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SEX AND AGE DIFFERENCES IN THE
LABELING AND INTENSITY OF EMOTION

BY

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RUNNING HEAD: EMOTION LABELING

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Abstract

In the present study, the relationship of sex and age of subject to emotion labeling, affect intensity and gender identity was examined. Subjects were 120 naive volunteers recruited from University of Richmond undergraduate classes and community organizations, 60 of whom were male and 60 female. All participants were administered the Emotion Research Questionnaire (ERQ) along with the Bem Sex Role Inventory (BSRI). Dependent variables were the total number of anger responses (ERQ-A), Mean Affect Intensity (MN-INT), Mean Anger Intensity (A-INT) and Mean Fear Intensity (F-INT). The BSRI gave Masc (BEM-M) and Fem (BEM-F) scores for each subject. Results of six two-factor, independent group analyses of variance yielded a significant sex by age group interaction only for the BEM-M scores, accompanied by a significant simple effect for sex. Additionally, significant sex main effects were evidenced on all other dependent variables. Item-total correlations were computed providing some revision of the ERQ, and an independent content validation of the ERQ with the Zuckerman Inventory of Personal Reactions Form 2 (ZIPERS II) resulted in moderate to high correlations. The findings supported the hypotheses that females demonstrated higher overall emotional intensity, anger intensity, fear intensity and Bem Fem scores, while males tended to show higher ERQ anger and Bem Masc scores. The influence of the significant F-max for the ERQ-A ANOVA was discussed, as was the nonsignificance of the age factor. Results were presented in terms of cognitive appraisal and social learning theories. Suggestions

for future investigations involving the ERQ included control of demographic variables, multivariate prediction of scores and a closer look at the criteria for separating age groups.

Sex and Age Differences in the
Labeling and Intensity of Emotion

According to Schachter and Singer (1962), the labeling of emotion is in large part due to one's cognitive appraisal of the situational cues surrounding an emotion-arousing experience. This appraisal seems to occur in an attempt to account for the physiological reactions touched off by the stimulus situation. As a result of the process, an emotional label is attached to the combination of the physical symptoms, the precipitating events and the resultant cognitions (Schachter & Singer, 1962). Arnold (1960, 1968) has an alternate yet noncontradictory theory of emotion that is more physiologically oriented. In her theory, the emotional sequence begins with a primary "emotional experience produced by the evaluation of the (physical and environmental) situation" (Arnold, 1968, p. 284). This appraisal results in an emotional label similar to that of Schachter and Singer (1962), but it is then followed by what Arnold terms "peripheral changes in the somatic environment" (Arnold, 1968, p. 285). These changes are also evaluated, producing the "secondary feeling" that may either intensify or confuse the primary label. In the latter instance, the initial evaluation may be revised (Arnold, 1968).

Lazarus' (Lazarus & Averill, 1972) conceptualization of the process of emotion labeling resembles that of Arnold (1968) because of the significance of this revision process. His sequence of primary and secondary appraisal, followed by reappraisal, supports a cyclical

interaction in which feedback from the event and one's internal reflection changes the cognitions or evaluations of the circumstances. These appraisals are a function of two types of antecedent conditions. Situational variables refer to the cues drawn from environmental factors, and, therefore, change from one set of circumstances to another. Dispositional variables are determined as a result of individual biological and cultural influences, including such attributes as personality traits, belief systems, attitudes and cognitive styles.

Role of Gender Identity in Emotion Labeling

Schachter and Singer (1962), Arnold (1960, 1968) and Lazarus (Lazarus & Averill, 1972) all acknowledge the role of cognitive influences on the process of actual attachment of the emotional label. Whether this influence is part of an on-going, sequential system as in Lazarus' model (Lazarus & Averill, 1972) and that of Arnold (1968) to a lesser extent, or whether it colors an individual's attempt to explain certain emotional circumstances as in Schachter and Singer (1962) is not the issue. Whatever model or combination of models one finds more acceptable, it is the ambiguity involved in the selection of a label for these feelings, primarily in the form of dispositional variables that this work attempts to research.

These cognitive influences may be in the form of one's cognitive style or attitude set. Gender identity is a likely contributor to these influences; for instance, the sex role socialization that a child acquires comes to significantly influence his preferences for certain activities and his habits of behavior, as seen in the Bandura and Walters

(1959) study on aggression and sex role modeling. In terms of the antecedent conditions discussed by Lazarus and Averill (1972), whether an individual views himself or is viewed by others as male or female will influence dispositional variables and subsequently color emotion labeling and emotional experiences in general.

Research in the area of sex differences in emotion has focused on a number of dependent variables, including psycho-physical reactivity in emotional experiences (Plutchik & Conte, 1974), and responses to erotic literature (Herrell, 1975). Typically, these and other investigations have tended to follow Anastasi (1958) and Sears (1965) in their characterization of males as more aggressive, overactive and prone to temper tantrums, while describing females as more dependent, fearful and timid. Results from a study of responses to different types of stressful stimuli (Cysewski & Weiner, 1975) support the view that females express more emotionality than males on the Fear Survey Schedule.

Zuckerman (1977) evidenced an interesting parallel to the above findings. In the development of a situation-specific state-trait test of affect, sex differences were found in trait tests but not in state tests (Zuckerman, 1977). These results initially lead one to conclude that sex differences have no basis in state measures.

Consistent with this opinion, the author, in an earlier work (Sholley & Desselles, 1979), hypothesized that certain situations have the capacity to evoke either anger or fear and that sex differences could be found in responses to these situations. Males were expected to react with more anger in such situations, and females with more fear.

The instrument used to test the hypotheses was a 30 item Emotion Research Questionnaire (ERQ). Format followed a forced choice anger/fear response for each item. Situations were obtained from a pilot work where college students were asked to generate instances in which they recalled feeling angry or afraid. The scores from the ERQ were correlated with sex and the Masc and Fem scores from the Bem Sex Role Inventory (BSRI) (Bem, 1974). The BSRI was included in the study on the assumption that it would be a good measure of gender identity. Results were significant ($p < .05$) and in the directions predicted. In the present research it is again predicted that there will be significant sex differences between those situations described as arousing anger or fear. More pointedly, the findings are expected to illustrate, that, typically, males label emotional reactions to given situations on the ERQ as anger while females cite fear as the emotion elicited (Sholley & Desselles, 1979; Anastasi, 1958; Sears, 1965). In addition, females are anticipated to have higher overall affect intensity on the ERQ and BSRI Fem scores (Cysewski & Weiner, 1975; Bem, 1974), while males demonstrate higher BSRI Masc (Bem, 1974) and ERQ anger scores (Sholley & Desselles, 1979; Anastasi, 1958; Sears, 1965).

Age as a Determinant of Cognitive Style

Another variable that may influence both sex role perception and labeling of emotion is age. Shifts in how subjects described Thematic Aperception Test (TAT) cards depicting four adults (two young and two old) have been reported by Neugarten and Gutmann (1958). Descriptions given by older respondents (age 55 to 70) were significantly different

from the younger respondents (age 40 to 54). The old man in the picture was portrayed as increasingly submissive and the old woman as authoritarian by the older participants. In later studies, Gutmann (1964, 1967) rated TAT responses of 40 to 70 year olds as to the type of "ego style" they illustrated. He named three types of ego functioning: "active mastery", "passive mastery" and "magical mastery" (Gutmann, 1964). Style descriptions ranged from "the most vigorous, effective style" (active mastery) to "stress-laden, maladaptive ego functioning style" (magical mastery) (Gutmann, 1964, p. 119). Passive mastery he described as "adaptive conformers" who "disengage themselves from feelings and excitement" and "find aggression and self-assertion as ego-alien" (Gutmann, 1964, pp. 122-125). His results evidenced a marked trend toward passive mastery and magical mastery with advancing age.

This shift in ego style, which in essence is a dispositional variable, may be one of many determinants of emotion labeling in old age. However, caution must be used in making broad statements from projective data; extrapolating from picture descriptions to actual or reported self-behavior must be advanced hesitantly. At the present time, a statement simply alluding to the change in selected personality characteristics over age, without reference to the absolute nature of these movements, would be the most appropriate interpretation (Kimmel, 1974).

Concomittant with this hypothesized shift in ego style, sex role perception in older adults may also be undergoing change. This study intends to look at the previously uninvestigated area of gender identity in post-college age adults, as a corollary line of research. This was done by administering the BSRI (Bem, 1974) to all participants along

with the ERQ. As a result of the works by Neugarten and Gutmann (1958) and Gutmann (1964, 1967), it is therefore hypothesized that with advancing age, there will be declines in ERQ anger scores and BSRI Masc scores with concurrent increases in BSRI Fem Scores for both sexes.

Intensity of Affect

As noted earlier (Cysewski & Weiner, 1975; Hersen, 1973), investigations into emotionality have evidenced sex differences in reported intensity of affect. In both works, objective measurement tools were used, and females were found to give stronger emotional reactions. Dean (1962) compared interview responses of 50 to 95 year old males and females on "the level and meaning of their affective involvement with others" (p. 441). Questions included, "How often do you find yourself feeling lonely? Would you say very often; fairly often; sometimes, but not too often; hardly ever; never?" (p. 441). Despite possible tendencies of subjects to deny negative emotions, a "clear, straight-line relationship downward from one decade to the next" in intensity was seen in irritation and with boredom and anger to a lesser extent (Dean, 1962, p. 442). Loneliness seems to increase with age. She also found that of all the emotions queried, only irritation was reported to any appreciable extent. Finally, the data illustrated an abrupt drop in reported anger level at about age 60, that then remained consistent for the older age ranges (Dean, 1962). In the present work, general trends are hypothesized to illustrate declining intensity of affect (both anger and fear) on the ERQ with increased age (Dean, 1962).

Questionnaire Validation

All of these studies on affect intensity, as well as those dealing with the labeling of emotion and sex differences, deal with reported emotion and not overt behavior. Questions concerning the justification for the use of objective paper and pencil tests and self-reports must be addressed. Willerman, Turner and Peterson (1976) compared "typical and maximal performances" elicited from stimuli that were considered anger- and elation-arousing. Typical performance tests asked subjects to review their behavior and describe the normal response; whereas, maximal tests encouraged subjects to achieve at their highest levels (Willerman, et al., 1976). Findings revealed that advantages in predictive validity were negligible between the two types, and widespread value of one over the other remains to be demonstrated (Willerman, et al., 1976). The ERQ is something of a typical performance test, as it asks participants to either remember back to when they actually were in certain situations or to imagine themselves there if they had no prior experience. Unlike the Willerman et al., (1976) study, however, the ERQ has a self-report, not performance format.

Validation studies were conducted on the Anger Self Report (ASR) scale of Zelin, Adler and Meyerson (1972), correlating psychiatric ratings of anger and ASR scores. Multimethod analyses of the correlations yielded "substantial convergent and discriminant validities for the ASR scales" (Zelin, et al., 1972, p. 340). Hersen (1973) reported a definite social desirability variable at work in his investigation of self-reported fear. He found that this factor had an in-

hibitory effect on men, making them less prone to admit fear on the Fear Survey Schedule. Such a factor's confounding effects are questionable in terms of sex differences in emotion labeling, if one considers social desirability as merely a by-product or measure of socialization. Its effect may then be included in the entire hypothetical framework.

While works such as these do not preclude the possibility of low validity on the paper and pencil tests used in this research, they do provide some minimal empirical basis for the use of self-report measures in the assessment of emotions. Another point to consider is that other scales dealing with this topic survey general emotional patterns, while the ERQ in this study concerns itself with emotional responses to prescribed behavioral instances.

Nevertheless, certain steps were taken in the development of this line of research expressly to deal with the problem of validating the ERQ. As noted previously, several pilot studies were carried out for just this reason. The most significant of these provided inter-item as well as item-total correlations. The value of r for sex and ERQ was $-.340$ ($p < .01$), meaning that for females the anger score on the ERQ decreased. The correlation for the comparison of the ERQ and the Masc and Fem scores on the BSRI, respectively, were calculated as $+.248$ ($p < .01$) and $-.243$ ($p < .01$). The BSRI was then a significant predictor of the ERQ anger score in the same direction as sex-predictor scores. N was equal to 119 for all computations. With an r of $-.340$, sex only accounted for approximately 12% of the entire test variance on the ERQ. Item-total correlations were then performed (Nunnally, 1970) to discern

which items were most highly predictive of total score. Five items did not meet the criterion correlation of .10 with the ERQ and were then dropped from future administrations of the measure. The Kuder-Richardson-20 reliability coefficient was calculated for the ERQ minus those items and was found to be .5015.

The original 30 item questionnaire was thus narrowed to a 25 item measure that was used in a subsequent pilot study to determine the appropriateness of the forced-choice anger/fear response. Subjects were given the revised scale, but in responding to each item another option was included. If the emotion the participants were experiencing was neither anger nor fear, they were allowed to mark "Other" and were instructed to name the emotion in the blank provided. The most frequent responses were a combination of anger and fear, embarrassment, frustration and apathy.

With the exception of apathy, these alternate responses were directly in line with the nature of the ERQ, since it was intended that the situations would indeed elicit ambiguous emotional reactions. The items were supposed to have the potential to evoke both anger and fear in order to allow the individual's dispositional variables (e.g., sex, age, gender identity, cognitive style) to mediate the labeling process.

Incorporated in the present research is a content validation as well as an item analysis. The ERQ was given to a population of college students along with the Zuckerman Inventory of Personal Reactions Form-2 (ZIPERS II) (Zuckerman, 1977). This administration yielded 10 scores for each student on the ZIPERS II, five from each of the state (S) and

trait (T) scales on identical dimensions. These dimensions, also known as the five factor scores, are as follows (Zuckerman, 1977, p. 515):

1. Fear arousal: heart beats faster, breathe faster, feel fearful.
2. Positive affect: feel carefree, affectionate, elated, and act friendly or affectionately.
3. Anger and aggression: feel angry and act aggressively and/or avoidantly.
4. Attentive coping: Feel attentive and feel like getting further into situation or through with it.
5. Sad: feel sad.

As mentioned before, Zuckerman (1977) reported greater sex differences on trait scores than on state scores. He found these results while working on the test-retest reliability of his scale, and after having each subject take both the S and T scales twice, he discovered that "females were significantly higher on Fear Arousal and Sadness on both Trait Tests ... and on Anger-Aggression on Trait Test 1 only. Males were significantly higher on Positive Affect and Attentive-Coping on Trait Test 1 only" (Zuckerman, 1977, p. 517).

In the present study, each of the 10 scores described above (five factor scores for both the S and T scales) are correlated with the anger and fear scores of the ERQ for validation purposes. Primary interest is centered upon the comparison of the S and T Fear Arousal scores with the ERQ fear score and the S and T Anger-Aggression scores with the ERQ anger score.

Plan of the Research

The goal of the research was to draw together the previous results in the area of labeling and intensity of emotions and to investigate the influence of sex and age factors on these processes. The revised 25 item ERQ (Sholley & Desselles, 1979) was used as a measure of subjective labeling of emotion, as shown by the overall anger or fear score, and as a measure of the intensity of emotion, as reflected by three scores: the average rating given all items on the questionnaire, the average on those items responded to with anger and the average for those items answered with fear. BSRI (Bem, 1974) scores provided a measure of sex role socialization; these and the four ERQ scores were studied as they changed with sex and age.

Hypotheses

It is predicted that there will be significant sex differences between those situations described as arousing anger or fear. More pointedly, the research findings are hypothesized to illustrate that, typically, males label emotional reactions to given situations as anger while females cite fear as the emotion elicited (Sholley & Desselles, 1979). Work by Neugarten and Gutmann (1958), Singer (1963), Gutmann (1964, 1967), Dean (1962), Hersen (1973) and other previously cited authors, predict the following results. Across ages, males will show higher ERQ anger and BSRI Masc scores, and females will be expected to report higher ERQ intensity and BSRI Fem scores (Shelley & Desselles, 1979; Anastasi, 1958; Sears, 1965; Hersen 1973). With increasing age, both sexes are anticipated to illustrate a decline in ERQ intensity of affect, ERQ

anger and BSRI Masc scores, with concomittant increases in BSRI Fem scores (Dean, 1962; Neugarten & Gutmann, 1958; Gutmann, 1964; Gutmann, 1967).

Method

Subjects. A total of 120 naive subjects, 60 male and 60 female, were classified by age and sex into eight groups of 15 each. Division by age was into four age ranges: Age 17 to 24, age 30 to 40, age 45 to 55 and age 65 and above. University of Richmond undergraduate students and community members drawn from civic, professional and religious organizations comprised the subject population. Nine additional students (two male and seven female) participated in the content validation of the ERQ with the ZIPERS II.

Materials. The ERQ consisted of 25 descriptions of situations, followed by the letters "A" and "F" signifying the emotions anger and fear. Subjects were asked to circle the letter corresponding to the emotion that best represented their initial reaction to each item when they placed themselves in that set of circumstances for the first time. Subjective ratings of intensity for each emotion were also measured on a scale of one to seven, with one being a very weak emotion and seven a very strong emotion. The second measure, the BSRI (Bem, 1974), asked subjects to rate themselves on each of 60 adjectives. This scale provided a determination of each person's masculine and feminine traits. Duplicates of the ERQ, the BSRI, as well as the ZIPERS II used in the validation, are included in the appendix.

Procedure. Volunteers were recruited as participants after being

told that the study involved assessment of emotional responses of individuals in relation to certain personal characteristics. For all age groups, the informed consent sheet was completed, followed by the two questionnaires (either the ERQ & BSRI or the ERQ & ZIPERS II) in counterbalanced order. For the major portion of the research the ERQ was accompanied by the BSRI; in the content validation, the ZIPERS II replaced the BSRI. The need for subjects to respond to the items with their initial emotional reactions was stressed. Participants were reminded not to sign any of the response sheets, and the informed consent sheets were collected. Following completion, subjects were again reminded of their right to withdraw from the research. For both sexes in the college and middle age ranges as well as for females over 65, the questionnaires were given in groups of five to 15 each. However, due to problems locating males in the older age groups, administration was done on an individual basis. For all subjects in the 45 to 55, over 65 and the majority of those in the 30 to 40 range, the questionnaires went home with the participants to be completed at their convenience. Instructions were explicitly stated that these subjects were not to receive any assistance in answering any part of the measures. Debriefing was withheld pending final data analyses, and completed either by letter or personal contact with the researcher.

Scoring. The ERQ was scored by summing the total number of situations responded to with anger and the number with fear. Either anger or fear score may have been used in the analyses, since one and only one choice for each item was acceptable. The anger score was selected as the

the indicator, after Sholley and Desselles (1979). Mean intensity scores for each subject was determined by summing all ratings, regardless of the emotion, and dividing by the number of items (25). Separate Anger Intensity and Fear Intensity scores were also computed. All items must have been completed on both scales to be included in the data analysis. The BSRI gave separate "Masc" and "Fem" scores, reflecting each subject's masculine and feminine traits, when scored according to Bem (1976). Scoring procedure involved addition of the ratings for the 20 "Masc" and 20 "Fem" adjectives individually and computing the average rating for each list. The ZIPERS II was scored after Zuckerman (1977).

Results

Six two-factor independent groups analyses of variance were computed on the research data. Factors for all analyses were sex and age group. The six dependent variables were: 1) ERQ anger scores (ERQ-A); 2) ERQ mean emotional intensity scores (MN-INT); 3) ERQ average anger intensity scores (A-INT); 4) ERQ average fear intensity scores (F-INT); 5) BSRI Fem scores (BEM-F) and 6) BSRI Masc scores (BEM-M).

Means for each level are shown in Table 1 for all dependent variables, and raw scores are included in Appendix E. F-max tests for homogeneity of variance were found to be nonsignificant at the .05 alpha level for all analyses but ERQ-A (see Table 2).

Insert Tables 1 and 2 about here

Source tables for the analyses of variance are summarized in

Tables 3 and 4. A significant sex by age group interaction was seen only on the BEM-M scores, which was accompanied by a significant simple effect for sex. Testing for main effects on all other variables revealed that sex was significant in every instance. Age group produced consistently nonsignificant results.

Insert Tables 3 and 4 about here

The influence of the sex main effect upon BEM-F, MN-INT, A-INT and F-INT is clearly illustrated in Figures 2 through 5. A somewhat confused pattern of responses for ERQ-A scores is seen in Figure 1, where the sex main effect is not easily identifiable. Finally, the differential effect of the sex by age group interaction upon the BEM-M scores, as well as the sex simple effect, can be seen in Figure 6. However, this interaction was not immediately discernable in the three older groups, which appear to reflect a sex main effect when looked at alone. Therefore, further ANOVA's were calculated on the BEM-M scores, first cross-classifying age groups 2, 3 and 4 by sex. A oneway ANOVA was then computed on age group 1 by sex.

Insert Figures 1 through 6 about here

The results of these later analyses are given in Table 5. As suggested by Figure 6, the sex by age group interaction was nonsignificant, and sex produced as significant main effect in the older age groups. For age group 1, nonsignificant differences between males and females were demonstrated.

Insert Table 5 about here

The item scores were correlated with the ERQ-A scores, and all but two calculations exceeded the $r = .10$ criterion (Nunnally, 1970). A summary of results is included in Table 6. The reliability was found to be .32 for the ERQ, omitting items 7 and 13 and using the Kuder-Richardson-20 formula.

Insert Table 6 about here

Results from the content validation comparing the 10 ZIPERS II State and Trait scores and ERQ-A and ERQ-F yielded substantial correlations in the assumed directions (see Table 7). Correlations were in the moderate to high positive range for the following pairs of variables: ERQ-A with Positive Affect (State), ERQ-A with Positive Affect (Trait), ERQ-A with Anger/Aggression (State), moderate to ERQ-F with Fear Arousal (Trait), ERQ-F with Positive Affect (State), ERQ-F with Positive Affect (Trait) and ERQ-F with Anger/aggression (State).

Insert Table 7 about here

Discussion

The major findings of the research were the main effects attributable to sex. These results provide a degree of support for sex-appropriate social learning (Bandura & Walters, 1963) in emotion labeling, affect intensity and gender identity. Additionally, for all dependent variables,

no "clear, straight-line relationships" (Dean, 1962) were seen from one age range to the next. Rather, the relationships tended to be somewhat complex, rising and falling at different points on different variables.

On the Bem Sex Role Inventory, females demonstrated anticipatedly higher levels of femininity than males, across ages. Once separated from the older groups, Bem masculinity scores for males and females in the 17 to 23 year range were approximately equivalent (see Figure 6 and Table 5). In the remaining age groups, however, males scored higher on masculinity than females, as predicted.

Results from the three older groups on the BEM-M and all BEM-F scores provide some verification of Anastasi (1958), Sears (1965) and Bandura and Walters (1963) in their reports of sex stereotypic behavior. However, in the youngest age group, males and females were undifferentiated along the masculinity dimension. Differences were not clearly defined at this age range, perhaps signalling some developmentally significant occurrence. It is interesting to note that this pattern has not been seen on the femininity scores, which were clearly separated between sexes at all ages. Speculation suggests that it is socially acceptable for both sexes to appear masculine while feminine traits are only appropriate for women.

Moving to the three intensity variables, females exhibited the predicted higher overall, anger and fear intensities. Therefore, on the prescribed situations on the ERQ, females typically expressed stronger emotion regardless of whether it was anger or fear. This "emotionality" of women, or rather their tendency to express their feelings, has been evidenced previously (Hersen, 1973; Cysewski & Weiner, 1975). Extending these results from emotional expression to emotional experiencing and concluding that women feel

more intense emotion than men, however, is an erroneous extrapolation.

Strictly speaking, the significant F-max for ERQ-A scores renders the results for that analysis of variance inapplicable. This significance reflects within group variances of some experimental cells that are several times greater than the variances of other cells. This increases the probability that statistically significant results are in fact due to error variation and not to actual treatment influences. However, six F-max computations were performed on this same sample population with only one significance, and it may be possible that this single occurrence may have been a result of chance. If this aspect is considered, some tentative conclusions may be made from the ANOVA results, keeping in mind this violation of the assumptions surrounding the statistic.

Subject responses to the Emotion Research Questionnaire supported the hypothesis that there are observable sex differences in the labeling of emotional reactions to given situations. Males involved in this study cited anger more frequently than females across situations. The opposite pattern was seen for females, for whom fear was the selected emotion.

As with the intensity scores on the ERQ, these findings deal only with reporting of emotion. Like the theories of Lazarus (Lazarus & Averill, 1972), Arnold (1960, 1968) and Schachter and Singer (1962), there is no attempt to infer that males and females experience different emotions. What was suggested and has been supported is that an individual's cognitive style is a determining factor in emotion labeling and expression.

Statistical comparison of the ZIPERS II and the ERQ provided interestingly supportive correlations for the anger and fear scores and in

the directions expected. As noted earlier, the focus of the construct validation was on the ERQ-F-FA state/trait and ERQ-A-AA state/trait comparisons. It was in these calculations that some of the highest r values were seen. The correlation of .55 between FA trait scores and both ERQ-A & ERQ-F reflected amounts of overlapping variance between the scores. ERQ-A and AA state and trait scores were also moderately correlated in the positive direction. In several instances, correlations with the same ZIPERS II dimensions resulted in approximately equal r s in opposite directions for the ERQ-A and ERQ-F scores. This provides some measure of validity for the ERQ in that fear and anger scores on both scales correlated as expected. These findings provide some objective measure that the ERQ is in fact measuring the emotions it purports to be.

Item-total correlations signaled two items which did not meet the criterion correlation and were then not significantly predictive of the total score. Items 7 and 13 dealt with circumstances in which the subject was "critisized before a group for no reason" and "came very close to being bitten by a large unchained dog at someone's gate". Removal of these items in future administrations may aid in reducing the variability of the questionnaire scores. Most items, however, exceeded $p < .01$ in predicting overall score. On the basis of this analysis, for the division of the ERQ into two separate tests measuring fear or anger with a yes/no response may be fruitfully explored.

The consistently nonsignificant age group effects that were noticed on all dependent variables may be attributable to several factors. Most apparent is the conclusion that these four age ranges do not differ in

emotion labeling, intensity or sex role socialization. It would then follow that whatever developmental changes adults undergo do not influence these cognitive variables. Secondly, age divisions may have been selected that could have obscured any possible differences between subjects. This work followed a format somewhat similar to Dean (1964) and Neugarten and Gutmann (1958) and a basis for the divisions. Closer examination of the criteria for these age ranges in future research may yield different results.

Another viable explanation for the absence of age group effects could, of course, lie in the ERQ itself. Although the content validation provided some information on the nature of this ERQ, it is still in its initial stages of development, with many further investigations mandated. The appropriateness of the forced-choice format is major research question, for little previous evidence exists for the hypothesis that the same emotional arousal is typically labeled fear by females and anger by males. Possible lines of study may delve into the separation of the ERQ into two separate tests of anger or fear based on the results of continued item analyses. Work in this area may resolve the problem of a significant F-max for ERQ-A scores that was evidenced, as the large amounts of variance may have been side effects of problems in the measurement tool itself.

Several insights for research derived from this study have become evident to the author throughout the duration of the experiment. These suggestions begin with the compilation of more information on the sample population for two reasons. First, demographic data including educa-

tional status, occupation, income and birth order may be beneficial in controlling some of the variance between subjects; arguments can be made, however, for random sampling to justify more generalizable findings. Additionally, with this background information, alternate statistical procedures, such as multivariate prediction of scores, could result in some interesting findings. Larger numbers of characteristics may give better predictions of what factors are involved in affect intensity and labeling, as well as gender identity.

Future controls on some procedural inconsistencies such as group versus individual administration, differences in explanation of instructions and test environment are recommended to be more stringent. These problems were recognized and considered, although not entirely controlled due to the investigative nature of the work.

In sum, based on these findings, future works incorporating the suggested revisions hold promise of meaningful information in the area of cognitive influences on emotional experiences.

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Table 1
Means of All Dependent Variables by
Agegroup and Sex

Group ^a	Variable					
	ERQ-A	MN-INT	A-INT	F-INT	BEM-F	BEM-M
Agegroup 1						
Males	12.3	4.43	4.39	4.35	4.66	4.98
Females	12.7	5.02	4.86	5.12	5.22	4.90
Agegroup 2						
Males	13.7	4.19	4.15	4.27	4.68	5.53
Females	13.4	4.85	4.72	4.95	4.98	4.72
Agegroup 3						
Males	13.7	4.40	4.23	4.54	4.88	5.40
Females	11.9	5.27	4.90	5.70	5.34	4.68
Agegroup 4						
Males	13.9	4.39	4.13	4.63	4.81	5.35
Females	11.2	5.10	4.67	5.42	5.16	4.30

^an = 15 for each subgroup

Table 2

F-max Values for All Dependent Variables

Variable	F-max
ERQ-A	6.11 *
MN-INT	4.33
A-INT	4.00
F-INT	3.38
BEM-F	3.00
BEM-M	2.67

* $p < .05$

Table 3
Analyses of Variance

Dep Var	Source	<u>df</u>	<u>MS</u>	<u>F</u>
ERQ-A	Sex (S)	1	36.30	4.00 *
	Agegroup (A)	3	7.39	.81
	S x A	3	13.74	1.51
	Error	112	9.09	-
MN-INT	S	1	14.98	16.05 ***
	A	3	.53	.57
	S x A	3	.12	.12
	Error	112	.93	-
A-INT	S	1	9.44	8.09 **
	A	3	.33	.28
	S x A	3	.05	.05
	Error	112	1.17	-
F-INT	S	1	21.46	20.12 ***
	A	3	1.70	1.59
	S x A	3	.34	.32
	Error	112	1.07	-

* $p < .05$
 ** $p < .01$
 *** $p < .0001$

Table 4
Analyses of Variance

Dep Var	Source	<u>df</u>	<u>MS</u>	<u>F</u>
BEM-F	Sex (S)	1	5.23	21.79 **
	Agegroup (A)	3	.40	1.67
	S x A	3	.10	.42
	Error	112	.24	-
BEM-M	S	1	13.15	27.11 **
	A	3	.49	1.01
	S x A	3	1.28	2.65 *
	Error	112	.49	-

* $p < .05$
 ** $p < .0001$

Table 5
Analyses of Variance

Dep Var	Source	<u>df</u>	<u>MS</u>	<u>F</u>
BEM-M (Age Groups 2-4)	Sex (S)	1	16.53	35.08 *
	Age Group (A)	2	0.71	1.51
	S x A	2	0.21	0.45
	Error	84	0.47	-
BEM-M (Age Group 1)	Between Groups	1	.04	.08
	Within Groups	28	.53	

*p < .0001

Table 6

Item-Total Correlations for ERQ-A

Item ^a	<u>r</u>	Item	<u>r</u>
1	- .44 ***	16	- .45 ***
2	- .36 ***	17	- .53 ***
3	- .15	18	- .42 ***
4	- .13	19	- .20 *
5	- .38 ***	20	- .34 **
6	- .25 **	21	- .32 **
7	- .02	22	- .29 **
8	- .13	23	- .16
9	- .25 **	24	- .25 **
10	- .33 **	25	- .43 ***
11	- .38 ***		
12	- .42 ***		
13	+ .02		
14	- .42 ***		
15	- .24 **		

^a n = 120
* p < .05
** p < .01
***p < .0001

Table 7
Correlations Between ZIPERS II and ERQ Scores

ZIPERS II	ERQ-Anger	ERQ-Fear
State		
Fear Arousal	- .22	+ .22
Positive Affect	+ .62	- .62 **
Anger/Aggression	+ .47	- .48 *
Attentive Coping	+ .11	- .11
Sad	- .21	+ .21
Trait		
Fear Arousal	- .55	+ .55 *
Positive Affect	+ .37	- .37
Anger/Aggression	+ .27	- .27
Attentive Coping	+ .06	+ .06
Sad	- .03	+ .03

**p < .05

*p < .10

Note. N = 9 for all comparisons.

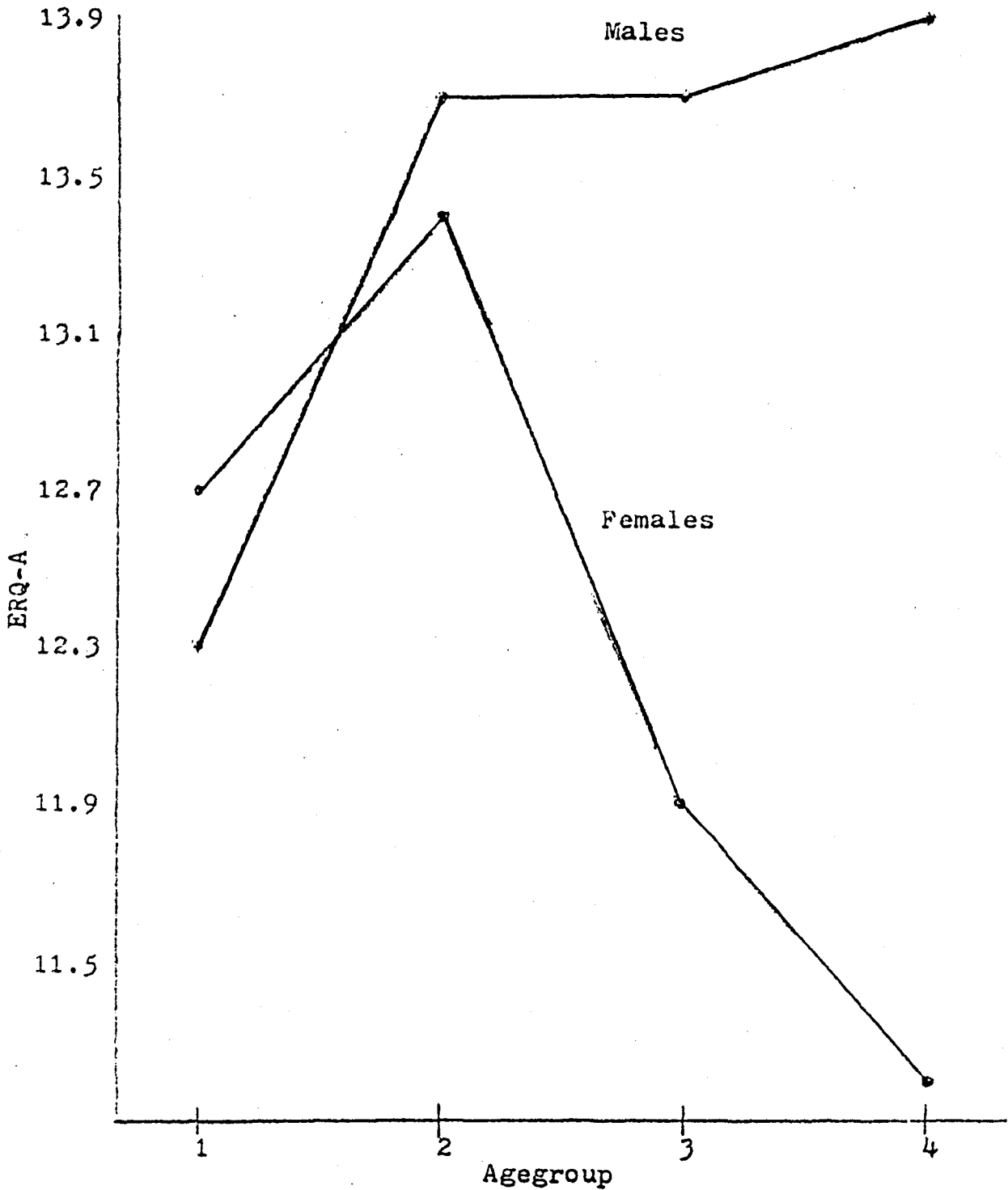


Figure 1. ERQ Anger score (ERQ-A) as a Function of Agegroup.

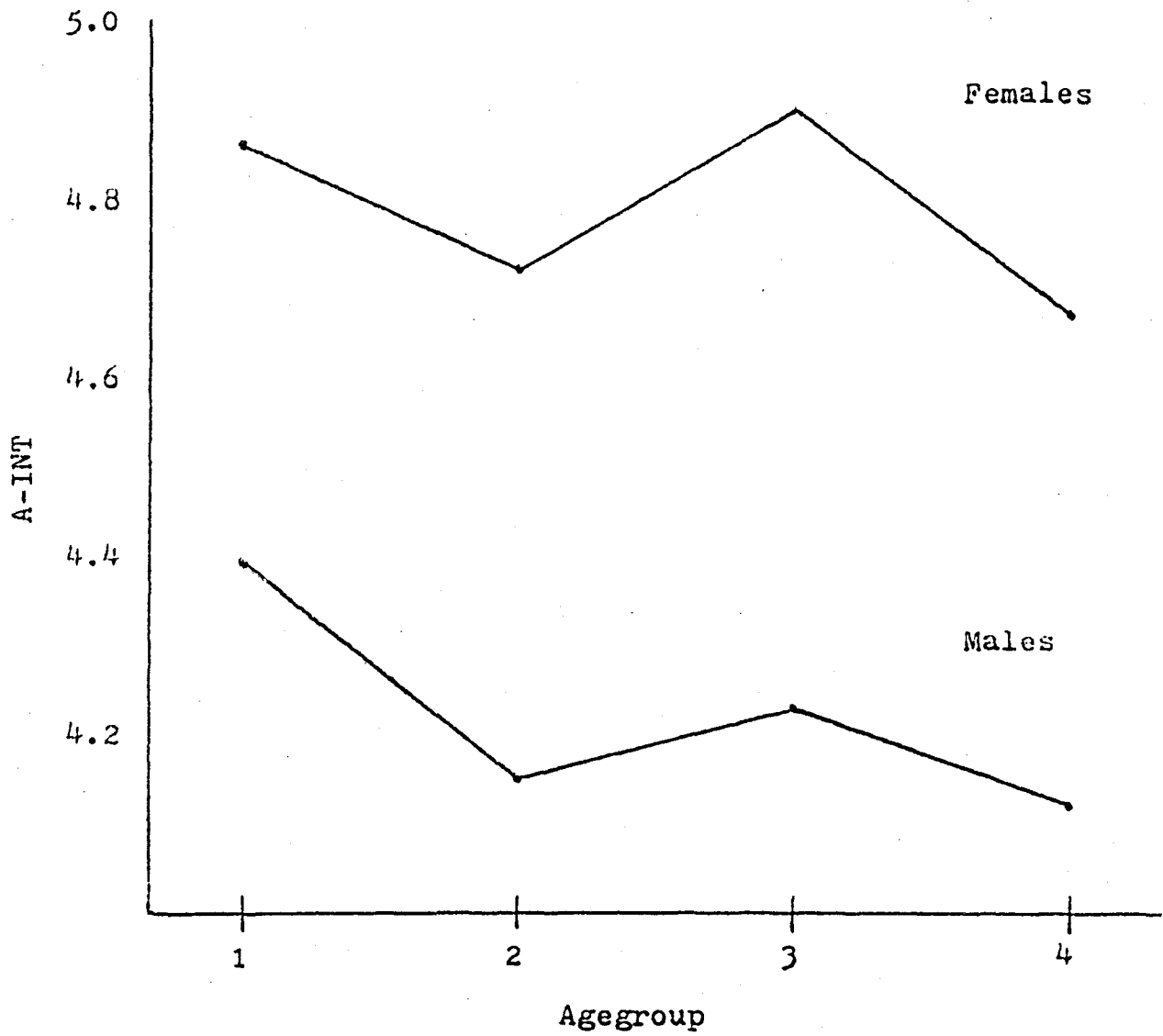


Figure 2. Mean Anger Intensity (A-INT) as a Function of Agegroup.

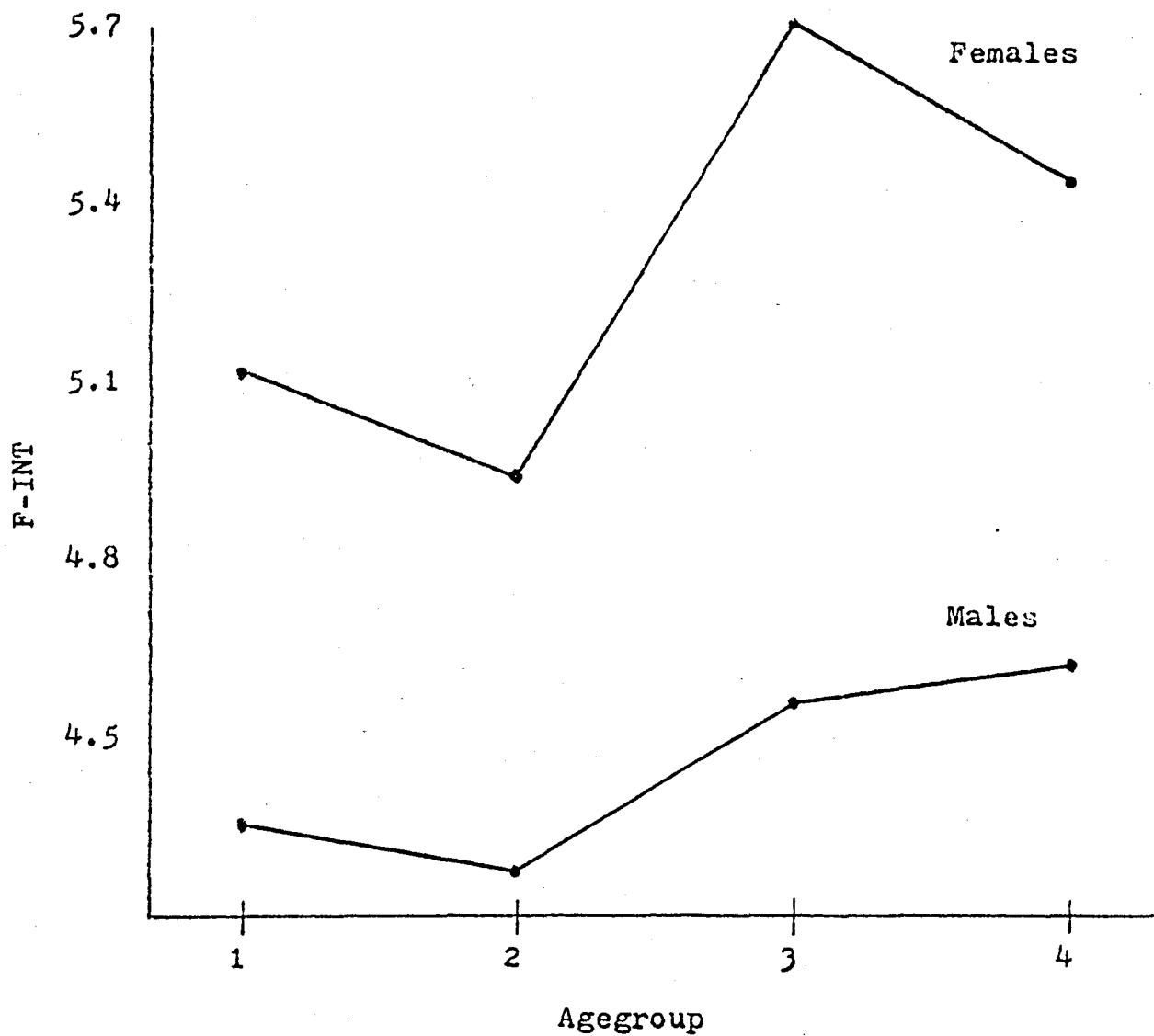


Figure 3. Mean Fear Intensity (F-INT) as a Function of Agegroup.

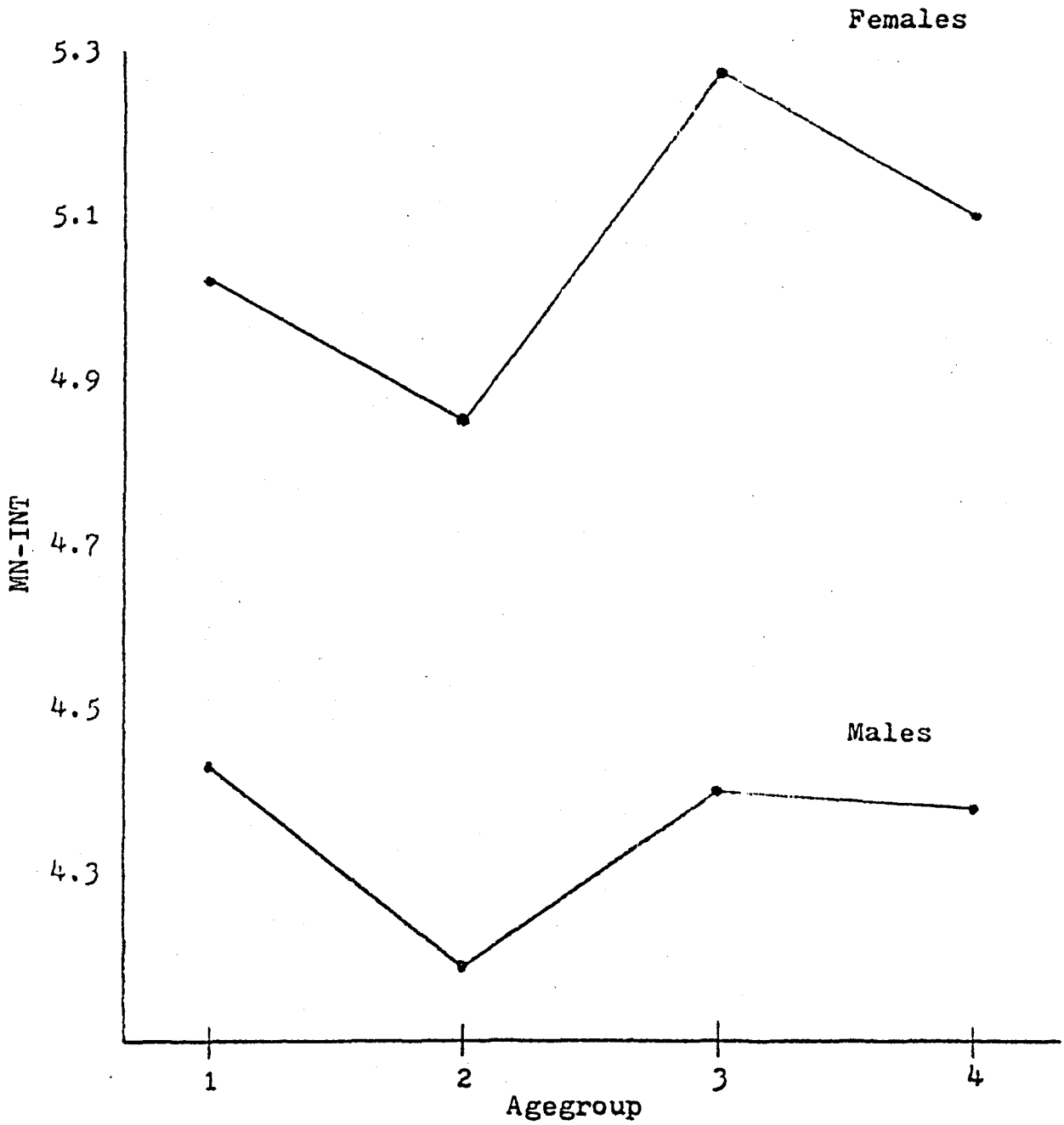


Figure 4. Mean overall Emotional Intensity (MN-INT) as a Function of Agegroup.

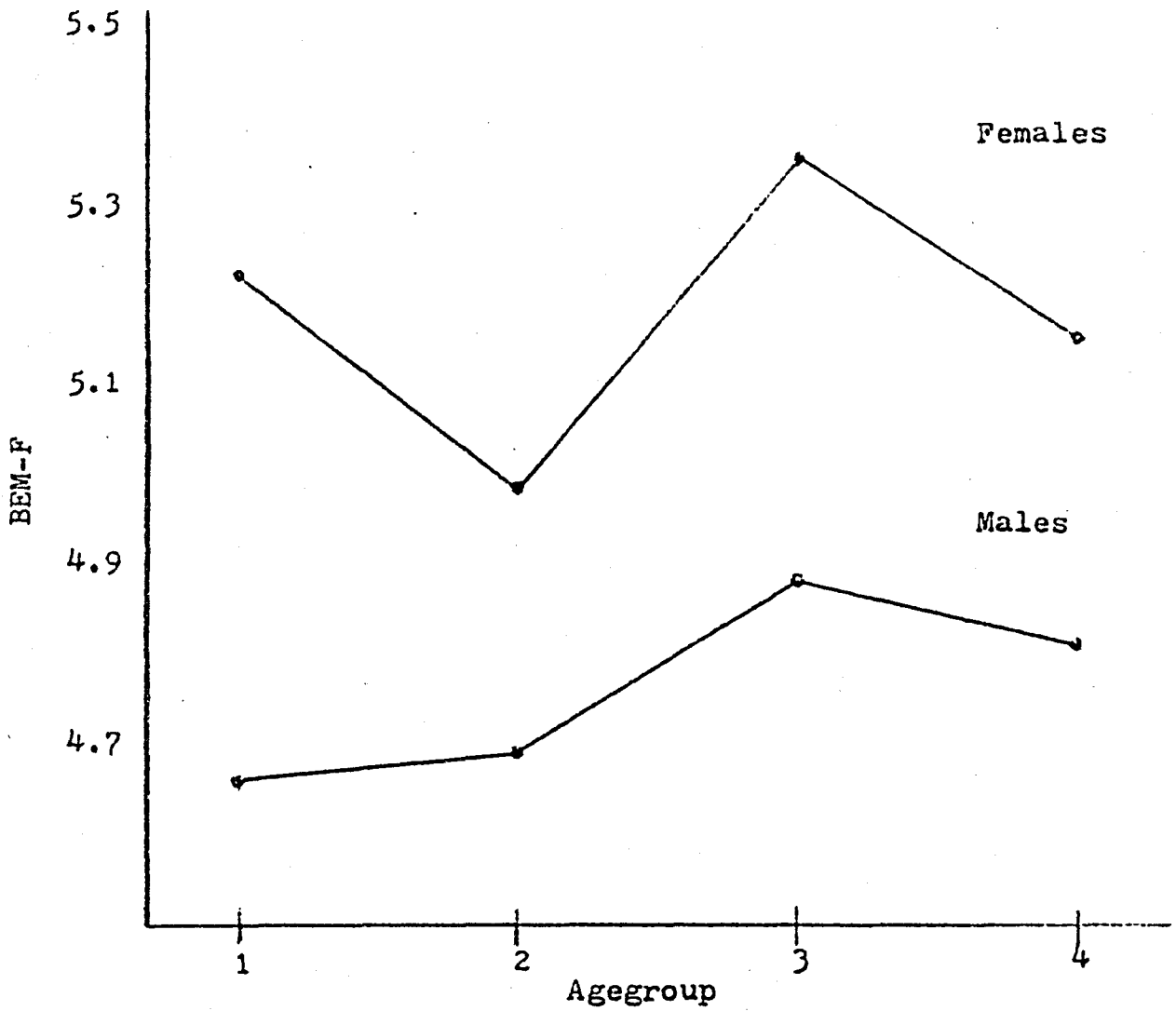


Figure 5. Bem Fem scores (BEM-F) as a Function of Agegroup.

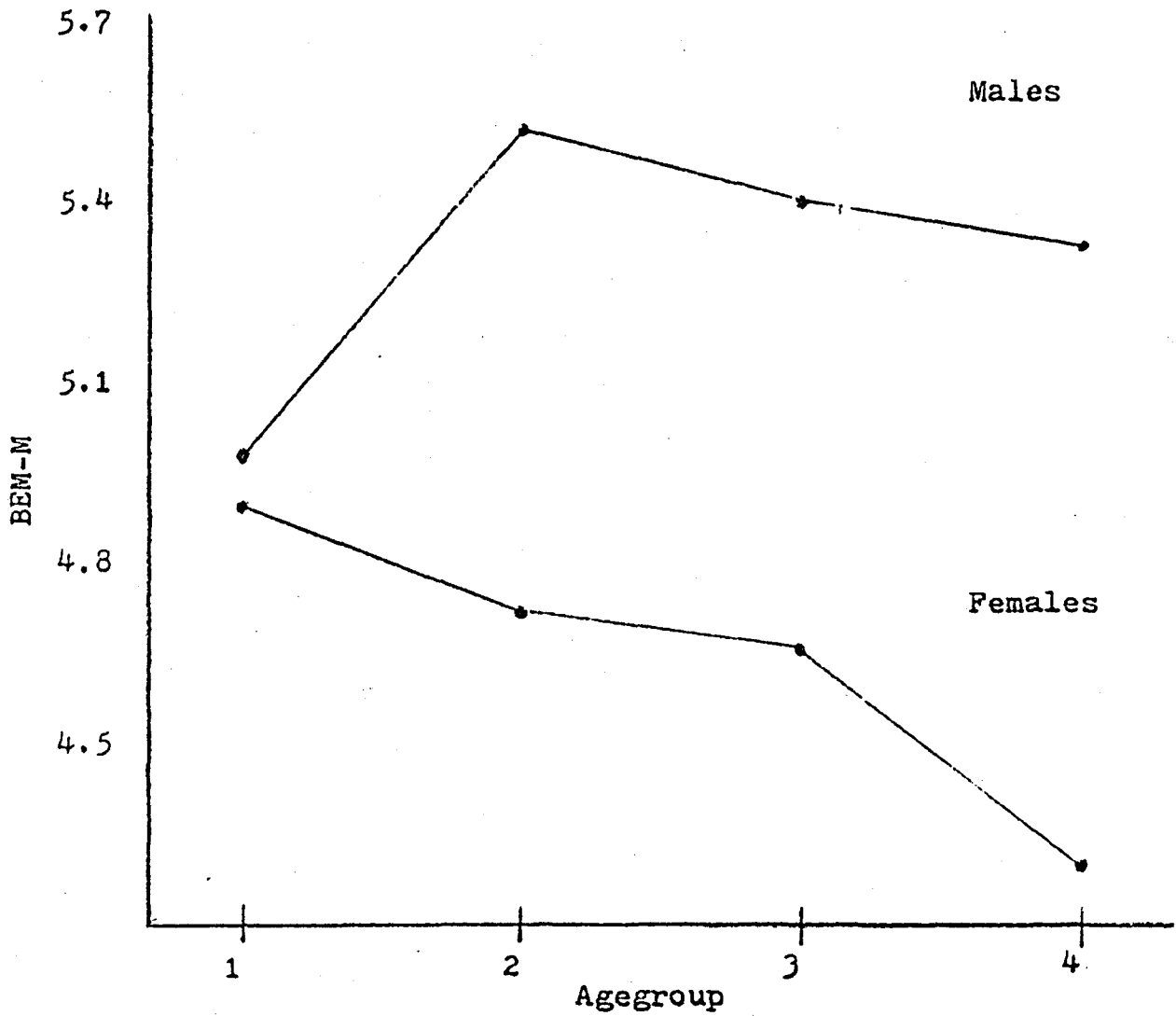


Figure 6. Bem Masc scores (BEM-M) as a Function of Agegroup.

APPENDIX A

EMOTION RESEARCH QUESTIONNAIRE

Instructions : Read each item and circle the letter which corresponds to the emotion that best describes your initial or "gut" reaction when you place yourself in that set of circumstances for the first time "A" stands for ANGER and "F" for FEAR.

In the blank space following the letters, you are to rate how strong that emotion was. Rating is done on a seven point scale with one (1) meaning very weak emotion up to seven (7) meaning very strong emotion. Please take your time and consider each question honestly, because there are no "right" or "wrong" answers on this test

1. Finding yourself physically or mentally unable to do something that is important to you. A F _____

2. Finding out that someone close to you personally is very likely to be harmed and you are unable to do anything to stop it. A F _____

3. Being involved in a serious accident in a car. A F _____

4. Being in extreme physical pain from a hospitalized illness. A F _____

5. Getting caught doing something you shouldn't have. A F _____

6. Receiving a traffic ticket for an ambiguous offense. A F _____

7. Being criticized before a group of people for no reason. A F _____

8. Learning that a close friend and neighbor was assaulted in their home. A F _____

9. Being asked a very important question that you are totally unprepared to answer while in front of a group. A F _____

10. Being followed by a stranger. A F _____

11. Learning that someone has been lighting a number of fires on homes in your area. A F _____

12. Seeing people that you love engage in an unreasonable argument to the point of actual physical violence. A F _____

13. Coming very close to being bitten by a large, unchained dog at someone's gate. A F _____

14. You have lied to someone, now they find out about it and confront you with it. A F _____

15. Being in love with someone and they with you (so you think), but the other person is often inconsiderate of your feelings. A F _____

16. Feeling responsible for your side losing an important contest. A F _____

17. Failing a test (driving, school, job placement test). A F _____

- | | | | |
|---|---|---|-------|
| 18. Witnessing the intense suffering of someone you love. | A | F | _____ |
| 19. Feeling someone doesn't recognize your potential and is judging you. | A | F | _____ |
| 20. Being punished. | A | F | _____ |
| 21. Being asked at a turning point in your life, over and over again by the same person, what are you going to do with your life. And you don't know. | A | F | _____ |
| 22. Realizing someone of the opposite sex has just seen you without clothes on. | A | F | _____ |
| 23. Seeing your pet run in front of a fast-moving car. | A | F | _____ |
| 24. Watching someone you love or care for, place themselves in serious danger through sheer carelessness. | A | F | _____ |
| 25. Having to rush around frantically trying to finish an important project that's due very shortly. | A | F | _____ |

DESCRIBE YOURSELF

1	2	3	4	5	6	7
NEVER OR ALMOST NEVER TRUE	USUALLY NOT TRUE	SOMETIMES BUT INFREQUENTLY TRUE	OCCASIONALLY TRUE	OFTEN TRUE	USUALLY TRUE	ALWAYS OR ALMOST ALWAYS TRUE

Self-reliant	
Yielding	
Helpful	
Defends own beliefs	
Cheerful	
Moody	
Independent	
Shy	
Conscientious	
Athletic	
Affectionate	
Theatrical	
Assertive	
Flatterable	
Happy	
Strong personality	
Loyal	
Unpredictable	
Forceful	
Feminine	
Reliable	
Analytical	
Sympathetic	
Jealous	

Has leadership abilities	
Sensitive to the needs of others	
Truthful	
Willing to take risks	
Understanding	
Secretive	
Makes decisions easily	
Compassionate	
Sincere	
Self-sufficient	
Eager to soothe hurt feelings	
Conceited	
Dominant	
Soft-spoken	
Likeable	
Masculine	
Warm	
Solemn	
Willing to take a stand	
Tender	
Friendly	
Aggressive	

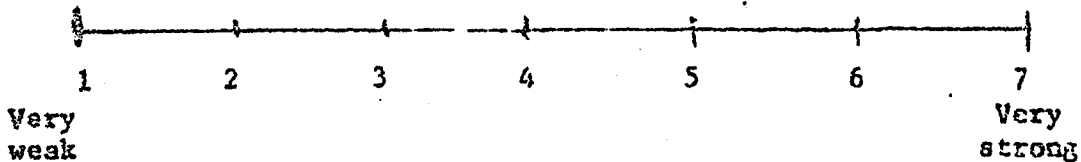
Gullible	
Inefficient	
Acts as a leader	
Childlike	
Adaptable	
Individualistic	
Does not use harsh language	
Unsystematic	
Competitive	
Loves children	
Tactful	
Ambitious	
Gentle	
Conventional	

EMOTION RESEARCH QUESTIONNAIRE INSTRUCTIONS

On the following pages is a list of twenty-five situations that would be likely to elicit an emotion. Following each are the letters A and F, which stand for the emotions Anger (A) and FEAR (F). You are to circle the letter which corresponds to the emotion that best describes your INITIAL or "gut" reaction when you place yourself in that set of circumstances for the first time.

Although you may feel that both emotions are occurring at the same time, we must insist that you make a decision as to which comes first, hopefully on an intuitive basis. In the interest of good psychological research, please answer as naturally and honestly as you can and not like you think we would expect you to. In questionnaires such as this, there are NO "right" or "wrong" responses, only individual differences.

If you would notice that beside the letters A & F, there is a column labeled "Intensity". In these blanks you are to rate how strong the emotion was for each item. Rating is done on a seven (7) point scale as illustrated below.



One (1) means "very weak emotion" and seven (7) "very strong emotion". You are to select the number that best describes the strength or intensity of the emotion.

Here are two sample items. Read each, select anger (A) or fear (F) and rate the strength of the emotion you chose. Remember to answer honestly and carefully.

S1. Seeing someone intentionally put the first dent in your new car. A F _____

S2. Getting lost while alone in a large, unfamiliar city at night. A F _____

Again, your first reactions are what we are interested in; there are NO "RIGHT" or "WRONG" answers, and do not sign any of the answer sheets.

Stop here and wait for further instructions from the researcher.

APPENDIX D

For persons participating in the Emotion Research Study :

1. This experiment is designed to study emotional responses of individuals to several situations.
2. Your involvement in the research will include the completion of two self-report measures. One is a questionnaire where you rate characteristics which describe you. The other questionnaire will provide a list of situations and will ask you to indicate which of the two emotions given, anger or fear, best represents your initial or "gut" reaction to the circumstances described. After you select one emotion, you are to rate it on a scale from one to seven in terms of how strong that emotion is.
3. All responses will be anonymous and confidential. They will be seen only by Dr. Barbara K. Shelley and Ms. Marisa Deaseller. You are not to put your name or any identifying mark on the response sheets. Results of the experiment will be given to you at a later group meeting.
4. You are free to end your participation in the study at any time.

I am aware of what this research involves, and I volunteer to participate.

Signature

Name - please print

Date

Group or class

APPENDIX E

RAW DATA

Variable List : Subject Years Sex ERQ-A Bem-F BEM-M A1 F1 A2 F2 A3 F3 A4 F4
A5 F5 A6 F6 A7 F7 A8 F8 A9 F9 A10 F10 A11 F11 A12 F12 A13 F13
A14 F14 A15 F15 A16 F16 A17 F17 A18 F18 A19 F19 A20 F20 A21 F21
A22 F22 A23 F23 A24 F24 A25 F25

00619 M 12 3.95 4.30 0 7 7 0 5 0 0 7 0 7 0 7 7 0 7 0 0 7 1 0 0 7 1 0 0 3 5 0
0 7 4 0 0 3 7 0 0 5 0 5 0 7 0 6 5 0 5 0 7 0
01030 F 13 3.35 4.25 6 0 0 5 0 5 0 7 0 6 7 0 0 4 6 0 0 3 0 6 0 4 5 0 0 6 0 3
4 0 5 0 5 0 0 6 6 0 6 0 5 0 1 0 0 6 6 0 2 0
01122 F 14 4.70 4.85 5 0 5 0 0 7 0 5 0 4 5 0 7 0 0 5 6 0 0 6 0 7 2 0 0 6 0 5
3 0 2 0 5 0 6 0 6 0 7 0 7 0 0 6 0 5 0 5 4 0
01237 F 16 5.70 3.75 5 0 0 7 0 4 6 0 2 0 1 0 5 0 0 7 0 2 0 7 0 6 0 6 0 5 3 0
7 0 6 0 1 0 7 0 6 0 3 0 6 0 2 0 0 7 6 0 5 0
01338 F 13 5.50 5.55 6 0 0 7 0 7 0 7 0 7 5 0 7 0 7 0 0 6 0 7 0 5 0 7 0 5 0 6
2 0 4 0 5 0 7 0 5 0 4 0 4 0 2 0 0 6 7 0 0 4
01421 F 11 5.70 6.40 3 0 0 7 0 6 0 6 0 5 3 0 4 0 5 0 1 0 0 3 0 3 0 5 0 3 0 2
2 0 2 0 2 0 0 6 3 0 0 2 1 0 0 1 0 4 0 6 1 0
01545 F 12 5.55 5.25 5 0 0 7 0 7 0 7 0 4 6 0 6 0 5 0 0 6 0 7 0 6 0 7 0 6 6 0
6 0 7 0 7 0 0 7 7 0 6 0 7 0 2 0 0 7 0 6 0 4
01651 F 10 5.40 4.40 5 0 0 7 0 7 0 5 0 6 6 0 7 0 0 7 6 0 0 7 0 7 6 0 0 7 0 5
5 0 0 6 0 5 0 7 5 0 0 6 6 0 5 0 0 7 0 7 5 0
1730 F 11 5.65 4.30 0 5 0 7 0 7 0 6 0 3 5 0 6 0 6 0 0 4 0 6 0 4 0 7 0 4 0 1
2 0 1 0 2 0 0 7 5 0 3 0 3 0 1 0 0 7 0 7 2 0
01853 F 15 4.85 4.20 6 0 0 6 0 6 0 6 5 0 7 0 7 0 5 0 0 6 0 7 0 7 0 7 0 6 6 0
4 0 6 0 7 0 7 0 4 0 5 0 7 0 4 0 0 6 0 7 4 0
02033 F 15 5.45 5.40 4 0 6 0 0 7 0 5 1 0 6 0 7 0 4 0 0 3 0 5 5 0 0 6 0 6 0 3
5 0 5 0 5 0 7 0 5 0 3 0 6 0 0 3 0 6 5 0 0 5
02155 F 7 5.25 4.55 0 3 0 4 0 7 0 3 0 2 3 0 4 0 0 6 0 4 0 6 0 7 0 5 0 7 0 3
4 0 4 0 0 5 0 6 0 4 2 0 4 0 1 0 0 5 0 6 0 4
02332 F 14 4.20 4.30 5 0 0 6 0 7 0 7 4 0 4 0 7 0 0 7 0 7 0 7 0 5 6 0 0 5 6 0
4 0 4 0 6 0 0 2 6 0 3 0 5 0 2 0 0 7 0 6 5 0
02431 F 17 4.35 4.85 5 0 0 7 0 7 3 0 0 4 4 0 5 0 7 0 0 2 0 3 7 0 4 0 0 3 0 3
4 0 4 0 4 0 7 0 6 0 4 0 4 0 3 0 0 6 6 0 4 0
02548 F 8 5.75 3.85 0 6 0 7 0 6 1 0 0 3 0 1 5 0 5 0 0 4 0 4 6 0 0 7 0 5 0 3
4 0 0 2 0 2 0 6 4 0 0 2 4 0 1 0 0 7 0 7 0 6
02647 F 11 5.80 5.05 7 0 7 0 0 7 0 7 0 5 5 0 5 0 7 0 0 6 0 6 0 6 6 0 0 7 0 6
6 0 0 6 0 6 0 6 7 0 0 5 5 0 7 0 0 7 0 7 6 0
02755 F 9 5.05 5.30 4 0 0 5 0 7 0 2 0 4 0 4 7 0 0 6 4 0 0 7 0 7 0 7 0 6 0 7
2 0 6 0 6 0 0 7 7 0 0 6 5 0 7 0 0 7 0 7 0 5
02946 F 11 5.45 5.30 2 0 0 7 0 7 0 4 0 7 7 0 7 0 7 0 0 7 0 7 7 0 0 7 0 7 0 7
7 0 7 0 7 0 0 7 7 0 7 0 0 7 7 0 0 7 0 7 0 7
03055 F 20 4.80 5.15 6 0 0 6 0 7 0 3 2 0 3 0 6 0 5 0 1 0 2 0 4 0 5 0 0 4 1 0
1 0 3 0 3 0 1 0 4 0 1 0 3 0 1 0 0 6 5 0 4 0
03137 M 12 5.15 5.70 5 0 0 7 0 7 0 7 0 7 0 7 0 7 0 7 0 0 5 0 3 7 0 4 0 0 5 0 7
4 0 5 0 5 0 7 4 0 5 0 0 5 0 5 0 5 7 0 0 5
03238 M 18 4.65 4.95 0 3 6 0 0 6 0 6 2 0 2 0 3 0 5 0 4 0 0 6 4 0 6 0 0 6 3 0
3 0 5 0 3 0 7 0 3 0 2 0 3 0 1 0 0 4 0 7 5 0
03350 M 12 4.85 6.75 6 0 7 0 4 0 6 0 0 3 3 0 6 0 4 0 0 2 0 1 3 0 0 5 0 6 0 5
0 5 0 5 0 4 4 0 4 0 5 0 0 3 0 1 0 7 0 7 4 0
03465 F 15 4.90 4.85 0 5 0 7 0 7 0 7 5 0 6 0 5 0 7 0 4 0 0 6 7 0 6 0 0 7 6 0
5 0 6 0 0 6 0 5 3 0 5 0 6 0 6 0 0 6 6 0 0 5
03649 M 14 5.00 4.45 7 0 0 7 7 0 0 2 0 5 4 0 0 5 0 2 0 6 0 6 5 0 6 0 0 7 0 7
3 0 6 0 6 0 7 0 5 0 0 1 4 0 1 0 0 6 7 0 7 0
03876 F 14 5.55 3.95 4 0 0 7 0 7 0 4 0 5 5 0 7 0 6 0 6 0 0 7 6 0 0 7 0 7 0 7
4 0 7 0 5 0 7 0 4 0 6 0 7 0 7 0 0 7 0 7 0 5
03973 F 13 5.85 4.65 0 4 4 0 0 6 0 5 2 0 5 0 4 0 0 5 3 0 0 5 0 6 4 0 0 6 0 3
3 0 3 0 3 0 0 3 4 0 0 2 5 0 3 0 0 5 3 0 0 3
04083 F 12 4.90 5.63 6 0 0 7 0 5 6 0 0 5 5 0 7 0 0 7 5 0 0 6 0 5 0 6 0 7 0 6
6 0 7 0 6 0 0 7 6 0 0 6 7 0 6 0 0 7 6 0 0 5
04165 F 06 4.65 4.40 0 5 0 7 0 7 0 1 0 7 4 0 4 0 7 0 0 2 0 7 0 5 0 6 0 7 0 7
1 0 0 7 0 6 0 7 4 0 0 4 0 1 4 0 0 7 0 7 0 6
04277 F 11 5.90 3.15 5 0 0 7 5 0 3 0 0 7 7 0 6 0 0 6 0 7 0 7 0 7 6 0 0 7 6 0
6 0 0 7 0 7 0 7 6 0 0 5 4 0 0 5 0 5 6 0 0 5
04375 M 09 5.00 5.60 0 4 0 7 0 7 0 5 0 6 5 0 6 0 7 0 0 5 0 3 5 0 0 7 0 7 0 6
5 0 0 5 5 0 0 6 4 0 4 0 3 0 0 5 0 5 0 7 0 6

11770 F 10 5.60 4.10 0 5 3 0 0 5 0 6 0 5 0 4 5 0 7 0 0 5 0 7 0 6 7 0 0 6
0 4 3 0 0 5 0 4 5 0 0 7 6 0 5 0 6 0 0 7 6 0 0 5

12170 M 10 5.30 4.55 0 7 0 5 0 7 0 7 0 5 5 0 4 0 0 3 0 2 0 5 0 7 0 1 0 3
1 0 1 0 1 0 0 1 0 7 2 0 1 0 3 0 5 0 0 7 6 0 0 3

14066 M 17 4.65 5.60 3 0 2 0 0 5 5 0 3 0 5 0 3 0 2 0 0 2 0 3 5 0 4 0 0 3 3 0
2 0 3 0 3 0 0 1 2 0 2 0 4 0 1 0 0 5 0 4 0 3

13066 M 18 4.55 5.30 3 0 6 0 0 4 0 7 1 0 2 0 3 0 0 2 2 0 1 0 6 0 3 0 0 4 3 0
2 0 3 0 3 0 0 6 3 0 2 0 1 0 1 0 0 4 0 6 2 0

12968 M 7 6.00 5.05 0 7 7 0 0 7 0 7 0 7 0 6 7 0 7 0 0 7 0 7 0 6 7 0 0 7 0 7
6 0 0 7 0 7 0 7 0 0 7 0 7 2 0 0 7 0 7 0 7

128 69 M 11 4.60 4.50 3 0 0 6 0 3 0 2 0 2 6 0 1 0 0 6 0 1 0 2 3 0 4 0 2 0 0 1
1 0 1 0 0 2 0 6 1 0 0 1 3 0 2 0 0 5 0 5 0 3

12666 M 18 4.80 6.45 6 0 7 0 0 6 0 6 0 2 5 0 6 0 6 0 2 0 4 0 7 0 5 0 0 4 0
2 4 0 6 0 5 0 0 7 6 0 4 0 5 0 6 0 0 6 6 0 3 0

12577 M 11 4.35 5.15 0 5 0 5 0 6 0 6 0 5 5 0 4 0 4 0 4 0 0 5 0 5 0 4 0 6 0 3
0 3 0 4 0 0 5 4 0 3 0 4 0 0 2 0 5 0 5 4 0

12475 M 12 5.20 6.80 4 0 7 0 0 5 0 5 0 7 5 0 6 0 7 0 5 0 6 0 7 0 0 6 0 6
0 7 6 0 6 0 0 7 0 7 5 0 0 6 6 0 0 6 0 7 0 7 0 7

12365 M 17 5.0 5.80 5 0 0 7 4 0 0 4 0 1 7 0 7 0 7 0 0 4 0 1 5 0 6 0 5 0
0 2 4 0 7 0 5 0 0 7 4 0 1 0 1 0 1 0 0 5 7 0 4 0

12267 M 9 4.75 5.30 0 4 5 0 0 7 0 7 0 5 5 0 6 0 7 0 0 2 0 7 0 6 0 5 4 0
0 5 0 6 1 0 0 5 7 0 6 0 0 4 6 0 0 2 0 7 0 7 0 5

12066 M 16 3.70 5.35 7 0 0 4 0 4 0 5 1 0 1 0 1 0 7 0 3 0 0 4 4 0 2 0 0 4
0 2 0 3 2 0 5 0 5 0 2 0 2 0 4 0 1 0 0 3 0 5 2 0

11975 M 17 4.45 4.70 3 0 5 0 0 7 0 7 4 0 3 0 4 0 0 5 4 0 0 3 0 5 5 0 0 6
5 0 4 0 3 0 3 0 3 0 2 0 3 0 4 0 2 0 0 4 0 5 3 0

11869 M 21 4.90 4.65 3 0 4 0 3 0 0 3 2 0 5 0 7 0 4 0 3 0 0 1 3 0 2 0 0 5
3 0 3 0 2 0 4 0 0 4 5 0 1 0 5 0 1 0 5 0 6 0 3 0

11672 F 14 5.95 5.75 7 0 0 7 0 7 0 5 3 0 4 0 7 0 7 0 3 0 0 5 0 7 5 0 7 0
1 0 5 0 0 2 0 3 0 7 2 0 7 0 7 0 7 0 0 6 0 5 0 4

11423 M 6 4.80 4.65 0 3 0 7 0 7 0 7 0 5 5 0 3 0 0 3 0 1 0 5 0 1 0 5 0 2
0 6 0 5 0 1 0 1 0 5 1 0 2 0 5 0 1 0 0 7 0 7 0 7

6619 M 12 4.35 5.60 4 0 0 5 0 3 0 5 0 3 5 0 4 0 3 0 0 4 0 3 0 4 5 0 0 7
0 6 6 0 4 0 3 0 6 0 7 0 0 3 4 0 0 2 0 6 5 0 0 4

6520 M 9 4.45 4.65 5 0 0 6 0 7 0 5 0 4 3 0 4 0 0 3 0 2 0 4 6 0 3 0 0 3
0 5 5 0 0 5 6 0 0 7 3 0 0 4 0 6 0 1 0 6 0 7 3 0

12755 M 14 4.25 5.80 3 0 0 4 0 3 2 0 1 0 5 0 2 0 4 0 1 0 0 1 0 1 0 4 0 7 0
0 6 2 0 1 0 0 6 2 0 1 0 1 0 1 0 0 2 0 5 1 0

11547 M 12 4.93 5.20 4 0 0 5 0 3 1 0 0 3 4 0 2 0 6 0 0 1 0 2 6 0 0 3 4 0 0 2
4 0 4 0 5 0 6 0 5 0 5 0 5 0 6 0 0 7 0 7 6 0

945 F 11 6.10 3.10 6 0 0 7 0 7 0 6 7 0 6 7 0 7 0 5 0 6 0 7 0 6 0 6 0 5
5 0 6 0 6 0 0 7 6 0 5 0 5 0 0 6 0 7 6 0 0 7

09153 M 14 5.10 5.05 6 0 0 7 0 6 0 4 0 6 4 0 6 0 7 0 5 0 0 6 0 7 0 7 0 4 5 0
6 0 5 0 5 0 0 7 6 0 4 0 5 0 4 0 0 5 0 6 6 0

11355 M 16 4.60 5.60 5 0 0 7 0 7 0 4 6 0 7 0 7 0 5 0 0 5 0 7 7 0 0 7 6 0
4 0 4 0 5 0 6 0 5 0 5 0 5 0 6 0 0 7 0 7 6 0

09445 M 09 5.70 6.15 7 0 0 7 0 4 0 7 0 7 0 4 7 0 4 0 0 4 0 2 0 7 0 6 0 7 0 5
3 0 1 0 0 1 5 0 5 0 3 0 1 0 0 2 0 7 0 7 0 7

03545 M 11 5.20 5.95 0 6 0 7 0 7 0 6 0 7 6 0 7 0 7 0 5 0 0 6 0 6 6 0 0 5 0 5
6 0 6 0 6 0 0 7 6 0 6 0 5 0 0 3 0 7 0 7 0 4

00319 F 16 4.25 5.05 5 0 7 0 0 1 6 0 0 6 6 0 7 0 7 0 0 1 0 3 7 0 6 0 0 7 0 7
6 0 5 0 6 0 7 0 7 0 6 0 1 0 0 1 0 6 5 0 0 2

00130 F 14 5.45 4.45 0 7 0 7 0 7 0 5 4 0 6 0 7 0 7 0 0 6 0 7 7 0 0 6 0 6 6 0
6 0 5 0 6 0 6 0 5 0 5 0 5 0 6 0 0 5 0 7 0 5

00268 F 11 4.85 4.05 0 6 0 7 0 7 0 7 0 5 7 0 7 0 5 0 7 0 0 6 0 6 0 7 0 6 0 5
6 0 6 0 4 0 0 7 6 0 0 5 7 0 5 0 0 7 7 0 0 4

00420 F 12 5.30 4.95 6 0 0 6 7 0 5 0 0 6 0 5 7 0 0 6 0 7 0 5 4 0 0 7 0 6 4 0
6 0 5 0 7 0 0 6 7 0 5 0 7 0 0 1 0 4 0 6 0 5

00519 F 14 5.55 4.05 4 0 5 0 0 6 0 6 0 5 2 0 3 0 0 7 0 6 0 6 6 0 0 6 3 0 0 5
4 0 4 0 5 0 5 0 6 0 6 0 5 0 2 0 0 5 0 7 0 6

04471 F 13 4.95 3.95 5 0 0 5 0 7 0 4 0 1 2 0 3 0 7 0 4 0 0 7 7 0 0 7 0 7 0 1
1 0 0 3 1 0 0 7 1 0 1 0 1 0 7 0 0 7 0 7 3 0

04565 F 07 5.00 4.55 0 2 0 4 0 5 0 6 1 0 6 0 2 0 4 0 0 2 0 7 0 6 0 1 0 7 0 1
0 1 0 1 0 4 0 6 1 0 0 1 1 0 1 0 0 2 0 4 0 4

04621 F 14 4.95 3.85 6 0 7 0 0 6 6 0 0 5 5 0 5 0 0 5 0 6 0 6 0 6 5 0 0 6 0 5
5 0 7 0 4 0 5 0 4 0 5 0 5 0 0 5 0 6 5 0 0 5

04821 M 12 5.60 5.45 0 6 7 0 0 1 2 0 0 5 6 0 0 6 6 0 0 7 0 6 0 5 0 6 0 6 5 0
4 0 1 0 5 0 7 0 0 6 3 0 5 0 0 4 0 5 6 0 0 6

04920 F 13 5.45 4.75 5 0 0 5 0 5 4 0 0 6 4 0 4 0 0 5 0 5 0 5 5 0 6 0 0 4 0 6
5 0 6 0 6 0 0 5 7 0 4 0 7 0 5 0 0 7 0 6 0 6

05074 F 10 4.80 4.20 1 0 0 7 0 7 0 5 5 0 7 0 7 0 0 6 0 6 0 7 0 5 0 7 0 7 5 0
5 0 0 6 0 7 0 7 6 0 0 6 5 0 6 0 0 7 0 7 5 0

05121 M 13 4.80 4.50 5 0 0 2 0 7 0 6 0 3 7 0 4 0 3 0 0 5 0 4 0 2 5 0 0 5 0 2
4 0 5 0 4 0 4 0 2 0 0 4 4 0 0 1 0 3 4 0 3 0

05219 F 09 6.00 4.75 5 0 0 7 0 7 0 5 0 6 7 0 7 0 6 0 0 5 0 7 0 5 0 6 0 4 0 1
6 0 3 0 0 1 0 7 5 0 5 0 7 0 0 1 0 7 0 7 0 5

05420 F 15 5.70 5.80 6 0 0 6 0 4 0 6 0 4 6 0 7 0 7 0 5 0 0 6 0 5 6 0 0 5 0 4
5 0 6 0 6 0 7 0 6 0 5 0 5 0 4 0 0 7 6 0 0 4

05520 M 14 4.78 4.00 5 0 0 6 0 6 0 4 4 0 5 0 4 0 5 0 0 4 0 2 0 1 0 4 4 0 3 0
5 0 4 0 3 0 0 2 5 0 4 0 4 0 1 0 0 4 0 4 0 5

05620 F 13 5.30 5.90 5 0 7 0 0 7 0 5 0 3 4 0 7 0 0 5 0 3 0 7 0 6 6 0 5 0 0 4
6 0 7 0 4 0 7 0 5 0 2 0 0 5 0 2 0 7 4 0 0 6

05721 F 14 5.70 5.45 5 0 0 7 0 7 0 5 4 0 5 0 4 0 4 0 0 3 0 1 0 6 0 6 0 2 0 7
6 0 2 0 6 0 7 0 7 0 7 0 6 0 5 0 0 7 7 0 0 7

05918 F 12 5.15 4.25 0 7 0 7 0 7 0 7 2 0 5 0 6 0 6 0 0 6 0 6 5 0 0 5 0 6 0 5
0 5 0 6 0 7 0 5 0 5 0 2 0 1 0 0 7 0 7 4 0

06019 F 11 4.85 3.80 5 0 0 6 0 6 0 5 0 5 5 0 4 0 0 5 0 4 0 6 0 4 4 0 0 3 0 4
4 0 5 0 4 0 0 6 5 0 4 0 4 0 0 5 0 6 5 0 0 4

06120 F 10 4.80 4.65 4 0 0 5 0 7 0 7 0 3 4 0 6 0 4 0 0 5 0 4 0 3 0 6 0 5 4 0
0 4 2 0 2 0 0 4 4 0 0 5 4 0 0 1 0 6 2 0 0 3

06221 M 06 4.70 3.90 6 0 0 7 0 7 4 0 0 6 7 0 5 0 0 5 0 4 0 5 0 4 0 4 0 7 0 6
0 5 0 5 0 5 0 5 6 0 6 0 0 5 0 5 0 7 0 7 0 6

06822 F 12 4.90 5.05 0 6 5 0 0 7 3 0 0 2 7 0 5 0 2 0 0 3 0 5 5 0 6 0 0 5 0 5
4 0 5 0 0 7 0 7 2 0 0 2 3 0 3 0 0 2 0 7 0 6

06319 M 18 4.65 5.75 5 0 5 0 0 3 5 0 0 2 1 0 3 0 3 0 0 3 0 1 3 0 4 0 0 5 0 5
5 0 3 0 4 0 5 0 2 0 3 0 3 0 1 0 0 5 4 0 4 0

06780 F 11 4.50 4.00 0 4 0 4 3 0 0 2 0 1 3 0 4 0 5 0 0 1 0 4 0 2 0 3 2 0 0 2
2 0 0 1 0 3 0 3 2 0 1 0 2 0 2 0 0 2 0 2 1 0

06921 M 14 4.55 5.00 3 0 0 6 0 6 0 4 0 3 4 0 5 0 5 0 0 4 0 3 3 0 5 0 0 5 0 3
3 0 5 0 4 0 6 0 4 0 4 0 2 0 0 1 0 5 0 5 3 0

07020 M 11 4.95 4.60 4 0 0 6 0 6 0 6 0 2 3 0 3 0 4 0 0 2 0 1 0 1 0 2 0 1 0 2
2 0 3 0 1 0 6 0 2 0 1 0 0 1 0 1 0 6 3 0 0 1

07118 M 16 4.40 5.75 4 0 0 6 0 2 6 0 6 0 7 0 5 0 7 0 0 4 6 0 0 7 0 6 0 7 0 5
5 0 7 0 7 0 7 0 4 0 6 0 5 0 0 1 0 7 5 0 4 0

07222 M 18 4.10 6.15 4 0 6 0 0 5 0 1 3 0 6 0 3 0 5 0 0 1 0 1 3 0 4 0 0 1 2 0
3 0 4 0 5 0 6 0 3 0 1 0 1 0 1 0 0 3 0 3 4 0

07317 M 13 4.80 4.80 6 0 0 7 0 6 7 0 7 0 0 5 2 0 6 0 0 7 0 3 5 0 0 5 0 7 0 7
0 3 4 0 5 0 6 0 7 0 7 0 0 3 0 2 5 0 5 0 0 7

07418 M 11 5.00 5.60 0 3 0 6 0 4 0 5 0 7 0 7 5 0 6 0 0 5 0 3 5 0 6 0 0 7 0 6
7 0 6 0 4 0 0 4 5 0 4 0 5 0 0 1 0 6 5 0 0 6

07574 F 09 4.75 4.65 0 6 0 6 0 7 0 5 0 7 5 0 7 0 0 7 7 0 0 7 0 7 0 6 0 7 0 7
5 0 3 0 0 2 0 7 0 3 3 0 6 0 5 0 0 6 0 7 5 0

07640 M 15 4.55 5.25 6 0 7 0 4 0 0 5 0 4 3 0 2 0 3 0 2 0 0 3 0 1 3 0 0 2 2 0
1 0 1 0 1 0 1 0 1 0 0 1 1 0 0 1 0 1 0 2 0 4

07746 M 15 3.85 5.05 6 0 6 0 0 5 0 4 0 3 5 0 6 0 5 0 0 2 0 1 6 0 0 4 0 6 0 1
4 0 6 0 3 0 3 0 6 0 1 0 4 0 1 0 0 6 4 0 0 2

07840 M 14 5.30 5.35 7 0 7 0 0 5 0 6 0 7 4 0 7 0 5 0 7 0 0 5 0 6 0 6 0 7 0 7
6 0 7 0 0 6 7 0 5 0 7 0 7 0 5 0 0 7 0 7 5 0

07948 M 15 4.65 5.45 3 0 7 0 0 5 0 4 0 7 3 0 5 0 5 0 0 1 0 2 4 0 0 3 0 7 0 6
4 0 3 0 4 0 7 0 4 0 4 0 7 0 2 0 0 7 7 0 0 7

