeless	-.0460	.5355*	-.1168	-.2460	.2575	.4266*
	pleasant-unpleasant	.4059	.6581*	-.3532	.1556	.7665*	.2028
Potency	dependent-independent	.0955	-.5103*	-.1850	.1135	-.1728	.5941*
	safe-dangerous	.5752*	.0442	-.4722	.2025	.5538*	-.0903
	lenient-severe	.6219*	.0959	-.5400	.6173*	.4614	.1106
Activity	active-passive	-.8474*	-.0807	-.0896	-.7185*	-.0209	-.0152
	impulsive-controlled	-.8751*	.0419	-.0017	-.5277*	.2473	.0226
	excitable-calm	-.8769*	-.0378	-.0628	-.6659*	-.2754	-.1122
Proportion of variance:		.4120	.2178	.1710	.3038	.2945	.1647

TABLE 20 (cont'd.)

Semantic Differential Factors	Adjective Dimensions	Stimuli 7BM I	7BM II	7BM III	8GF I	8GF II	8GF III
Evaluation	accepting-rejecting	.1930	-.2101	-.6215*	.5006*	.3561	.0121
	happy-sad	.6532*	.1393	-.4317	.8610*	-.0359	-.0810
	hopeful-hopeless	.6981*	-.0339	-.1505	.8047*	-.0635	-.0518
	pleasant-unpleasant	.8082*	-.1816	-.1533	.8420*	.0763	-.2074
Potency	dependent-independent	.4423	.0751	-.5274*	-.0641	-.5714*	.0985
	safe-dangerous	.6878*	-.3796	-.0453	.6092*	.2102	.2416
	lenient-severe	.2143	-.5631*	-.2631	.5554*	.4419	-.1293
Activity	active-passive	.1788	.7271*	-.0342	.0903	-.5940*	.0846
	impulsive-controlled	-.1489	.6238*	-.4351	.1154	.1003	-.7061*
	excitable-calm	-.2215	.7359*	.1359	-.3592	-.6130*	-.2896
Proportion of variance:		.3389	.2832	.1647	.4547	.2061	.1039

TABLE 20 (cont'd.)

Semantic Differential Factors	Adjective Dimensions	Stimuli 9BM I	9BM II	9BM III	10 I	10 II	10 III
Evaluation	accepting-rejecting	.8356*	-.1413	-.0092	.4152	.0078	.6389*
	happy-sad	.9154*	.1694	-.0375	.8553*	-.2466	.0602
	hopeful-hopeless	.7390*	.0129	-.1932	.7904*	.1387	.3439
	pleasant-unpleasant	.9032*	-.1195	.2213	.9234*	-.0453	.1981
Potency	dependent-independent	.0860	-.1204	-.5054*	.0305	-.1208	.7245*
	safe-dangerous	.8124*	-.1275	.1707	.4859	-.1729	.5774*
	lenient-severe	.1721	-.7330*	.0100	.3055	-.5206*	.2494
Activity	active-passive	.1022	.6517*	.0636	.0210	.7182*	-.1543
	impulsive-controlled	-.1047	.0373	-.6282*	.1311	.5180*	.2517
	excitable-calm	-.1396	.5264	-.5973*	-.4209	.6151*	-.2115
Proportion of variance:		.4466	.1639	.1386	.3669	.1970	.2047

TABLE 20 (cont'd.)

Semantic Differential Factors	Adjective Dimensions	Stimuli 12M I	12M II	12M III	13MF I	13MF II	13MF III
Evaluation	accepting-rejecting	.2871	.7598*	.1534	.1796	.1629	.7193*
	happy-sad	.7241*	-.1372	-.0807	.8195*	.2523	.1969
	hopeful-hopeless	.6874*	.3183	-.1427	.7793*	-.0576	.4973
	pleasant-unpleasant	.8392*	.1998	.0193	.6737*	.3306	.3832
Potency	dependent-independent	-.0327	.2396	-.5505*	-.5055*	-.0927	.2025
	safe-dangerous	.7014*	.4637	.2556	.1824	.7613*	.1151
	lenient-severe	.6558*	.4002	.4088	.6001*	.4139	.0292
Activity	active-passive	-.0762	-.7155*	.1577	.0815	-.3681	-.5849*
	impulsive-controlled	-.0342	.0203	.6502*	-.2123	-.7067*	-.1729
	excitable-calm	-.1115	-.6106*	.2285	-.2331	-.6326*	-.3888
Proportion of variance:		.3574	.2694	.1424	.3236	.2565	.1963

TABLE 20 (cont'd.)

Semantic Differential Factors	Adjective Dimensions	Stimuli 14 I	14 II	14 III	17BM I	17BM II	17BM III
Evaluation	accepting-rejecting	.7147*	-.2531	.3062	.7570*	-.2536	.0739
	happy-sad	.8973*	-.1133	-.0510	.7265*	-.2382	.2238
	hopeful-hopeless	.8091*	-.1297	.1626	.5335*	-.5146	-.0299
	pleasant-unpleasant	.8623*	-.2623	.2951	.7236*	-.0128	.4147
Potency	dependent-independent	-.1523	.0555	-.7603*	-.0951	.1986	-.5054*
	safe-dangerous	.6879*	-.5578	-.0613	.5100*	.2349	-.1657
	lenient-severe	.5952*	-.3703	-.3550	.1602	.3330	.5538*
Activity	active-passive	-.0230	.8456*	-.0504	.1969	-.4770*	.0891
	impulsive-controlled	-.4075	.6863*	-.0528	-.0522	-.2970	.5201*
	excitable-calm	-.2806	.7875	-.0327	-.0135	-.7121	.1537
Proportion of variance:		.4549	.2889	.1103	.3333	.2099	.1663

TABLE 20 (cont'd.)

Semantic Differential Factors	Adjective Dimensions	Stimuli 20 I	20 II	20 III	E I	E II	E III
Evaluation	accepting-rejecting	.5360*	.4178	-.0208	.6967*	.0558	-.3321
	happy-sad	.7754*	-.3163	-.1092	.8318*	-.1631	-.1475
	hopeful-hopeless	.7941*	-.2682	-.0233	.8138*	-.0065	-.0903
	pleasant-unpleasant	.8594*	-.0334	.1729	.7885*	-.0006	-.4013
Potency	dependent-independent	.1761	-.6138*	.0499	.6305*	-.3197	-.0095
	safe-dangerous	.6122*	.4674	-.2641	.4628	.1108	-.6553*
	lenient-severe	.3638	.1448	.3743*	-.2440	.6031*	.0297
Activity	active-passive	.0389	-.2911	-.5559*	.0644	-.2879	-.8648*
	impulsive-controlled	.0367	.1368	-.5679*	.1765	-.3200	-.3435*
	excitable-calm	.0182	-.6948*	-.2450	-.1650	-.7796*	-.1349
Proportion of variance:		.3982	.2204	.1347	.3914	.1594	.1979

TABLE 20 (cont'd.)

Semantic Differential Factors	Adjective Dimensions	Stimuli F I	F II	F III	G I	G II	G III
Evaluation	accepting-rejecting	.6652*	-.0531	.1631	.8735*	-.0353	.1926
	happy-sad	.7320*	.0728	.5170	.9019*	-.0676	.1231
	hopeful-hopeless	.7375*	-.1108	-.0940	.1000	.0257	.6788*
	pleasant-unpleasant	.7466*	.1762	.2873	.8440*	.0581	.2744
Potency	dependent-independent	.6255*	-.1574	.3526	.3780*	-.0744	-.0672
	safe-dangerous	.7625*	-.1396	-.1440	.4184	-.3684	.5733*
	lenient-severe	-.0641	.0470	-.3617*	.1141	-.4830*	.0677
Activity	active-passive	.1738	-.7371*	-.3551	-.0706	.5444*	.5015
	impulsive-controlled	.0126	-.5936*	.2812	.1981	.6476*	.0751
	excitable-calm	-.0139	-.7739*	.0850	-.1529	.7329*	-.0548
Proportion of variance:		.4256	.2195	.1204	.3548	.2154	.1561

TABLE 21

Mean Ratings of Pictures
on Semantic Differential

Adjective Dimensions	Pictures				
	1	2	3BM	4	6BM
accepting-rejecting	3.72	3.44	5.08	4.44	4.54
happy-sad	5.18	4.58	6.36	4.80	5.70
hopeful-hopeless	4.84	3.38	6.12	4.12	4.60
pleasant-unpleasant	4.86	4.02	5.94	4.98	5.44
dependent-independent	3.92	4.36	3.90	3.62	3.88
safe-dangerous	3.38	3.30	5.04	4.74	4.50
lenient-severe	4.16	4.22	5.30	5.12	4.82
active-passive	5.06	3.40	4.00	2.52	3.76
impulsive-controlled	4.66	4.62	2.64	2.46	4.42
excitable-calm	5.14	5.02	3.38	2.66	3.72
	7BM	8GF	9BM	10	12M
accepting-rejecting	3.76	2.52	3.48	2.00	3.88
happy-sad	4.58	3.24	3.76	3.28	5.20
hopeful-hopeless	3.98	2.66	4.42	2.84	4.14
pleasant-unpleasant	4.48	2.78	3.52	2.92	5.12
dependent-independent	3.96	4.56	4.14	2.08	3.36
safe-dangerous	3.92	2.68	3.22	2.62	4.78
lenient-severe	4.56	3.70	3.02	3.26	4.66
active-passive	4.24	5.58	5.82	4.06	3.96
impulsive-controlled	4.50	4.80	4.50	3.62	4.20
excitable-calm	4.22	5.92	5.64	4.88	4.54

TABLE 21 (cont'd.)

Adjective Dimensions	Pictures				
	13MF	14	17BM	20	A
accepting-rejecting	4.88	3.82	3.36	4.44	2.96
happy-sad	5.98	4.32	3.42	5.40	3.22
hopeful-hopeless	5.82	3.44	2.98	5.20	2.96
pleasant-unpleasant	5.74	3.80	3.52	5.24	3.28
dependent-independent	3.46	4.94	4.62	5.06	2.32
safe-dangerous	4.78	4.00	4.30	5.10	5.80
lenient-severe	5.10	4.52	4.48	4.52	4.72
active-passive	3.26	4.66	1.80	4.82	1.48
impulsive-controlled	2.72	3.92	4.32	4.26	5.08
excitable-calm	3.00	4.98	2.98	4.68	2.66
	B	E	F	G	H
accepting-rejecting	2.92	2.58	1.74	2.56	1.94
happy-sad	3.00	3.54	1.68	2.50	1.94
hopeful-hopeless	2.92	3.08	1.78	2.42	1.70
pleasant-unpleasant	3.86	5.26	1.56	2.14	2.02
dependent-independent	5.04	3.24	2.66	3.54	2.58
safe-dangerous	5.30	3.06	1.98	3.16	2.40
lenient-severe	5.02	3.92	3.54	3.68	3.66
active-passive	2.20	3.62	4.20	3.58	3.66
impulsive-controlled	4.46	4.34	4.36	3.48	3.12
excitable-calm	2.92	4.56	5.02	3.76	3.96