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**MOODS AND MEMORIES: A STUDY OF THE RELATIONSHIP
BETWEEN MOOD VARIABILITY AND MEMORY FOR THE AUTOBIO-
GRAPHICAL PAST AND FOR DRIVE-RELATED VERBAL MATERIAL**

by

Joan Farber

**A dissertation submitted to the Graduate Faculty
in Psychology in partial fulfillment of the
requirements for the degree of Doctor of
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1971

This manuscript has been read and accepted for the Graduate Faculty in Clinical Psychology in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

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CHAPTER I

MOODS AND MEMORIES: RESEARCH AND THEORETICAL BACKGROUND

INTRODUCTION

This is a study of the relationship between variability of reported moods and memory for autobiographical and drive-related material. It has been shown that people differ widely in the range and frequency of mood changes, and that individual differences in mood variability are quite stable personality characteristics. Mood variability has also been shown to correlate with a substantial number of personality measures. (Wessman & Ricks, 1966) Although there have been a number of studies of affect and cognition, including studies of emotion and memory, the possible relationship of mood variability to such factors has not been explored. Consideration of the studies of mood and those relating emotion and memory suggested the type of relationship which it was the purpose of this study to investigate.

The central goal was to demonstrate that persons who report frequent and relatively intense changes of feeling

states (moods) differ from persons who describe their feelings as largely stable and unchanging in the quality of their recall of autobiographical and drive-related material. These differences between persons with stable and variable mood patterns were expected on the basis of a hypothesized difference in both the quality of their usual affective responsiveness to experience and the cognitive principles by which they organize their experience. It was suggested that persons who report awareness of frequent changes in their feelings tend to view their own lives in terms of what has made a difference to them affectively--in other words, that their recall is centered around the subjective impact of events--and that, on the other hand, persons who report extreme stability of mood tend to de-emphasize affect and the kinds of experiences which are intimately related to it in their recall of the past.

It was anticipated that persons whose usual experience includes relatively frequent and intense affect changes would be inclined to view their life experiences in a more personal, emotionally-oriented and vividly sensory way than those whose moods are more or less unchanging; the latter were expected to view their own lives in a more schematized, conventionalized, routinely factual and externally-oriented way. This was expected to be observable in both an open-ended autobiography and a personal life questionnaire.

It was also suggested that there would be differences between variable and stable mood subjects in their ability to remember affectively-toned or drive-related vs. neutral verbal material. Because they are more oriented towards feelings, interested in them, and accustomed to handling them, it was expected that variable mood subjects would be stimulated to recall affect-arousing material better than neutral material. On the other hand, it was expected that persons who feel a need to maintain extreme stability in their feelings (stable mood subjects) would recall neutral material better than affect-arousing material.

It was also anticipated that subjects with variable moods would be found to value intense feelings more highly in themselves and others, to be interested in them, and to consider emotionality as an important aspect of their lives; stable mood subjects were expected to show more reservation about the value of strong feeling, to be less interested in it and tolerant of it.

Research on the Relationship Between Mood Variability and Personality

The Wessman and Ricks book, Mood and Personality (1966) is so far the most extensive study of the correlates of mood, and the only major study which deals with variability of mood as it occurs in normal subjects over an extended period of

time. In the Wessman and Ricks study, Harvard undergraduates filled out a mood questionnaire nightly for six weeks, with the results later correlated with a large number of test scores and ratings from a three year personality assessment project. The various mood scales used by Wessman and Ricks had a range of ten points; a number of measures were derived from these scales, many of which correlated significantly with various personality measures. The main focus of the analysis used the mean of the daily "average" on the Elation-Depression scale, which was taken as a measure of "hedonic level," and its standard deviation which was used as a measure of mood variability. The Wessman and Ricks book includes the results of a more limited but similar study which was done under the authors' supervision using Radcliffe students, and obtaining, on the whole, similar results. (McIlvaine, 1958).

The 16 mood scales covered the following aspects of feeling: Fullness vs. Emptiness of Life, Receptivity Towards and Stimulation by the World, Social Respect vs. Social Contempt, Personal Freedom vs. External Constraint, Harmony vs. Anger, Own Sociability vs. Withdrawal, Companionship vs. Being Isolated, Love and Sex, Present Work, Thought Processes, Tranquility vs. Anxiety, Impulse Expression vs. Self-restraint, Personal Moral Judgment, Self-confidence vs. Feeling of Inadequacy, Energy vs. Fatigue, and Elation vs. Depression. A

factor analysis of the standard deviation scores on the set of scales for the entire group of subjects showed that one single factor accounted for 91% of the variance in the Harvard sample, and 82% in the Radcliffe group. Variability on one of the scales was accompanied by close to the same amount of variability on the others; apparently there is one general dimension of variability-stability running through all of the scales. In their discussion of mood variability, Wessman and Ricks used the standard deviation of the Elation-Depression scale as the index of the general trait of variability, and the mean of the Elation-Depression scale as the measure of hedonic level. The mean values of almost all of the scales correlated highly with Elation-Depression. (For men the exception was Personal Freedom vs. External Constraint; for women it was Love and Sex.) For women the scales correlating most highly with Elation-Depression were Tranquility vs. Anxiety (.89) and Fullness vs. Emptiness of Life (.88). A factor analysis of the means on all of the scales of the women's group revealed two main factors. One of these was best represented by Elation-Depression; the other was a tendency to be either quite restricted or quite extreme in the range of feeling reported on all of the scales within one day.

One of the basic findings was that hedonic tone (the mean daily "average" on the Elation-Depression scale) and mood

variability are independent of each other, both having a distinct pattern of correlates on a number of personality measures. Measures of Between-day variability (the standard deviation of the daily "average" on the Elation-Depression scale) and Within-day variability (the mean range between the highest and lowest values reported each day) were significantly related for the male group only ($r = .56$ $p < .05$); in the female group the correlation ($r = .34$), though showing a tendency in the same direction was not statistically significant. However, Wessman and Ricks comment that the "regular patterning of correlates of variability with our other clinical data led us to conclude that Variability of hedonic level, both within days and across days, is a general character trait." (p. 69) In the major discussion of the correlates of variability they used day-to-day variability (the standard deviation of the daily "average") as the measure.

In summarizing the mass of test and interview material, Wessman and Ricks contrast the stable and variable groups as follows:

The stable people had the quality of closed systems, quiescent occupants of fixed social roles, no longer searching out the alternative ways of life possible in their social environments, fitting in without open struggle but with perhaps a good deal of inner work directed toward control. The variable men and women, on the other hand, had personal organizations that were still in the process

of formation, still open to the disruptive and rewarding influences of both inner and outer stimulation, still searching. More energetic, more productive, and less focussed than their stable peers, perhaps even less socialized and civilized, they were also less discontented. Though their personalities were less formed than those of the stable people, and more vulnerable to some kinds of threat, they were also more open to change, and probably over the long run, more adaptable. (p. 241)

The most general characteristic related to mood variability, permeating every type of data gathered, contrasted the emotional openness of the variable people to the constriction of the stable. This is not a simple matter of introversion vs. extroversion. The variable people were more open to their own inner lives, more subjective, introceptive and narcissistic, but-at least in the male sample--they were also more involved with their fellow men and more likeable. Related to this greater openness, this pro-emotional stance, was a more diffuse, but also livelier, richer fantasy life, relatively free from repression and suppression of feeling. The more stable men and women were relatively aloof, emotionally controlled and given to fantasies of isolation when they fantasied at all. On the positive side, the stable men and women proved to be more integrated personalities with more stable identities, solid citizens of their time and place. A third set of variables suggested a possible temperamental, perhaps physiological substrate to emotional variability. The stable men appear to be relatively passive people with a good deal of inertia, while the variable men were more energetic, fast paced, full of initiative, oriented towards the future. (p 187)

Wessman and Ricks emphasize that their results may be in some ways specific to their rather unusual sample. Becker and Nichols (1964) in a study of University of Illinois female students found that their variable subjects resembled the stable Harvard-Radcliffe subjects more than the variable ones--

showing low need achievement, high need for affiliation, reliance on traditional family ideology, and in general a rather authoritarian and stereo-typically conventional outlook. The first study of long-term variability of mood (Flugel, 1925; quoted in Wessman and Ricks, p. 181) found variable subjects to be more unhappy (which was not confirmed by either the Harvard or Radcliffe studies) but did not relate variability to other characteristics. Although it has often been assumed that mood fluctuations are periodic and regular, Wessman and Ricks did not find such regular cyclical patterns--though the authors point out that such patterns might emerge over a more prolonged period of time. While Johnson (1937) found no apparent relationship between mood and menstrual cycle, others have (Benedek and Rubenstein, 1942). The Radcliffe sample showed that two days prior to menstruation were generally marked by a lowering of hedonic level. (Wessman and Ricks, p. 69)

Other studies of mood have not generally emphasized mood variability per se. There have been several studies of short term moods by Nowlis and his associates, concerned with the definition and factor analysis of mood components, with the Mood Adjective Check List as the principle measure. Nowlis considers mood to be based on fluctuations in relative strength of a number of "systems of behavior and experience"

(1965). These systems include aggression, anxiety, surgency, concentration, social affection, fatigue, sadness, egotism, and vigor; a similar set of factors was found by both Lorr et al (1967) and Borgatta (1961). There have also been studies showing that moods can be changed, and the changes measured by pre- and post-testing group procedures with such things as exciting or anxiety-provoking films as intervening variables. (Levison, 1963; Lazarus et al, 1962; Speisman, 1964; described in Nowlis, 1965) These studies showed differences in the kinds of changes which occurred, and related the changes to personality characteristics. In one of the Nowlis studies (1965) done over a sixty day period with fifty-one men, 18% of the correlations made between the standard deviation of daily scores and various personality measures were significant; however, the factors of anxiety and sadness accounted for 42% of the correlations.

There have also been a few studies suggesting that mood variance may be inversely related to autonomic reactivity. Speisman et al (1964) found that subjects who were high in capacity for status, self acceptance, and communality, and also were high on the MMPI hysterical-denial subscale, reacted to a stressor film by lowering levels of autonomic activity and large increases in mood levels. Fiske (1957) re-examined some previously collected data and found a high

negative correlation between variability and the MMPI scales of Ego Functioning (K), Hypochondriasis (Hs), Psychasthenia (Ps) and Paranoia (Pa), and also a high positive correlation with Hypomania (Ma). Wessman and Ricks conclude that

Variable subjects are either low in ego strength or are willing to admit what difficulties they do have, and that they are less likely...than stable subjects to have psychosomatic complaints, compulsive symptoms, or ideas tinged with paranoid coloring. These results suggest alternative ways of handling emotion at the expense of somatic disruption, compulsive reactions and difficulty in knowing the sources of their actions and feelings.
(p. 181)

This distinction parallels one drawn by Eysenck (1947) between anxiety neurotics who tend to be stable to the point of rigidity while suffering autonomic imbalance, and the flighty and emotional pattern of hysterical patients.

Cattell's research (1957) suggests that emotional variability is likely to be associated with neuroticism and extroversion; however, the Wessman and Ricks results contradict the association with neuroticism and question the association with simple extroversion, since the variable subjects were more responsively attuned to both inner and outer stimuli.

In a factor analytic study of the MMPI, Block (1964) derived two main factors, the second of which, while not concerned specifically with mood variability, seems perhaps to have tapped a parallel set of characteristics. Block calls this an "ego control factor" and conceives of it as reflecting

a continuum with

excessive containment of impulse and delay of gratification at one end (over-control) vs. insufficient modulation of impulse and inability to delay gratification at the other end (under-control). Behaviorally, an over-controller appears to be constrained and distant, with minimal experience of his personal emotions; he is highly organized and categorical in his thinking, tending to adhere rigidly to previous understandings; he can continue to work on uninteresting tasks for long periods of time; he is over-conforming, indecisive, and with narrow and relatively unchanging interests; he delays gratification even when pleasure is a sensible course of action, not threatening of long range events.

Behaviorally, an under-controller is unduly spontaneous, with enthusiasms neither held in check nor long sustained; his decisions are made (and unmade) rapidly and his emotional fluctuations are readily visible; he disregards, if he does not disdain, social customs and mores; he tends toward immediate gratification of his desires even when such gratification is inconsistent with the reality of his situation and his own ultimate goals; his grooves of behavior are not deeply ingrained and, accordingly, his actions can frequently cut across conventional categories of response in ways that are (for better or for worse) original. (Block and Turula, 1963, p. 115)

Research on the Relationship Between Emotion and Memory

Much of the early research concerning the relationship between emotion and memory was concerned essentially with whether affect enhances or inhibits learning. (Rapaport, 1950) In a number of experiments it was found that short term recall was not related to pleasantness or unpleasantness of the items to be learned, or to the Ss' like-dislike, esthetic valuation, etc., or to an associated experience of a pleasant or unpleasant

sort, but rather to the intensity of the Ss' feelings about them; the more strongly the Ss felt about the stimuli (which were suggestive or neutral nonsense syllables, pictures, single words, etc.), the better they remembered them regardless of whether the feeling were positive or negative.

(Cason, 1932; Heywood & Vortride, 1934; White and Ratliffe, 1934; Barret, 1938. From Rapaport, 1950) However, critics of such experiments pointed out that the feelings involved in such judgments as pleasant vs. unpleasant are weak, limited and superficial, and that the learning-forgetting processes were extremely simple.

In another series of studies, some done with adults, and some with children, subjects were asked to recall life experiences. Several experimenters found that subjects tended to report more pleasant than unpleasant experiences. (Kowalewski, 1908; Henderson, 1911; and Flugel, 1917; from Rapaport, p. 70) However, these studies were criticized for the likely influence of response tendencies; when these tendencies are taken into account this research too supports the finding that relative intensity of feeling is associated with greater recall regardless of whether the feeling is pleasant or unpleasant. (Rapaport, p. 71)

In an effort to explore a more subtle range of feeling than pleasantness-unpleasantness, Wuerdemann (1926; from

Rapaport, p. 64) studied incidental memory using various figures and paired odors and measuring, not quantity of recall, but certainty and adequacy of "redintegration" over varying periods of time up to six weeks. As in the earlier experiments, emotion was established introspectively, but the concern was with feeling tone, intensity and depth of feeling, rather than pleasantness-unpleasantness. In so doing he presupposed Kreuger's theory of feeling, according to which feeling is inseparable from experience, so that memory for something includes feeling as an integral part of the wholeness of the thing remembered. (Rapaport, p. 65) Wuerdemann's experiments supported this, showing that experiences of great feeling intensity and depth are remembered better than those weak and superficial in feeling, that experiences with particularly unique feeling-qualities are retained better and longer, and that parts are remembered by an activation of a "whole-attitude" which involves feelings. (Rapaport, p. 65)

Another group of emotion-memory studies supposedly demonstrate the Freudian concept of repression; in fact, while they cannot accurately be said to do this, the studies are of some interest. For example, Waldberg (1921; from Rapaport, p. 86) read a list of single words frequently associated with complexes. He found that normal adults tended to reproduce the original list sequence, with interruptions

only at those words having a personal meaning. Words related to complexes contrary to the individual's self-esteem, however, were "repressed" while other complex-related words were recalled particularly easily. Sharp (1930; from Rapaport, p. 18) used words related to the individual subjects' life histories and tested for recall 2, 9 and 16 days after list presentation. He found that material unacceptable to the subjects was both more difficult to learn and more poorly retained; acceptable but still personally relevant material was harder to learn than neutral material but also was retained longer. In another experiment Sharp (1930; from Rapaport, p. 87) used paired nonsense syllables having religious and profane connotations; Flanagan (1930; from Rapaport, p. 90) did a parallel experiment in which nonsense syllables had sexual connotations. Both studies had a set of innocuous syllables for control. Significant differences were found in both learning and recall between the pairs, with unacceptable words being more poorly learned and retained. Again the authors claim to have demonstrated repression, and also suggest that there was a "negative set" against recall of the unacceptable material.

Similarly, the 'perceptual defense' studies (McGinnies, 1949) were said to demonstrate repression by showing that 'taboo' words have higher recognition thresholds than neutral

words. In the first experiments subjects were shown to require longer periods of exposure to recognize tachistoscopically presented taboo words than neutral words, even though they had a greater galvanic skin response to the taboo words before they were overtly identified. These results were criticized for such things as having failed to take into account the relative infrequency of use of taboo words and the possibility that the subjects were suppressing their responses rather than failing to perceive the stimuli.

(Howes and Solomon, 1950, 1951) However, in further experiments, subjects showed recognition (by galvanic skin response) to nonsense syllables previously paired with shock when they were presented at speeds above the threshold for recognition, thus upholding the notion of perceptual defense. (McCleary and Lazarus, 1949; Lazarus and McCleary, 1951)

The studies by Ziegarnick (1927) showing better recall for completed than uncompleted tasks are also relevant to the general question of emotion and memory. Sullivan (1927; from Rapaport, p. 97) found that the 'Ziegarnick effect' occurred most clearly when tasks were administered in a neutral way, and that completed tasks were remembered if they were all presented as an intelligence test. Rosenzweig (1943) and others also showed that completed tasks were recalled with greater frequency under "ego involving" conditions, and again

such experiments were said to demonstrate repression; various patterns obtained were also said to relate to "ego strength" (Alper, 1946, Sanford, 1946), though Jourard (1954) failed to find a relationship with a Rorschach measure of ego strength. Eriksen showed that Ss who forget more uncompleted tasks also show "perceptual defense" against recognizing words for which they have long reaction times, while Ss who recall more incompletd tasks do not; a similar result was found by Postman and Solomon (1950) and seems suggestive of a defensive "style" running across both perception and memory. Memory for completed vs. uncompleted tasks has also been related to anxiety, congruence between self and ideal, aspiration level, etc., etc. (Reviewed in Zolik, 1955)

There have also been a series of studies attempting to relate Byrne's Repression-Sensitization Scale (Byrne, 1961) to various aspects of memory. This scale, which is an extract from the MMPI, is said to reflect the tendency to handle threat either by avoidance (through repression, denial, etc.) or by approach, (through sensitizing defenses, such as intellectualization, worrying, etc.). One study found sensitizers to be superior to repressors in short term memory for both threatening and non-threatening words (Bergquist et al 1968); however another study (Lewinsohn et al, 1970) found no significant differences between repressors and sensitizers

in recall of threatening and non-threatening words accompanied by colors and designs. The Lewinsohn study also attempted to relate repression-sensitization to levelling-sharpening; no significant relationships were found either between repression-sensitization and levelling-sharpening, or between levelling-sharpening and recall. Williamson et al (1970), using the Welsh H and Welsh R Scales and the Shipley Scale found sensitizers had better recall of dreams than repressors; however, Bone et al (1970), using the Byrne Scale, found no apparent relationship.

Recall patterns suggestive of different 'styles' of organizing memories were described even in quite early memory research; Binet (1897) referred to "observers" and "describers," Baerwald (1908) to "spontaneous recallers" and "describers," and Partridge (1947) to "a reducing type" and "a recasting type." (Summarized in Gomulcki, 1956) Cofer (1956) divided such organizing tendencies into three categories--one being the fully explicit and conscious principles used to simplify the task, another being vague, un verbalized ordering habits related to language, familiarity, etc., and the third being vague, un verbalized attitudes, sets, and emotional dispositions. The last type is said to serve a schematizing function and to underly selective perception, motivated forgetting and the tendency to conventionalize experiences in recall to fit

one's frame of reference.

In studying "types" of recallers, experimentors have been using extended verbal material and looking at individual differences and qualitative changes (as well as accuracy) in the obtained recall. The classic work in this area is Bartlett's Remembering (1932), which studied the influence of previous experiences, memory "schemata" and attitudes on successive reproductions of lengthy prose passages. He found that recalled material had been shaped and conventionalized by the subjects' attitudes and emotional frames of reference. Gomulcki (1956) found that by extending verbal material beyond the verbatim memory span he found two clear recall types: 1) those who reproduced only what could be recalled verbatim and omitted anything about which they were unsure, and 2) those whose reproductions contained additions, alterations and intrusions in the midst of accurately recalled material. In a series of studies, Paul (1959) established that such tendencies, which he calls "importing" and "skeletonizing," are enduring characteristics which subjects show in a variety of memory situations and independent of the type of stimulus material, so long as it is extended prose.

Alston (1966) investigated the relationship between the memory style of importation and ego strength (as measured by the Rorschach) with matched drive and neutral passages of in-

creasing length. He found that importers characteristically recalled the drive passages better than the neutral passages, and suggested that for these subjects, rather than posing a threat, drive content was a stimulating influence. He also suggested that for importers, "thought may be organized along drive lines, and so memory functions most smoothly with material with drive and drive-derivative content."

Paul et al (1965) studied the way in which a group of male actors recalled an experience of LSD-25 administered in the laboratory. After initial screening procedures had excluded persons showing marked psychopathology, all subjects (N=50) were intensively interviewed and given a Rorschach, a TAT, and a Weschsler-Bellevue Intelligence Test. In addition they were all tested for recall of verbal material by means of a theme list. During the day LSD was given, a 74-item questionnaire was administered four times and a retrospective questionnaire was given the next day to assess recall. Three groups emerged, showing distinctive patterns of recall. One group, the "Subtractors," tended to forget aspects of the experience which were ego-alien and threatening; these included such things as a "frightening sense of passivity or loss of control," a loss of ego boundaries, or a "partial dissolution of the sense of self." The second group, the "Adders," added and confabulated in recall; the new material

was of two major kinds, either dealing with affects or with the perceived meaning of the events. The third group, the "Recallers" recalled the experience most accurately, though what they reported were experiences of a sort likely to occur in more or less normal states. These differences in recall paralleled differences in the quality of the drug experience itself: The Subtracters had experienced "much change in their perception of the environment but little change in themselves"; in their recall they diminished still further the effects on themselves and emphasized the changes experienced in relation to the environment. The Adders experienced the biggest drug effect with the most marked changes in self-experiences, perception of the environment, and loss of controls; their recall reflected this, with the changes and additions further emphasizing their intense affective reaction and the impairment of controls and coping. The Recallers experienced the smallest drug effect, and remembered their not markedly unusual experience most accurately.

Profiles for the three memory groups were derived from the personality and memory data. (These profiles are given in clinical terms which reflect the interpretation of standard clinical tests in terms of defensive types, etc.) "The Subtractor is an obsessive compulsive character with hyster-

ical features" who is also

well integrated and effectively defended. He tends to use intellectual defenses and shows strong strivings for independence. He is creative, sensitive and intelligent. He tends to use denial to diminish his experience and particularly to de-emphasize the regressive aspect of experience. Thus his defenses are notably adaptive in the face of the threatening drug experience in that they accentuate the image of an unimpaired and unchanged self and de-emphasize the originally reported loss of contact with the environment. He retains extended verbal material without importations or intrusions.

The Adder tends to be narcissistic and schizoid and may show thought disorder. Compared to the Subtractor, he is poorly integrated, uses a variety of defenses but not with great effectiveness. He is dependent, naive, and passive receptive. He is characterized by an "openness between different states of consciousness, or else he can tolerate regressive phenomena because he is not unfamiliar with them." In recall of verbal material, he uses intrusions from previous experience in both long and short term memory.

The Recaller tends to be an "inhibited, obsessive-compulsive character, who experiences little manifest anxiety and has a narrow range of rigid but quite effective defenses." His thinking is somewhat concrete and stereotyped; he is relatively unresponsive emotionally, and neither reflective nor introspective. He is poor in short term retention of verbal material but has good long range recall.

In recalling verbal material, Subtractors had most accurate recall, the Recallers poorest accuracy, and the Adders in between. The Adders gave most importations and intrusions, the Subtractors fewest, and the Recallers in between. Drive content had little effect on memory, though the Adders told longer stories to drive-related themes than to neutral ones. Under the drug, while all groups showed a decrement in memory, the greatest effect was shown by Subtractors on neutral material; their attention was increased by the drive material with an improvement in their performance.

In a recent unpublished study, Ricks describes two approaches to memory which he call "re-experiencing" and "cognitive control." He subjected Harvard students to a stress interview in which they were to defend their philosophy of life against the attacks of a law student. He took their recall immediately afterwards and a year later; he also interviewed the students about their thoughts and approaches to memory itself, and the two major types emerged. In the interview he found that the Re-experiencers feel that emotion precedes other elements and go about remembering by first recapturing the feeling--while those low on re-experiencing think of memory as comprised of discrete and abstract segments, and think of the memorableness of something as due to

the quality of the stimulus rather than the remembering person.

He found little difference between the two groups in the immediate recall of the stress interview; however, a year later the Re-experiencers had much more complete recall, although with a somewhat narcissistic bias (remembering more of what they had said than their opponents). For remembering personal and inter-personal events, re-experiencing is apparently a more effective approach than cognitive control; however in other kinds of memory tasks, such as those involved in academic work, cognitive control is apparently an extremely effective strategy--as shown by the fact that high use of cognitive control turned out to be a better predictor of academic success than various measures specifically designed for that purpose.

Ricks describes the two processes as follows:

Cognitive control organized memory by imposing on it a set of general principles, rubrics, schemata, which then take the place of special details. While a great deal of energy must be saved this way, it is questionable whether abstract schemata can facilitate memory for inter-personal events or whether they must always take the place of exact detail...Re-experiencing, while it offers distortions in the direction of elaboration and making a better story, seems to stay closer to its original, with the additional elements filling out a picture which still retains much veridical detail.

Personality data on the Ss gave the following picture:

Re-experiencers tended to be imaginative, impulsive, likeable,

productive, narcissistic, fast-paced, changeable and sociable. They are "Impulsive yea-sayers, lacking in intellectual discipline and control, but not particularly poor students, with strong cultural interests..." Cognitive control was most highly related to self-reports of orderliness, efficiency, intellectual caution and control, individualism, and high academic achievement.

Discussion of Previous Research

These last few studies bring together a number of elements suggested by earlier studies. Several of the early studies using quite innocuous verbal stimuli, suggested that increasing the relative intensity of affect associated with a stimulus enhances its recall. Something like this may have occurred with Alston's (1966) importers who retained drive-related stimuli better than neutral ones, and the Subtractors (Paul et al, 1965) under LSD who also responded better to drive-related material. Thus responsivity to a particular kind of intensity of stimulus may vary from person to person, and also within individual's depending on their 'ego state.' At the same time, among the LSD subjects it was the most intense and unusual experiences which were subjected to the adding or subtracting procedures, while the more normal ones were recalled most accurately. Perhaps there is an individually variable 'threshold' of intensity or strangeness below

which recall is enhanced and above which ego defensive manipulations are called into action.

It is striking that the recall styles corresponded to the quality of the experiences themselves. The Adders appear to be using what Ricks calls "re-experiencing" in their recall of the LSD experience. In emphasizing their truly extreme responsiveness, these Ss seem to be suggesting that their capacity to respond emotionally and even to lose control is a highly valued part of their sense of identity. Although no mood data is available on these subjects, it would seem from the personality descriptions that it is not unlikely that they are very variable in mood. The Subtractors, who keep tighter control over their experiences, and have less vulnerable identities, seem to have reacted somewhat similarly to those subjects described in earlier experiments who recalled best those items not contrary to self-esteem. Their focus on outer stimuli suggests some analogy with Ricks' "cognitive-control" group. Speculation on this group's place in the mood variability-stability range is more difficult than with the Adders; since they are inclined to minimize the intensity of their experience with denial, however, they would probably appear to be fairly stable. Finally, the recallers, who both maintain considerable control over the quality of their LSD experience and remember it well would

seem to be behaving like most subjects in most laboratory studies of memory. Having kept what was for the others a somewhat disrupting experience from being one for them, they maintain memory as a reasonably well-functioning autonomous ego skill. Speculation would suggest that these subjects would be stable in mood.

Altogether these studies suggest that the relationship between individual personality characteristics and memory is a complex one indeed. Early studies tried to relate recall to qualities of the stimuli alone with, at best, ambiguous results. The attempts to demonstrate "repression" did seem to show that people have some kind of selectivity in their recall but gave little indication of how it functions. More recently "memory style" experiments have focussed, not just on forgetting and remembering, but also on the cognitive strategies involved and their effects in terms of the remembered product. General contrasting approaches to memory have been related to corresponding personality variables. Studies such as those of Ricks and Paul et al suggest that there is an intimate relationship between the affective quality of remembered experience and an individual's usual style of living with his feelings. The personality correlates of memory types suggest that the "Adders" and "Re-experiencers" seen together as a group, and perhaps the "Subtractors" and

the "Cognitive Controllers" as another group may have some important characteristics in common, not the least of which might be their general style of handling affect. The first group seems to be impulsive, volatile, effusive, narcissistic, productive, open to inner and outer experience, and somewhat poorly integrated. The second group seems more stable, but also more rigid, relatively closed to affective experience, and more factually than personally oriented in regard to memory. Altogether these differences seem to parallel characteristics of persons with variable and stable moods and suggest that qualitative differences in their memories of their own lives may be expected.

Theoretical Background

The importance of affect in organizing and focussing experience was described by William James, who wrote that the "real world for each of us, the effective world of the individual is the compound world, the physical facts and emotional values in indistinguishable combination." (James 1902, quoted Wessman and Ricks, p. 2) For some time after James, however, psychologists emphasized primarily the disruptive effect of emotion on organized activity and cognition. Emotion was seen as arising out of conflict related to drive frustration. Both Hullian learning theory and psychoanalytic theory considered tension reduction as the basic motivational prin-

ciple; affect was considered primarily in its negative aspect, as a painful stimulus to be avoided.

More recently the emphasis in psychology has veered back towards the Jamesian view in which affect is seen as an integral part of cognitive organization and functioning, rather than merely as a disruptor of functioning with tension reduction as the ubiquitous motivator. (For example, Rapaport, 1950; White, 1959; Schachtel, 1959; Tomkins, 1962)

Silvan Tomkins (1962, 1963) has developed a major personality theory, a main part of which is concerned with affect as a system with intrinsically rewarding and punishing properties. He considers complex affective patterns to be a major aspect of what we call personality and has elaborated some of the kinds of socialization experiences conducive to particular patterns. His work is of particular interest because of its detailed consideration of the function of the positive affects of interest and excitement. Excitement he sees as the power behind creativity. "Excitement has of course many competitors among the affects and one who is constantly afraid or ashamed or distressed cannot also be interested in the exploration of novelty."

Tomkins (1965, 1966) has also described an elemental polarity in what he calls Left and Right "ideo-affective postures"; these are basic attitudes which structure an

individual's intellectual and affective response orientation. The polarity between left and right is seen as the basis of conflicting viewpoints in every social, religious, intellectual and cultural movement throughout Western history. The position one finds congenial is said to be particularly related to experiences in the socialization of affect, and some of the more central aspects of the postures themselves concern one's attitude towards affect. From an individual's basic premise as to whether 'man is an end in himself' (the position of the left) vs. 'man is not an end in himself' (the position of the right) a number of other beliefs are derived, among them approbation vs. disapprobation of affect. "The left has positive affects towards affects per se, and is at home in the element of feeling; the right is uneasy and intolerant of affect per se, lest it endanger norm attainment." (Tomkins, 1963, p. 401) Another derivative is the left's disapprobation vs. the right's approbation of reason as a restraining force on affect. Other derivatives have to do with the left's belief that man should maximize positive affect and drive satisfaction, and minimize affect inhibition, negative affect and drive dissatisfaction. The right believes norm compliance to be of prime importance and favors whatever modulation or containment of affects and drives may be consistent with this end.

This theory would seem to imply that a person's willingness to be open to those aspects of experience which include feeling, and to recall them later may be related to his feelings about feeling itself, or feelings about the particular kind of feeling in question. Clearly there are large individual differences in attitude towards having and showing feeling--with some people being repelled and appalled by strong reactions in either themselves or others, while others feel a need for the stimulation of strong feelings in both themselves and their associates. One may also have conscious, as well as unconscious conflicts surrounding the discharge of affect. It seems likely that a general tolerance for having and expressing strong feeling may be related to willingness to assimilate material which tends to provoke it. This is also likely to be related to how individuals remember and think of their own life histories, with some persons seeing their past as made up of highly personal events recalled because of their affective significance, and others tending to view it more externally as a succession of conventionalized biographical 'facts' in which feelings are at most peripheral, and small details with only personal meaning are unimportant.

Rieff and Scheerer (1959) in presenting a developmental theory of memory describe two kinds of memories which they call "remembrances" and "memoria." Remembrances are those

items which are always experienced as being "in my past" and presuppose a sense of self in the present as opposed to a past which is experienced as an autobiographical past. Memoria, on the other hand, lack this "personal-temporal index" and consist of items of acquired knowledge (which, though learned in a personal context are retained without reference to it), skills, habits, etc. Though obviously not all memoria are available at a given moment, an item may persist in a relatively stable way over prolonged periods and continue to maintain the same meaning and the same content. Remembrances, on the other hand, vary depending on the current frame of reference--so that, for example, "A girl who married at 20 may, at 30, remember chiefly the dress she wore...at 40 the food consumed at the wedding breakfast; at 50 the fact that her uncle sent a stingy present." (p. 39) These authors consider that any given event "will be experienced according to the developmental stage of the cognitive-emotional structure of the personality." Thus the major difficulty in recall of early experience is bridging the gap between the current mode of experience and the early one. The tendency to "conventionalize" the past (Schachtel, 1949; Bartlett, 1932) is due to the need to bridge this gap in order to make the experience consciously available at all. "It thus appears that...the very act of remembering sets to work forces which

transfigure the previous experience according to the present ego structure and its present schemata." (Rieff and Scheerer, p. 41) It is suggested that amnesia for childhood events is largely due to adults having outgrown the way they experienced them. Other factors involved include the relative lack of self-reflection and introspective awareness of children, resulting in the child's thought and action being guided by assumptions and premises which are un verbalized and relatively unavailable to conscious experience. (p. 63)

In special states (hypnosis and narcosynthesis) persons can "relive" earlier periods and recover previously unavailable memories of things occurring then, while re-experiencing, apparently, the earlier cognitive-affective state. Silvan Tomkins (1962) has demonstrated that adults in normal states can recover what were thought to be lost childhood memories with their original affect by reactivating speech and motor behaviors not used since childhood. (For example, having normally reserved adults stamp their feet and scream "no!" often revives forgotten childhood negativism and rage.) Ricks' Re-experiencers would seem to be describing an analogous process of re-activating past experience.

This theory also seems to have implications for the possible relationship between mood variability and memory. If indeed affectively variable individuals are "re-experiencers,"

it would seem that the current availability of intense feeling may provide an opening for recall by affective reactivation of earlier affect-laden experiences; this would seem to be an avenue back to early experience less available to stable mood persons.

Rapaport (1950), writing within the Freudian psychoanalytic tradition, discusses the relationship of emotion and memory. He describes affect as arising out of situations in which unconscious instinctual energies are aroused with no available "free pathway of activity"; (p. 37) these energies find outlet in "emotional expression" and "emotion felt." There is a hierarchy of intensity of such feelings from rage, fear, etc., to mild and conventionalized feelings such as like-dislike, approval, etc. In a discussion of repression, forgetting is seen as resulting from a tendency to avoid the pain which recall of a particular thing would arouse by the reawakening of an unconscious conflict. Thus Rapaport suggests that while all events are theoretically recallable, people tend to forget those things which are associated with unconscious conflict. He assumes that an affect-related purposiveness is intrinsic to recall, "that affect charged tendencies are carriers of memory." (p. 165) He states that memory "is not the storehouse of deposited engrams but a stratification of dynamic fields in which every experience

enters into relation with related experience in the varied levels of stratification. (p. 102) Memory is an aspect of thought and as such subject to the same kinds of defensive transformations under pressure of psychic conflict.

While this theory of the relationship between emotion and memory is relevant to a study of mood variability and memory, the relationship is somewhat complicated by the necessity to distinguish between mood and emotion, and then between emotion and "affect charge." In the Rapaport theory the determining role in memory is not emotion or feeling per se, but affect charges which are "representatives of instincts," or "quantitative factors in the presentation of instinct" whose final expression may be experienced as emotion. This theory suggests that both feeling and memory represent the conscious outcome of inter-related unconscious dynamic processes involving instinctual energies and their derivatives.

To consider how this theory relates to moods, one must consider the relationship between mood and emotion. Ruckmick (1936, quoted in Wessman and Ricks, p. 10) points out that while a mood has the "general affective tone" and some of the same bodily symptoms as an emotion, "it is not sudden but usually drawn out...and does not sieze the whole of consciousness (as do full emotions or passions)." He suggests that

moods are probably more closely related to physiological conditions than to direct experiences, but that they clearly can be evoked by circumstances of various kinds. Ryle (1950, from Wessman and Ricks, p. 13) speaks of mood as a "frame of mind to say, do and feel a wide variety of loosely affiliated things." When such moods become chronic, they are considered as part of character. In Jacobson's view (1953, from Wessman and Ricks, p. 18), while affects are rather specific in their direction towards particular objects, they "may become moods by spreading out and predominating over the whole field of the ego for a certain span of time." Thus one may consider moods to be affective states which tend to persist independent of an eliciting event (which may or may not be consciously noticed as such), and which for their duration effect the feeling tone surrounding later events.

Thus mood variability is a particular form of affective variability. The Freud-Rapaport theory of emotion would seem to imply that an individual with frequent and intense variations in feeling may be particularly subject to frequent instinctual arousal under conditions in which outlets to satisfaction are blocked. One of the possible implications for memory might seem to be that persons with variable moods, having many easily aroused unconscious conflicts, might be apt to forget an associatively wider range of material than

more stable persons, who would be expected to have a broader spectrum of relatively neutral functioning. However, this formulation equates the intensity and frequency of unconscious conflict with conscious affective experience. In the Freud-Rapaport theory the conscious experience of mood or emotion is only one of the possible outcomes of instinctual conflict, one of the possible outlets for blocked affective charges--the other possibilities making up the great variety of normal and pathological experiences.

In his formulation of affect dynamics, Silvan Tomkins (1962) also takes up the issue of what he calls the "variable interdependency between affective response and the awareness of affective response," pointing out that

unconscious feeling means no more or less than unconscious hearing. It is a necessary consequence of the limitations of channel capacity that the messages will be transmitted over sensory channels which may or may not be transformed into conscious report. Although avoidance is one way in which messages fail to attain conscious form, it is not the only way, nor the most frequent way. (pp. 315-316)

Depending on their experiences people develop complex and highly individual patterns of autonomic responsiveness, as well as highly selective awareness of these responses. The physiological findings described earlier, in which autonomic arousal and affectivity were inversely related, illustrates one aspect of the complexity of this relationship.

Ernest Schachtel (1959), writing within the psychoanalytic framework, distinguishes two kinds of affect, only one of which he feels is adequately described by Freudian theory. He differentiates between "embeddedness affect," which he describes as "diffuse violent and unruly discharge" essentially tied to the passive experience of drive frustration and distress, from "activity affect" which focusses and sustains active coping. He suggests that congenital differences exist in the relative strength of these two kinds of affect, with however, the final balance modifiable by experience. Embeddedness affect is seen as implying a wish to return to the passive sheltered condition of intra-uterine life, while activity affect reflects an outward, adaptive orientation. He considers the polarity between the passive, withdrawing, closing, stereotyped responding of embeddedness affect and the active, exhilarating, adaptive, exploratory, varied, outward movement of activity affect as a central dimension of personality. On the whole, healthy personality development involves a shifting trend away from the first towards the second. He notes, however, the frequent development of "secondary embeddedness," by which he means the dependency on the comfort and security of what is already known and accepted; this results in an avoidance of anxiety by reduction of experience to a stereotyped familiar form.

Schachtel sees affective organization as centrally linked to cognitive functioning, including memory, which he notes, is "even more governed by conventional patterns than perception and experience." (p. 298) "Memory as a function of the living personality can be understood only as a capacity for the organization and reconstruction of past experiences and impressions in the service of present needs, fears and interests" (p. 284). Clearly, these "needs, fears, and interests" will be very much tied in with the dominant quality of affect--whether it is embeddedness affect (passive, anxious distress directly linked to security and drive) or activity affect (related to interest and active coping).

This theory implies that memory will be rich and full in proportion to the individual's openness to experience. It suggests that if one is to expect a relationship between affective variability and memory, one will want to know more about the affects and how they stand in the embeddedness vs. activity scheme. According to Schachtel the normal adult's affective life contains a complex mixture of both activity and embeddedness (while in serious psychopathology there tends to be a predominance of embeddedness). Clearly affect is not to be viewed simply as an obstacle to cognition but rather as a factor which may actually facilitate richness and fullness of cognitive functioning. This seems to parallel the notion of creativity held by current ego psychology (and based on

the notion of "regression in the service of the ego") which sees it as rooted in the capacity to make contact with 'primitive' impulses and unconscious conflicts and shape them into socially acknowledgeable forms.

In terms of the hypotheses of this study, it suggests that insofar as affective variability reflects an openness to inner and outer experience, that at least for persons without extreme psychopathology, it should enhance the richness of memory for those things of interest to the individual.

In summary, a review of relevant research and theoretical literature suggests that there should be consistent relationships between individual affective characteristics and memory styles. Typical features of reported moods studied over time should be related to qualitative and quantitative characteristics of personal memories and also to memory for experimentally presented verbal material. The research to be reported in the following chapters will specify the hypotheses proposed, how they were investigated, and what was found.

CHAPTER II

DESIGN OF PRESENT RESEARCH

Hypotheses

1. It was anticipated that, because of their more flexible style of living with their feelings, that variable mood subjects would recall (whether accurately or not) a greater multiplicity of personal remembrances than Stable mood subjects. On a Personal Memory Questionnaire consisting of items of interest only to the individual, Variable subjects were expected to recall a higher percentage of items than Stable subjects.

2. It was also anticipated that differences in style of handling feelings would be reflected in both the contents and style of a written autobiography in the following ways:

It was expected that the tone of the Variable subjects' autobiographies would reflect emotional involvement in the events described such that these events would almost seem to have been re-experienced in the present. Their style of presentation was expected to reflect their highly personal focus,

to be rich in sensory detail and to show little concern with chronological sequence or any other externally imposed, rational organization. Their own emotional reactions were expected to be of central importance to the events and experiences presented, with these responses being stressed and maximized in their descriptions.

The Stable subjects were expected to produce autobiographies in which the tone would be more detached, and objective. It was anticipated that there would be relatively little sensory detail, and that events would be presented as occurring in chronological sequence or as parts of regular patterns of events, habits, etc. It was expected that events would be presented more or less as facts, with emotional reactions of only peripheral meaning and importance

3. Assuming that Variable-mood subjects are more open to their feelings and interested in them, it was hypothesized that they would also be especially attuned to remembering material which refers to and elicits such feelings; on the other hand, Stable-mood subjects, whose defensive organization keeps affective volatility at a minimum, were expected to be less open to assimilating affect-laden material. Therefore it was expected that Variable and Stable mood subjects would differ in the relative fullness and accuracy with which they remember drive-related as opposed to neutral verbal

material. In a test using extended verbal material (the Alston Passages [Alston, 1966]) it was hypothesized that Variable subjects would recall drive-related material more completely and accurately than neutral material, while the Stable subjects were expected to recall neutral material more completely and accurately than drive-related material.

4. It was also hypothesized that Variable and Stable mood subjects would differ in their attitudes towards feelings. Variable subjects were expected to be more accepting of feeling in themselves and others, to be more interested in it, and to see it more as a useful guide to knowledge and action than Stable mood subjects. This was to be investigated by a questionnaire devised for that purpose.

5. This study presented the opportunity to investigate further possible correlates of mood variability. It was suggested that the dimension of stability-variability may be analogous to the over-vs.-under control factor tapped by the Block 'Beta' or Ego-control scale (Block, 1964); Stable and Variable subjects were expected to differ in their scores on the Block scale, with Stable subjects having relatively high scores (indicating over-control) and Variable subjects having low scores (indicating under-control).

METHOD

Subjects

The final group of subjects consisted of thirty-six female volunteers ranging in age from 17 to 21. All, except one recent graduate, were attending schools of higher education in New York City. (They came from City College, Barnard, New York University, The School of Visual Arts, and the Hunter-Bellevue School of Nursing.) Most of the subjects from City College and the Hunter-Bellevue School of Nursing were recruited directly by the author's requesting volunteers in classes in psychology. All subjects were asked if they knew anyone else who might like to participate in the study, and a number of subjects were added in this way. Thus, the subjects were girls who were rather informally recruited who participated out of interest or curiosity; many of them had close friends and almost all had at least acquaintances who also participated.

While most subjects who completed the study expressed lively interest in it, many more subjects volunteered than actually finished. Most drop-outs occurred during the first two-week period of recording their moods. Reasons given for dropping out varied, but the usual one was that it took too much time, or that they just couldn't remember to record their moods every night. However, two subjects who dropped

out said that they found the mood recording upsetting: one girl said that it made her aware of how depressed she felt and the other explained that she had just begun psychotherapy and was too emotionally stirred up by that to tolerate additional introspection.

Procedure

An initial meeting with subjects occurred either following classes in which volunteers were requested, or by appointment if their names had been given by friends. In the latter case, meetings were usually arranged with two or three girls at some convenient place such as a school lounge, etc.; on a few occasions the first meeting was at a subject's home.

In the first meeting the subjects were told the purpose of the study (to investigate feelings and memory), and given a general picture of the procedures, including what would be required of them, approximately how much time it would take, etc. The author encouraged and answered any questions except those pertaining specifically to the relationships being investigated in the study. The relationship between the author and the subjects was friendly and informal, and the subjects were encouraged to feel that they were as important to the study as indeed they were.

In this first meeting each subject filled out a face sheet (Appendix A) with her first name and last initial, age,

year in school, phone number and schedule of free time when she would be available for a test session. Subjects were instructed to use first names only to preserve anonymity and they were told that all material would be confidential.

The subjects were then given the Feeling Record Sheets and the Mood Scales (Appendices B and C) which they were to fill out every night for two weeks; at the end of the first and second weeks they were to mail the week's sheets to the author. Stamped and addressed envelopes were provided for this purpose for this and all other material which the subjects completed outside of the author's presence. At this first meeting they also received the Block Ego-control Scale (Appendix D), which they were to fill out and mail at any time during this first two-week period.

After receiving the mood sheets for the first two-week period through the mail, the author contacted the subjects by phone to schedule a testing session. All subjects, except those from the Hunter-Bellevue School of Nursing, came to the Psychological Center of the City University for the test session; however, because of their very heavy schedules, the nursing students were unable to come to the Psychological Center at a time when the building was open, and so testing sessions were held for them in a classroom at the Hunter-Bellevue School. These sessions were scheduled at the convenience

of the subjects and generally in groups of three or four. However, because subjects sometimes failed to keep this appointment, the actual test groups ranged in size from two to four; no one was tested alone.

The testing session had two major parts: first the subjects were tested for recall for affective vs. neutral verbal material by means of the Alston Passages. (Appendix E) The passages were presented on a tape recorder, and the subjects given as much time as they wished for writing down their recall after hearing each passage. For most groups this took about 45 minutes.

In the second part of the session, the subjects were asked to write an autobiography of their early lives. This was to take them approximately one hour.

As the subjects finished the autobiography, the author spoke with them about their reactions to both parts of the testing session and gave them the Mood Sheets for the second two-week period, as well as the Personal Memory Questionnaire (Appendix G) and the Attitude and Feeling about Feeling Questionnaire (Appendix H). The mood sheets were to be filled out, like the first set, on consecutive nights for the succeeding two weeks; the other questionnaire material was to be completed during this two-week period and mailed to the author on completion. The subjects also signed a separate sheet with

their complete names and addresses so that they could receive a summary of the hypotheses and results of the study upon its completion.

Instruments and Scoring Procedures

1. The three mood scales in this study were selected from the 16 used by Wessman and Ricks (1966) in their six-week mood studies of Harvard and Radcliffe students. Although group differences were anticipated primarily on the basis of the Elation-Depression scale, two other scales were given--the Tranquility-Anxiety, and Harmony-Anger scales.

The mood scales each consist of ten descriptions of mood states on a continuum ranging from one extreme to the other of elation-depression, tranquility-anxiety and harmony-anger. The subjects were instructed to select the description on each scale which came closest to describing the "best" and the "worst" she felt during each day; she was also to select the description which came closest to her general or "average" over-all mood for each day.

The scales were given in two parts, each lasting for a two-week period. The daily sheets also contained questions about the content of the subjects' moods, whether they were menstruating, whether they had used drugs or medication, etc.

The following measures were derived from the daily mood sheets for each subject: the mean of the daily "average"

score for each of the twenty-eight days provided a measure of average mood level (or "hedonic" level). The standard deviation (SD) of this daily "average" score was used as a measure of Between-day variability. The mean of the difference between the "best" and the "worst" that a subject felt each day (referred to hereafter as the Mean Daily Range, or MDR) provided the measure of Within-day variability.

Within-day and Between-day Variable and Stable groups for all three scales were formed by dividing the total group of thirty-six subjects at the median.

Pearson Product Moment Correlations were computed between the three mood measures (Mean of the Daily "Average," Between-day Variability and Within-day Variability) on all three scales. Differences of mood level between Stable and Variable groups were tested with T ratios.

In evaluating the relationship between mood variability, hedonic level and the Block Ego-control Scale, all three scales were used. However, in the analysis of the relationships between moods and memories, only the Elation-Depression and Tranquility-Anxiety scales were considered after an initial examination of the results showed these two scales to be of greatest interest.

2. Block's (1964) Ego-control scale (Appendix D) consists of thirty-four items from the MMPI. It was derived from a factor analysis of the MMPI and has a number of personality

correlates which seemed to parallel those previously found for mood variability-stability. A high score on the scale is said to indicate over-control, while a low score is indicative of impulsivity.

Differences between mean scores of the Stable and Variable groups were evaluated by t ratios; Pearson Product Moment Correlations were also computed between the Block Ego Control scale and the three mood scales.

3. Recall of affect arousing, or drive-related vs. neutral material was tested with the Alston Passages (Alston, 1966). This is a series of twelve paired neutral and threatening verbal passages; for this study only eight passages were used. The passages are graduated in length and range from 50 to 135 words. The paired neutral and drive-related passages are comparable in length, syntax, verbal flow, adjective-verb ratio, and frequency of usage. The subjects were instructed to reproduce the passages in writing after hearing them once on a tape. (See Appendix E for passages and specific instructions.)

Recall for each passage was scored in two ways: First, in the manner suggested by Alston whereby each unit of meaning is scored (a score of '2' for the exact wording, and a score of '1' for a close approximation with the correct meaning retained), and second, by a simple word count.

Stable and Variable groups were compared using the following aspects of the Alstons scores: Total recall score and word count, Affective score and word count (derived from the affective passages only), Neutral score and word count (derived from the neutral passages only), and Affective-minus-Neutral score and word count (the sum of the scores for the affective passages minus the corresponding neutral passages). Group differences were evaluated with t ratios and correlations between variability and recall computed with Pearson R.

4. Recall for specific autobiographical incidents of only personal interest was measured by the Personal Memory Questionnaire. (Appendix G) This questionnaire has two parts. Part I consists of 50 short answer questions concerning events from both the recent and distant past. This section is based on a questionnaire devised by Lane Kauffer Glassman as part of an unfinished doctoral dissertation studying differences in recall of 'memoria' and 'remembrances.'

Part I was scored by giving a '1' for each answered question. Some questions contained more than one part; these were scored by giving fractional credit to each part, so that a subject could receive no more than a total score of '1' for a single question. In addition, unanswered questions were credited as though they had been answered in those cases in which the subject explained and gave clearly described and

well-recalled reasons why the question could not be answered. (For example, a subject whose father died when she was an infant could not answer a question about how he spent his time at home when she was ten years old. In such a case, it seemed more misleading, in terms of the meaning of the score, to consider this to be a memory gap than to count it as an answered question.)

Subjects were also asked to indicate the degree of sureness they felt about their answers. Subjects sometimes indicated that they were "sure" about part of a question but only "vague" or "pretty sure" about another; these statements were tallied for each subject.

Correlations and group comparisons between Stable and Variable Subjects were made by means of t ratios and Pearson R correlations.

The second part of the questionnaire asked for the subjects' own thoughts and feelings about their memories, including specific references to what they experienced while participating in the study. Stable and Variable group differences were evaluated by χ^2 and, when called for, Fisher's Exact Test.

5. During the test session the subjects were asked to write an autobiography of their childhood years. (The exact instructions appear in Appendix F.)

They were told to allow about an hour to do this, though they could take a bit longer or leave a bit earlier if they chose. Any other questions about what was expected were answered noncommittally, making it clear that how they wrote or what they wrote about was up to them.

The autobiographies were scored by the author using the categories appearing in Appendix F. Each of these categories was considered as part of a continuum; in actual scoring half and quarter scores were used, reflecting gradations between major categories on each scale.

In the original plan of the study the scoring was to have been done, not only by the author, but by two additional judges as well. However, when no significant results were found on the basis of the author's scoring, it was decided not to use judges after all, since their rather time-consuming task would have presumably only corroborated the non-significance of the findings.

Group difference between Stable and Variable subjects and correlations with mood variability-stability were computed, as elsewhere, by means of t ratios and Pearson r correlations.

6. Attitudes concerning feeling itself were investigated with the Attitude and Feeling about Feeling Questionnaire (see Appendix H). The questions concerning attitude

towards affect were taken from scales used by Tomkins (1963) in his study of 'left' and 'right' ideo-affective postures; the rest of the questionnaire was written by the author.

The answers were tabulated and differences between Stable and Variable groups were evaluated by χ^2 . Sometimes subjects checked off more than one category in their answer, or indicated that their answer was between two of the categories; in such cases the score was split, giving a half score to the two categories in question.

CHAPTER III

RESULTS

The following presentation of the findings begins by showing the parallel relationships between mood variability and hedonic level on the three mood scales (Elation-Depression, Tranquility-Anxiety, and Harmony-Anger). Next, mood variability and hedonic level are related to Block's Ego-Control Scale. Sections 3-5 show the relationships found between mood variability and the three memory tasks: the Alston Passages, the Personal Memory Questionnaire, and the Autobiographies. Section 6 presents the differences between Stable and Variable subjects in their attitude and feelings about feeling itself. Section 7 shows the inter-relationships between memory tasks, and Section 8 presents the findings for special small groupings of subjects.

The relationships between the different kinds of mood variability, mood level, and the Block Ego Control Scale are presented for all mood scales. However, in the analysis of the relationships between moods and memories, only the Elation-Depression and Tranquility-Anxiety scales were pre-

sented, after a preliminary examination of the results showed these two scales to be of greatest interest.

In the statistical analysis of the results, all differences between group means were tested with T ratios; all correlations are Pearson Product Moment Correlations. Only those findings which reach or closely approach statistical significance will be presented.

1. Emotional Variability: the mood scales.

A. Variability Between-days: the Standard Deviation (SD)

The SD of the mean of the daily "average" on the Elation-Depression scale provides the principle measure of Between-day variability. (The daily "average" is the subject's estimate of her overall mood for a day.)

For purposes of group comparison between Stable and Variable subjects, the total group has been split at the median. As shown in Figure I, the distribution of the group is quite a-symmetrical, the spread of scores for the SD Variable* group being more than twice as great as the spread for the Stable group. In the Variable group the subjects cluster close to the median--as one would expect were variability normally distributed within the sample. The fre-

* Hereafter when Variable or Stable groups are mentioned without further explanation, the groups referred to will be those derived from the Elation-Depression scale.

quency distribution of the Stable group peaks, however, at the lower end, indicating a second concentration of subjects at the lowest extreme of the distribution.

Table I and Figure III show the distributions of SDs on both the Tranquility-Anxiety and Harmony-Anger scales. The level of variability on both of these scales is somewhat lower than on the Elation-Depression scale. Between-day variability is particularly restricted on the Harmony-Anger scale, with the subjects clustering towards the stable end of the distribution. It appears that these subjects experience less variation along the dimension of the Harmony-Anger than along the dimensions of Elation-Depression or Tranquility-Anxiety.

In general the mood results are comparable to those reported in other studies. However, the abrupt cut-off at the stable end of the distribution of SDs makes the range of this variable somewhat narrower than that found in the previous studies of Harvard and Radcliffe students (Wessman and Ricks, 1969). (This comparison is shown in Tables I and IA.)

B. Variability Within-days: The Mean Daily Range (MDR).

The mean of the daily range (hereafter designated as MDR) on the Elation-Depression scale is the principle measure of Within-day variability. (As indicated earlier, the

TABLE I

Mood variability and average mood level on the Elation-Depression, Tranquility-Anxiety and Harmony-Anger scales. Based on 4 weeks of nightly reports (N = 36).

	Mean of the daily "average" (mood level)		SD of the daily "average" (Between-Day Variability)				Mean daily range (Within-day Variability)			
	Mean	SD	Mean	SD	Median	Range	Mean	SD	Median	Range
Elation-Depression	6.22	.61	1.02	.31	.97	.62-1.79	2.75	.90	2.81	.64-4.11
Tranquility-Anxiety	6.13	.70	1.22	1.01	.99	.49-1.62	2.76	.95	2.80	.71-4.93
Harmony-Anger	6.71	.54	.90	.27	.83	.46-1.62	2.52	.82	2.46	.39-4.43

TABLE I-a

Mood variability and average mood level on the Elation-Depression scale as found in studies of Harvard (N = 17) and Radcliffe (N = 21) students. Based on 6 weeks of nightly reports. (from Wessman and Ricks, p. 59)

	Mean of the daily "average" (mood level)	SD of the daily average (Between-day Variability)			Mean Daily Range (Within-day Variability)		
		Mean	Median	Range	Mean	Median	Range
Harvard Ss	5.96	.94	.80	.22-1.84	2.85	2.69	1.02-4.89
Radcliffe Ss	6.14	.98	.94	.42-1.81	2.64	2.61	1.17-4.36

MDR is the mean of the differences between the daily "high" and "low" mood values reported for each of the 28 days.) Again the total group was divided at the median to attain the two comparison groups. As can be seen in Figure II, this distribution approximates a normal curve.

As was also the case with Between-day variability, the group as a whole is less variable Within-days on the Harmony-Anger scale.

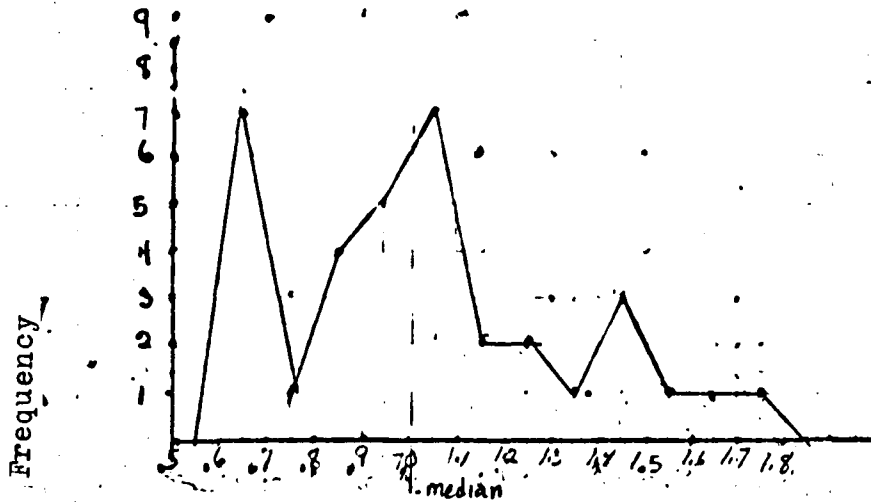
C. Hedonic level: the Mean of the Daily "Average" (M)

The mean of the daily "average" (elsewhere designated as M) on the Elation-Depression scale provides a general measure of the subjects' level of Elation-Depression. Since the subjects' estimates of mood were made on a ten point scale, the total group mean of 6.22 indicates that the general mood level was somewhat on the elated side. This group was more elated than either the Harvard or Radcliffe samples--though the Radcliffe women were considerably more elated than were the Harvard men.

D. Relationships between mood measures.

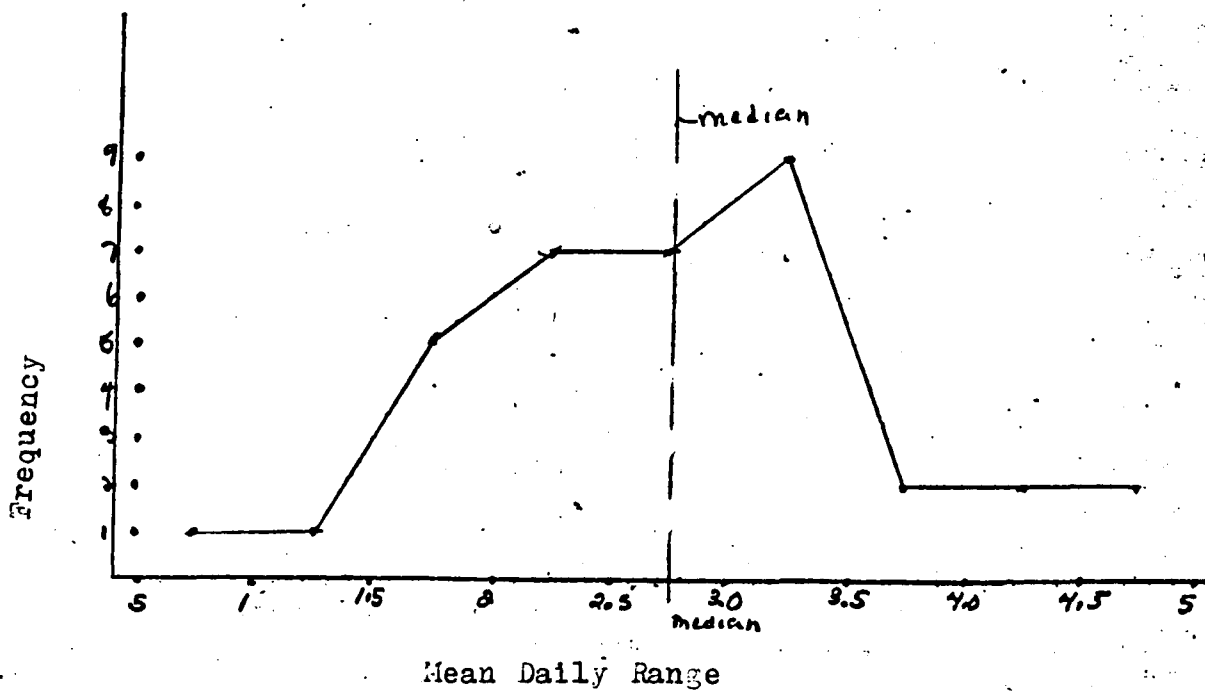
Table II shows the correlations between the mood measures. The correlation between emotional variability Within-days and Between-days is low. The correlation of .25 is significant only at the .20 level for Elation-De-

FIGURE I
 Frequency Distribution of Between-day Variability
 Scores on the Elation-Depression Scale (N=36)



SD of Daily "Average"

FIGURE II
 Frequency Distribution of Within-day Variability Scores
 on the Elation-Depression Scale (N=36)



Mean Daily Range

FIGURE III

Frequency Distribution of Between-day Variability Scores
on the Tranquility-Anxiety & Harmony-Anger Scales (N=36)

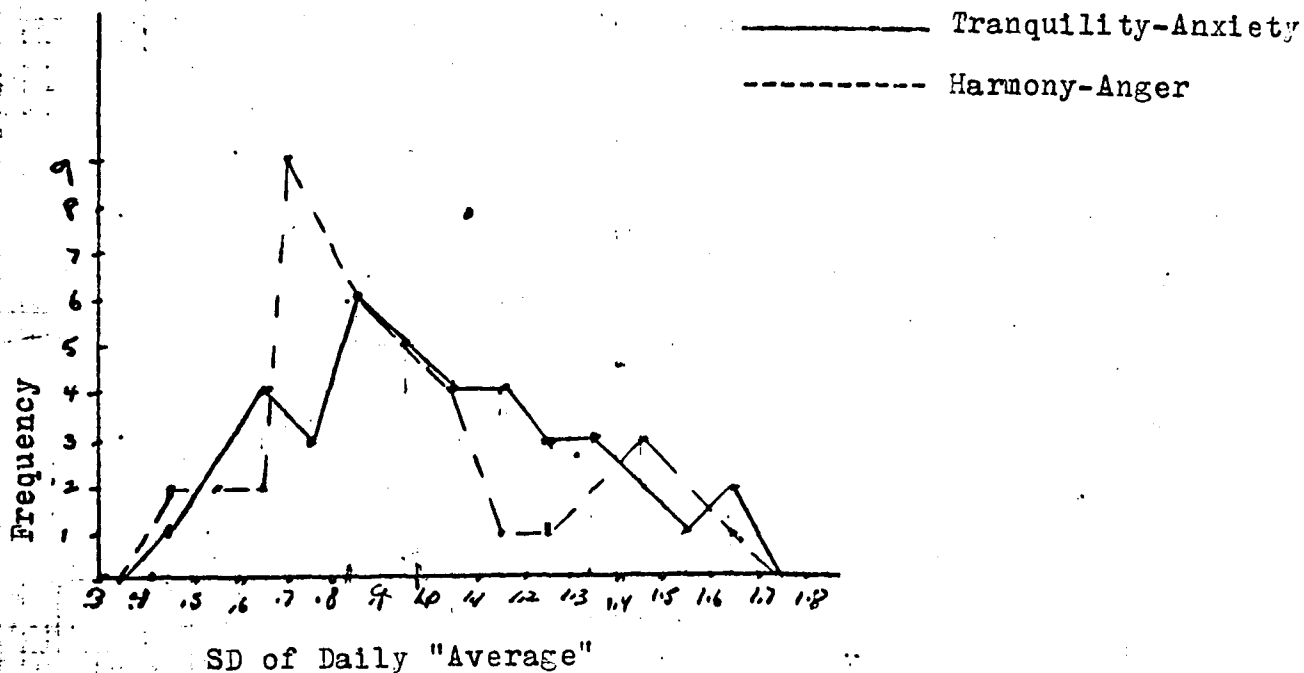


FIGURE IV

Frequency Distribution of Within-day Variability on the
Tranquility-Anxiety & Harmony-Anger Scales (N=36)

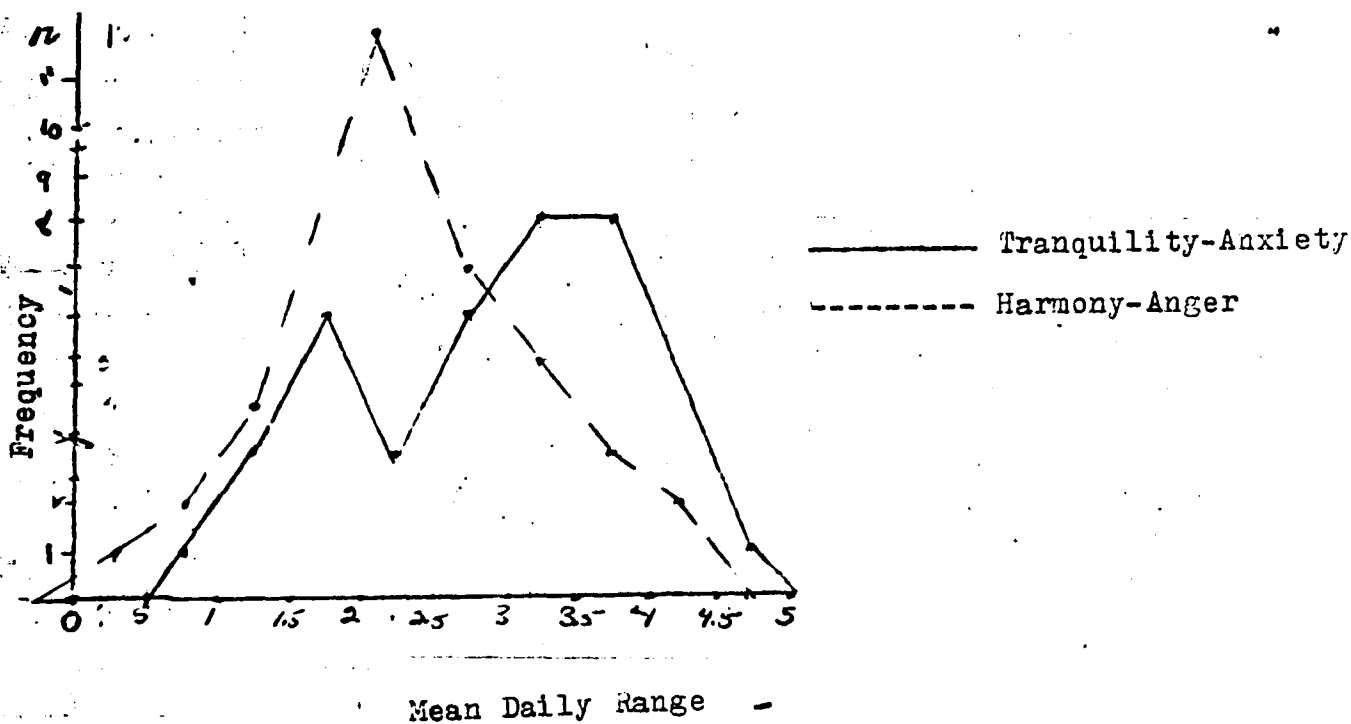


TABLE II

Correlations between SD, Mean Daily Range, and Mean of the Daily "Average" of Elation-Depression, Tranquility-Anxiety and Harmony-Anger Scales.

	Elation-Depression			Tranquility-Anxiety			Harmony-Anger		
	SD	MDR	M	SD	MDR	M	SD	MDR	M
Elation-Depression									
SD		+ .25	-.08	+.79**	+.04	-.12	+.54**	+.12	-.06
MDR	+.25		-.23	+.30*	+.82**	-.27	+.24	+.84**	-.16
M	-.08	-.23		-.01	-.19	+.90**	-.17	+.02	+.87*
Tranquility-Anxiety									
SD	+.79**	+.30*	-.01		+.13	-.08	+.64**	-.29	+.17
MDR	+.04	+.82**	-.19	+.13		-.16	+.17	+.85**	-.13
M	-.12	-.27	+.90**	-.08	-.16		-.12	-.03	+.85*
Harmony-Anger									
SD	+.54**	+.24	-.17	+.64**	+.17	-.12		+.17	-.13
MDR	+.12	+.84**	+.02	-.29	+.85**	-.03	+.17		.00
M	-.06	-.16	+.87**	+.17	-.13	+.85**	-.13	.00	

* p < .10

** p < .01

pression, and virtually unrelated on the other two scales. In the total group of thirty-six subjects, twelve are high in one variability measure and low in the other. (These will be referred to hereafter as 'mixed cases.')

Three of these subjects are towards the middle range of the total group on both measures, so that there is a discrepancy of less than ten places in the rank order of their MDR and SD positions. However, for the other nine subjects the discrepancy is quite large: the two most extreme are numbers 1 and 3 in the rank order of Between-day variability, and 31 and 34 of Within-day variability, with a discrepancy of 30 and 34 places respectively.

The Radcliffe study also found a non-significant relationship between these two kinds of variability; for the Harvard subjects, on the other hand, this correlation was significant at the .05 level (Wessman and Ricks, p. 62). It seems possible that in women these two kinds of variability are more independent than they are in men; it is perhaps more common for women to experience wide mood swings within single days and yet describe the all-over 'feel' of most days as more or less the same (such persons being variable Within-days but stable Between-days), or to experience relatively little change during single days and yet vary considerably from day-to-day (and so be variable

between-days and stable within-days).

However the SDs, MDRs and Ms of the three scales are all significantly related to their corresponding measures. This was also found by Wessman and Ricks (who used much more elaborate statistical procedures, including factor analysis). These authors concluded that since "variability on one of the affective scales was accompanied by relatively the same magnitude of variability on all the rest," that the standard deviation of the daily "average" on Elation-Depression "serves as an appropriate index of this general trait of variability" (pages 67-68). In analyzing their results, they used the nightly reports of "average" Elation-Depression as the source of their main measures of mood variability and hedonic level. In this study Elation-Depression is also considered the primary measure, but the major results will also be presented for the Tranquility-Anxiety scale. However, variations in anxiety and depression are presumed to be integrally related aspects of mood variability; the validity of this assumption is supported by the fact that significant results obtained with one of the two scales is almost always paralleled in the results on the other--even though the results may not be significant on both scales.

Table III compares the means of the daily "average" mood reports and their variances from all three mood scales

TABLE III

Average mood levels (derived from the mean of the daily "average") on Elation-Depression, Tranquility-Anxiety and Harmony-Anger scales compared for Stable and Variable subjects on the Elation-Depression scale.

Elation-Depression Scale	Elation-Depression		Tranquility-Anxiety		Harmony-Anger	
	Daily Mean	(Variance)	Daily Mean	(Variance)	Daily Mean	(Variance)
Between-day Variability(SD)						
Variable Ss	6.12	(.42) **	6.02	(.50)	6.64	(.28)
Stable Ss	6.04	(.86)	6.25	(.50)	6.78	(.31)
		F=2.05				
With-day Variability (MDR)						
Variable Ss	5.96	(.29) ***	5.79) ***	(.43)	6.54) **	(.15) **
Stable Ss	6.20	(.96)	6.48	(.35)	6.87	(.38)
		F=3.31	t=3.33		t=1.96	t=1.96

** p < .05

*** p < .01

for the Stable and Variable groups (on the Elation-Depression scale). The Within-day variable groups differ notably on the means of both Tranquility-Anxiety ($p < .05$) and Harmony-Anger ($p < .10$), with the Stable subjects being both more tranquil and harmonious, and the Variable subjects more anxious and angry. However, the Stable group also has a significantly higher variance on both the Elation-Depression and Harmony-Anger means, indicating a greater diversity of scores within this group. This finding, of a significantly larger variance in the Stable than the Variable group, occurs frequently in the results which follow.

2. The Block 'Beta' or Ego Control Scale.

One of the hypotheses stated that mood variability, as measured on the Elation-Depression scale, would be related to the Block (1965) 'Beta' scale, which is derived from the MMPI and is a measure of over-vs. under-control. Table IV indicates that while the results fall short of significance, they are in the predicted direction, with the Stable groups having the higher scores. Somewhat surprisingly, the correlations between the Block 'Beta' scale and the mean of the daily "average" on the Elation-Depression scale and the Harmony-Anger scale approach significance ($p < .10$ in both cases). Thus over-control, as measured by the Block Scale,

TABLE IV-A

Variable and Stable Group Differences in performance on the Block 'Beta' or 'Ego Control' Scale.

	Block 'Beta' Scale		Total Group Mean = 15.62
	Mean	SD	
<u>Elation-Depression</u>			
Between-day (SD) Variable Ss	14.65	5.01	
(SD) Stable Ss	16.55	4.26	
Within-day (MDR) Variable Ss	14.59	4.06	
(MDR) Stable Ss	16.61	5.10	
<u>Tranquility-Anxiety</u>			
Between-day (SD) Variable Ss	15.64	5.04	
(SD) Stable Ss	15.61	4.45	
Within-day (MDR) Variable Ss	15.01	4.23	
(MDR) Stable Ss	16.17	5.11	
<u>Harmony-Anger</u>			
Between-day (SD) Variable Ss	15.65	4.80	
(SD) Stable Ss	15.50	4.50	
Within-day (MDR) Variable Ss	15.06	4.02	
(MDR) Stable Ss	15.83	5.30	

TABLE IV-B

Correlations between the Block 'Beta' Scale and measures of mood variability and hedonic level.

Elation-Depression			Tranquility-Anxiety			Harmony-Anger		
SD	MDR	M	SD	MDR	M	SD	MDR	M
+ .02	- .21	- .33*	- .12	- .16	- .25	+ .05	- .27	- .31*

* $p < .10$

appears to be related more to lowered hedonic level than to stability of mood.

3. Immediate recall of extended verbal material and mood variability:

A. Total recall.

Each subject's production on the Alston Passages was scored in two ways: first, in the manner suggested by Alston (1966) whereby each unit of meaning is scored (a score of '2' for the exact wording and '1' for a close approximation with the correct meaning retained), and second, by a simple word count. The results of these two methods of scoring (as shown in Table VI) correlated highly ($r = .88$). The results are based on 33 subjects, three having failed to comply with the instructions.

In general, the results (as shown in Tables V-A and V-B) indicate an inverse relationship between Within-day variability and recall on the Alston Passages. Though the results are significant only for Tranquility-Anxiety, they are clearly paralleled in the results for Elation-Depression. Group differences in total recall are significant only for the word count. However, the correlations between MDR (on the Tranquility-Anxiety scale) and both total score and word count approach significance (at the .10 level). Thus it appears that wide fluctuations of mood (and particularly anxiety)

TABLE V-A

Comparison between Stable and Variable groups in their mean recall scores on the Alston Passages (standard deviations in parentheses) (N=33)

Alston Passage Recall Scores

	Total Score	Total Word Count	Affective Score	Neutral Score	A-N Score	A-N Word Count
<u>Elation-Depression Scale</u>						
Between-day Variability (SD)						
Variable Ss	309.9 (19.2)	439.2 (63.1)	165.9 (24.1)	144.0 (18.9)	21.9 (19.2)	21.8 (30.0)
Stable Ss	298.2 (27.9)	408.3 (103.6)	160.2 (54.4)	138.0 (38.2)	22.2 (27.9)	16.1 (35.4)
Within-day Variability (MDR)						
Variable Ss	298.4 (40.4)	410.9 (40.4)	158.3 (26.0)	140.1 (19.5)	18.2 (29.8)	20.8 (22.0)
Stable Ss	310.0 (90.3)	438.4 (100.0)	168.1 (53.0)	142.0 (38.2)	26.1 (35.0)	16.1 (24.0)
<u>Tranquility-Anxiety Scale</u>						
Between-day Variability (SD)						
Variable Ss	303.3 (44.6)	421.0 (76.6)	163.5 (27.3)	139.8 (20.3)	23.7 (18.5)	16.4 (31.0)
Stable Ss	304.9 (86.5)	419.6 (97.5)	163.7 (52.8)	141.4 (36.3)	22.3 (27.7)	20.5 (33.0)
Within-day Variable (MDR)						
Variable Ss	286.6 (49.5)	393.6 ¹ (81.3)	149.2 ² (32.7)	134.6 (19.9)	14.4 ³ (24.8)	15.1 (31.0)
Stable Ss	322.6 (80.4)	453.0 (80.8)	176.0 (27.2)	146.6 (33.7)	29.1 (22.6)	21.7 (32.0)

¹t = 2.10 p < .05

²t = 1.96 p < .10

³t = 1.88 p < .10

TABLE V-B

Correlations between Alston Passage recall scores,
mood variability and hedonic level. (N=33)

Alston Passage Recall Scores

	Total Score	Total Word Count	Affective Score	Affective Word Count	Neutral Score	Neutral Word Count	A-N Score	A-N Word Count
<u>Elation-Depression</u>								
Between-day Variability (SD)	+.08	+.12	+.10	+.08	+.05	+.01	+.11	+.11
Within-day Variability (MDR)	-.25	-.27	-.28	-.10	-.20	-.20	-.24	-.03
Daily Mean	+.03	+.07	+.06	-.06	+.04	+.06	+.06	+.03
<u>Tranquility-Anxiety</u>								
Between-day Variability (SD)	+.04	.00	+.07	-.06	-.03	-.10	+.16	.00
Within-day Variability (MDR)	-.31*	-.33*	-.36**	-.10	-.22	-.20	-.34**	-.11
Daily Mean	-.04	+.07	-.03	+.04	-.01	+.11	-.04	-.10

* p < .10

** p < .05

TABLE VI

Correlations between Alston Passage recall scores. (N=33)

	Total Score	Total Word Count	Affective Score	Affective Word Count	Neutral Score	Neutral Word Count	A-N Score	A-N Word Count
Total score		+.88**	+.97**		+.92**		+.53**	+.42**
Total word count	+.88**							
Affective score	+.97**			+.76**	+.83**		+.19	
Affective word count			+.76**			+.73***		
Neutral score	+.92***		+.83***			+.81***	+.71***	
Neutral word count				+.74**	+.81***			
A-N score	+.53**	+.48**	+.19		+.71***			+.61***
A-N word count	+.42**	+.33*				+.61***		

* p < .10

** p < .05

*** p < .01

within single days are inversely related to immediate recall of extended verbal material.

Though the Stable and Variable groups do not differ significantly in the mean scores on total recall, once again the Stable groups contain most of the subjects with extremely high or low scores; there are therefore significant differences between the variances for Stable and Variable groups both Within- and Between-days (for MDR, $F = 5.0$, $P < .01$; for SD $F = 4.9$, $p < .01$).

B. Recall of affective vs. neutral material.

Although Stable and Variable groups from the Elation-Depression scale do not differ significantly in their recall of affective or neutral passages, once again there is a significant difference for Within-day variability on the Tranquility-Anxiety scale: Stable subjects have significantly higher scores on the affect passages than do Variable subjects. While there was no specific hypothesis about recall of affective and neutral passages independent of each other, the inverse relationship between variability and recall of affective passages was not expected.

One of the hypotheses did state, however, that Variable groups would recall affective material more fully than neutral material, and that Stable groups would recall neutral material better than affective material. Recall of affective-

over-neutral material was measured by considering the passages as affective and neutral pairs, and subtracting the scores and word count of the neutral passages from the scores and word count of the affective passages. (The results will be referred to hereafter as A-N score and word count.)

As shown in Table VI, A-N score and word count correlate significantly with total score ($p < .01$) and word count ($p < .10$) and also with each other ($p < .01$)

Most subjects and all groups of subjects recalled affective material more fully and accurately than neutral material. The anticipated relationships between mood variability and A-N did not occur. Indeed, the only noteworthy results are counter to the hypothesis and significant only for Within-day variability on the Tranquility-Anxiety scale: these Within-day Stable subjects have higher A-N scores than the Variable subjects ($p < .10$), and A-N score is inversely related to MDR ($p < .05$). The only significant group difference between Variable and Stable subjects on the Elation-Depression scale was that the SD Stable group had significantly higher variance than the Variable group ($F = 2.1, p < .05$).

Thus the most notable result with the Alston Passages, that Within-day variability is inversely related to recall of affective-over-neutral passages, is contrary to the

hypothesis. It also seems that fluctuations in Tranquility-Anxiety are more directly related to immediate recall than fluctuations in Elation-Depression.

4. Personal memory and mood variability:

A. Memory for personal events: Part I of the Personal Memory Questionnaire

It was predicted that Variable subjects would recall events of only subjective interest more fully than would Stable subjects. Tables VII-A and VII-B show that the groups do not differ significantly on the total number of items recalled. The questionnaire includes items both from the recent past (a week-to-ten days prior to answering the questionnaire) and the relatively distant past (up through the age of twelve). While no significant relationships were found between variability and recall of recent events, Within-day variability is significantly correlated with memory for early events (for Elation-Depression, $p < .05$; for Tranquility-Anxiety, $p < .01$).

(Thus while Within-day variability is inversely related to immediate recall of affective-over-neutral material of an impersonal nature, it is positively related to recall of specific incidents from childhood.)

Though there are no group differences for Between-day variability in the total number of items recalled, once

TABLE VII-A

The Personal Memory Questionnaire: Comparison between Stable and Variable mood groups in the mean number of items recalled and the mean number of items about which the subjects were "Sure" (standard deviations in parentheses) (N=36)

	Total Recalled	Total 'Sure'	Recall under 12	'Sure' under 12	Present Recall	'Sure' Present
<u>Elation-Depression Scale</u>						
Between-day Variability (SD)						
Variable Ss	43.70(2.81)	27.91 ¹ (5.46)	10.73(1.97)	4.19(2.52)	9.53(.58)	7.88 ² (1.02)
Stable Ss	42.44(3.96)	24.44 (5.70)	11.04(1.87)	4.00(2.40)	9.35(.64)	6.88 (1.64)
Within-day Variability (MDR)						
Variable Ss	43.80(3.20)	26.64 (5.31)	10.67(2.43)	3.44(2.69)	9.35(.70)	7.94 ³ (1.06)
Stable Ss	42.51(3.73)	25.39 (6.44)	11.36(1.08)	4.52(3.12)	9.52(.50)	6.83 (1.58)
<u>Tranquility-Anxiety Scale</u>						
Between-day Variability (SD)						
Variable Ss	43.57(2.18)	27.17 (5.99)	11.53(1.78)	4.14(2.36)	9.47(.58)	7.55(1.42)
Stable Ss	42.32(4.14)	25.97 (6.27)	10.63(1.71)	4.16(2.79)	9.41(.65)	7.22(1.48)
Within-day Variability (MDR)						
Variable Ss	42.99(3.39)	26.19(5.94)	11.84 ⁴ (1.37)	3.88(2.42)	9.38(.65)	7.44(1.29)
Stable Ss	43.14(3.59)	26.94(6.31)	10.25 (1.86)	4.52(2.78)	9.50(.57)	7.33(1.61)

¹t = 1.86 p < .10

²t = 2.19 p < .05

³t = 2.48 p < .05

⁴t = 3.00 p < .05

TABLE VII-B

Correlations between recall scores on the Personal Memory Questionnaire, mood variability and average mood level (N=36)

	<u>Total Recall</u>	<u>Total 'Sure'</u>	<u>Recall under 12</u>	<u>"Sure" under 12</u>	<u>Recall present</u>	<u>'Sure' present</u>
<u>Elation-Depression Scale</u>						
Between-day Variability (SD)	+ .25	+ .35**	+ .17	+ .26	+ .16	+ .35**
Within-day Variability (MDR)	+ .19	+ .03	+ .35**	- .05	- .07	+ .20
Mean of daily "average"	+ .25	+ .03	+ .13	+ .06	+ .19	- .14
<u>Tranquility-Anxiety Scale</u>						
Between-day Variability (SD)	+ .27	+ .11	+ .15	+ .10	+ .02	+ .21
Within-day Variability (MDR)	+ .10	- .14	+ .51***	- .08	- .05	- .05
Mean of daily "average"	+ .05	+ .01	+ .20	+ .08	+ .16	+ .17

** p < .05

*** p < .01

TABLE VIII

Correlations between recall scores within
the Personal Memory Questionnaire.

	Total Recall	Total 'Sure'	Total 'Guess,' 'Vague,' etc.	Total Recall under 12	Total 'Sure' under 12	Total Present Recall	Total 'Sure' Present
Total recall		+.47**	+.09	+.47**	+.31*	+.40**	+.22
Total 'Sure'	+.47**		-.31*	+.25	+.82***	+.11	+.57***
Total 'Guess,' etc.	+.09	-.31*		+.06	-.63**	+.09	-.29*
Total Recall under 12	+.47**	+.25	+.06		+.22	+.20	00
Total 'Sure' under 12	+.31*	+.82**	-.63**	+.22		+.12	+.28*
Total Present Recall	+.40**	+.11	+.09	+.20	+.12		+.07
Total 'Sure,' Present	+.22	+.57**	-.29*	00	+.28	+.07	

* p < .10
** p < .05
*** p < .01

again the Stable group contains most of the extreme scores, and so has a significantly higher variance than the Variable group ($F = 2.00$ $p < .05$).

Subjects also rated the relative sureness of their answers to the questionnaire. Between-day variable subjects have a significantly greater total number of "sure" responses than Between-day Stable subjects, and both Variable groups have more "sure" responses connected with recent events. The correlations between Between-day Variability and the total number of "sure" responses and the "sure" responses connected with recent events are also significant ($p < .05$). Thus it seems that Variable subjects, and especially Between-day Variable subjects, approached the Memory Questionnaire with more overt confidence in their answers than did the Stable subjects.

B. Subjective experience of memory: Part II of the Personal Memory Questionnaire.

The second part of the Personal Memory Questionnaire asked the subjects about their subjective experiences associated with memory. The results of this section appear in Table IX. In this section, virtually all of the notable and statistically significant results occurred with the Elation-Depression scale.

One of the hypotheses regarding personal recall predicted that Variable subjects would tend to remember the

TABLE IX

Stable and Variable subjects' responses on
Part II of the Personal Memory Questionnaire

1.) Personal evaluation of own memory.

	<u>Excellent</u> ¹	<u>Good</u> ²	<u>Average</u>	<u>Fair-poor</u>
<u>Elation-Depression Scale</u>				
Between-day (SD)				
Variable Ss	7	6	3	2
Stable Ss	3	7	5	3
Within-day (MDR)				
Variable Ss	5	7	4	2
Stable Ss	5	6	4	3
<u>Tranquility-Anxiety Scale</u>				
Between-day (SD)				
Variable Ss	7	7	3	1
Stable Ss	3	6	5	4
With-day (MDR)				
Variable Ss	4	7	5	2
Stable Ss	6	6	3	3

¹Includes 4 Ss who rated themselves between good and excellent.

²Includes 1 S who rated herself average-to-good.

TABLE IX (cont'd)

2.) What Ss consider themselves as having trouble remembering. (Categories abstracted from varied answers given.)

A. Own life experiences (early life, upsetting things, etc.) B. Personal Details (phone nos., names, etc.) C. Facts for school

Elation-Depression Scale

SD Variable Ss	6	6	9
SD Stable Ss	7	5	5
MDR Variable Ss	6	6	8
MDR Stable Ss	7	5	6

Tranquility-Anxiety Scale

SD Variable Ss	4	6	9
SD Stable Ss	9	5	5
MDR Variable Ss	4	7	8
MDR Stable Ss	9	4	6

TABLE IX (cont'd)

3.) What Ss consider themselves to remember especially well.

	A. Own life experience	B. Personal Details	C. Facts for school
<u>Elation-Depression Scale</u>			
SD Variable Ss	11	12	2
SD Stable Ss	7	14	3
MDR Variable	7	14	3
MDR Stable	11	12	2
<u>Tranquility-Anxiety Scale</u>			
SD Variable Ss	11	12	2
SD Stable Ss	7	14	3
MDR Variable Ss	8	13	1
MDR Stable Ss	10	13	4

4.) Sensory experiences regularly involved in recall. (Numbers in parenthesis refer to senses only 'rarely' involved)

	Sight	Sound	Smell	Touch	Taste	Feeling*	Senses Genly.	No Senses	Senses Evoke
<u>Elation-Depression Scale</u>									
SD Variable Ss	12 (3)	5 (1)	2	0 (1)	0 (1)	8 (1)	1	2	3
SD Stable Ss	13	3 (1)	1 (2)	1	1	4 (5)	2	5	1
MDR Variable Ss	13 (2)	6 (1)	2 (1)	0 (1)	1	5 (1)	1	4	3
MDR Stable Ss	12 (1)	2 (1)	1 (1)	1	0 (1)	7 (5)	2	3	1
<u>Tranquility-Anxiety Scale</u>									
SD Variable Ss	13 (2)	5	2	0 (1)	1	5 (2)	1	2	1
SD Stable Ss	12 (1)	3 (2)	1 (2)	1	0 (1)	7 (5)	2	5	3
MDR Variable Ss	13	5	1 (2)	0 (1)	1	5 (3)	1	4	2
MDR Stable Ss	12 (3)	3 (2)	2	1	0 (1)	7 (4)	2	3	2

*It was not clear whether these Ss were referring to sensation or affect.

TABLE IX (cont'd)

C. Number of subjects who indicated that they found recall of the past painful, depressing, overwhelming, upsetting, etc.

	<u>Upsetting</u>	<u>No Distress Indicated</u>
<u>Elation-Depression Scale</u>		
SD Variable Ss) *	7	11
SD Stable Ss	2	16
MDR Variable Ss) *	7	11
MDR Stable Ss	2	16
<u>Tranquility-Anxiety</u>		
SD Variable Ss) *	7	11
SD Stable Ss	2	16
MDR Variable Ss	4	14
MDR Stable Ss	5	13

* For SD and MDR variability on the Elation-Depression Scale and MDR variability on the Tranquility-Anxiety Scale, $\chi^2 = 2.37$ (with Yates correction); Fischer's Exact Test, $p = .05$.

TABLE IX (cont'd)

5. Attitude towards memory

A. Ss' feelings about recall of the past as experienced during this study.

	Generally positive	Mixed	Generally negative
<u>Elation-Depression Scale</u>			
SD Variable Ss	11	1	3
SD Stable Ss	11	3	0
MDR Variable Ss	11	1	2
MDR Stable Ss	11	3	1
<u>Tranquility-Anxiety Scale</u>			
SD Variable Ss	12	2	1
SD Stable Ss	10	2	2
MDR Variable Ss	9	2	1
MDR Stable Ss	13	2	2

B. Number of Ss who stated they would like to remember more of the past.

Elation-Depression Scale

SD Variable Ss	9	MDR Variable Ss	12
SD Stable Ss	13	MDR Stable Ss	10

Tranquility-Anxiety Scale

SD Variable Ss	12	MDR Variable Ss	13
SD Stable Ss	10	MDR Stable Ss	9

TABLE IX (cont'd)

6.) Feelings associated with past memories as they were evoked by answering the Personal Memory Questionnaire.

	Mostly happy and pleasant	Mixed	Mostly painful and unpleasant
<u>Elation-Depression Scale</u>			
SD Variable Ss)*	4	13	1
SD Stable Ss	12	6	0
MDR Variable Ss	6	11	1
MDR Stable Ss	10	8	0
<u>Tranquility-Anxiety Scale</u>			
SD Variable Ss	8	10	0
SD Stable Ss	8	9	1
MDR Variable Ss	8	9	0
MDR Stable Ss	8	10	1

* For SD variability on the Elation-Depression Scale, $\chi^2 = 4.95$ (with Yates correction), $df = p < .05$.

TABLE IX (cont'd)

7.) Number of the Ss who have previously or are now seeing a psychotherapist or counsellor on a regular basis (for other than routine school counselling).

	<u>Yes</u>	<u>No</u>
<u>Elation-Depression Scale</u>		
SD Variable Ss)*	6	12
SD Stable Ss	0	18
MDR Variable Ss	4	14
MDR Stable Ss	2	16
<u>Tranquility-Anxiety Scale</u>		
SD Variable Ss	4	14
SD Stable Ss	2	16
MDR Variable Ss	4	14
MDR Stable Ss	2	16

*For SD variability on the Elation-Depression Scale, $\chi^2 = 5.00$ (with Yates correction), $p > .05$

past in a more vividly sensory way than Stable subjects. There are, however, no group differences in the frequency with which Stable and Variable subjects reported sensory experiences accompanying recall (item #4); in fact, this is apparently a usual part of recall for most of the subjects, with more than two-thirds of them reporting visual experiences as an accompaniment to remembering. Involvement of the other senses is less frequent, though hearing as part of recall is not rare. A relatively large number of SD Variable subjects reported "feeling" as a regular aspect of personal recall; this is difficult to interpret because it is not clear whether the subjects were referring to sensation or affect. However this response is of some interest because of indications elsewhere that the SD Variable group has a particularly high number of subjects who indicate that at least some of the time recalling the past is felt to be, not only a painful, but also a generally negative experience. Four subjects also spontaneously reported that sensations--sights, tunes, etc.--sometimes evoke involuntary memories; of these subjects, three were Variable on both scales.

Answers indicating that overwhelming feelings or emotional distress are associated with personal recall are most common among Variable subjects. Nine subjects indicated that some of the time remembering the past is an upsetting

or overwhelming experience. They expressed this in a variety of ways: For example, that remembering can be "somewhat depressing"; that it is "interesting but makes me melancholy," that it makes the subject feel "a little blah because (she) remembered a hell of a lot but couldn't think of a good way to hold it all together," that it "hurts" because it makes her remember what she felt at the time, etc. Of these nine subjects, there are seven in both the Between- and Within-day variable groups on the Elation-Depression scale, and seven also in the Between-day Variable group on the Tranquility-Anxiety scale. (Fischer's Exact Test, $p = .05$).

Although the same number of Between- and Within-day Variable subjects reported being overwhelmed or upset by the feelings associated with their memories, Between-day Variable subjects tended to take a more consistently negative attitude towards recall of the past than did Within-day Variable subjects. Two-thirds of the subjects wrote that they like recalling the past and enjoyed the recall involved in the study; only three subjects were clearly negative about recall of the past and the study, and all three are Between-day Variable (and two Within-day Variable). Similarly, in the distribution of replies as to whether the memories evoked by the Personal Memory Questionnaire were "Mostly happy and pleasant," "Mixed," or "Mostly painful and

unpleasant" (item #6), significantly more SD Variable subjects found their memories "mixed" or "unpleasant," while the SD Stable subjects found them "mostly happy and pleasant." ($p < .05$) This difference, though in the same direction, is not significant for MDR Variable and Stable subjects.

One might expect that those who report being upset by their memories might be generally more depressed than the others; however the mean of the daily "average" of this group (6.19) differs little from that of the whole group. Looking at the subjects individually, however, most of those who indicated that recall was upsetting or depressing included in their autobiographies experiences and events which must have been both deeply upsetting and extremely difficult to assimilate emotionally. (These memories include the sudden death of a parent, being abruptly returned to an orphanage when the woman she had assumed to be her mother had a baby, warm memories of a mother who later became psychotic and suicidal, incidents of parental violence, etc.) The only one who found recall depressing but reported nothing of this kind in her autobiography, wrote an autobiography which stands alone both for its tone of emotional blandness and the limitation of content (almost entirely to school); she seems to have written it using a good deal of denial and probably some conscious suppression.

However, not everyone who described blatantly upsetting childhood events stated that she was upset by recall. It seems that some people are particularly vulnerable to re-experiencing painful feelings as part of recall, and that this vulnerability is somehow related to mood variability.

The tendency on the part of Stable subjects to describe most of their memories as "happy and pleasant" suggests that stability of mood may go along with a tendency to minimize and deny pain and distress. This is done in the present by whatever defensive strategies make possible the maintenance of stability. It is done in relation to the past either by minimizing the emotional impact of painful but remembered experience (see later discussion of Betty), or by forgetting such experiences. Presumably the kind of control over feelings which Stable subjects have takes time to develop, and that as young children they too experienced a good deal of intense affect. The poor recall of early experiences on the part of Within-day Stable subjects may be related to a tendency to forget events occurring at a time when their feelings were not so well controlled.

When it does not involve them personally (as with the Alston Passages), the Stable subjects are better able to recall affectively 'loaded' material than are Variable subjects; however, they tend to forget unpleasant incidents

(or the associated feelings) from their own lives. Variable subjects, on the other hand, tend to recall events from their early lives, including unpleasant ones, better than Stable subjects, but have poorer recall of affect-related verbal material unrelated to their own experiences.

5. Autobiographical memory and mood variability.

There were several hypotheses regarding differences between Stable and Variable Subjects in their approach to a written autobiography: Stable subjects were expected to differ from Variable ones in their degree of involvement in the autobiography, their style of organization, their use of detail, the importance of affect to the events described and the tendency to minimize as opposed to maximize affect. While the results (shown in Tables X-A and X-B) are not as clear as might be hoped, a number of relationships, even when falling short of statistical significance, do cumulatively support the hypotheses.

The only notable group difference (also supported by a significant correlation) involved Between-day Variable subjects (on the Tranquility-Anxiety scale) who wrote their autobiographies in a more episodic style ($p < .10$) than did Stable subjects. Thus Between-day fluctuations in anxiety are related to an autobiographical style consisting of an array of specific episodes without

TABLE X-A

The Autobiography: Stable and Variable Group Differences in Mean Scores. (Standard deviation in parentheses)+ (N=36)

	<u>IA</u>	<u>IB</u>	<u>IC</u>	<u>IIA</u>	<u>IIB</u>	<u>IIC</u>
<u>Elation-Depression Scale</u>						
Between-day						
(SD) Variable Ss	2.18(.60)	2.29 (.55)	2.01(.73)	2.64(.98)	1.86(.55)	7.16(3.93)
(SD) Stable Ss	2.01(.60)	2.05 (.60)	11.86(.56)	2.75(.90)	1.90(.68)	7.77(2.18)
Within-day						
(MDR) Variable Ss	2.05(.63)	2.27 (.65)	2.01(.71)	2.69(.87)	1.96(.51)	7.44(3.35)
(MDR) Stable Ss	2.11(.61)	2.02 (.52)	1.90(.56)	2.77(.96)	1.78(.67)	7.61(3.01)
<u>Tranquility-Anxiety Scale</u>						
Between-day						
(SD) Variable Ss	2.15(.48)	2.38*(.54)	2.07(.67)	2.64(.99)	1.91(.37)	7.94(3.56)
(SD) Stable Ss	2.03(.71)	2.00 (.52)	1.82(.63)	2.55(.96)	1.83(.49)	6.94(2.78)
Within-day						
(MDR) Variable Ss	2.07(.61)	2.08 (.45)	1.93(.73)	2.61(.92)	1.97(.75)	7.61(3.13)
(MDR) Stable Ss	2.11(.61)	2.29 (.54)	1.99(.54)	2.58(1.03)	1.77(.54)	7.27(3.32)

*t=2.0, p< .10

+Scoring category key (also see Appendix F)

IA Level of current involvement as judged by tone.

IB Summary vs. episodic style of presentation.

IC Richness of detail.

IIA Relevance of affect to events described.

IIB Minimization vs. maximization of affect.

IIC Number of different affects mentioned.

TABLE X-B

Correlations between autobiography scores and Between-day and Within-day Variability and daily "average" mood level. (N=36)

	<u>IA</u>	<u>IB</u>	<u>IC</u>	<u>IIA</u>	<u>IIB</u>	<u>IIC</u>
<u>Elation-Depression Scale</u>						
Between-day (SD) Variability	+ .09	+ .11	+ .07	+ .01	- .03	- .07
Within-day (MDR) Variability	- .03	+ .06	- .13	- .11	+ .22	- .02
Mean of Daily "Average"	+ .23*	- .12	- .06	- .01	+ .01	- .07
<u>Tranquility-Anxiety Scale</u>						
Between-day (SD) Variability	+ .04	+ .26*	+ .17	00	00	+ .01
Within-day (MDR) Variability	- .03	+ .09	- .08	- .05	+ .23*	+ .08
Mean of Daily "Average"	+ .19	- .12	00	+ .08	- .01	00

* $p < .10$

TABLE XI

Correlations within autobiography scores⁺

	IA	IB	IC	IIA	IIB	IIC
IA		+.42**	+.48***	+.28	+.39**	+.34*
IB	+.42**		+.56***	+.06	+.12	+.07
IC	+.48***	+.56***		+.32*	+.25	-.39**
IIA	+.28	+.06	+.32*		+.47***	+.59***
IIB	+.39**	+.12	+.25	+.47***		+.36**
IIC	+.34*	+.07	+.39**	+.59***	+.36**	

+ For scoring categories, see Appendix F

* $p < .10$

** $p < .05$

*** $p < .01$

logical or temporal sequence. There is also a positive correlation between MDR on the Tranquility-Anxiety scale and maximization of affect ($p < .10$). This confirms the expectation that Variable subjects would present their feelings as an essentially integral part of past experiences.

There is also a positive relationship between the mean of the daily "average" on the Elation-Depression scale and the tone of current involvement in the autobiography ($p < .10$). Thus the more elated subjects tend to be better able to express current affective involvement in their early lives than the more depressed subjects--who presented their early lives in a more detached and less immediately personal way. This seems consistent with the positive correlation between elation and spontaneity as indicated by scores on the Block Scale.

6. Attitudes and feelings about feelings.

As Table XII shows there were very few group differences in the results from the Feelings About Feelings Questionnaire which reached statistical significance. The possibility of attaining statistical significance on this questionnaire seems to have been seriously limited by the small sample size. On some items the group differences do seem large enough to make one suspect that with a larger sample

TABLE XII

Attitudes and Feeling about Feelings Questionnaire:
Stable and Variable Group Differences. (N=36)

Elation-Depression Scale

1-a. I believe that, while feelings may be important, reason should be the final judge in all important matters.

	Strongly Agree	Mildly Agree	Mildly Disagree	Strongly Disagree
Between-day				
(SD) Variable Ss	3	9	4	1
(SD) Stable Ss	0	13	2	2
Within-day				
(MDR) Variable Ss	1	10	1	2
(MDR) Stable Ss	2	12	1	2

1-b. In your own life to you use reason as the final judge in making important decisions?

	Most of the time	Some-times	Rarely	Never
Between-day				
(SD) Variable	3	10	4	0
(SD) Stable	5	9	4	0
With-in day				
(MDR) Variable Ss	2	9	6	0
(MDR) Stable	6	10	2	0

TABLE XII (cont'd)

2-a. I believe that all truly feminine women have strong and changeable emotions.

	Strongly Agree	Mildly Agree	Mildly Disagree	Strongly Disagree	Did not answer
Between-day					
(SD) Variable Ss	4	5	1	3	5
(SD) Stable Ss	5	3	1	5	4
Within-day					
(MDR) Variable Ss	4	3	2	4	5
(MDR) Stable Ss	5	5	0	4	4

3-a. I believe that people should let themselves experience every kind of feeling, even those that seem strange and alien.

	Strongly Agree	Mildly Agree	Mildly Disagree	Strongly Disagree
Between-day				
(SD) Variable Ss	10-1/2	6-1/2	2	0
(SD) Stable Ss	8	8	1	0
Within-day				
(MDR) Variable Ss	7-1/2	7-1/2	3	0
(MDR) Stable Ss	11	7	0	0

TABLE XII (cont'd)

3-b. Do you, in fact, experience feelings which seem strange and alien?

	Often	Some- times	Rarely	Never
Between-day				
(SD) Variable Ss	3-1/2	12-1/2	2	0
(SD) Stable Ss	2	11	5	0
Within-day				
(MDR) Variable Ss	2	11	5	0
(MDR) Stable Ss	3-1/2	12-1/2	2	0

4-a. Strange and overly intense feelings are dangerous and can lead to insanity.

	Strongly Agree	Mildly Agree	Mildly Disagree	Strongly Disagree
Between-day				
(SD) Variable Ss	3	1	2	12
(SD) Stable Ss	2	4	5	7
Within-day				
(MDR) Variable Ss	2	3	3	10
(MDR) Stable Ss	3	2	4	9

TABLE XII (cont'd)

4-b. Are you ever afraid that your feelings are crazy?

	Often	Some- times	Rarely	Never
Between-day				
(SD) Variable Ss	5	5	6	2
(SD) Stable Ss	0	10	8	0

as a 2x2 table

Within-day				
(SD) Variable Ss,*	5	5		
(SD) Stable Ss	0	10		

* For SD Variability, as a 2x2 table: $\chi^2 = 4.27$ (with Yates correction), $p < .05$

Within-day				
(MDR) Variable Ss	2	8	7	1
(MDR) Stable Ss	3	7	7	1

5-a. Being overwhelmed by feelings is a sign of weakness

	Strongly Agree	Mildly Agree	Mildly Disagree	Strongly Disagree
Between-day				
(SD) Variable Ss	1	3	4	10
(SD) Stable Ss	1	0	7	10
Within-day				
(MDR) Variable Ss	1	2	6	9
(MDR) Stable Ss	1	1	5	11

TABLE XII (cont'd)

5-b. Do you, in fact, experience being overwhelmed and immobilized by feeling?

	Often	Some- times	Rarely	Never
Between-day				
(SD) Variable Ss	5	9	4	0
(SD) Stable Ss	4	9	5	0
Within-day				
(MDR) Variable Ss	4	10	4	0
(MDR) Stable Ss	5	8	5	0

6-a. The best decisions are those that are arrived at by intuition and sentiment.

	Strongly Agree	Mildly Agree	Mildly Disagree	Strongly Disagree
Between-day				
(SD) Variable Ss	2	6	8	2
(SD) Stable Ss	0	4-1/2	8-1/2	5
Within-day				
(MDR) Variable Ss	2	6	8	2
(MDR) Stable Ss	0	4-1/2	8-1/2	5

TABLE XII (cont'd)

6-b. When you are making important decisions, do you primarily rely on your intuition and sentiment?

	Most of the time	Some- times	Rarely	Never
Between-day				
(SD) Variable Ss	3	9	6	0
(SD) Stable Ss	3	9-1/2	4-1/2	1
Within-day				
(MDR) Variable Ss	3	10	4	1
(MDR) Stable Ss	3	8-1/2	4-1/2	0

7-a. So-called mystical experiences are usually in the service of delusion.

	Strongly Agree	Mildly Agree	Mildly Disagree	Strongly Disagree
Between-day				
(SD) Variable Ss	2	4	4	6
(SD) Stable Ss	3	5	7	1
Within-day				
(MDR) Stable Ss	3	7	5	2
(MDR) Variable Ss	2	2	6	5

TABLE XII (cont'd)

7-b. Do you have such experiences?

	Often	Some- times	Rarely	Never	No Answer
Between-day					
(SD) Variable Ss	0	3	6	8	1
(SD) Stable Ss	0	0	8-1/2	8-1/2	1
Within-day					
(MDR) Variable Ss	0	1	5	11	1
(MDR) Stable Ss	0	2	9-1/2	5-1/2	1

8-a. Without the changeableness of human feelings, life would be dull.

	Strongly Agree	Mildly Agree	Mildly Disagree	Strongly Disagree	No Answer
Between-day					
(SD) Variable Ss	12	3	0	2	1
(SD) Stable Ss	12	4	2	0	
Within-day					
(MDR) Variable Ss	13	1	1	2	1
(MDR) Stable Ss	11	6	1	0	

TABLE XII (cont'd)

8-b. Do you consider yourself a moody person?

	Very	Some- what	Not very	Not at all
Between-day				
(SD) Variable Ss	5	9	3	1
(SD) Stable Ss	4	9	4	1
Within-day				
(MDR) Variable Ss	6	10	2	0
(MDR) Stable Ss	3	8	5	2

9-a. When things bog down between people, there's nothing like a good fight to clear the air.

	Strongly Agree	Mildly Agree	Mildly Disagree	Strongly Disagree	No Answer
Between-day					
(SD) Variable Ss	2	7	5	4	
(SD) Stable Ss	0	11	1	5	1
Within-day					
(MDR) Variable Ss	1	8	3	6	
(MDR) Stable Ss	1	10	3	3	1

TABLE XII (cont'd)

9-b. Do you get into fights or heated arguments with people that you are at least somewhat close to?

	Often	Some- times	Rarely	Never
Between-day				
(SD) Variable Ss	3	8-1/2	4-1/2	2
(SD) Stable Ss	1	12	4	1
Within-day				
(MDR) Variable Ss	0	11-1/2	5-1/2	1
(MDR) Stable Ss	4	9	3	2

9-c. If you get into such fights or heated arguments, do you regret them later?

	Often	Some- times	Rarely	Never	No Answer
Between-day					
(SD) Variable Ss	3	6	5	2	2
(SD) Stable Ss	4-1/2	8-1/2	5	0	
Within-day					
(MDR) Variable Ss	5	7	4	0	2
(MDR) Stable Ss	2-1/2	7-1/2	6	2	

TABLE XII (cont'd)

10. If you are in a bad mood, do you (often-sometimes-rarely-never) know what has made you feel that way?

	Often	Some- times	Rarely	Never
Between-day				
(SD) Variable Ss	10	7	1	0
(SD) Stable Ss	12	6	0	0
Within-day				
(MDR) Variable Ss	8	10	0	0
(MDR) Stable Ss	14	3	1	0

11. Do you get so immersed in what you are doing or feeling that you forget all about yourself?

	Often	Some- times	Rarely	Never	No Answer
Between-day					
(SD) Variable Ss	2	12	3	0	1
(SD) Stable Ss	3	11	4	0	
Within-day					
(MDR) Variable Ss	3	10	4	0	1
(MDR) Stable Ss	2	13	3	0	

TABLE XII (cont'd)

12. If you are deeply upset about something personal, do you like to keep it to yourself?

	Usually	Some- times	Rarely	Never
Between-day				
(SD) Variable Ss	4	7	7	0
(SD) Stable Ss	4	5	9	0
Within-day				
(MDR) Variable Ss	4	7	7	0
(MDR) Stable Ss	4	5	9	0

13. If you are deeply upset about something personal, do you like to talk about it with someone?

	Usually	Some- times	Rarely	Never
Between-day				
(SD) Variable Ss	12	3	3	0
(SD) Stable Ss	9	8	1	0
Within-day				
(MDR) Variable Ss	10	5	3	0
(MDR) Stable Ss	11	6	1	0

TABLE XII (cont'd)

14. Do you particularly seek out experiences which are exciting, even though they may also be somewhat frightening.

	Often	Some- times	Rarely	Never
Between-day				
(SD) Variable Ss	2	11	5	0
(SD) Stable Ss	1	10	7	0
Within-day				
(MDR) Variable Ss	1	9	8	0
(MDR) Stable Ss	2	12	4	0

15. Do you have trouble standing up for yourself in an argument?

	Often	Some- times	Rarely	Never
Between-day				
(SD) Variable Ss	1	13	4	0
(SD) Stable Ss	2	9	5-1/2	1-1/2
Within-day				
(MDR) Variable Ss	1	13	4	0
(MDR) Stable Ss	2	9	5-1/2	1-1/2

TABLE XII (cont'd)

16. On the whole do you prefer quiet good times or intense thrills?

	Quiet good times	Intense thrills	Both
Between-day			
(SD) Variable Ss	14	2	2
(SD) Stable Ss	15	2	1
Within-day			
(MDR) Variable Ss	15	1	2
(MDR) Stable Ss	14	3	1

17. Do you get feeling overwhelmed by other people's troubles?

	Often	Some- times	Rarely	Never
Between-day				
(SD) Variable Ss	4	12	2	0
(SD) Stable Ss	3	10	5	0
Within-day				
(MDR) Variable Ss	3	11	4	0
(MDR) Stable Ss	4	11	3	0

TABLE XII (cont'd)

18. Do you find people's intellectual positions more interesting than their feelings and emotions?

	Often	Some- times	Rarely	Never
Between-day				
(SD) Variable Ss	1	6	10	1
(SD) Stable Ss	1	6	9	2
Within-day				
(MDR) Variable Ss	2	6	9	1
(MDR) Stable Ss	0	6	10	2

19. Thinking about your one or two closest friends, would you say that they are more or less emotional than you are?

	Lot more	Little More	Equally	Little Less	Lot Less
Between-day					
(SD) Variable Ss	2-1/2	1-1/2	8	5-1/2	1
(SD) Stable Ss	3	1/2	7	3-1/2	3
Within-day					
(MDR) Variable Ss	1-1/2	1-1/2	9	4	1
(MDR) Stable Ss	4	1/2	6	4	3

TABLE XII (cont'd)

20. Do you have any creative outlets for your feelings (such as writing, dancing, painting, music, etc?)

	Yes	No
Between-day		
(SD) Variable Ss	14	4
(SD) Stable Ss	9	9
Within-day		
(MDR) Variable Ss	12	6
(MDR) Stable Ss	11	7

21. Are you able to overlook things which seem to upset others?

	Often	Some- times	Rarely	Never
Between-day				
(SD) Variable Ss)*	0	10	7	1
(SD) Stable Ss	4	12	2	0
Within-day				
(MDR) Variable Ss	2	10	5	1
(MDR) Stable Ss	2	12	4	0

* For SD Variable Ss, as a 2x3 Table, $\chi^2 = 4.80$ (with Yates correction),
df = 2, $p < .025$

TABLE XII (cont'd)

22. Do you stop yourself from saying what you would like to say in order to avoid hurting someone's feelings or getting into an argument?

	Often	Some- times	Rarely	Never
Between-day				
(SD) Variable Ss	9	7	2	0
(SD) Stable Ss	10-1/2	7-1/2	0	0
Within-day				
(MDR) Variable Ss	8	10	0	0
(MDR) Stable Ss	11-1/2	4-1/2	2	0

23. Which of the following describes you best?

	Somewhat too in- hibited	Somewhat too emotional	Neither ⁺	Both ⁺
Between-day				
(SD) Variable Ss	4	7	4	3
(SD) Stable Ss	9	5	2	2
Within-day				
(MDR) Variable Ss)*	3	9	3	3
(MDR) Stable Ss	10	3	3	2

⁺Omitted in computing χ^2

* For MDR Variable Ss, $\chi^2 = 4.93$ (with Yates correction) $p < .10$

TABLE XII (cont'd)

24. How do you think other people see you in regard to your control over your feelings?

	A. Somewhat too inhibited	B. Somewhat too emotional	C. Neither	A&C	B&C
Between-day					
(SD) Variable Ss	3	5	8	0	2
(SD) Stable Ss	3	2	12	1	0
Within-day					
(MDR) Variable Ss	5	3	8	0	2
(MDR) Stable	1	4	12	1	0

25. Would you like to be able to--

	A. Hold back more	B. Let go more	C. Neither	D. Both
Between-day				
(SD) Variable Ss	3	10	5	0
(SD) Stable Ss	1	10	6	1
Within-day				
(MDR) Variable Ss	1	10	7	0
(MDR) Stable Ss	3	10	4	1

TABLE XII (cont'd)

26. Think about one or two girls who are your closest friend; which description fits them best?

	1. Very Emotional	2. Somewhat Emotional	3. Somewhat Steady	4. Very Steady	1&3	2&3
Between-day						
(SD) Variable Ss	3	8	3	1	1	1
(SD) Stable Ss	1	10	4	1	2	0
Within-day						
(MDR) Variable Ss	3	10	2	2	0	1
(MDR) Stable Ss	1	8	5	0	3	1

27. Which of these descriptions best describes the man you would like to marry or the man you are married to?

	1. Very Emotional	2. Somewhat Emotional	3. Somewhat Steady	4. Very Steady	2 or 3 ⁺
Between-day					
(SD) Variable Ss	1	10	5	0	1
(SD) Stable Ss	1	5	12	0	0
Within-day					
(MDR) Variable Ss	1	10	5	0	1
(MDR) Stable Ss	1	5	12	0	0

as a 2x2 Table

SD & MDR Variable Ss)*	11	5
SD & MDR Stable Ss	6	12

⁺ (omitted in computing x^2)

* For SD and MDR Variable Ss, as 2x2 tables, $x^2 = 2.95$ (with Yates correction) $p < .10$

TABLE XII (cont'd)

28. Which one is the best description of you, from your own point of view?

	1. Very Emotional	2. Somewhat Emotional	3. Somewhat Steady	4. Very Steady	2 & 3
Between-day					
(SD) Variable Ss	2	15	0	0	1
(SD) Stable	2	11	3	1	1
Within-day					
(MDR) Variable Ss	3	14	0	0	1
(MDR) Stable Ss	1	12	3	1	1

29. Which one best describes you as you think others see you?

	1. Very Emotional	2. Somewhat Emotional	3. Somewhat Steady	4. Very Steady
Between-day				
(SD) Variable Ss	4	9	5	0
(SD) Stable Ss	3	6	7	2
Within-day				
(MDR) Variable Ss	5	10	3	0
(MDR) Stable Ss	2	5	9	2

as a 2x2 Table

(MDR) Variable Ss,*	15	3
(MDR) Stable Ss	7	11

* For MDR Variable Ss, as a 2x2 table, $\chi^2 = 5.73$ (with Yates correction) $p < .05$

significant results would have been found. On other items, however, the relative unanimity of the subjects' responses is itself of interest.

It was predicted that Variable subjects would tend to be more accepting of feelings in themselves and others, and to view them more as useful guides to knowledge and action than Stable subjects.

However most subjects in the study, regardless of whether they were Stable or Variable, were inclined towards a favorable attitude towards 'feelings' in general. Thus two-thirds of the total group "Strongly agreed" that, "Without the changeableness of human feelings, life would be dull" (#8-a). It is interesting, in the light of previously noted results, that the only two subjects to "Strongly disagree" were both in the Variable groups--suggesting again that some Variable subjects find their affective experiences a bit too much to handle.

However, two-thirds of the group also at least "Mildly agreed" with the statement that, "While feelings may be important, reason should be the final judge in all important matters." (Item 1-a) Of the three subjects who "strongly agree" with this statement, all were SD Variable, indicating again some serious reservation from this group of subjects about succumbing to their feelings. Consistent with their

response to this last question, almost two-thirds of the subjects are also inclined to disagree with the statement, "The best decisions are those that are arrived at by intuition and sentiment" (#6-a); however, when it comes to what they actually do, more than two-thirds say that they in fact do rely on intuition and sentiment at least "Sometimes" (#6-b).

Significant group differences for Within-day variability were found in self-descriptions regarding affect both from the subjects' own points of view and from what they see as the points of view of other people. Thus, Within-day Variable subjects tend to see themselves as "too emotional" and Stable subjects see themselves as "too inhibited" (#24, $p < .10$). Similarly MDR Variable subjects tend to believe that others see them as being on the 'emotional' side, while Stable subjects believe that others see them as on the "steady" side (#30, $p < .05$). When asked to describe either "the man you would like to marry, or the man you are married to," (#28) both SD and MDR Variable subjects prefer at least moderately variable men and Stable subjects prefer moderately stable men ($p < .10$). Thus, these subjects seem to experience mood variability-stability as a style of living and being which is socially recognized and acknowledged; they also apparently tend to look for a similar orientation in a mate.

Unlike MDR Variable subjects, SD Variable subjects do

not necessarily characterize themselves as being or as appearing to others to be notably emotional. (Items #24 and 25) Apparently variability is not as fully integrated into their self-image as it is for MDR Variable subjects.

Most subjects consider themselves to be at least "somewhat" moody (#8-b)--though the Within-day Variable subjects are most consistent about it. Yet when asked about ways they might like to change, twenty out of the thirty-six subjects (and evenly divided between Stable and Variable groups) said they would like to become "more free to express (their) thoughts and feelings." (#26)

The questionnaire also includes several items about possible frightening or strange experiences associated with feelings. Even though significantly more Within-day Variable subjects consider themselves "too emotional," there are virtually no differences in the frequency with which Stable and Variable subjects report being "overwhelmed or immobilized by feelings" (#5-b), or experiencing feelings which are "strange and alien" (3-b). It seems that the Within-day Variable subjects are relatively comfortable with their feelings, even if they evaluate them as being somewhat excessive,

However in answer to the question, "Are you ever afraid that your feelings are crazy?" (#4-b), a significantly

larger number of Between-day Variable than Stable subjects reply that they "often" rather than only "sometimes" feel this way ($p < .05$). Consistent with this, a significantly larger number of SD Variable than Stable subjects report themselves to be currently involved in or to have had some kind of psychotherapy ($p < .05$). Neither of these relationships are significant for MDR Variable and Stable subjects.

This is consistent with the tendency noted earlier of SD Variable subjects to be not only upset by the feelings associated with memory, but to dislike remembering as well. It seems that these subjects are not only upset by their memories, but also upset about having been upset. This group seems to overtly acknowledge a high level of emotional vulnerability in reply to the question, "Are you able to overlook things which seem to upset others?" (#22) More SD Variable subjects indicate "Rarely or never," while more Stable subjects indicate "Often" ($p < .10$). Thus, while the SD Variable subjects are aware of their vulnerability, the Stable subjects are also aware of their relative imperviousness to things which are upsetting to those less placid. (There is little difference between MDR Stable and Variable subjects on this item.)

7. Interrelationships between memory measures.

When several scores were derived from a single memory task, (i.e., the Alston Passages, the Personal Memory Questionnaire, or the Autobiography), these scores usually correlate significantly. (These correlations are found in Tables VI, VIII and XI) However the correlations between measures derived from different memory tasks indicate that memory, even as measured by the few tests used in this study, is a considerably more complex function than the assumptions behind the hypotheses would imply.

For example, the hypotheses predicted that the same (Variable) subjects would have high recall scores on the Alston A-N and the Personal Memory Questionnaire. However, the correlations between almost all aspects of the Personal Memory Questionnaire and the Alston Passage data are negative. (These correlations appear in Table XIII.) While not all of these correlations are significant, many of them are, and cumulatively they do seem to indicate a quite consistent inverse relationship between immediate recall of extended verbal material and recall of specific incidents in one's life. The significant inverse correlations between the number of items under age 12 recalled on the Personal Memory Questionnaire and the Alston affect score and A-N score ($p < .05$ for both) are of particular interest. It

TABLE XIII

Correlations between Alston Passage recall scores
and Personal Memory Questionnaire recall scores.

	<u>Alston Passages</u>							
	Total Score	Total Word Count	Affect Score	Affect Word Count	Neutral Score	Neutral Word Count	A-N Score	A-N Word Count
<u>Personal Memory Questionnaire</u>								
Total recall	-.23	-.12	-.24	-.07	-.13	-.03	-.28*	-.05
total 'Sure'	.00	+.01	-.04	+.11	+.11	+.11	+.34*	+.13
Recall under 12	-.37**	-.34**	-.44**	-.27	-.09	-.09	-.51**	-.31*
'Sure' under 12	-.03	-.01	-.05	-.04	+.03	+.03	-.06	+.12
Recall present	-.34**	-.31*	-.23	-.26	-.23	-.22	-.35**	-.05
'Sure' present	+.27**	+.21	+.26	+.23	-.26	+.09	+.13	+.34

* p < .10

** p < .05

*** p < .01

appears that the discrepancy between the ability to recall extended verbal material and specific incidents in the past is enhanced when the verbal material is affectively 'loaded' in content.

The only positive correlation between the Personal Memory Questionnaire results and the Alston measures is that between the number of "sure" responses and A-N score ($p < .10$). Thus it seems that an attitude of confidence towards personal memory (particularly for recent occurrences) tends to go along with recall of affective over verbal material of an impersonal nature.

While the Alston recall scores are inversely related to early memory on the Personal Memory Questionnaire, they are positively related to the tone of current involvement in the autobiography. ($p < .05$) (The correlations between the Alston data and the Autobiographies appear in Table XIV) Thus, those subjects who recalled the Alston Passages more accurately and fully also expressed by their writing style more immediate involvement in the recall of their early lives, while those who recalled the Passages less accurately and fully tended to write autobiographies which were more detached and objective in tone.

A-N score is negatively related to the summary vs. episodic style on the autobiography ($p < .05$). This was not

TABLE XIV

Correlations between Alston Passage recall scores and the autobiography scores.

	Total Score	Total Word Count	Affect Score	Neutral Score	A-N Score	A-N Word Count
Autobiography						
Scoring Categories +						
IA Level of Involvement	+.39**	+.37**	+.34**	+.40**	+.11	+.14
IB Summary vs Episode Style	+.07	00	-.04	+.22	-.35**	-.25
IC Richness of Detail	+.14	+.16	+.07	+.25	-.21	-.29
IIA Relevance of Affect	-.06	+.06	-.01	-.10	+.12	+.11
IIB Minimization vs Maximization of Affect	-.05	+.14	+.03	+.05	-.01	-.02
IIC Diversity of Affect	-.01	+.04	00	-.05	+.06	+.03

+ For description of scoring categories, see Appendix F.

** $p < .05$

anticipated in the hypotheses.

Table XV shows the correlations between the Personal Memory Questionnaire and the Autobiographies. The total number of items recalled on the Memory Questionnaire is positively related to the relevance of affect to the experiences described in the autobiography ($p < .05$). Thus, those subjects who recalled more items on the Memory Questionnaire also tended to include emotional reactions as a central aspect of the experiences and events they described in their autobiographies. The number of items recalled under 12 on the Memory Questionnaire is also positively related to the tendency to maximize rather than minimize affect in the autobiography ($p < .10$). Both of these correlations support the notion that for persons with good recall for personal events, feelings are an integral part of the events recalled, and that the ability to remember such events is related to the ability to admit the associated feelings into awareness.

The number of "sure" responses for items under 12 on the Memory Questionnaire is inversely related to richness of detail on the autobiography ($p < .10$). This is somewhat difficult to explain, but one might speculate that being "sure" about the past presupposes that one has certain 'facts,' and that this 'factual' approach to memory is

TABLE XV

Correlations between the Personal Memory Questionnaire
recall scores and the Autobiography scores

Personal Memory Questionnaire	Total Recall	Total 'Sure'	Total Recall Under 12	'Sure' under 12	Recall in Present	'Sure' in Present
Autobiographies⁺						
IA Level of Involvement	+ .15	- .18	- .01	- .20	+ .02	+ .08
IB Summary vs Episodic Style	+ .22	+ .21	+ .23	- .05	+ .10	+ .17
IC Richness of Detail	- .05	- .01	+ .02	- .29*	- .24	+ .07
IIA Relevance of Affect	+ .35**	+ .04	+ .08	+ .09	- .15	+ .05
IIB Minimization vs Max- imization of Affect	- .03	- .13	+ .29*	+ .06	- .17	00
IIC Diversity of Affect	+ .04	+ .06	+ .04	- .07	- .27	- .07

⁺ For description of scoring categories, see Appendix F

* $p < .10$

** $p < .05$

contrary to an idiosyncratically detailed, sensory kind of recall.

8. Other subject groupings and memory data.

A. Contrasting patterns for Between-day and Within-day variability.

As can be seen in the previous sections, the correlates and group differences associated with one of the two kinds of variability are only rarely associated with the other as well.

On the whole, the results relating directly to the hypotheses are clear only for Within-day variability. Thus the significant inverse relationship between variability and recall of affective-over-neutral material on the Alston Passages, as well as the positive relationship between variability and recall of childhood events on the Personal Memory Questionnaire relate to Within-day variability only. (In fact, both of these relationships were significant only for MDR on the Tranquility-Anxiety scale; however, both relationships are clearly paralleled in the results on the Elation-Depression scale.)

Between-day Variable subjects tend to be generally more "sure" of their recall on the Personal Memory Questionnaire than Stable subjects; Within-day Variable subjects are apparently more "sure" only of recent memories. Between-

day Variable subjects also tend to use an episodic organization on the autobiography while Stable subjects used a more summary chronological style.

Between- and Within-day Variable subjects reported more often than Stable subjects that recalling the past is disturbing or overwhelming to them. However, Between-day Variable subjects most consistently thought of their memories as painful and unpleasant and disliked the recall involved in the study. The Between-day Variable subjects also most consistently described themselves as unable to overlook potentially upsetting things; they most often fear that their feelings are crazy, and they most often have had some kind of psychotherapy. Yet, unlike the Within-day Variable subjects, they do not see themselves as being "too emotional."

Altogether, it seems that the Within-day Variable subjects come much closer than the Between-day Variable ones to having the characteristics of variability found by Wessman and Ricks and expected in this study. Between-day Variable subjects, while being less aware of the changeableness of their emotions, seem more often to be overwhelmed by feelings which are not ego-syntonic. Compared to Within-day Variable subjects, they are less accepting and more fearful of their affective experiences.

B. Mixed Cases

Because of the differences found between the two kinds of Variability, it seemed useful to look at the data for "mixed cases."

As noted earlier, twelve subjects were in the Stable category on one of the variability measures and in the Variable category on the other. Of these subjects, nine had differences of more than ten rank order places between their positions in one group and the other; only these subjects were used in considering the differences between the mixed group and the group as a whole.

Unfortunately the small number of subjects makes it difficult to evaluate the differences. Table XVI contains the scores for those items on which the two mixed groups differed notably from each other. Where such differences occur the scores follow the pattern taken elsewhere by the scores MDR Variability-Stability. Thus the MDR Variable/SD Stable group has a distinctly lower Alston total score and A-N score than the MDR Stable/SD Variable group. Again, paralleling the results for MDR by itself, the MDR Variable/SD Stable group has fewer "sure" responses associated with early memory than does the MDR Stable/SD Variable group. Altogether the results with this group reflect the fact that MDR variability is more directly related to the hypotheses

TABLE XVI

Mixed Cases on the Elation-Depression Scale compared with other mood groups and total group.

	Alston total score	Alston A-N score	Memory Questionnaire 'Sure' under 12
MDR Variable & SD Stable (4 cases)	293.00 (32.1)	17.50 (37.3)	3.25 (1.26)
SD Variable & MDR Stable (5 cases)	319.00 (42.5)	28.60 (22.2)	5.10 (3.17)
Total group	304.12 (64.5)	21.97 (22.0)	4.21 (2.54)
SD Variable	309.65 (19.2)	21.88 (19.2)	4.47 (2.52)
SD Stable	298.25 (27.9)	22.19 (22.9)	4.05 (2.40)
MDR Variable	298.59 (40.4)	18.24 (29.8)	3.44 (2.78)
MDR Stable	310.00 (90.3)	26.06 (30.0)	4.52 (3.12)

of the study than is SD variability.

C. Individual patterns.

A few individual subjects with extreme scores on various measures illustrate clearly the patterns seen in the group results.

Betty is the most striking case in that she has extreme scores on so many of the measures. She is an extremely Stable subject. (She is rank order #36 on MDR for both Elation-Depression and Tranquility-Anxiety, and #33 on SD for Elation-Depression.) She recalled the second lowest number of items on the Personal Memory Questionnaire, but has the highest Alston total score, word count and A-N score. On the autobiography Betty was given close to the extreme rating for minimization of affect. She also wrote one of the autobiographies in which an extremely traumatic early experience was reported (the death of her mother in a car accident with Betty, age 6, asleep in the back seat). There is little indication of emotional disturbance following this event, and in general her autobiography gives an impression of muted and extremely well-controlled feeling. Betty exhibits clearly the pattern of mood stability, forgetting of many specific incidents from childhood, and striking competence in immediate recall of particularly affectively-loaded verbal material which has directly nothing to do

with herself.

Robin presents a pattern which is in some ways the reverse of Betty's. Robin was an extremely Variable subject (having rank order #1 on MDR for Elation-Depression and #4 on MDR for Tranquility-Anxiety, as well as #7 on SD for Elation-Depression). She answered the highest number of questions on the Personal Memory Questionnaire. Like Betty, she also reported clearly traumatic events from her early life. (She was an adopted child who learned of her adoption when returned to an orphanage at the time of her adoptive mother's first pregnancy.) However she seems to have handled her memory of these events very differently from Betty. She has notably high scores on the level of current involvement in her autobiography and on the relevance of affect to the events described. She was also one of the subjects who wrote that recall of the past is painful to her because she remembers what the events felt like at the time. Thus Robin, with her affective variability, is very much in touch with both specific incidents from the past and the feelings which accompanied them.

Cheryl, another very Stable subject (rank order #35 for MDR and SD on Elation-Depression, and #34 for MDR on Tranquility-Anxiety) shows a pattern which parallels Betty's. Thus she has the highest Alston total word count, and the

second highest Alston total score; she answered the second lowest total number of items, as well as the second lowest number of items related to childhood events on the Personal Memory Questionnaire. Once again, one can see the pattern of mood stability, poor recall for personal events, but good recall of material unrelated to the self.

Pam provides the clearest example of Between-day Variability and Within-day Stability. (Her rank order for SD on the Elation-Depression scale is #1, and on the Tranquility-Anxiety scale it is #2; on MDR she is #31 and #33 on these two scales.) She wrote an autobiography which is striking for its blandness, guardedness and lack of overt references to feelings; and yet she apparently found writing it and filling out the Personal Memory Questionnaire painful. She stated that most of the memories evoked were painful and unpleasant and was generally negative about the experience of recall in the study; she also indicated that she "often" fears that her feelings are crazy. It seems that she is afflicted with moods and reactions which she would prefer to control more completely, but finds herself unable to do so.

In summary, the findings suggest that the relationship between mood variability and memory is more complex than the hypotheses suggested.

The correlations between Within- and Between-day variability are low and statistically non-significant, indicating that for this group of subjects, these are distinct patterns of affect change. Most of the significant relationships found between moods and memory, apply only to Within-day variability. In addition, many of the results were statistically significant only for the Tranquility-Anxiety scale; however these results were always paralleled in the pattern of scores for Elation-Depression.

The results with the Block 'Beta' or Ego Control Scale indicate that hedonic level is more closely related to this form of ego control than is mood variability. Thus elation was found to be positively correlated to under-control, and depression to over-control.

The results concerning recall of extended verbal material (the Alston Passages) are contrary to the hypothesis. All subjects recalled affective material more accurately and fully than neutral material. This difference was particularly great for Within-day Stable subjects, whose affective-minus-neutral passage scores were significantly higher than those of the Within-day Variable subjects. There are statistically significant inverse correlations between Within-day variability and total recall, recall of affective passages, and recall of affective-minus-neutral passages. While these

results are only significant for the Tranquility-Anxiety scale, they are clearly mirrored in the scores for Elation-Depression.

There is a significant positive correlation between Within-day variability and the number of childhood events recalled on the Personal Memory Questionnaire. However, the expected differences between Stable and Variable subjects in the total number of items recalled on the Personal Memory Questionnaire was not found. Between-day Variable subjects were found to be more often "sure" about their personal memories than Between-day Stable subjects. Variable subjects were more likely than Stable subjects to report that remembering their own lives can be painful and overwhelming, but Between-day Variable subjects seem to be more consistently negative about recalling the past than Within-day Variable subjects.

There is a consistent inverse relationship between recall on the Alston Passages and memory of personal events on the Personal Memory Questionnaire.

Within-day Variable subjects (on the Tranquility-Anxiety scale) tended to write their autobiographies in an episodic style and to maximize affect. A writing style suggestive of immediate involvement in the past is significantly related to elation but not to variability.

Most subjects in the study expressed positive attitudes towards affect. Within-day Variable subjects saw themselves as somewhat "too emotional" but also seemed to be quite comfortable with their feelings. While Between-day Variable subjects did not see themselves as being overly emotional, they did report, significantly more often than Between-day Stable subjects, that they "often" fear their feelings are crazy and that they have sought psychiatric help.

CHAPTER IV

DISCUSSION

The purpose of this study was to investigate the relation between mood change and memory for both personal experience and non-personal, affect-related verbal material. It presupposed that the way an individual handles and experiences affect is central to what he allows himself to experience in the present and to recall from the past.

Various personality theorists have emphasized the pivotal role that affect plays in cognitive functioning. (Tomkins, 1962, 1963; Schachtel, 1959; White, 1959, etc.) The only major study of mood change (Wessman and Ricks, 1966) found personality correlates which suggested that stable and variable persons could be shown to differ in their approach to cognition. Studies of memory (such as Paul et al, 1965; and Ricks) also indicated that relative openness to feeling is related to the availability of personal experiences to later recall.

The findings of the present study suggest that both mood

change and memory for personal and affective material have a number of different aspects which should be specified and examined if the relationships between moods and memories are to be clearly understood.

1. Mood variability-stability as a dimension of personality.

In general, the results obtained support the view that mood variability-stability is an experimentally useful and subjectively valid dimension of personality. However, the low correlations between Within-day and Between-day variability indicate that the intensity of mood changes and the rapidity with which such changes occur are not related in any simple or, at this point, predictable way. Between- and Within-day Variable subjects apparently differ in both their pattern of recall and in the way that they experience affect in relation to personal memory. This suggests that there may be quite different defensive and cognitive tendencies associated with these two differently-timed variability patterns.

As has been indicated in the previous chapter, the assumptions and hypotheses of this study were more applicable to Within-day than to Between-day variability-stability. It seems that Within-day Variable subjects come closer to having the emotional openness, responsiveness and exuberance described by Wessman and Ricks as correlates of variability. A

sense of being vulnerable to uncontrollable feelings is more common among Between-day Variable subjects; this could be seen as reflecting some kind of 'neurotic' tendency.

The relationship between over-control, as measured by the Block Beta scale, and the two kinds of variability reflects this difference. The correlations between the Block scale and Within-day variability, though not significant, were in the expected direction--with over-control being positively related to stability and under-control to variability ($p < .20$). However, for Between-day variability, the correlation ($r = +.02$) is not even in the expected direction; thus it seems that Between-day variability, unlike Within-day variability, is not associated with relative spontaneity or impulsivity.

One may speculate that the vulnerability to unwanted feelings among Between-day Variable subjects represents, not relative freedom from excessive control, but failure of attempted control. A pattern of Between-day variability, at least when accompanied by relative Within-day stability, may indicate a failure of a relatively rigid defensive system whose goal was to maintain both the appearance and the experience of stability. This is supported by the facts that Between-day Variable subjects, while not considering themselves especially emotional, often experience their feelings as ego-

alien, consider themselves to be particularly vulnerable to upset, and most frequently seek psychiatric help. These subjects apparently experience themselves as passive 'sufferers' of their affects. The tendency to sustain a single, but extreme mood throughout the day suggests a kind of rigid imperviousness to outside stimuli; such persons, when they find themselves in a particular mood, not only cannot shake it off themselves, but also do not respond spontaneously to other people or situations in such a way as to alter their mood. Altogether they are considerably more uncomfortable psychologically than either those who experience very frequent affect changes, or those who experience only minimal change. Thus, Between-day Variable subjects seem to have all the disadvantages of emotional variability and little of the potential satisfaction of either variability or stability.

It seems that the difference between Within-day and Between-day Variable subjects in regard to how comfortable they are with their feelings may be related to differences in the effects of their attempts to control negative affect. Tomkins (1962) describes how one of the possible effects of attempted control over the outward display of affect is the intensification of the inner response; in children this often erupts into later tears or tantrums. (p. 182) It seems possible that Between-day Variable subjects experience an adult equivalent of this--so that the feeling which was to

have been suppressed breaks through as unwanted and ego-alien moodiness.

Tomkins notes that the simulation of affect without corresponding inner feeling is also possible, and that this too may be used as a defense against unwanted feeling. For example, a study by Whitehorn showed that much schizophrenic affective behavior was unrelated to internal affect as measured by heart rate; however, when the outward affective behavior was prevented, the heart rates increased greatly, presumably reflecting an actual experience of the affect which had been previously expressed in behavior but not 'felt' (pp.182-183). This is consistent with the findings noted elsewhere of the inverse relationship between hysterical and psychosomatic symptoms. It suggests that the awareness of a wide range of affect, linked with some form of affective behavior or expression may permit an avoidance of some of the physiological changes associated with extreme affect. This would seem, at least partially, to account for the Within-day Variable subjects' sense of ease with their rather extreme, and rapidly changing feelings.

The results with the Block 'Beta' scale show that over-under control is more closely related to hedonic level than to mood variability. It seems that while intense and rapidly changing moods are somewhat correlated with impulsivity and

spontaneity, and stable moods with conformity and delay of gratification, that there is not a simple and direct association between over-under control and mood stability-variability.

Classical psychoanalytic theory suggests that affects arise on those occasions in which direct drive discharge is blocked. Since one of the components of 'ego strength' is the capacity to experience feelings and impulses without necessarily acting on them instantly, it would seem that a direct correspondence between the dimensions of affective variability-stability and immediate-vs-delayed gratification of impulses would be found only in cases of ego malfunction (ranging from mania to catatonia).

The significant correlations between the Block Ego Control Scale and hedonic level indicate that those who are relatively impulsive also tend to be more elated than those who are relatively inhibited. This relation could be seen as being directly related to the relative ease (absence of conflict) in obtaining gratification. It could also be seen as reflecting an experience of positive feedback provided by the spontaneous pursuit of what is interesting and exciting. (Tomkins, 1962).

2. Affective Variability and Memory Style

In general, the patterns of recall for Within-day Stable and Variable groups correspond to Ricks' description of the

"re-experiencing" and "cognitive control" memory styles. The Variable subjects seem to be "re-experiencers" of the past, whose openness to feeling facilitates recall of events from early life. Ricks found that this approach to memory, which relies on reviving past feeling to reconstruct past events, was less effective when the material to be recalled was factual or impersonal. Similarly, in this study those subjects with better recall of events from their early lives had poorer recall of non-personal material. The Within-day stable subjects appear to be using something like the "cognitive control" approach, which is more effective than "re-experiencing" for recall of impersonal material, but less effective for recall of personal events.

The finding of no difference between Stable and Variable subjects in their recall of recent personal events also parallels the finding of Ricks of no difference between "cognitive control" and "re-experiencing" subjects in their immediate recall of an upsetting personal event. Thus it seems that the differences in memory for personal past events reflect differences in the effectiveness of memory retrieval strategies, rather than in the initial recording of such memories.

It seems possible, however, that the differences in recall for impersonal events (the Alston Passages) may have a

somewhat different basis. Some hint may be provided by a study reported by Tomkins (1962, pp. 188-189) dealing with the relationship between autonomic activity and performance on vocabulary and reasoning tests. In this study (by Mandler and Kremen) it was found that actual autonomic activity had no effect on performance, but that perceived and reported autonomic activity interfered with performance. It was suggested that preoccupation with autonomic events distracted attention away from the intellectual tasks. It seems possible that something like this occurred with the Within-day Variable subjects on the Alston Passages. Tomkins also points out that the awareness of affect is not always disruptive; if the affect is positive it may enhance cognitive functioning. But, altogether, this does suggest that the functioning of persons who are highly aware of their feelings may be quite directly related to their feelings of the moment and that persons who are less aware of their feelings may be better able to sustain a steady response to the demands of a task.

The memory style of the Within-day Stable subjects also resembles that of the "subtractors" in Paul's (1965) study of memory for LSD experiences. When later asked for a description of their experiences under LSD, the "subtractors" left out those aspects which had been most disturbing to them

at the time. This group also had the highest recall scores on a theme list. They are described as using intellectual defenses as well as denial to diminish experiences which are threatening and ego-alien. Similarly the Within-day stable subjects apparently forget the upsetting aspects of their personal experiences and remembered the Alston passages better than the other subjects. They, too, appear to use intellectual defenses as well as denial.

As indicated earlier, all groups of subjects had fuller recall of affectively toned verbal material than neutral material. However, for Within-day Stable subjects the differences between affective and neutral scores are particularly large, indicating that for them the affective 'loading' had the greatest facilitative impact on memory. This is, of course, contrary to the hypotheses of this study; however it does seem to be consistent with the results found in some of the early memory studies.

In recalling affective passages more fully and accurately than neutral passages most subjects seem to be behaving like those subjects in the early memory experiments in which recall was positively related to the intensity of the subjects' feelings about the stimuli, regardless of whether these feelings were positive or negative (Rapaport, 1950). In these early studies (with nonsense syllables and word lists)

the intensity of feelings aroused was presumably very limited; similarly it seems that even the Alston Passages (which include such things as a vivid description of a birth, the dismemberment of a helpless animal, etc.) do not activate intense feelings or defenses against feelings to the same degree as affect-laden personal memories. It seems likely that so long as the material is impersonal, that some degree of affect-related content makes it more vivid and interesting without making it necessarily more threatening.

It remains to be explained why affective content is more facilitative of recall in Within-day Stable than Variable subjects. Apparently Stable subjects, who defend themselves so effectively against the emotional impact of their own experiences, are particularly attuned to recalling emotionally-toned material which is clearly outside their own lives. It is suggested that their considerably enhanced recall of affective material is possible because the personal implications of the material are minimized--not only because the material is unrelated to the subjects' own lives, but also because it appears within a task-oriented context which clearly focusses attention on the content rather than on the subjects' response to the content. Thus there is little need for the mobilization of defenses usually employed to diminish the impact of potentially disturbing experiences in

'real' life. Viewed from the point of view of psychoanalytic theory, this situation both provokes the conditions for conflict (by the content of the affective passages) and makes conflict unnecessary, thereby releasing the 'energy' (used in increased attention and recall) which is normally tied up in defense. For Within-day Variable subjects, who are less rigidly defended from the affective impact of events in their daily lives, the presence or absence of affective 'loading' in non-personal material makes less difference. The affective content helps them somewhat to maintain attention, but since their lives are full of vividly felt responses to actual events, the Alston affective passages have less impact on them than on the Stable subjects. Since they are less conflicted about allowing themselves intense reactions in the first place, the 'safety' of the situation makes little difference to the energy available for attention and recall.

In general, the findings do support the notion that an individual's current style of handling affect is importantly related to what he remembers of the past, and the way he remembers it. The positive correlation between Within-day Variability and memory for incidents from childhood seems to exemplify the kind of relationship between affect and recall suggested by Tomkins (1962) and Schachtel (1959). Variable subjects who are able to experience a wide range of changing affects in the present also tend to be open to re-experiencing

moods and feelings from the past; childhood memories are more available to them because the feelings which are part of these memories are also more available. Stable mood subjects, who have learned to control their current experience of affect, remember less of the past because these very controls restrict the re-experiencing of the relatively uncontrolled emotions of childhood. Presumably the quality of current subjective experience is more rigidly discrepant from childhood experience for Stable than for Variable subjects; thus one of the costs of their stability is loss of contact with their early lives. For these subjects it would presumably require some kind of 'regression' (in the sense of re-awakening an abandoned and avoided intensity of feeling) for them to recall childhood events which are available to Variable subjects. For the Variable subjects, 'regression' is not required because a wider range and intensity of feeling has remained available, lessening the barrier to childhood states of feeling.

However, the fact that recall of childhood events is related to current affect, does not mean that memory of the past normally entails an actual re-experiencing of past affect. There are probably always changes of some kind in the remembered feeling. Sometimes these changes may be only of intensity or duration, but at other times the memory of the

past affect itself, may evoke an entirely different feeling in the present. For example, "The distress I remember from the mistake I made yesterday may occasion shame, if on second thought it appears to have been entirely avoidable had I exercised more care; or it may occasion anger if in the meanwhile I discovered that what was really responsible was someone else's casualness..." (Tomkins, 1962, p. 132)

There is, of course, no way of knowing whether the personal memories recalled in this study are accurate or not. Presumably the content of such memories undergo various changes of focus and emphasis in order to make sense in a current frame of reference. (Rieff and Scherer, 1959; Schachtel, 1959) However, the Ricks study showed that "re-experiencers" recalled upsetting interpersonal events (occurring the year before) better than "cognitive control" subjects-- even though their recall had a "narcissistic bias." This supports the likelihood that the positive correlation between memory for childhood events and Within-day variability does represent a relationship between variability and actual recall, rather than just a response set.

Nevertheless, there may well be a response tendency on the part of Within-day Variable subjects to fill in the gaps of their memories when they are in doubt. There is perhaps an implicit acknowledgement of this in the fact that while

the correlations between the number of answered questions about childhood events and Within-day variability are highly significant, the correlations between Within-day variability and the number of "sure" responses are even slightly negative; thus while the Variable subjects do answer the questions, they are apparently at least somewhat aware that they are reconstructing the past rather than simply reporting facts.

Because so few of the memory tests used in this study were significant for Between-day variability, it is difficult to relate this form of mood change to memory style. The positive correlation between Between-day variability and the number of "sure" answers on the Personal Memory questionnaire does make an interesting contrast to the positive relationship between Within-day Variability and the number of early events recalled. Apparently greater Between-day variability goes along with confidence that whatever is recalled is factually true, as opposed to the tendency shown by Within-day variable subject to reconstruct memories from relatively uncertain impressions.

Limitations of the Present Study

The use of volunteer subjects in a study such as this one inevitably limits the participants to persons who are interested in the subject and well-organized enough to complete the tasks. In a study of moods, this may eliminate potential

subjects at both extremes of moodiness--since it seems likely that extremely stable-mood persons will have little inclination to introspect about their feelings, while extremely variable persons are apt to lack the self-discipline required to keep track of their erratic moods every day. Thus the use of volunteers probably tends to result in a group of subjects most of whom are in the middle ranges of variability-stability.

This drawback, along with the relatively small number of subjects seems to have limited the possibility of attaining statistically significant results in this study. The number would probably have been sufficient if the Stable and Variable groups had been more sharply distinguished. Thus, rather than dividing into Stable and Variable groups by splitting a total group at the median of variability, it would be preferable to have a larger subject pool with Stable and Variable mood groups taken from the extremes. The obvious problem in doing this is in finding a sufficiently large group of subjects for the initial subject pool.

The fact that the mood sheets were not kept for a longer consecutive period made it impossible to study detailed individual patterns and changes in variability and hedonic level. In order to do this, a period of several months would be desirable. This would also make it possible to find out more about the extent to which variability is itself a stable

personality characteristic and if and how it is effected by the menstrual cycle, etc.

In retrospect, it seems that the homogeneous results obtained with the autobiography can be partially explained by the procedure. The instructions, and indeed the very context in which the autobiographies were written, may have been conducive to a levelling of what was being measured: Since this was known to be a study about feelings, and the subjects had already kept two weeks of mood sheets, they were likely to approach the autobiography in at least a somewhat personal and affect-oriented way. They were likely to assume that affect-related experiences were the 'sort of thing' they were expected to write. On the other hand, the autobiographies were written in the presence of others, and following a quite impersonal memory test; this may have put a damper on the effusive self-expression of other subjects. Thus, it seems possible that these two elements, working together, limited the range of differences between subjects.

While the Personal Memory Questionnaire and the Autobiography were relatively efficient means of collecting interesting and suggestive data about personal memory, richer and perhaps more accurately representative data might have been gotten from intensive interviews. For example, in an interview, genuinely unanswerable questions (such as one con-

cerning the activities of a father who was not living at home at the time specified by the question) could be immediately replaced by an appropriate question. Interviews would also probably reflect the affective meaning of past events more accurately than a written autobiography: The use of the autobiography assumes that the affective meaning and impact of an event can be clearly expressed in writing. While some persons are able to express themselves freely in this way, for others, the very act of writing may inhibit or distort emotional expression.

Suggestions for Future Research

This study suggests that the cognitive and personality correlates of Within and Between-day mood variability are quite different, at least in women. A more detailed study of affective variability-stability focussing on differences between Within-day and Between-day variability would be of much interest. In general, the relationship between moodiness--meaning proneness to long-term, relatively diffuse reactions--and spontaneous affective responsiveness needs to be explored. Clinical work suggests that as persons become more consciously and spontaneously responsive, they become less 'moody' in the sense of being prey to vague, persistent negative affects of unknown origin. Are there perhaps changes in the course of successful psychotherapy in the balance

between Within-day and Between day variability?

Such a study might focus on experiences in the socialization of affect, current ways of coping both inter-personally and intrapsychically with emotionally charged situations, as well as on various cognitive correlates of both types of variability.

It would also be of interest to explore possible sex and age differences in the correlates of both kinds of mood variability. So far, the subjects of studies of mood variability have been young adult college students. It seems possible that mood variability may have a different relationship to the personality and functioning of persons in different stages of life.

Another of the more notable results in this study is the inverse relationship between immediate recall of extended verbal material and memory for personal events. It would be interesting to know if there are other patterns or combinations of memory skills that would emerge in a study of individual performances on a wider variety of memory tasks.

CHAPTER V

SUMMARY

The purpose of this study was to demonstrate that persons who report frequent and intense changes in mood differ from persons who report minimal mood change in their memory for both personal events and drive-related material.

Previous research (Wessman and Ricks, 1966) had found variable mood persons to be more emotionally open, productive, spontaneous and rich in fantasy life than stable mood persons. On the other hand, stable mood persons were more emotionally controlled, aloof, and generally fixed in their sense of identity and social role. Memory style research (Ricks, Paul, et al, 1965) had suggested that there is a close relationship between the kinds of things people remember about their experiences and their characteristic way of living with their feelings. A number of personality theorists have also emphasized the critical role of current affect in recall of the past (Tomkins, 1962, Rapaport, 1950; Schachtel, 1959; Rieff and Scheerer, 1959).

Therefore it was suggested that persons who report frequent changes in their feelings, tend to center their recall around the subjective impact of events, while stable mood persons tend to de-emphasize experiences related to strong feeling and to view their past as an orderly array of impersonal facts. Thus, Variable subjects were expected to recall more items than Stable subjects on a personal memory questionnaire containing items of only personal interest. They were also expected to write autobiographies which would differ from those of Stable subjects in having a style more suggestive of immediate emotional involvement, be episodically rather than chronologically organized, and richer in detail; affect was expected to be more central to the events described, and to be maximized, rather than minimized in importance. The autobiographies of the Stable mood subjects were expected to be more detached and objective in tone, to be orderly and chronological in presentation, and relatively lacking in sensory detail; it was expected that affect would be minimized, and only of peripheral importance to the events described.

It was also predicted that Variable and Stable subjects would differ in recalling extended verbal material. Because they are particularly oriented towards feelings and accustomed to dealing with them, Variable subjects were expected to recall affectively-toned or drive-related material more accurately

and fully than neutral material. Stable subjects, on the other hand, who tend to minimize the emotional aspect of situations, were expected to recall neutral material more fully and accurately than affective material.

Variable subjects were also expected to value feelings more highly in themselves and others than Stable mood subjects.

This study also provided the opportunity to investigate further possible personality correlates of mood variability-stability. It was suggested that mood variability would be related to Block's 'Beta' or 'Ego Control' Scale, with Stable subjects being high, and Variable subjects low in this measure of over-vs-under control.

The subjects were 36 female student volunteers between the ages of 17 and 21. They kept a nightly record of their moods for two, two-week periods using three scales, each one of which contains ten descriptions of mood states on a continuum between extremes. The scales used were Elation-Depression, Tranquility-Anxiety, and Harmony-Anger (taken from the 16 used by Wessman and Ricks, 1966). Subjects were to indicate which description corresponded most closely to her "high," her "low," and her "over-all average" for the day. This data provided the basis for measures of mood level (derived from the mean of the daily "average"), Between-day variability

(the SD of the daily "average"), and Within-day variability (the mean of the daily range between the "highs" and "lows"). Between-day and Within-day Variable and Stable groups of subjects for all three scales were formed by dividing the scores of the whole group at the median of each measure.

Between the two, two-week periods of mood recording, subjects were seen in small groups for a testing session. In this session, subjects were first tested for recall of extended verbal material with the Alston Passages. (Alston, 1966) This is a series of drive-related and neutral passages graduated in length and paired for syntax, frequency of usage, verbal flow, and adjective-verb ratio. The passages were presented once on a tape recorder and the subjects wrote their recall after hearing each passage. The subjects were then asked to write an autobiography of their childhood up to the age of 12.

During the weeks of recording their moods, the subjects also filled out and mailed to the author the following questionnaires: during the first two-week period, they completed the Block 'Beta' or 'Ego-control' Scale, and during the second two-week period, the Personal Memory Questionnaire, and the Attitude and Feeling about Feeling Questionnaire.

The results support the view that a person's characteristic style of handling affect is related to memory. However

this relationship is considerably more complex than the one suggested by the hypotheses.

Most of the results relating memory and affective variability were found only for Within-day variability. The correlations between Within- and Between-day variability were low and statistically non-significant. This suggests that, at least for women, these are two distinct patterns of variability with differing relationships to memory style.

Many of the findings are statistically significant only for variability on the Tranquility-Anxiety scale; however these findings are always paralleled by the results on the Elation-Depression scale, even when the latter do not achieve significance; variability on these two scales were viewed as reflecting a single process.

The Block Ego-Control scale (1964) was found to be significantly related to hedonic level but not to mood variability.

Though there are no significant differences between Stable and Variable subjects in their total recall of personal events (on the Personal Memory Questionnaire), there is a significant positive correlation between Within-day variability and memory for childhood events. Between-day Variable subjects were more often "sure" of their personal memories than Between-day Stable subjects. Between- and Within-day Variable

subjects reported that remembering the past can be upsetting or overwhelming more often than Stable subjects. However, the Between-day Variable group was more consistent than the Within-day Variable group in viewing their past memories as painful and in disliking the experience of remembering in the study.

On a written autobiography, variability was found to be positively related to an episodic, rather than a summary, chronological, style, and also to a tendency to emphasize and maximize, rather than minimize affect in relation to the events described. A style suggestive of immediate re-living of the described events was positively related to hedonic level.

The results with the Alston Passages are contrary to the hypotheses. All subjects recalled affective material better than neutral material. For Within-day Stable subjects this difference is greater than for Within-day Variable subjects, so that their scores for Affective-minus-Neutral passages are significantly higher than those of the Variable subjects. There are significant inverse correlations between Within-day variability and total recall, recall of affective passages, and recall of affective-minus-neutral passages. While these results are significant only on the Tranquility-Anxiety scale, they are clearly paralleled on the Elation-

Depression scale.

There is a consistent inverse relationship between recall of the Alston Passages and memory for personal events on the Personal Memory Questionnaire, with the first being negatively and the second positively related to Within-day variability. Thus it seems that conscious awareness of a wide range of changing affect enhances recall of personal events from the past; however for immediate recall of material having nothing to do with the self (and particularly affective material), it seems not only irrelevant, but perhaps disruptive.

Most subjects expressed positive attitudes towards affect. Within-day Variable subjects see themselves as being somewhat "too emotional," but seem generally to be comfortable with their feelings. Between-day Variable subjects, on the other hand, do not see themselves as overly emotional people, but are apt to experience their feelings as ego-alien sources of distress. Thus these two patterns of mood variability seem to reflect different kinds of experiences with affect itself. It was suggested that while Within-day variability reflects a lively, ego-syntonic affective responsiveness to inner and outer events, that Between-day variability may represent a failure of an attempt at rigid control over both feelings and experiences.

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APPENDIX A

165

FACE SHEET

CODE NAME _____

PHONE NO. _____

AGE _____

CLASS _____
(Instructor & hour of
class meeting)

YEAR _____

Please indicate your free hours (both during the day and in the evening) when you would be available for a test session.

Monday:

Tuesday:

Wednesday:

Thursday:

Friday:

Saturday:

Thank you.

APPENDIX B
The Daily Mood Scales
FEELING DESCRIPTION SHEET

156

TRANQUILITY VS. ANXIETY (how calm or troubled you felt)

10. Perfect and complete tranquility. Unshakably secure.
9. Exceptional calm, wonderfully secure and carefree.
8. Great sense of well-being. Essentially secure, and very much at ease.
7. Pretty generally secure and free from care.
6. Nothing particularly troubling me. More or less at ease.
5. Somewhat concerned with minor worries or problems. Slightly ill at ease, a bit troubled.
4. Experiencing some worry, fear, trouble, or uncertainty. Nervous, jittery, on edge.
3. Considerable insecurity. Very troubled by significant worries, fears, uncertainties.
2. Tremendous anxiety and concern. Harassed by major worries and fears.
1. Completely beside myself with dread, worry, fear. Overwhelmingly distraught and apprehensive. Obsessed or terrified by insoluble problems and fears.

HARMONY VS. ANGER (how well you got along with, or how angry you felt toward, other people)

10. Boundless good will and complete harmony.
9. Enormous good will and great harmony.
8. Considerable good will.
7. Get along well and rather smoothly.
6. Get along pretty well, more or less good feeling.
5. A little bit annoyed, somewhat "put out". Minor irritations.
4. Annoyed, irritated, provoked.
3. Very angry. Ill will.
2. Enraged. Seething with anger and hostility.
1. Violent hate and fury. Desire to attack, destroy.

ELATION VS. DEPRESSION (how elated or depressed, happy or unhappy you felt today)

10. Complete elation. Rapturous joy and soaring ecstasy.
9. Very elated and in very high spirits. Tremendous delight and buoyancy.
8. Elated and in high spirits.
7. Feeling very good and cheerful.
6. Feeling pretty good, "O.K."
5. Feeling a little bit low. Just so-so.
4. Spirits low and somewhat "blue".
3. Depressed and feeling very low. Definitely "blue".
2. Tremendously depressed. Feeling terrible, miserable, "just awful".
1. Utter depression and gloom. Completely down. All is black and leaden.

FEELING RECORD SHEET

NAME _____
 WEEK NO. FROM _____
 TO _____

First, please read over the FEELING DESCRIPTION SHEET. Then, using the numbers of the descriptions which correspond most closely to your feelings, fill in completely 5 ratings on each scale before going to bed each night. Record 1) the "HIGHEST" and 2) the "LOWEST" you felt, even though they may have been experienced only for a brief moment; the "AVERAGE" represents your overall summary of the day.

If you forget to fill out the sheet one night, do it the next morning; if you forget the next morning as well, skip that day, note it on the sheet in the space between days, and continue in the next space. PLEASE TRY TO MAKE THIS A CONSECUTIVE RECORD; however if you miss a day or two, continue your daily recording until there is a total of 14 days. At the end of this period you will be asked for an approximation of how accurate your ratings were.

DAY 1

DAY OF THE WEEK _____

Tranquility vs. Anxiety
 Highest _____
 Lowest _____
 Average _____

Harmony vs. Anger
 Highest _____
 Lowest _____
 Average _____

Elation vs. Depression
 Highest _____
 Lowest _____
 Average _____

For roughly how long did your most elated mood last?
 For roughly how long did your most depressed mood last?
 Have you any idea what prompted your most elated mood?
 in brief, was it?

If so, what, in

Have you any idea what prompted your most depressed mood?
 in brief, was it?

If so, what,

Have you taken any drugs, medication, alcohol, etc. today?
 what and how much of it did you take?

If so,

Are you menstruating? If so, what day is this?
 What time is it now, as you are recording this?

Additional Comments:

The Block 'Beta' or Ego-Control Scale

Q-1

CODE NAME _____

Please read each statement and check off whether it is true as applied to you, or false as applied to you. If a statement is mostly true, mark it as true. If it is mostly false or not usually true, mark it false. If a statement does not apply to you, or if it is something that you don't know about, leave that item blank; however do not leave any blank spaces if you can avoid it.

	TRUE	FALSE
1. At times I have very much wanted to leave home.	_____	_____
2. I am almost never bothered by pains over the heart or in my chest.	_____	_____
3. I am a good mixer.	_____	_____
4. I hardly ever feel pain in the back of the neck.	_____	_____
5. I am easily downed in an argument.	_____	_____
6. I like dramatics.	_____	_____
7. I have never done anything dangerous for the thrill of it.	_____	_____
8. Most people are honest chiefly through fear of being caught.	_____	_____
9. Most people will use somewhat unfair means to gain profit or advantage rather than to lose it.	_____	_____
10. My conduct is largely controlled by the customs of those around me.	_____	_____
11. It makes me uncomfortable to put on a stunt at a party even when others are doing the same sort of things.	_____	_____
12. I find it hard to make talk when I meet new people.	_____	_____
13. I wish I were not so shy.	_____	_____
14. I would like to be a journalist.	_____	_____
15. I like to flirt.	_____	_____
16. Some of my family have habits that bother and annoy me very much.	_____	_____
17. I was a slow learner at school.	_____	_____
18. When in a group of people I have trouble thinking of the right things to talk about.	_____	_____
19. I am likely not to speak to people until they speak to me.	_____	_____
20. In school I found it very hard to talk before the class.	_____	_____
21. I think nearly anyone would tell a lie to keep out of trouble.	_____	_____

Q-1 (Contin.)

CODE NAME _____

	TRUE	FALSE
22. I seem to make friends about as quickly as others do.	_____	_____
23. I am easily embarrassed.	_____	_____
24. At parties I am more likely to sit by myself or with just one other person than to join in with the crowd.	_____	_____
25. At times I have worn myself out by undertaking too much.	_____	_____
26. I like to read newspaper editorials.	_____	_____
27. I like to attend lectures on serious subjects.	_____	_____
28. I have strong political opinions.	_____	_____
29. In a group of people I would not be embarrassed to be called upon to start a discussion or give an opinion about something I know well.	_____	_____
30. I practically never blush.	_____	_____
31. I would like to wear expensive clothes.	_____	_____
32. I am often afraid that I am going to blush.	_____	_____
33. While in trains, busses, etc., I often talk to strangers.	_____	_____
34. I do not mind meeting strangers	_____	_____

APPENDIX E

The Alston Passages

Instructions:

"Now I want you to remember and write down some passages that I'll play on the tape recorder. Listen carefully to them because I want you to write them as accurately as you can. I'll start the recorder and play the selection. You listen very carefully. At the end of each selection I'll stop the recorder and I want you to write down your recall. Although it may not be possible to be word-perfect, you are to be as accurate as you can.

The passages I'm going to play vary in length and they include all kinds of topics. Please don't ask any questions about what was played. First, because this is a memory experiment and I wouldn't be able to tell you, and second because I don't want anything to interfere with your concentration. But don't worry because you'll be able to hear everything clearly.

Any questions? When I stop the recorder after a passage you have as much time as you need. Some people like to start writing right away; some people like to wait a while before starting. You do it whatever way you wish.

Any questions? OK let's start. Listen carefully to each one."

The passages appear below in the "Neutral" and "Drive" pairs designated by Alston (1966). The numbers in parenthesis represent the order in which the passages were presented to the subjects on the tape.

Neutral

- 1) The little/boy's/finger/
pointed upward/as the balloon/
rose. The tired/eyes/of the
maid/relaxed,/grateful/for a
moment's rest./Leaves/rustled/
gently/on the tall/trees./ In
harmony/they swayed/in the
wind,/and flicked/against/the
wings/of passing/birds./ The
warm/air/suggested/summer.

Drive

- 6) Her slim/body/doubled over/
as the pains/mounted./ The
gentle/hands/of the doctor/
paused/waiting/for the final
moment./ The embryos/kicked/
vigorously/in the sticky/
morass./ In desperation/ they
gaspd/for air,/and flailed
against/the walls/of envelop-
ing/flesh./ A sudden surge/
released them.

APPENDIX E (continued)

- 5) The truck driver/eased/ on-
to the highway/and shrugged./
Immediately/headlights/began
to pass,/their bright/rays/
flooding/the dingy/wind-
shield/with glare./ He squint-
ed/hard/at the flat/road/and
then adjusted/the radio dial./
He whistled/and began to ac-
company/the muffled/tunes/
coming/over the air./ He felt
easier/now/and he tried/to
relax/for the tedious/trip/
ahead./ Out/on the crowded/
expressway/the speeding/cars/
moved by him/and disappeared/
into the distance./ Finally/
he sighed/ and resigned him-
self/to the long/ordeal.
- 2) The diver/plunged/deep/into
the water/and shivered./ At
once/a sensuous/image/form-
ed/before his eyes./ Her/
gleaming/skin/stood out/
starkly/against the back-
ground/haze./ Panting/fev-
erishly/he peeked/at her/
through fingers/covering/
his eyes./ She beckoned/and
he could not help/following/
her husky/calls/still deep-
er./ She was delighted/now/
and she began/to rub/naked/
breasts./ Down/in the loose
sand/she teased him/and pull-
ed off/her black/panties./
Then he saw/the coat/of
slimy/fur/and scales/that
covered her body.
- 3) The fishing boat/rocked/with
the light/wind./ The water/
was still/and the boy/rested/
comfortably/in the warm,
silence/of the ocean./ Limp/
seaweed/drifted behind/the
small craft./ Soon/he fell
asleep./ Two/rapid tugs/
awoke him/and he saw/his
line/tightly stretched./ His
quick/hands/grabbed/the pole/
but bad luck/spoiled/his
effort./ He leaned back/to
look/for more signs/of fish./
Again/he felt/a tug/and he
braced himself/and fed/more
line/to the catch./ There
was little time/for rest/or
comfort/now./ Soon/a big
fish/was reeled in./ He
pointed/the bow/shoreward/
as the hot sun/settled.
- 7) The crippled/rabbit/cowered
from/the hot/breath./ Its
eyes/were lost/and it stum-
bled/blindly/into the sharp/
blades/of grass./ There/it
felt/safe./ But torn/pieces/
trailed/the menaced/victim./
Four/hooded/hawks/soared/
overhead,/their beaks/clack-
ing/expectantly./ Their keen/
eyes/scoured/the ground/as
they looked/for the straw-
berry/clues./ Some/swooped
down/to devour/the trail/of
bits/of flesh./ When its
hole/was discovered/the man-
gled/creature/screamed/and
squirmed/for safety./ But
there was no place/to hide/
and no hope./ Triumphantly/
the twisted/creatures/pounced./
A quiet/evilness/drifted/over
the scene/as the beasts/flew
away.

APPENDIX E (continued)

- 8) The difference between/courage/and recklessness/is easily distinguished/in combat/soldiers./ Life/is always/closely/guarded./ These hardy/men/have scurried through/many/perilous/jungles/and forests/to avoid/battle./ Many times/an officer,/sensing/defeat,/tries/to rally/his fleeing/troops./ But this is useless/once/panic/has started./ So he/coolly/ignores it/and allows them/to escape./ If there is time/he may/join them/and order/a full-scale/retreat./ Leaders/of small/units/are hard to find/in the army./ The tough/veterans/talk/to the newcomers/and persuade them/to forget/heroism/and play it safe./ They are not/cowards/because of this./ It is just that/they weigh risks/against dangers./ One could say that/cautious/old/soldiers/are more patriotic,/man for man,/than foolhardy ones.
- 4) The relation between/feeding behavior/and mortality/in suckling/pigs/is well documented./ They are always/frantically/hungry./ These innocent/animals/have been known/to bite/clear through/the mother's/teats/in their haste/to get/milk./ Sometimes/the wounded/mother,/screaming/in pain,/will turn/and slay/her entire/brood./ Or the sow/may, without second thought,/abandon them/and let/them die./ They often turn/on each other/in their greed./ The stronger/ones/band against/the weakest/and destroy him/so that/there will be/one less/to share/tne meager/food./ Thus,/litters/of twelve/or more/are gradually/reduced/to one or two/wicked/survivors./ They are extremely/jealous/toward/new-born/sucklings./ One report says/that helpless/young/babes/were slaughtered/one by one/as they emerged/from the mother.

.

APPENDIX F

The Autobiography

A. Instructions:

"I am interested in how you remember your early life. Please write an autobiography of your life up to the age of 12 based on your own memories. Try to stick with things that you actually remember happening, and avoid things that you have only been told about. Include whatever seems important to you."

B. Scoring Categories:

(All of these scoring categories were considered as on a continuum)

I Style of Presentation

A Level of current involvement in the past as indicated by the tone of the autobiography. Degree of immediacy and intensity of the author's current feeling relationship to her past as she has written it.

- 1) The tone seems literary, objective and somewhat formal. The author seems remote from the material and could almost be writing in the 3rd person.
- 2) The author is still somewhat removed in the sense that the events are clearly imbedded in a past which is 'over-and-done with.' However there is a clear personal connection with the events. The style and point of view is subjective, lively, and personal.
- 3) The author is very much involved. She has still an immediate reaction to the events she describes. They almost seem to be re-lived in the telling.

B Summary Presentation vs. Episodic Presentation

- 1) The past is described in an orderly, progressive, chronological way, largely as a rational pattern or sequence of events, habits, etc.

- 2) The approach is basically chronological but included within it is an approximately equal number of specific incidents, habits or summary descriptions.
- 3) The autobiography consists almost entirely of specific episodes, events and experiences with little concern for temporal sequence.

C Richness of Detail

- 1) Minimal description or extraneous detail. Almost no attention to the sensory 'feel' of things.
- 2) Some greater detail is intrinsic to filling out the meaning of the events described; the detail is sufficient to do this but not much more. In general things are described with only moderate sensory vividness and elaboration--though there may be two or three incidents with slightly more detail than this.
- 3) Almost every event is elaborated with sharpness and detail. Sometimes the sensory detail itself is the 'point' of the recollection.

II Presentation of Affect

A Degree of relevance of affect to the events described.

- 1) Affect is irrelevant to the events described. Experiences are presented as though neutral factual events with almost no explicit emotional reactions referred to or described.
- 2) Though some moderate, relatively low-key feelings and preferences are referred to, there is a generally bland quality to events and experiences. If stronger reactions are mentioned, they are indicated only in very general or external terms. (For example, the author may say she "got upset" or even that she "cried" at an injury perhaps, but with no mention of how she felt at the time.)
- 3) Lively affective reactions are frequent but not the major focus of attention. Intense feelings are alluded to but not elaborated.

4) Strong emotional reactions are central to the events described. Events are described as more or less the conditions for eliciting affect, rather than affect being seen as secondary.

B Author's tendency to minimize vs. maximize affect in her autobiography.

0) No upsetting, disturbing or exciting events were reported. (It is assumed that this represents an extreme blocking of affect in regard to recall; in other words, it is assumed that no one's life has been lived as blandly as that.)

1) What would seem to have been exciting, upsetting (even traumatic) events are mentioned with the affect one would presume, on some level, would be associated with such events left vague, unmentioned, minimized or denied.

2) Exciting or upsetting events with 'appropriate' affect at least alluded to or acknowledged in some way.

3) Affective responses seem inflated and maximized; experiences seem to be 'milked' for their potential to evoke strong feeling.

C Diversity of Affect

Number of different feelings or moods mentioned in the autobiography. These may be attributed either to the subject herself or to others.

APPENDIX G

NAME _____

PERSONAL MEMORIES

People vary greatly in what they remember about particular events, both in the past and the present. Some people remember minute details about things which other people scarcely bother to notice, much less to remember. This has nothing to do with intelligence or anything like that--it's just a way that people differ.

The following questions refer to memories of this sort. Some of them you may recall vividly, some vaguely, and some not at all. Try to answer as well as you can, but PLEASE DO NOT GET HELP FROM ANYONE, even though you may be in contact with someone who remembers many things which you have forgotten.

Try to answer the questions as freely and chattily as you would in a conversation. You may not need to write very much on many questions, but PLEASE EXPLAIN YOUR ANSWERS FULLY. Point out which parts you may be unsure about, and include any special reasons why you remember something particularly easily, reasons why it may be impossible to recall something at all, and reasons why a question may be simply unanswerable for you. (For example, in answering the question, "Who was your favorite movie actor when you were 12?" the following possible remarks should be included: You might remember your favorite actor but not be sure if you were 12 at the time; you might have preferred the same actor from the age of 9 up until now, and so you can answer without any effort at all; you might have lived somewhere so inaccessible when you were 12 that you didn't know any movie actors at all; and so on.)

If you can, do PART I of this questionnaire all at once in a single sitting. If this is impossible, do try to FINISH EACH QUESTION AT A SINGLE SITTING. That is, DON'T read ahead and stew about a question all day before answering it. Rather, read a question, think a minute or two, do what you can with it, and go on. If a question is particularly hard, note it down. If you finish with a question and later remember more and want to put it in, NOTE IN YOUR ANSWER that you are going back to add to a previously completed answer. In any case, only go back to an answer if you feel like it; it is NOT necessary.

After answering each question, summarize the overall sureness and clarity of your recall using the following descriptive words. Write the appropriate word (or words) in the parenthesis in the margin beside each question. In some cases more than one of these descriptions may be called for. (For example, "Possibly unreal" might apply to a memory which is also "vague" or a "fragment", and so on.)

Descriptive words

SURE - for a sharp and clear memory about which you are completely certain.

PRETTY SURE - for a memory that is not quite so sharp and clear, but most probably correct and accurate.

GUESS - for memories concerning facts (ages, dates, times, etc.) about which you are guessing, and do not know how accurate your answer is.

APPENDIX G (Continued)

VAGUE - for a vague memory in which nothing stands out sharply, but you do decidedly remember something.

FRAGMENT - for something remembered in a fragmentary way; for a memory consisting of wisps of a largely forgotten event or scene. Perhaps small bits of sights, sounds, smells or single words are all that you recall.

POSSIBLY UNREAL - for something which might not be a 'real' memory at all; it could be a dream, a fantasy, or something you were told about once and have come to think of as a memory.

PART I

1. On what street was your grammar school? Do you remember what the outside of the building looked like (for example, its color, number of storeys, grounds, etc.)?

()

2. When you were 12 years old, who was your favorite movie actor? Do you remember the names of any movies you saw him in?

()

3. What time did you have to go to sleep when you were 6 years old? Do you remember how you felt about it?

()

4. How did you hear that Senator Robert Kennedy had died?

()

5. What was the name of your third grade teacher? What did she look like? (For example, was she old or young, fat or thin, what color hair, did she wear glasses, etc.?)

()

6. How old were you the first time you stayed somewhere overnight away from your parents (or womever you lived with as a young child)? What, in brief, do you remember about it?

()

7. Where and with whom did you eat lunch last Tuesday? (What day of the week are you answering this?)

()

8. To whom was the last telephone call you made and what was it about? Was there anything striking about the person's voice?

()

9. In what order did you put on your clothes when you got dressed this morning? (Do you always do it the same way?)

()

10. Who was your mother's closest friend when you were in grammar school?

()

11. What was the most recent news item you read or heard about that annoyed you? How did you hear about it?

()

12. Do you remember how old you were and what it was like when your first few baby teeth came out?

()

13. How and where did you spend the summer of 1959?

()

14. How old were you when you were allowed to cross the street by yourself for the first time? Do you remember anything about it?

()

15. When is your best friend's birthday?

()

16. What did you have for supper three nights ago?

()

17. Which of the books that were read to you when you were young did you like the best?

()

18. What job did you do the first time you got paid for doing some kind of work? How old were you?

()

APPENDIX G (Continued)

181/182
181

19. What was the last movie you saw? Was it in color or in black and white?

()

20. When was the last time you took medication and what kind was it? What did you take it for, and did it help?

()

21. What was the name of your best friend when you were in 1st grade? Do you remember anything you used to do with Him or her?

()

22. What was the name of your favorite teacher in grammar school? What did you particularly like about her?

()

23. Who was the last performer you saw on television who made you laugh?

()

APPENDIX C (Continued)

24. What color dress, blouse or sweater were you wearing three days ago?

()

25. When you were about 6, what did you want to be when you grew up?

()

26. What was your favorite game when you were about 6 years old?

()

27. What was one of the things you talked about the last time you spoke to your mother or father? (which one was it? How long ago was it?)

()

28. What was the last present you received and who gave it to you?

()

APPENDIX G (Continued)

29. On what street did you live when you were 5 years old? (How old were you when you moved?)

()

30. Was the last new person you were introduced to male or female? Was there anything particularly striking about him (or her)?

()

31. What was your favorite toy when you were 4 years old? Do you remember any particular time when you had it or were playing with it?

()

32. What was the name of the person with whom you had your first single date? How old were you? What did you do on the date?

()

33. Where did you put your keys when you got home last night?

()

34. Where did you buy the shoes you are now wearing?
()

35. Exactly how old is your mother?
()

36. What time did you go to sleep last Thursday night? (What day is this?)
()

37. When was your house or apartment last painted? (month and year)
()

38. What was the last time you got into a physical fight? How old were you? What was it about and who was it with?
()

39. Where did you sit in your 5th grade classroom. (What side of the room was it? Do you remember who sat in front, behind and to the side of you?)

)

40. Think of the last restaurant you ate in. What color were the walls painted? (Do you eat there often?)

)

41. What was the name of your favorite TV or radio program when you were about 9?

()

42. Where did you get the pen or pencil you are now using?

()

44. How much money did you spend yesterday?

()

APPENDIX G (Continued)

45. What was the general topic of your last dream and when did you have it? Do you usually remember dreams?

46. What was your favorite subject in grammar school?

47. What did you buy the last time you went shopping in a food store? (When was that?)

48. How did your father spend most of his time at home when you were about 10?

49. What was the first club or organization that you joined? How old were you?

50. What was the first article of clothing you bought for yourself?

()

PART II - QUESTIONS ABOUT MEMORY ITSELF

1. In general, would you say you have an (excellent, good, average, fair or poor) memory?

2. Do you have any particular problems in remembering? What sorts of things are hardest for you to remember?

3. Are there any areas where your memory seems better than most other people's? What kinds of things do you remember most easily?

4. For some people, memory is tied up with sensory images, so that as they recall they 'see', or 'hear', or 'smell', or 'feel'. Some of the people who experience this do so most of the time, while others recall with such sensory vividness only once in a while.

On the other hand, for many other people remembering seems to be an entirely 'mental' process which does not activate feelings or sensations very much, if at all.

What about you? Are senses and feeling involved in remembering? If they are, is it usual or rare? What senses are involved most usually? In the questions asked earlier in this questionnaire, did you 'feel', or 'see' or 'hear', etc. any things or persons in this way? If so, which ones, and how vivid was it (very, somewhat, not very, very faint)?

5. How do you feel about what you remember of your own past? Would you like to remember more of it or less? Is it interesting to you to try to remember or somewhat boring? (What, for example, has been your reaction to being asked about the past in this questionnaire, and also on the autobiography part of the writing session?)

6. Looking back on the periods referred to in this questionnaire, are your memories 1) mostly happy and pleasant, 2) mixed, with both painful and pleasant feelings evoked, or 3) mostly painful, sad or unpleasant?

APPENDIX G (Continued)

7. Sometimes the kinds of things that people remember are effected by psychotherapy or extensive personal counselling. Have you in the past, or are you now regularly seeing a therapist or counsellor (for other than routine school matters)?

If yes, for how long did you go, or have you been going?

How frequently did you see the therapist (once week, or what?)

If you are not now seeing a therapist but have in the past, how old were you at the time?

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NAME _____

ATTITUDES AND FEELINGS ABOUT FEELINGS

People differ from each other in how they feel about many things; people vary in the kinds of emotional experiences they typically have. In addition to that they also differ in their attitudes towards feelings and in how they react to emotional experiences; in other words, they vary in how they think and feel about feeling itself.

The following questionnaire deals with both of these aspects of your emotional life, and it therefore asks you two kinds of questions: There are questions that concern your beliefs and your attitudes about feelings and emotions, and there are questions that ask about what you actually do feel and experience. Please consider each question on its own terms as a separate item. Don't worry about being contradictory, or if it turns out that your actual experiences do not conform to your beliefs. After all, if people's beliefs and behaviors were always (or even usually) identical, there would be no need to ask both kinds of questions. Above all, please try to answer all questions as openly and freely as you can. After each question there is a space for comments; if you have anything to add which will clarify your answers, it will be most appreciated.

Answer the following questions by underlining the appropriate word or phrase.

1-a. I believe that, while feelings may be important, reason should be the final judge in all important matters. (STRONGLY AGREE - MILDLY AGREE - MILDLY DISAGREE - STRONGLY DISAGREE)

1-b. In your own life do you use reason as the final judge in making important decisions? (MOST OF THE TIME - SOMETIMES - RARELY - NEVER)

Comments:

2-a. I believe that all truly feminine women have strong and changeable emotions. (STRONGLY AGREE- MILDLY AGREE - MILDLY DISAGREE - STRONGLY DISAGREE)

Comments:

3-a. I believe that people should let themselves experience every kind of feeling, even those that seem strange and alien. (STRONGLY AGREE - MILDLY AGREE - MILDLY DISAGREE - STRONGLY DISAGREE)

3-b. Do you, in fact, experience feelings which seem strange and alien? (OFTEN- SOMETIMES - RARELY - NEVER)

Comments:

4-a. Strange and overly intense feelings are dangerous and can lead to insanity.
(STRONGLY AGREE - MILDLY AGREE - MILDLY DISAGREE - STRONGLY DISAGREE)

4-b. Are you ever afraid that your feelings are crazy? (OFTEN- SOMETIMES - RARELY - NEVER)

Comments:

5-a. Being overwhelmed by feeling is a sign of weakness. (STRONGLY AGREE - MILDLY AGREE - MILDLY DISAGREE - STRONGLY DISAGREE)

5-b. Do you, in fact, experience being overwhelmed and immobilized by feeling?
(OFTEN - SOMETIMES - RARELY - NEVER)

Comments:

6-a. The best decisions are those that are arrived at by intuition and sentiment. (STRONGLY AGREE - MILDLY AGREE - MILDLY DISAGREE - STRONGLY DISAGREE)

6-b. When you are making important decisions, do you primarily rely on your intuition and sentiment? (MOST OF THE TIME - SOMETIMES - RARELY - NEVER)

Comments:

7-a. So-called mystical experiences are usually in the service of delusion.
(STRONGLY AGREE - MILDLY AGREE - MILDLY DISAGREE - STRONGLY DISAGREE)

7-b. Do you have such experiences? (OFTEN - SOMETIMES - RARELY - NEVER)

Comments:

8-a. Without the changeableness of human feelings, life would be dull.
(STRONGLY AGREE - MILDLY AGREE - MILDLY DISAGREE - STRONGLY DISAGREE)

8-b. Do you consider yourself a moody person? (VERY - SOMEWHAT - NOT VERY - NOT AT ALL)

Comments:

9-a. When things bog down between people, there's nothing like a good fight to clear the air. (STRONGLY AGREE - MILDLY AGREE - MILDLY DISAGREE - STRONGLY DISAGREE)

9-b. Do you get into fights or heated arguments with people that you are at least somewhat close to? (OFTEN - SOMETIMES - RARELY - NEVER)

9-c. If you get into such fights or heated arguments, do you regret them later? (OFTEN - SOMETIMES - RARELY - NEVER)

Comments:

10. If you are in a bad or a good mood, do you (OFTEN - SOMETIMES - RARELY - NEVER) know what has made you feel that way? Or are you so rarely in a noticeable mood that you cannot answer? (YES - NO)

Comments:

11. If you are in a bad or a good mood, do you (OFTEN - SOMETIMES - RARELY - NEVER) know what has made you feel that way? Or are you so rarely in a noticeable mood that you cannot answer? (YES - NO)

Comments:

12. Do you get so immersed in what you are doing or feeling that you forget all about yourself? (OFTEN - SOMETIMES - RARELY - NEVER)

Comments:

13. If you are deeply upset about something personal, do you like to keep it to yourself? (USUALLY - SOMETIMES - RARELY - NEVER)

Comments:

14. If you are deeply upset about something personal, do you like to talk about it with someone? (USUALLY - SOMETIMES - RARELY - NEVER)
If you do, about how many people do you feel free to discuss personal things with? _____

Comments:

15. Do you particularly seek out experiences which are exciting, even though they may also be somewhat frightening? (OFTEN - SOMETIMES - RARELY - NEVER)

Comments:

16. Do you have trouble standing up for yourself in an argument? (OFTEN - SOMETIMES - RARELY - NEVER)

Comments:

17. On the whole do you prefer QUIET GOOD TIMES or INTENSE THRILLS?

Comments:

18. Do you get feeling overwhelmed by other people's troubles? (OFTEN - SOMETIMES - RARELY - NEVER)

Comments:

19. Do you find people's intellectual positions more interesting than their feelings and emotions? (OFTEN - SOMETIMES - RARELY - NEVER)

Comments:

20. Thinking about your one or two closest friends, would you say that they are more or less emotional than you are? (A LOT MORE, - A LITTLE MORE - EQUALLY - A LITTLE LESS - A LOT LESS)

Comments:

21. Do you have any creative outlets for your feelings (such as writing, dancing, painting, music, etc.) (YES - NO) If yes, what? _____

Comments:

22. Are you able to overlook things which seem to upset others? (OFTEN - SOMETIMES - RARELY - NEVER)

Comments:

23. Do you stop yourself from saying what you would like to say in order to avoid hurting someone's feelings or getting into an argument? (OFTEN - SOMETIMES - RARELY - NEVER)

Comments:

For items 24, 25 & 26 put an "X" in the appropriate space to indicate your answer.

24. Which of the following describes you best? Do you feel that you are,

A. Not as free in your emotional life as you would like to be; somewhat more inhibited about expressing feeling than you wish you were? A _____

B. Somewhat too emotional; more emotional than you would like to be, so that you get upset too easily; too excited and carried away, so that feelings take over too easily? B _____

C. Or do neither of these apply because you have no problems in this area? C _____

Comments:

25. How do you think other people see you in regard to your control over your feelings?

A. As being too controlled and inhibited, so that you can't let yourself go? A _____

B. As not having enough control so that you are too emotional and excitable? B _____

C. As having a satisfactory balance of freedom and control so that there are no problems in this area. C _____

Comments:

26. Would you like to be able to--

A. Hold back more of what you really think and feel to avoid getting into trouble? A _____

B. Let go more and really let people know what you think and feel? B _____

C. Or is this not a problem for you at all? C _____

Comments:

Read over the following descriptions and use them to answer questions 27-31. Indicate your answers by writing the number of the appropriate description in the space beside the question.

Descriptions

(1.) Someone who is almost always bursting with feeling and excitement, always in some extreme state of elation, excitement, anger, depression, etc. about something.

(2.) Someone who has fairly frequent and intense ups and downs, but also longish periods of matter-of-fact calm about things.

(3.) On the whole, a steady, matter-of-fact person who generally takes things calmly and is only rarely very excited, elated, angry, or depressed.

(4.) A very steady, matter-of-fact person who almost never seems to be in a very excited, elated, angry, or depressed mood.

27. Think about one or two girls who are your closest friends; which description fits them best? _____

Comments:

28. Which of these descriptions best describes the man you would like to marry, or the man you are married to? _____

Comments:

29. Which one is, from your own point of view, the best description of you? _____

Comments:

APPENDIX H (Continued)

30. Which one best describes you as you think others see you? _____

Comments:

Now, please mail this to:

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