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# Locus of Control and Aspiration in Feminist and Traditional Women

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LOCUS OF CONTROL AND ASPIRATION IN  
FEMINIST AND TRADITIONAL WOMEN

A Thesis

Presented to the  
Department of Psychology  
and the  
Faculty of the Graduate College  
University of Nebraska at Omaha

In Partial Fulfillment  
of the Requirements for the Degree  
Master of Arts

by

Shelagh Emmott

December, 1975

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THESIS ACCEPTANCE

Accepted for the faculty of the Graduate College, University of Nebraska, in partial fulfillment of the requirements for the degree Master of Arts, University of Nebraska at Omaha.

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The concept of locus of control has been a widely-researched one in recent years. An outgrowth of Rotter's (1954) social learning theory, it has found application in the prediction of a diversity of behaviors, some, such as achievement behavior and resistance to conformity pressure, of considerable social import. Locus of control has been conceived of as an expectancy variable concerning the individual's beliefs as to the amount of control he exerts over important reinforcements; expectations predicated upon the validation of experience over the course of time. At its internal pole, the construct refers to the generalized expectation that reinforcements are contingent upon one's personal actions. The external pole attributes control over reinforcements to luck, chance, or powerful others.

An internal locus of control has been found to be predictive of a number of positively valued behaviors: resistance to conformity pressures (Biondo & McDonald, 1961; Odell, 1959; Strickland, 1965); the ability to attend to personally relevant information (Phares, 1968; Lefcourt & Wine, 1969; Seeman & Evans, 1962); and the ability to delay gratification (Bialer, 1961; Lessing, 1969). Internals have been found to demonstrate realistic aspiration levels, taking previous performance into account in predicting future behavior (Crowne & Liverant, 1963; Feather, 1968; Lefcourt,

1967), and they tend to adopt more constructive and less intrapunitive responses to frustration than do externals (Butterfield, 1964). There appears to be an inverse relationship between internality and maladjustment (Harrow & Ferrante, 1969; Shybut, 1968), and on a series of personality measures, internals described themselves as more active, striving, powerful, achieving, independent and effective than externals (Hersch & Scheibe, 1967).

A number of researchers have questioned the unidimensionality of the locus of control concept. Mirels (1970) performed a factor analysis on Rotter's Internal-External Scale, using a principal components method with squared multiple correlations on the diagonals. He found two orthogonal underlying factors; Factor I concerning the respondent's inclination to assign greater or lesser importance to ability and hard work than to luck as influences determining personally relevant outcomes, and Factor II focusing on the respondent's acceptance or rejection of the idea that a citizen can exert control over political and world affairs. Joe and Jahn (1973) converted the Rotter forced-choice format to a Likert-type scale, thus permitting product-moment rather than phi coefficients, which result in greater variability and larger item correlations, and thus a more sensitive factor analysis. Using a principal component analysis carried out on a correlation matrix with

squared multiple correlations on the diagonal, followed by an orthogonal rotation by the varimax method, two factors were found which correspond closely to the factors described by Mirels. The first factor, although not limited to perceptions of personal efficacy, made attributions to hard work as opposed to luck, and the second factor, concerned with influence on political affairs, replicated Mirel's second factor exactly. Similar factor structures were found by Gurin, Gurin, Lao & Beattie (1969), Lao (1970), and Abramowitz (1973). These studies indicated that the differentiation of perceptions of personal and socio-political control was essential in interpreting locus of control orientation.

Collins (1974) converted Rotter's 23 forced-choice items to 46 items with Likert-type response formats to measure agreement. In addition to replicating Mirel's two factors, he identified an additional two factors, using a principal component factor analysis with multiple squared correlations in the diagonals. With a four-factor rotation using the varimax method, Collins found factors that met the criteria for simple structure to a considerable degree, with 37 of the 46 items loading greater than .35 on one and only one factor. He discussed the factors in terms of attributions of causality in a self-perception and person-perception framework. Persons could differ in the extent

to which they attribute consequences of behavior to be regularities in either the actor or the environment (predictability and lawfulness versus chance), and in the extent to which they attribute control to dispositional attributes of actor as opposed to environmental contexts (situational versus dispositional attributions). Collins described the four factors respectively as beliefs in 1) a difficulty-easy world (the environment poses tasks that are difficult and complex); 2) a just-unjust world (effort and ability are generally unrewarded); 3) a predictable-unpredictable world (the environment is programmed on a random reinforcement schedule); and 4) a politically responsive-unresponsive world (the institutions of government are not responsive).

The factors derived as the result of these various studies have proved to be of predictive utility, particularly in explaining the behavior of minority group members. While blacks, like other minority group members, have consistently scored in a more external direction than whites on the original form of the locus of control scale (Lessing, 1969; Owens, 1969; Shaw & Uhl, 1969). Gurin et al., (1969) found that when scores of black college students and job trainees on a locus of control scale were analyzed in terms of a two-factor structure, the

subjects endorsed the "Protestant Ethic" (internal) items which had a content area related to socio-political matters, as often as did whites, although they expressed much more pessimism about the amount of control they possessed as individuals. Results of the Coleman Report, a massive study of educational opportunity (Coleman, et al., 1966) indicated that internal control was the best predictor of academic success for minority students, and that locus of control accounted for more of the variance than any other single measure. Similarly, the subjects in Gurin's study who scored in an internal direction on items measuring personal control demonstrated traditional achievement behavior such as high achievement test scores, high GPA's, good performance on an anagrams test, and realistic aspirations to prestigious, demanding jobs. Gurin found that students who endorsed internal values concerning society at large performed less well than external subjects on measures of traditional achievement, however. Furthermore, subjects who were external concerning the amount of control they exerted in the socio-political realm aspired to jobs not traditionally held by blacks, and believed in the efficacy of collective social action for achieving better conditions for blacks. These findings were subsequently replicated by Lao (1970), who found that the two factors

acted independently of each other; an internal belief in social control predicting civil rights activity and a preference for collective action among a group of black college students.

Gurin (1969) discussed the meaning of the differential behavior associated with the two-factor structure in terms of the psychologically dysfunctional results of members of minority populations taking responsibility for their inability to succeed in a discriminatory society. He postulated that an external orientation concerning the perception of social control would be a more realistic and less intrapunitive response for persons who were the victims of discrimination, and should be thought of in terms of its adaptive value. According to Gurin, the most adaptive pattern of locus of control for a member of a minority group would be a sense of personal control over reinforcements, but a low sense of control over social and political events.

Exactly this pattern of control was found by a number of investigators of black militants (Caplan 1970; Forward & Williams, 1970). Caplan & Paige (1968), in a study of black rioters in Newark and Detroit in 1967, found that rioters had strong feelings of racial pride and attributed blame for racial unrest to societal discrimination. Forward and Williams (1970) found that there was no difference

between militants and non-militants on the total score on the undifferentiated Rotter scale; only when the scale was interpreted in terms of personal versus socio-political efficacy did differences emerge. Using the two-factor structure of locus of control in a study of social-political action in a sample of white, middle-class college youth, Abramowitz (1973) replicated the findings of other investigators of white populations (Strickland, 1965) that internality concerning social forces was predictive of social involvement. These results underscore the fact that different motivational variables appear to be operative for white Americans and members of minority groups.

Not only racial minorities but members of lower social classes have been found to give different response patterns to locus of control measures. Gruen and Ottinger (1969) found that beliefs in internal control (on Rotter's original scale) were related to membership in higher social classes, and internality on Rotter's scale was found to be related to objective access to opportunity (Jessor, et al., 1968). Although these studies did not discriminate between personal and social control, one could hypothesize that the external subjects were probably responding in terms of their realistic perceptions of lack of political control over external forces that affect the probability of attaining personal goals.



To the extent that women could be described as members of an oppressed social class as well as victims of discrimination, perhaps some of the pattern of perceptions held by blacks might be also held by women. Helen Hacker (1975) discussed the aptness of the designation of minority group for women:

"As females, in the economic sphere, women are largely confined to sedentary, monotonous work under the supervision of men, and are treated unequally with regard to pay, promotion and responsibility. With the exception of teaching, nursing, social service and library work, in which they do not hold a proportionate number of supervisory positions, and are often occupationally segregated from men, they make a poor showing in the professions. Educational opportunities are likewise unequal.... As citizens, women are often barred from jury service and public office. Even when they are admitted to the apparatus of political parties, they are subordinated to men.... In the specially ascribed status of a wife, a woman--in several states--has no exclusive right to her earnings, is discriminated against in employment, must take the domicile of her husband, and in general meet the social expectations of subordination to her husband's interests. As a mother, she may not have the guardianship of her children, bears the chief stigma in the case of an illegitimate child, is rarely given leave of absence for pregnancy...."

Many of the characteristics ascribed to blacks are shared by women; both groups are thought to be irresponsible, happy-so-lucky, intuitive, controlled by instinctual drives, and of inferior intelligence. Given the occupational and educational disparities of women as well as women's internalization of negative sex-role stereotypes, it might be expected that the same perceptions of control would be

held by women as are held by blacks. The two groups are dissimilar in many respects, but perhaps their shared inferior status would lead to shared perceptions. In particular, one would expect that feminists should demonstrate perceptions similar to those of black militants, since feminists hold analagous positions in the women's movement as militants do in the struggle for civil rights.

Such, in fact, appears to be the case. Sanger and Alker (1972) found that feminists showed a pattern of responses similar to that of black militants on the two-factor locus of control structure; they were characterized by internal personal control and external social control. Feminists also gave fewer responses espousing traditional feminine roles when questioned about their future careers and goals; like Lao's black subjects with high personal and low social control perceptions, they were more innovative in their aspirations. The rhetoric of the women's movement emphasizes the stance that societal laws and attitudes have resulted in the oppression of women (Millett, 1970; Firestone, 1970). Sanger and Alker's study seems to demonstrate that feminists do indeed share the premises of these arguments.

The question, however, arises as to content of the

external attributions made by women, and of the utility of such attributions to the attainment of meaningful goals. Surely there is a difference between a person who feels a lack of control over societal events because such events are due to random fluctuations of chance, and the person who feels that there are regularities to social and political events, but things are so constituted that only certain persons or groups benefit from the existing structure. The use of the two-factor structure introduced by Mirels does not make this distinction clear; the use of a scale like Collin's would make such a discrimination. It would seem a logical assumption to expect that persons who attributed the demands of the social and political situation to variegations of chance to be less likely to take up arms against outrageous fortune than would someone who perceived society in less Gaussian terms.

Perhaps more important, does the adoption of a feminist view of the world result in more adaptive behavior for women, or does it merely provide a handy excuse for failure? Thurber (1972) suggests that externality is an ego-defensive, anxiety-reducing defense mechanism and so women high in externality should demonstrate achievement superior to more internal, anxiety-inhibited women. Although Thurber does not make the distinction between personal and social externality, one could hypothesize that women who

exhibit social externality and personal internality give themselves a rationale for failure and the courage to attack difficult problems.

The question also arises as to whether or not an internal personal and external social orientation leads to more or less realistic aspiration levels. It should be noted that externals identified on Rotter's original scale demonstrated an inability to effectively use the information garnered by personal experience to estimate the subjective probability of success on performance measures, and also demonstrated unrealistic aspiration levels (expectations of success following failure, and vice-versa) (Lefcourt, 1967). Would these patterns of aspiration be shown by individuals with the "feminist" control perceptions? A difference in the aspiration levels of those who believe that social events are uncontrollable because they are the results of chance, and those who believe that social events are uncontrollable because control over reinforcements is maintained by a select few, would also seem to logically follow. The first group would be expected to perform in a manner similar to Rotter's external subjects, failing to change their aspirations as a result of experience, while the second group would be expected to exhibit more realistic aspiration levels.

In order to examine these issues, groups of feminist and traditional women were examined in order to discover their patterns of control perception, and women with "feminist" control patterns of personal internality and social externality (PI-SE) were compared to other women in order to test the following hypotheses:

- 1) Women who endorse feminist ideology will demonstrate the PI-SE pattern of control.
- 2) Women with the PI-SE pattern of control will perform better (have more correct solutions) on an experimental task (anagrams) than women with other control patterns.
- 3) Women with the PI-SE pattern of control will show higher aspirations (estimations of the probability of success) than women with other patterns of control.
- 4) Women with the PI-SE pattern of control will show smaller shifts in estimations of probability of success following success or failure than women with other control patterns.
- 5) Women with the PI-SE pattern of control will show fewer atypical shifts in expectations (rises in estimates of probability of success following failure, and vice-versa).

## METHOD

### Subjects

Subjects were 80 women living in a large Midwestern city (population 350,000). Comparison groups were chosen with the intent of maximizing differences in attitudes toward feminism. A further consideration in subject selection was the desire to examine groups other than the college sophomores traditionally studied by psychologists (Higbee & Wells, 1975). The traditional sample was composed of 40 women who were members of airmens and non-commissioned officers wives social clubs at a local Air Force base. The feminist sample was composed of 40 members of local National Organization for Women (NOW) chapters and women who attended a women-only feminist weekend retreat-and-singathon. It was anticipated that members of NOW, which advocates social and political action aimed at improving the status of women, would be more likely to endorse feminist views, and to display the PI-SE pattern of control than the Air Force women, who are from a social environment which usually affirms traditionally conventional views toward women. It was anticipated that more extreme differences in the variables of interest would be discovered between the two groups studied than among a group of college students.

Letters describing the study and requesting participation were sent to the presidents of the Air Force social clubs, and a personal presentation and request was made to the executive boards of two local NOW chapters. The materials were administered to subjects in groups, during regularly-scheduled meetings or, in the case of the feminist weekend, as part of the program. Data from three members of the traditional sample were dropped because of incomplete responses.

#### Differences between Feminists and Traditionals

Previous studies have found that feminists tend to be younger, better-educated, and holders of better-paying jobs than women who are not feminists (Oregon Women's Research Group, 1973; Finkler and Gard, 1975). In general, this was true of the two groups studied, except for the fact that the feminist group was somewhat older than the traditionals. Perhaps because the Air Force sample was chosen more on the basis of their anticipated conservatism on feminist issues and differential locus of control patterns, than on equivalence with feminists on other variables, there were considerable differences between the groups.

The feminists were approximately two years older than the traditionals sampled, with a mean age of 32.9 as com-

pared to 30.4 years for the traditionals, not a significant difference ( $t=1.08$ ,  $p \geq .43$ ). The college students sampled by the Oregon group (1973) had a median age of 21 years, but Finkler and Gard's (1975) subjects, interviewed at a feminist political rally and at encounter groups, were an average of 28 years old. Since the present study, like Finkler and Gard's, studied feminists in settings other than the college campus, the similarity in age in the two studies may indicate that feminism may be characteristic of women in their late twenties. There was a wide range of ages sampled (S.D. = 11.3 years); women of ages 16 to 74 responded.

The feminists were better educated than the traditionals. The feminists averaged 16.5 years of school, while the traditionals had a mean of 12.6 years of education, a significant difference ( $t=7.63$ ,  $p < .0001$ ). Forty-nine per cent of the feminists had attended graduate school, compared to 5.5% of the traditionals ( $\chi^2 = 15.71$ ,  $p < .001$ ).

The feminists also held more skilled and better-paying jobs than the traditionals. Sixty per cent of the feminists held jobs listed in the nine highest categories of Hollingshead's (1958) Index of Social Position, a majority of them being classed as semi-professionals (a category including reporters, clergy, and morticians). Seventy-six



per cent of the traditionals held jobs in the semi-skilled category, which includes hospital aides, waitresses, and housewives. This difference was significant ( $\chi^2 = 40.99$ ,  $p < .0001$ ). Similarly, the husbands of the feminists who were married were higher in occupational status as measured by the Hollingshead scale than the husbands of the traditional group ( $\chi^2 = 22.18$ ,  $p < .0005$ ). Forty-five per cent of the feminists' husbands were in the top six categories of the occupational scale, most being lesser professionals, a category including pharmacists and social workers. In contrast, 69% of the husbands of the traditionals were technicians, clerical workers, or skilled manual employees, categories 11 and 12 of the Hollingshead scale.

The occupations of the parents of the two groups were not significantly different, nor was the amount of education of the fathers (all  $p$ 's  $\geq .23$ ). The mothers of the feminists had an average of 12.8 years of schooling, however, compared to 11.1 years for the mothers of the traditionals ( $t = 2.68$ ,  $p < .01$ ).

There were other differences between the two groups. All of the traditional group were married, except for one widow. This was not surprising, since data for the traditional subjects was gathered in social clubs composed of wives of Air Force personnel. Only 40% of the feminists

were married, 30% being single, 25% divorced, 8% separated, and one person being widowed. Finkler (1975) found the same high percentage (25%) of divorces among her feminists. The high incidence of divorces and separations among the feminists in this sample might indicate that feminism is attractive to women who are in periods of social transition.

Although 65% of the feminists indicated that they had no religion or that their religion was other than Protestant, Catholic, or Jewish, only 8% of the traditionals were other than Protestant or Catholic.

#### Measures

Two questionnaires were administered to the subjects, a feminism scale (which includes a biographical data sheet) and a locus of control scale. In addition, performance and aspiration measures were obtained during the experimental task. Copies of all the dependent measures are included in Appendices A-C.

The Roles of Women questionnaire (see Appendix A), devised by the Women's Research Group at the University of Oregon (1971), contains items which measure degree of commitment to feminist ideology ("A woman should not sacrifice her work or her career to meet the needs of her family any

more than her husband does"); perception of discrimination ("A woman can go as far as she wants in the business or professional world"); and nontraditionality in behavior ("I shave my legs regularly"). The Oregon researchers reported a co-relation of .80 between total score on the feminism scale and a composite feminism criteria, including membership in a feminist organization, attitudes toward the women's liberation movement, and participation in a feminist organization within the last year. The scale has been found to discriminate between members of feminist organizations and women who are members of more traditional organizations such as church auxiliaries (personal communication, Finkler, 1975).

The feminism scale also contains a biographica data sheet, which includes questions concerning the education and occupation of the subject and her husband and parents.

The locus of control measure used (see Appendix B) was devised by Collins (1974). Responses were Likert-type rather than forced choice, a format which increases variability in responses and thus aids in subsequent factor analyses. Collins reported that responses obtained using the Likert format correlated .82 with responses obtained using the forced-choice format used on the same scale items by Rotter (1966). Collins reported test-retest reliabilities

over a period of a week for single items on his scale ranging from .18 to .75 with a median correlation of .54. Collins noted that items that Mirels (1970) used in constructing his two factors loaded higher than .40 on the first two factors that comprised Collins' scale, even though Mirels had used a forced-choice format. Collins analyzed his data by means of a principal components factor analysis with squared multiple correlations in the diagonals, and found that there was a single underlying theme running through all 46 alternatives. In addition to identifying a common theme, Collins used a four-factor rotation which spread the variance evenly over four discrete subsets of items, and met the criteria for simple structure, 37 of the 46 items loading more than  $\pm .35$  on one and only one factor.

The occupational scale used was devised by Hollingshead (1958). It is an ordinal ranking of some 500 occupations, divided into 20 categories on the basis of skill, education, salary and occupational prestige.

Several considerations entered into the choice of a dependent measure. Aspiration was chosen as the dependent variable, since aspiration was hypothesized to be factor differentiating feminists from traditional women. The performance task was the solution of anagrams, which were chosen since verbal tasks are not considered to be biased

against women. It was decided to select words of varying difficulty for solution, so that the measurement of aspiration would reflect individual differences in aspiration. Sutcliffe (1955) predicted that personality variables were most likely to manifest themselves in ambiguous situations, and Feather and Saville (1968) provided support for this prediction in a study involving aspiration measures. They found that aspirations showed greater generality on high variability tasks, and concluded that the reduction of the usefulness of performance feedback information in unpredictable situations made simple cognitive likelihood judgements difficult. In other words, in an ambiguous situation in which feedback was not useful, individual differences in aspiration were more apparent. Similarly, it was anticipated that high variability of difficulty in the present experimental task would result in increasing the effect of the PI-SE pattern of control on aspiration.

#### Pretest

In order to establish a set of anagrams with varying difficulty, a pretest was administered to 20 female students in an introductory psychology course at the University of Nebraska at Omaha. The purpose of the pretest was to

establish norms for solution times of anagrams.

Subjects were recruited from an introductory psychology course, and received course credit for participating in the experiment. The subjects were an average of 20.4 years of age (S.D. = 8.1 years). Fourteen of the subjects were college freshmen, and six were sophomores.

One hundred and twenty words were selected from the Lorge-Thorndike (1933) word frequency index, and then scrambled to form anagrams. Sets of three- and four-letter words were selected from four frequency categories of the Lorge-Thorndike list, the AA category (words occurring 100 or more times per million), the A category (words occurring 50 to 100 times per million), the 40 category (words occurring 40 to 50 times per million) and the 30 category (words occurring 30 to 40 times per million). It was anticipated that the difficulty of the anagrams would be closely related to the frequency of occurrence of the solution words.

The task was administered individually to each subject in a small experimental cubicle. The anagrams were typed on 3x5 index cards and presented individually to the subjects. Subjects were timed with a stopwatch to solution time as they unscrambled the anagrams.

The individual anagrams were found to have solution times ranging from four seconds to three minutes. Anagrams

with more than one solution were discarded, and the remaining words were divided into eight difficulty levels on the basis of solution times. Eight lists of ten words each were constructed, with a mean list solution time of 184.4 seconds, approximately three minutes. The lists ranged in difficulty from one to six minutes. (See Appendix D for word lists and median solution times.)

Following the pretest, the anagrams were collected in a booklet containing eight pages of anagrams alternating with pages asking questions about aspirations (see Appendix C). The cover page asked the subjects to estimate 1) their best performance on the succeeding trial (in number of words correctly solved), 2) their worst performance on the succeeding trial, and 3) their estimate of their actual performance on the next trial. Exactly the same questions were alternated with anagram lists in the booklet, so that subjects answered aspiration questions immediately prior to each trial.

Each anagram trial consisted of a list of three- or four-letter anagrams, ten anagrams per page. Each list contained all three-letter or four-letter words of approximately the same difficulty. The level of difficulty varied from list to list, and pages containing the lists were arranged randomly to make up booklets consisting of eight

pages of anagrams alternating with eight sets of the three aspiration questions.

### Procedure

All subjects were tested in a group setting. Each was first asked to fill out the Roles of Women questionnaire, with its biographical data sheet, and the Collins Locus of Control Scale. They were then handed the booklets containing the anagrams and the aspiration questions and read the following instructions:

"The task that you will now be asked to do is a measure of analytical ability. We are interested in the relationship of this task to the other tests you have just completed. The task that you are being asked to do is an anagrams task. An anagram is a word with scrambled-up letters, like this one (experimenter holds up card with the letters 'TBIE' printed on it). Your task is to rearrange the letters so as to form a meaningful English word. For example, this word can be rearranged to form the word 'bite' (experimenter demonstrates by pointing to word on card). You are not to make any foreign words, or any proper names, like Sue or Bill. Any questions?"

The booklet in front of you contains eight pages of anagrams, with a list of ten anagrams per page. You will be given three minutes per page to solve all ten anagrams. Before you begin the test, look at the three questions on the top page of the booklet. The three questions ask you to estimate the best score you think you will achieve, the worst score you think you will achieve, and the number correct you actually think you will get right on the first trial. These same three questions will be asked again before each trial. Please go ahead and answer the three questions on the front of the booklet. (Pause).



Before we begin, I would like to ask that you take your role of subject seriously, and try to do your very best. I believe that the outcome of this research may be significant, and in order that these results be meaningful, I need your help. So please try to do your very best.

You will have three minutes to work on each page. I will time you with a stopwatch. Please do not start a new page until I tell you to do so, and stop as soon as I say stop. You may now begin."

The subjects then started the anagrams task. The experimenter timed each trial with a stopwatch, allowing three minutes for each trial. After the subjects had completed the experiment, they were told the hypotheses and the purpose of the study.

## RESULTS

## Validity and Reliability of Feminism Scale

The traditional and feminist group were found to be significantly different on the mean feminism scores ( $t = 13.92$ ,  $p < .00001$ ). The feminist group had an overall mean of 145.84 on the scale, with the highest possible score being 180, and the traditional group had a mean of 102.56. An intercorrelation matrix was computed to describe the relationships among four criteria of feminism; the total feminism score (scored from 1 to 180), stated membership in a feminist organization (scored yes/no), extent of agreement with women's liberation (scored 1 to 7), and extent of participation within the last year in an organization working for women's rights (scored 1 to 7). (The computer program used produced correct phi and point-biserial coefficients where the combinations of dichotomous and continuous data made such appropriate). All of the correlations were significant at  $p < .001$  level. The lowest correlation (.55) was between extent of endorsement of the women's liberation movement and stated membership in a feminist organization. The highest correlation was between total feminism score and participation in a feminist organization within the last year (.77). In

general, the intercorrelations indicated that the score on the Roles of Women Scale was a valid indicator of feminism. (See Table 1.)

TABLE I  
VALIDITY COEFFICIENTS

	<u>FEMSCORE</u> <sup>a</sup>	<u>Q15</u> <sup>b</sup>	<u>Q17</u> <sup>c</sup>	<u>LIB20</u> <sup>d</sup>
FEMSCORE	1.000 ( <u>p</u> <.001)	.6988 ( <u>p</u> <.001)	-.7077 ( <u>p</u> <.001)	.7651 ( <u>p</u> <.001)
Q15	.6988 ( <u>p</u> <.001)	1.000 ( <u>p</u> <.001)	-.5468 ( <u>p</u> <.001)	.6949 ( <u>p</u> <.001)
Q17	-.7077 ( <u>p</u> <.001)	-.5468 ( <u>p</u> <.001)	1.000 ( <u>p</u> <.001)	-.5836 ( <u>p</u> <.001)

\* (Note: All correlations with Q15 are point biserial coefficients; all others are Pearson product-moment coefficients).

<sup>a</sup>FEMSCORE = total score on feminism scale (1 to 180).

<sup>b</sup>Q15 = stated membership in a feminist organization (no = 1, yes = 2).

<sup>c</sup>Q17 = responses to the question "How do you feel about women's liberation?" (1 = strongly opposed, 5 = strongly in favor).

<sup>d</sup>LIB20 = responses to the question "I have participated in the last year in an organization working for women's rights" (1 = strongly agree, 5 = strongly disagree).

In addition, score on the Roles of Women scale was correlated with membership in either the traditional or feminist group. A split at the overall mean of the feminism scale scores indicated that the majority of the members of the feminist group did indeed endorse feminist ideology, and that the Air Force wives were traditional in outlook. The correlation between the variable TRUFEM (position on the feminism scale) and sample group membership was  $.87$  ( $p < .001$ ). Of the 40 members of the feminist sample, two were below the overall mean on feminism, and the reverse was true for three of the 37 traditionals.

There were significant differences between the feminists and the traditionals on 33 of the 36 items on the feminism scale (all  $p < .05$ ). The following three items did not differentiate the two groups: "I am planning to learn some form of physical self-defense (such as judo or karate)"; "Men put as much emotional energy into a love relationship as women do"; and "Women compromise their personal goals and ideals for the sake of a good marriage more often than men do". The lack of divergence in response to the last two questions might lead one to speculate that the feminists, who would be expected to disagree with the former and agree with the latter, might have selected for themselves men who are personally

liberated from sex-role proscriptions. Every other item on the scale differentiated between feminists and traditionalists, and the total scale score made clearcut distinctions between the two groups.

Odd-even reliability, corrected by the Spearman-Brown formula, was found to be .95 for the feminism scale. Correlations above .90 are generally considered to be indicators of good reliability, so this score would appear to indicate excellent reliability.

#### Replication of Factor Analysis

A factor analysis of the responses of the feminist and traditional groups to the Collins scale was done, using a principal factor method with iterations. The first factor extracted reflects a common theme running through the items. The first factor had an eigenvalue of 6.5, close to the eigenvalue of 6.9 reported by Collins on his first factor. All of the internal items but two load negatively on the factor, and all but one of the external items load positively. All but nine of the 36 statements loaded more than .30 on the factor. The factor is not related to acquiescence set; a tendency to agree with all of the items would produce a positive loading on all the items.

Although Collin's second factor had an eigenvalue of

only 3.0, the second factor extracted in the present study had an eigenvalue of 5.7. The factor appeared to reflect a belief in a just world; some of the items loading high on the factor include "In the long run people get the respect they deserve in this world" and "Most misfortunes are the result of lack of ability, laziness, ignorance, or all three". The strong effect of these items in differentiating between the two groups sampled is probably due to the emphasis on social action of the NOW members.

A varimax rotation was then employed and isolated four factors, accounting for 39.2%, 33.7%, 14.4% and 12.8% of the variance respectively. The items which loaded on Collin's second factor ("just-unjust"), accounted for the most variance in this sample, with Collin's first factor ("easy-difficult") accounting for the next largest amount of variance. Using the criteria used by Collins, of assigning an item to a factor only if loaded  $\pm .35$  on one and only one factor, his first two factors were duplicated with the exception of two items out of the ten on each factor. Although the third factor ("predictable-unpredictable") was also well-replicated, the fourth factor ("politically responsive-unresponsive") did not emerge clearly in this sample, with only three items, as opposed to Collin's

eight, contributing to the factor. Of the five items which were part of Collin's factor four, but were not unequivocally components of factor four on the replication, each item loaded on factor four as well as on another factor. Those items for which agreement indicated espousal of the "politically responsive" pole of factor four loaded on the "just" pole of the first factor of the replication. Conversely, those items for which agreement indicates that the world is "politically unresponsive" loaded on the second factor of the replication, in the direction indicating belief in the "difficult" pole. In other words, the first two factors accounted for the variability of the items comprising Collin's factor four.

Overall, the replication of Collin's factor structure was felt to quite satisfactory, especially in the light of the small sample on which the replication was based. Psychometrically-oriented factor analysts prefer to have a large number of subjects and then assume statistical significance, which usually requires about five times the number of variables of interest (items). In this case, 250 subjects would have been required for an adequate factor analysis. The factor analysis replication was undertaken with the understanding that the results would be descriptive of this sample only and was not intended

to have further generality. The results suggest that the phenomenon represented by the factors is a strong one.

Collin's, in his 1974 study and in a later replication (personal communication, Collins, 1975), used a total of more than 500 subjects to validate his factor structure. Since his samples were considerably larger, possibly more representative, and offered more possibilities of generalization to other research, it was decided to use Collin's factor scales in assigning items to factors. (The comparison of Collin's factor structure and item loadings and those of the present study are presented in Appendix E).

This study was concerned with describing a locus of control factor structure which permits identification of persons with a high sense of control over events in the personal orbit, and a low sense of control over political and cultural institutions. Originally, Collin's Factor I seemed most appropriate as an index of personal control, and Collins' Factor IV was thought to reflect a feeling of powerlessness over institutions, Collins' Factor IV however, was a weak influence among this sample of women, and Collins' Factor II, the "just-unjust" dimension, seemed to be more logically consistent with the beliefs of a social activist. The factor contains items such as "Capable people who fail to become leaders have not taken advantage of



their opportunities" and "Most misfortunes are the result of lack of ability, ignorance, laziness, or all three". Endorsement of these items would indicate a belief in a just world, in which persons are generally rewarded for their efforts in an equitable fashion. It is doubtful that persons with social activist orientations, concerned with issues of discrimination, tradition-bound privilege, and economic and social inequity, would endorse items which assert that individuals are personally to blame for not being successful. Collins' Factor I ("easy-difficult") did in fact seem to measure perceptions of personal control; it contained items such as "Many times I feel that I have little influence over the things that happen to me". Disagreement with this and similar items results in an "easy" score. Since items which made up Collins' Factor IV loaded on the first and second factors on the factor replication, and since the first two factors accounted for the most variance on the factor replication, and since Collins' Factor II seemed to be a better measure of social externality, Collins' Factor I and Factor II were used as a basis for distinguishing the personally internal, socially external group (PI-SE) from persons with other patterns of belief.

Scores for all subjects were computed using Collin's (1974) factor-derived scales. The means obtained on both

factors in the present study (Factor I Mean = 34.6; Factor II Mean = 43.3) were higher than those obtained by Collins in his study (Factor I Mean = 30.9, Factor II Mean = 35.5), indicating that the groups in the present study perceived the world as being both more difficult and more unjust than the Collin's subjects. The concentration of the items on school, performance on tests, and behavior of teachers elicited many responses during the testing sessions from both the feminist and traditional sample that since many of them had been out of school for many years, such questions had little relevance to their life-styles and present concerns. Perhaps Collin's college student subjects felt more confident of their abilities in the familiar academic world, and therefore responded more toward the "easy" pole of Factor I. Similarly, the influence of the politically-active feminists in the present sample may have contributed to the higher scores in the "unjust" direction on the scale.

The PI-SE subjects selected were those who had low scores on both Factor I ("easy-difficult") in the "easy" direction, and on Factor II ("just-unjust") in the "unjust" direction. Since Collin's means on Factors I and II were lower than the ones obtained in the present study, and thus provided a more extreme group for comparison than the obtained means, his means were selected as cutoff points for

the PI-SE group. In addition, the use of Collin's means on his factor-derived scales would be useful in any future comparisons with other samples. By inspection, another group of subjects who were high on both Factor I and Factor II towards the "difficult" and "just" poles were selected as a comparison group. These subjects could be described as personally external and socially internal (PE-SI). A total of ten subjects were selected by visual inspection as being sufficiently high on both factors to be termed PE-SI. (See Figure 1).

#### Differences Between the PI-SE and PE-SI Subjects

The PI-SE subjects resembled the feminist sample closely. They were virtually identical in education and occupational income and status. They tended to be older than the feminists, with an average age of 34.8 years as compared to 32.9 for the feminists, but the difference was not significant ( $p = .26$ ). Similarly, the PE-SI subjects were insignificantly different from the traditional group in education and occupational status. Their mean age, 27.4 was somewhat lower than the mean for the traditional group, 30.4, but the difference was not significant ( $p = .19$ ).

The education of the PI-SE subjects was significantly higher (16.4 years) than that of the PE-SI's (12.6 years)

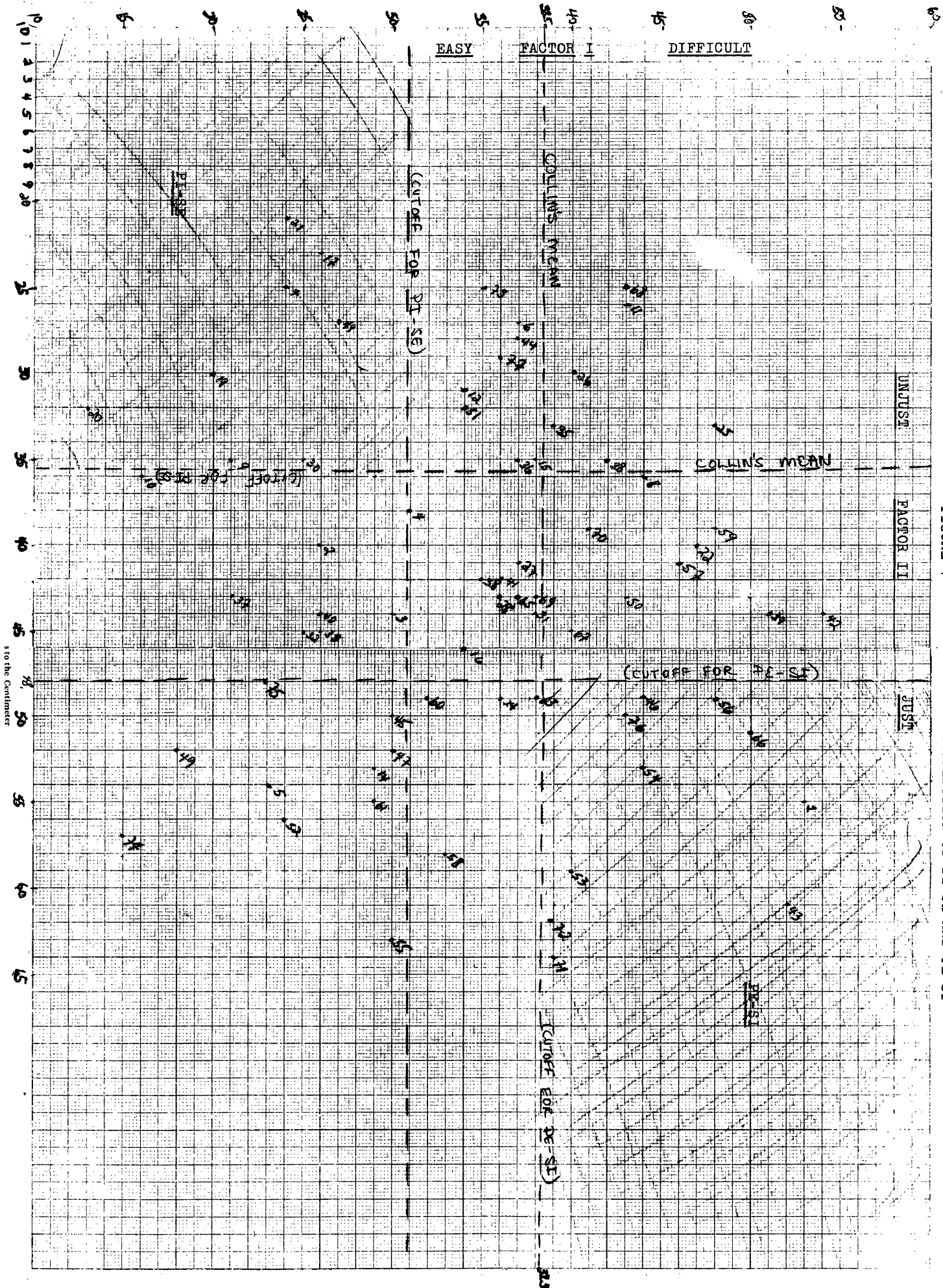


FIGURE 1  
 DISTRIBUTION OF PI-SE AND PE-SI

to the Centimeter

( $t = 7.57, p < .0001$ ). Similarly, the PI-SE subjects had better-paying and more prestigious jobs than the PE-SI subjects ( $\chi^2 = 12.43, p < .05$ ). The age difference between the PI-SE and PE-SI subjects was quite striking; the PI-SE subjects were more than seven years older than the PE-SI subjects ( $t = 2.15, p < .05$ ). The age difference may indicate that with increasing age, women feel more personally powerful, but less convinced that the world operates equitably.

#### Outcome of Hypotheses

The initial hypothesis of this study was that the PI-SE pattern of control would be typical of feminists. The PI-SE subjects, who scored toward the "easy" and "unjust" poles on Factors I and II respectively, were significantly different from PE-SI subjects on feminism scores on the Roles of Women scale ( $t = 3.37, p < .002$ ). Of the eight PI-SE subjects, seven were members of the feminist sample and had feminism scores above the mean. The other was a member of the traditional sample and was below the mean on feminism. Similarly, nine of the ten PE-SI subjects were from the traditional sample and had scores below the mean feminism score and one was from a feminist sample and had scored above the mean on feminism.

The PI-SE pattern, as predicted, appears to be more typical of feminists than of traditionalists.

Looking at the question from another direction, feminists as a group were more likely to have the PI-SE pattern on Factors I and II than the traditionalists. Feminists were significantly lower than traditionalists on both Factor I ( $t = 2.10$ ,  $p < .039$ ) and Factor II ( $t = 2.66$ ,  $p < .01$ ) in the "unjust" and "easy" directions, as predicted. Apparently the feminist is a person who believes that she personally can control what happens to her in her own life, but that the world is so structured that the political and social forces are not accessible and responsive. Such a pattern of beliefs was predicted for the feminists. The initial hypothesis, that the PI-SE pattern of control was characteristic of feminists, was therefore supported.

The dependent measures used to evaluate hypotheses were designed to test the adaptive utility of the PI-SE pattern of control. Adaptive utility refers to the responsiveness of the aspiration measures to performance feedback, as well as the initial magnitude of the aspirations. The dependent measures were computed in the same manner as used by Feather (1966, 1968) in a series of studies of the influence of task variables on aspirations

and confidence ratings.

The following dependent measures were computed:

- 1) BEST--each subject's estimate of what her best performance on the next trial will be.
- 2) MNBEST--mean of measure BEST over trials.
- 3) WORST--each subject's estimate of what her worst performance on the next trial will be.
- 4) MNWORST--mean of measure WORST over trials.
- 5) ACTUAL--each subject's estimate of what her actual performance on the next trial will be.
- 6) MNACTUAL--mean of the measure ACTUAL over trials.
- 7) SCORE--the number of anagrams correctly solved on trial n.
- 8) MNOBTAIN--the mean of the measure SCORE over trials.
- 9) GOAL--a goal discrepancy score; computed as:  
(estimated actual for trial n+1) - (estimated actual for trial n) This measure expresses whether the subject predicts performance better or worse than previous performance.
- 10) MNGOAL--mean of the measure GOAL over trials.
- 11) DISCREP--attainment discrepancy score; computed as: (obtained for trial n) - (estimated actual for trial n)

This measure expresses the accuracy of the subject's predictions; the difference between predicted and actual performance on the same trial.

12) MNATTAIN--the mean of DISCREP over trials.

13) MNSUCES--mean of scores measuring responsiveness to success; computed as: (if DISCREP for trial  $n > 0$ , then) (estimated actual for trial  $n+1$ ) - (estimated actual for trial  $n$ ) If the subject performed better than expected (if the number of anagrams correct equaled or exceeded the number predicted), then MNSUCES measures the average amount that aspirations were subsequently raised (the extent to which the subject was responsive to success).

14) MNFAIL--mean of scores measuring responsiveness to failure; computed as: (if DISCREP for trial  $n < 0$ , then) (estimated actual for trial  $n+1$ ) - (estimated actual for trial  $n$ ) If the subject performed worse than expected (if the number of anagrams correct was less than the number predicted), the MNFAIL measures the average amount that aspirations were subsequently lowered (the extent to which the subject was responsive to failure).

15) ATYPICAL--number of atypical responses, rises in aspirations following failure and drops in aspirations following success. Computed as: ATYPICAL = (if DISCREP for trial  $n > 0$ , then) and (if GOAL  $< 0$ , then) 1

or



ATYPICAL = (if DISCREP for trial  $n < 0$ , then) and (if GOAL  $> 0$ , then) 1

ATYPICAL measures the number of times the subject responds to feedback in a manner inconsistent with the content of the feedback.

16) LEARN--the increase in accuracy from trial 1 to trial 8; computed as: (absolute value of DISCREP at trial 8) - (absolute value of DISCREP at trial 1)

LEARN measured the effect of practice on performance.

The dependent measures BEST, WORST, ACTUAL, SCORE, GOAL, and DISCREP were used in repeated measures analyses. The summary measures were used as dependent measures for t-tests. The extreme on the PI-SE dimension, previously described, were compared on the dependent measures. Some of the comparisons might have been inflated by the large number of dependent measures; given such a large number of tests, a certain number will attain significance by chance. In addition, many of the dependent measures were highly correlated with each other (see Table 2). None of the tests on the dependent measures were significant, however, so the issue was academic.

Hypothesis #2 predicted that women with the PI-SE pattern of control would perform better on the anagrams task than women with other patterns. A 2 (locus of control) x 8 (trials) ANOVA with repeated measures on the last

TABLE 2

## Correlations Among Dependent Measures

Mnobtain	.09									
Mngoal	-.04	-.98***								
Mnattain	-.17	.31**	-.24*							
Mnsuces	-.17	.31**	-.24*							
Mnfail	.18	.07	-.06	-.50***						
Atypical	-.41**	.06	-.09	-.09	.33**					
Learn	.02	-.08	-.01	-.47***	-.19*	.01				
Mnbest	.59***	.56***	-.51***	.02	.15	-.17	.03			
Mnworst	.47***	.55***	-.54***	-.11	.18	-.06	.03	.39***		
Mnactual	.70***	.77***	-.75***	.06	.17	-.20*	.02	.76***	.70***	

\* $p < .05$ .\*\* $p < .01$ .\*\*\* $p < .001$ .

factor of the variable SCORE revealed that there were no significant differences between the PI-SE and PE-SI subjects in actual performance on the anagrams ( $F = 2.06$ ,  $p > .05$ ). Similarly, a t-test on the summary measure MNOBTAIN failed to reveal any differences in performance ( $t = .34$ ,  $p = .74$ ). Although the results were in the direction predicted, Hypothesis #2 was not supported; the PI-SE did not have superior performance compared to the PE-SI subjects.

Hypothesis #3 predicted that women with the PI-SE pattern of control would show higher aspirations than women with other patterns. Repeated measures analyses of the dependent measures BEST, WORST, and ACTUAL revealed that PI-SE's did not differ from PE-SI's on aspiration levels ( $F$ 's = 1.51, .62, 1.30 respectively; all  $p$ 's  $> .05$ ). Initial aspirations, that is, aspirations on Trial #1, before any anagrams had been attempted, were also not significantly different between the two groups ( $\chi^2 = 8.97, 13.39, 5.58$  respectively, all  $p$ 's  $> .05$ ), on BEST, WORST, and ACTUAL. Although the differences between the two groups on the first trial were not significant, the PI-SE subjects had higher estimates of their best and worst performance than did the PE-SI's, in accordance with prediction. PE-SI's were somewhat higher on ACTUAL, however.

Hypothesis #4 predicted that women with the PI-SE pattern of control would show smaller shifts in estimations of probability of success following success or failure. A repeated measures analysis showed no difference between the two groups on the GOAL measure ( $F = .78, p > .05$ ). The two groups were not significantly different on MNSUCES ( $t = 2.09, p = .06$ ) or MNFAIL ( $t = .86, p = .41$ ). As a matter of fact, the PE-SI group, on the basis of their means on the three above measures, appeared to be more responsive to performance feedback than the PI-SE's. The t-value for MNSUCES, as a matter of fact, approaches significance, with the PE-SI subjects showing more responsiveness (increasing their aspirations) after successful trials than the PI-SE's. This measure may, however, have been confounded by the fact that the PI-SE subjects were obtaining higher performance scores on the anagram task, and there may have been a ceiling effect. The results on these measures failed to provide support for Hypothesis #4.

The final hypothesis (#5) predicted that PI-SE subjects would demonstrate fewer atypical responses (rises in aspirations following failure, and vice-versa) than the PE-SI subjects. A t-test performed on the variable ATYPICAL failed to reveal any differences between the two groups on the measure, both groups having a mean of one

atypical response ( $t = 0.0$ ,  $p = 1.00$ ). Hypothesis #5 was therefore not supported.

Overall, a somewhat confused picture emerged. There were no significant differences between the two groups on any of the dependent measures. When the means were examined for directionality, it appeared that while on the basis of their MNBEST and MNWORST scores, the PI-SE subjects might tend to have higher aspirations, it could not be said that they were more responsive to performance feedback, since they had larger differences on MNGOAL, (indicating that they were less accurate) and MNATTAIN (indicating that they were less influenced by their past performance), and smaller differences on MNSUCES (indicating they raised their aspirations less after success). These results may have been due to the fact that there was a ceiling effect, since the PI-SE subjects were somewhat better at the task. The differences on MNGOAL and MNATTAIN might have been due to the fact that the PI-SE's consistently improved their performance, and there was insufficient range for estimation of actual performance (on which the accuracy and performance feedback measures are based) to accurately reflect expectations, particularly if the subjects perceived the estimations of actual performance as falling somewhere between the anchors of best and worst performance. Another possible

explanation is that PI-SE subjects were more aware of the essentially arbitrary nature of the task, since performance feedback was determined by the subject herself and since the lists of varying difficulty were randomly assigned over trials. The higher education of the PI-SE's might also have had the effect of making them more knowledgeable and sophisticated about psychological tests, and less willing to engage in tasks which they perceived as unimportant and only externally valued.

In short, the distinction between the PI-SE and PE-SI subjects did not seem to have any effect on performance on the dependent variables. (See Table 3 and Table 4) for means, t's, and actual p's).

A further analysis was then carried out to see if traditionally-defined internality-externality was responsible for a significant amount of the variance on the dependent variables, as has been demonstrated often in previous studies (Crowne & Liverant, 1963; Lefcourt, 1967). Traditional internals, that is persons internal in both a personal and a socio-political sense, were defined as those low on Factor I and high on Factor II ("easy-just") and traditional externals were defined as those who had the pattern "difficult-unjust". Analyses on all the dependent measures were performed, but no significant

TABLE 3

## T-tests on Dependent Measures

<u>MNBEST</u>	<u><math>\bar{x}</math></u>	<u>t</u>	<u>p</u>		<u><math>\bar{x}</math></u>	<u>t</u>	<u>p</u>
PISE	8.09	1.01	.34	PISE	.38	2.08	.06
PESI	7.05			PESI	.88		
FEM	8.55	3.42	.001	FEM	.62	.57	.57
TRAD	7.12			TRAD	.68		
<u>MNWORST</u>				<u>MNFAIL</u>			
PISE	4.58	.34	.74	PISE	-1.00	.86	.41
PESI	4.15			PESI	-1.75		
FEM	4.56	1.83	.07	FEM	-1.75	1.53	.13
TRAD	3.66			TRAD	-1.22		
<u>MNACTUAL</u>				<u>ATYPICAL</u>			
PISE	6.37	.29	.78	PISE	1.00	0.00	1.00
PESI	6.69			PESI	1.00		
FEM	7.30	2.27	.026	FEM	.87	1.09	.28
TRAD	6.36			TRAD	1.11		
<u>MNOBTAIN</u>				<u>LEARN</u>			
PISE	8.67	.34	.74	PISE	-1.25	1.13	.28
PESI	8.48			PESI	-2.50		
FEM	8.91	2.00	.026	FEM	-2.03	.23	.82
TRAD	8.36			TRAD	-1.92		
<u>MNGOAL</u>							
PISE	-2.07	.56	.58				
PESI	-1.60						
FEM	-1.38	1.72	.09				
TRAD	-1.92						
<u>MNATTAIN</u>							
PISE	2.29	.64	.54				
PESI	1.79						
FEM	1.61	1.26	.21				
TRAD	1.99						

differences were found (all  $p$ 's  $\geq .17$ ).

In an effort to discover what subject variables were related to the dependent measures, an intercorrelation matrix was drawn up which analyzed the relationships among all the independent and dependent variables. No significant relationships were found to exist between PI-SE and the dependent variables. Because of the larger sample size of the feminist-traditional grouping, it was decided to examine these two groups for differences on the dependent variables. An intercorrelation matrix of dependent and independent variables and the results of  $t$ -tests performed on the summary measures of the dependent variables (e.g., MNATTAIN) were considered in terms of the predictions made about the PI-SE pattern.

$T$ -tests between the feminist and traditional groups on all of the summary measures of the dependent variables revealed that feminists had higher aspirations on MNBEST ( $t = 3.42, p < .001$ ) and MNACTUAL ( $t = 2.27, p < .026$ ), and were higher on MNOBTAIN ( $t = 2.00, p < .05$ ). An intercorrelation matrix demonstrated relationships between total feminism score and the dependent measures, relationships which in some cases were closer than those comparisons made between feminist and traditional groups, since the total feminism score was treated as a linear



variable. Statistically significant relationships, which are the only ones reported, were demonstrated between the total feminism score and MNBEST of .39 ( $p < .001$ ), with MNWORST of .25 ( $p < .015$ ), with MNACTUAL of .29 ( $p < .04$ ), with MNOBTAIN of .26 ( $p < .01$ ), and with MNGOAL of .20 ( $p < .04$ ).

The feminists appeared to have higher aspirations than the traditionalists, on the basis of the t-tests and the intercorrelation matrix. However, the feminists had previously been shown to be better educated and to be of higher SES than the traditional subjects. Since their performance was also superior to the traditionalists, it was not clear whether their higher aspirations reflected their feminism or their capabilities. In order to answer this question, a partial correlation was performed on the data, holding performance, education, and socioeconomic status constant. When this was done, the effects of feminism on the dependent measures disappeared. These results indicated that performance, covarying as it did with education and social status, resulted in higher aspirations; in other words, the individuals of better education and higher SES had superior ability, and this ability was responsible for increased confidence. Those who actually did perform better had aspirations to match their performance.

Finally, a regression analysis was performed to see if the interaction of Factors I and II was responsible for a significant amount of the variance of the dependent measures. The two factors were multiplied together to form a linear, nonadditive variable called FACXFAC. This factor was tested to see if such a multiplicative factor would be significant in predicting the dependent variables MNGOAL, MNATTAIN, MNSUCES, MNFAIL, ATYPICAL, and LEARN. None of the F values were significant (all  $p$ 's  $\geq .28$ ) except for the total feminism score ( $F = 4.57$ ,  $p < .01$ ). Factors I and II were also entered into the regression equation. Factor I was found to be significant only on LEARN ( $F = 5.37$ ,  $p < .05$ ); persons who scored toward the "easy" pole on the factor were more accurate by trial eight than other persons. Perhaps the perceptions shared by persons who say the world is easy reflect the reality that they do in fact respond in effective ways to the environment, and adopt useful strategies. Factor II ( $F = 11.58$ ,  $p < .01$ ) and Factor I ( $F = 6.84$ ,  $p < .01$ ) were found to account for significant portions of the variance on the feminism score, a larger portion than the FACXFAC variable. Factor II accounted for 37% of the variance, Factor I an additional 5%, and FACXFAC an additional 1%. The regression analysis, in short, revealed that the PI-SE dimension was not related to

performance on the dependent measures, although PI-SE was related to feminism.

## DISCUSSION

The original question posed by this study was whether or not feminists would prove to demonstrate the PI-SE pattern of locus of control, and if they did, if such a pattern would be an adaptive one. The first part of the question has received an emphatic yes. There is a strong relationship between the belief systems of feminists and the belief systems of PI-SE's. Both groups feel that they personally have considerable influence over the things that happen to them, that events are predictable, and that individual efforts can change outcomes. In short, for them their personal world is "easy", amenable to individual influence and control. There is also the shared perception that the world is unjust to many persons. The PI-SE's, like the feminists, believe that people do not always have things easy, that individuals of merit may not necessarily be rewarded, that cultural and social forces may wreak injustices upon innocent and deserving persons. This awareness of, and concern for social injustices is characteristic of the social activist thinking which became an important current during the 1960's.

In an unpublished study, Zuckerman and Gerbasi (1974) reported that authoritarianism was negatively correlated with scores on the "just world" factor on a locus of control

scale, and positively correlated with "politically responsive" factor scores. Their results provide support for the interpretation that it is the dogmatic, traditional individual who believes that presently-established institutions and customs are entirely sufficient to ensure that most people are treated equitably. Lawrence Kohlberg (1964) described as the fourth stage of his six stages of moral development the "law-and-order" orientation; an orientation to "doing duty", and maintaining the social order out of respect for authority. This fourth stage seems similar to the PE-SI pattern. Conversely, the PI-SE subjects resemble the fifth or sixth stage of Kohlberg's scale, being less concerned with the authority of the law than with the impact of social institutions on people as individuals. It would be interesting to examine the relationships among dogmatism, authoritarianism and level of moral development as they relate to the locus of control patterns.

The results showed quite strongly that the PI-SE pattern of control is more characteristic of older than of younger women. The younger feminists are not represented in the PI-SE group. Perhaps, despite the content of feminist rhetoric, the younger women do not perceive as large a dichotomy between the amount of control that they

possess personally and the amount of control that most people in the world possess. For many of the feminists, who are well-educated and hold high-paying jobs, the world is a supportive and reinforcing place. It is much more fashionable to be a feminist than a conventional traditionalist in most professional and better-educated circles. Furthermore, feminism is a recent phenomenon with young followers. Young feminists enjoy the companionship of women their own age with similar tastes and from similar backgrounds. The costs of feminism are higher for older women. Their views are often at odds with women of their age; many middle-aged women feel threatened and hostile about feminism. Not only is feminism a lonely social stance to be adopted by older women, but they are often negatively sanctioned much more heavily than younger women for their beliefs. Women with children have had the issue of feminism raised as legal ammunition in divorce and custody disputes. Women who work sometimes find that their identification with the feminist movement is in conflict with expectations held of them by employers and coworkers as maternal or subservient figures. One might speculate that the experience of being exposed to, and perhaps suffering from the discrimination and powerlessness suffered by women as a minority group in the real, non-academic world might rid older women of the optimistic idealization of the political

and cultural system held by younger women. In the case of the older feminists, the PI-SE pattern of control might serve as the defense mechanism hypothesized by Thurber (1974), enabling women whose goals are limited or thwarted to externalize the blame for their disappointments, and thus retain the motivational impetus for continued efforts. Since older women probably do in fact suffer much more social disapproval for nontraditional behavior than younger women, this sort of defense mechanism would be more useful in the older group. A good direction for future research might be to explore the correlation between the amount of discrimination suffered and the extent of endorsement of the PI-SE pattern among feminists. It would be interesting to follow the course of a woman "coming of age as a feminist", to note changes in her belief systems as a function of varying personal, occupational, and ideological currents in her life. Perhaps the PI-SE pattern of control would be more prevalent among the leaders of the feminists rather than the rank-and-file. The paths for future research into the meaning and implications of the PI-SE pattern of locus of control are very interesting.

The disappointing results of the dependent variables are somewhat puzzling. The partial correlation analysis revealed that when performance, education and occupational

status were held constant, both feminism and PI-SE had no effect on aspiration levels. The higher performance and aspiration levels were probably due to the higher education and occupational status of the feminists.

In addition, there were weaknesses in the dependent measures which may have attenuated differences. It is likely that the dependent measures did not measure pivotal behaviors distinguishing social activists from those with more conventional beliefs. The task used might well have been too academic and too far removed from the concerns of the women tested to have picked up differences between social activists and others. A better task would have been one that capitalized much more directly on those attributes which are supposed to separate feminist from traditional women; attributes such as the willingness to engage in risk-taking behavior in situations where women are not usually found or in which sex-appropriate behaviors are not clearly established. Such situations might be in various sorts of business games, involving executive decision-making, the delegation of power, the judgement of appropriate risks, or similar behaviors not usually performed by women. Such tasks might be administered so that the subjects were in competition with men, a condition which is probably the most important proscription of the female sex-role stereotype.



Since working women are often the ones to explore roles not delineated by traditional sex-role expectations, samples of behaviors with content typical of their experiences would be most appropriate in determining adaptive belief systems and motivational dynamics. The employment of games developed by industrial psychologists would be a productive area of exploration.

There were other difficulties in the dependent measure employed. The subjects did very well on the task; PI-SE's obtained a mean of 8.7 words correct over trials, while the PE-SI's scored 8.5 correct. These high performance scores probably reduced the amount of variance available for analysis, and therefore attenuated effects on the aspiration measures. Furthermore, a possible consequence of the "topping-out" of the obtained scores was that the estimates of "actual" may have been depressed since individuals might have thought that "best" and "actual" aspirations would not be the same score. The high performance level of both groups was surprising in light of the mean solution times obtained in the pretest for the anagrams. Perhaps the availability of writing utensils, and the addition therefore, of another solution strategy, aided the groups who were administered the task during the experiment. In any case, aspiration measures would have had more significance

in the context of a more ego-involving task.

The number of subjects in the PI-SE and PE-SI groups was quite small, eight and ten subjects in each group, respectively. Results from such a small number of subjects might not be truly representative of the PI-SE dimension. The extreme nature of the two groups, as compared with the rest of the sample, and the mixed directionality of the means on the dependent measures indicate that the conclusion that actual differences between the two groups existed without detection, does not seem tenable.

The interaction of the nature of the task and the age of the two comparison groups might have attenuated real differences between PI-SE's and PE-SI's. The PI-SE subjects were older than the PE-SI's as well as the average feminist. Having been away from an academic environment, with its emphasis on verbal abilities, may have hindered the PI-SE's. During the administration, personal observation confirmed that older women complained more about the irrelevant nature of the task than did younger ones. A more relevant task might have revealed differences between the PI-SE subjects and others.

There were no differences in the sample in the present study on Factor III (predictable-unpredictable world), nor on Factor IV. It was therefore impossible to make conclusions about the meaning of the attributions of external

power. Such a question is still relevant, however, especially as applied to women. The scale in its present form, is not particularly sensitive to the very real feelings of powerlessness and loss of control which many women experience. The emphasis on content having to do with the classroom, aside from its lack of relevance to women who are not students, suffers from the flaw that the classroom is the one place where many women feel that they have control over what happens to them. The docility and desire to please significant others which results from the socialization process makes females very good students in many cases, and would lead to scores in the "internal" direction on the scale. These same "internal" scoring women may feel that they live lives of default in every other realm of experience. The most pressing need at the moment is for the development of a locus of control scale which taps content areas of relevance to women.

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## ROLES OF WOMEN

There has been much discussion lately on the roles of women in our society. We would like to find out what people really think about these roles. Please help us by answering this questionnaire as honestly as you possibly can, and don't worry about your identity; your responses will remain confidential.

This questionnaire is divided into two parts. In this first part, you will be asked only for background information.

1. Sex  female  
 male
2. Race  white  native American  
 black  oriental  
 chicano  other
3. Age at last birthday \_\_\_\_\_
4. Marital status  single  
 married  
 widowed  
 divorced  
 separated
5. How many children (if any) do you have? \_\_\_\_\_ Ages \_\_\_\_\_
6. a. What is your occupation? \_\_\_\_\_  
b. If possible, specify the title of your job. \_\_\_\_\_
7. a. If married, what is your husband's/wife's occupation? \_\_\_\_\_  
\_\_\_\_\_  
b. If possible, specify the title of the job. \_\_\_\_\_
8. Circle the number of the highest year in school that you have completed.  
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 more than 16  
a. Have you had any other training, such as business or trade school?  
yes (specify) \_\_\_\_\_



b. Have you had any graduate education?

       no        yes (specify) \_\_\_\_\_

9. a. What was your father's major occupation during the time you were in high school? \_\_\_\_\_

b. If possible, specify the title of his job. \_\_\_\_\_

10. Circle the number of the highest year in school that your father completed.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 more than 16

11. a. Was your mother employed when you were in high school?

       yes, full-time        yes, part-time        no

b. If yes, what was her occupation? \_\_\_\_\_

c. If possible, specify the title of her job. \_\_\_\_\_

d. Is your mother employed now?        yes, full-time  
       yes, part-time  
       no

12. Circle the number of the highest year in school that your mother completed.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 more than 16

13. How many brothers and sisters do you have? \_\_\_\_\_

14. Do you have any older brothers?        yes        no  
Any older sisters?        yes        no

15. What organizations are you active in? (religious, political, social)  
Please list them.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

16. What is your religion? \_\_\_\_\_

17. How do you feel about women's liberation? strongly opposed         
mildly opposed         
neutral         
mildly in favor         
strongly in favor

## ROLES OF WOMEN

This questionnaire is about the roles of women in our society today. Some of these questions ask you how you think things really are, some ask how you think things should be, and others ask how you yourself really act. Please place an X in the space under the heading which is closest to the way that you think or act. If any of the questions are unclear, or if you have any comments, please feel free to note them at the end of the questionnaire in the space provided. Thank you for your cooperation.

- |   | Strongly<br>Agree | Agree | Neither agree<br>nor disagree | Disagree | Strongly<br>disagree |
|---|-------------------|-------|-------------------------------|----------|----------------------|
| 1. I enjoy talking with men more than women.  | ( )               | ( )   | ( )                           | ( )      | ( )                  |
| 2. When a man opens a door for a woman, this symbolizes woman's status as weak and inferior.  | ( )               | ( )   | ( )                           | ( )      | ( )                  |
| 3. A woman has little to gain through participation in the present Women's Liberation movement.   | ( )               | ( )   | ( )                           | ( )      | ( )                  |
| 4. Women should feel free to go into bars alone.  | ( )               | ( )   | ( )                           | ( )      | ( )                  |
| 5. A capable woman can go as far as she wants in the business or professional world.  | ( )               | ( )   | ( )                           | ( )      | ( )                  |
| 6. A woman should not sacrifice her work or her career to meet the needs of her family any more than her husband does.                                      | ( )               | ( )   | ( )                           | ( )      | ( )                  |
| 7. A woman who goes into a man's field of work is much less likely to get ahead than is a man who goes into a woman's field of work.                        | ( )               | ( )   | ( )                           | ( )      | ( )                  |
| 8. If I had to choose, I would rather create or accomplish something of value and importance than have the constant affection and devotion of just one man. | ( )               | ( )   | ( )                           | ( )      | ( )                  |
| 9. The joys of motherhood do not make up for the sacrifices.  | ( )               | ( )   | ( )                           | ( )      | ( )                  |
| 10. I shave my legs regularly.  | ( )               | ( )   | ( )                           | ( )      | ( )                  |
| 11. Most people accept a woman as an authority in her field as readily as they accept a man.  | ( )               | ( )   | ( )                           | ( )      | ( )                  |

- 2 -

- |  | Strongly<br>Agree | Agree | Neither Agree<br>nor Disagree | Disagree | Strongly<br>Disagree |
|--|-------------------|-------|-------------------------------|----------|----------------------|
| 12. I have or I am planning to learn some form of physical self-defense (such as judo or karate).  | ( )               | ( )   | ( )                           | ( )      | ( )                  |
| 13. When someone makes a joke or a derogatory remark about women, I speak up and object.   | ( )               | ( )   | ( )                           | ( )      | ( )                  |
| 14. By their very nature, men are more suited to positions of leadership and authority than women.   | ( )               | ( )   | ( )                           | ( )      | ( )                  |
| 15. If I had to choose, I would rather be a nurse than a doctor.   | ( )               | ( )   | ( )                           | ( )      | ( )                  |
| 16. Jokes about women are made in good humor and aren't really insults to women.   | ( )               | ( )   | ( )                           | ( )      | ( )                  |
| 17. Young children who go to good day care centers are just as happy and develop just as well as children who stay at home with their mothers. | ( )               | ( )   | ( )                           | ( )      | ( )                  |
| 18. I do not (do not plan to) let outside activities interfere with taking care of my home and family.   | ( )               | ( )   | ( )                           | ( )      | ( )                  |
| 19. Economic independence is crucial to a woman's personal independence and autonomy.  | ( )               | ( )   | ( )                           | ( )      | ( )                  |
| 20. I have participated, in the last year, in an organization working for women's rights.  | ( )               | ( )   | ( )                           | ( )      | ( )                  |
| 21. It would be wrong for a woman to work if her husband didn't want her to.   | ( )               | ( )   | ( )                           | ( )      | ( )                  |
| 22. I would be willing to take a job that has never been done by a woman before.   | ( )               | ( )   | ( )                           | ( )      | ( )                  |
| 23. Men put as much emotional energy into a love relationship as women do.   | ( )               | ( )   | ( )                           | ( )      | ( )                  |
| 24. It is important for women to look to each other for real support, understanding and friendship.  | ( )               | ( )   | ( )                           | ( )      | ( )                  |

	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree
25. Women compromise their personal goals and ideas for the sake of a good marriage more often than men do.	( )	( )	( )	( )	( )
26. Motherhood and the family provide a woman with all she needs for a happy and productive life.	( )	( )	( )	( )	( )
27. When I have to see a doctor, I make some effort to find a woman.	( )	( )	( )	( )	( )
28. A woman shouldn't insult a man by objecting if he wants to hold her chair for her.	( )	( )	( )	( )	( )
29. The custom of the man initiating personal relationships (asking the woman out, etc.) contributes to women's disadvantaged status.	( )	( )	( )	( )	( )
30. When a man pays a lot of attention to a woman's appearance or figure, he is not treating her as a person.	( )	( )	( )	( )	( )
31. Personal liberation for a woman isn't possible without organizing together with other women.	( )	( )	( )	( )	( )
32. Women shouldn't let derogatory remarks about women go by without challenging them.	( )	( )	( )	( )	( )
33. I do not rule out the possibility of a sexual relationship with another woman.	( )	( )	( )	( )	( )
34. It's not right for a woman to go into a field of work where she may take a job away from a man who has to support a family.	( )	( )	( )	( )	( )
35. If I knew I were paid less than a man co-worker for the same job, I would take a complaint to the Equal Employment Opportunity Commission.	( )	( )	( )	( )	( )
36. I would be willing to vote for a woman for President of the United States.	( )	( )	( )	( )	( )

Answer the following questions by circling the number which best expresses your feelings from 1 (strongly agree) to 7 (strongly disagree).

- ) Many times exam questions tend to be so unrelated to course work that studying is really senseless. 1 2 3 4 5 6 7
- ) Sometimes I feel that I don't have enough control over the direction that my life is taking. 1 2 3 4 5 6 7
- ) Most people don't realize the extent to which their lives are controlled by accidental happenings. 1 2 3 4 5 6 7
- ) Sometimes I can't understand how teachers arrive at the grades they give. 1 2 3 4 5 6 7
- ) Who gets to be the boss often depends on who is as lucky enough to be in the right place first. 1 2 3 4 5 6 7
- ) Many times I feel that I have little influence over the things that happen to me. 1 2 3 4 5 6 7
- ) Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries. 1 2 3 4 5 6 7
- ) Most students don't realize the extent to which their grades are influenced by accidental happenings. 1 2 3 4 5 6 7
- ) I have often found that what is going to happen will happen. 1 2 3 4 5 6 7
- ) Without the right breaks one cannot be an effective leader. 1 2 3 4 5 6 7
- ) Getting a good job depends mainly on being in the right place at the right time. 1 2 3 4 5 6 7
- ) People's misfortunes result from the mistakes they make. 1 2 3 4 5 6 7
- ) Capable people who fail to become leaders have not taken advantage of their opportunities. 1 2 3 4 5 6 7
- ) The idea that teachers are unfair to students is nonsense. 1 2 3 4 5 6 7
- ) In the long run people get the respect they deserve in this world. 1 2 3 4 5 6 7
- ) In the case of the well-prepared student, there is rarely if ever such a thing as an unfair test. 1 2 3 4 5 6 7
- ) What happens to me is my own doing. 1 2 3 4 5 6 7
- ) People are lonely because they do not try to be friendly. 1 2 3 4 5 6 7

- 19) Most misfortunes are the result of lack of ability, laziness, ignorance, or all three. 1 2 3 4 5 6 7
- 20) In the long run, the bad things that happen to us are balanced by the good ones. 1 2 3 4 5 6 7
- 21) People who can't get others to like them can't understand how to get along with others. 1 2 3 4 5 6 7
- 22) There is a direct connection between how hard I study and the grades I get. 1 2 3 4 5 6 7
- 23) In my case getting what I want has little or nothing to do with luck. 1 2 3 4 5 6 7
- 24) There is really no such thing as "luck". 1 2 3 4 5 6 7
- 25) It is impossible for me to believe that chance or luck plays an important part in my life. 1 2 3 4 5 6 7
- 26) Many of the unhappy things in people's lives are partly due to bad luck. 1 2 3 4 5 6 7
- 27) Getting people to do the right thing depends upon ability; luck has little or nothing to do with it. 1 2 3 4 5 6 7
- 28) Becoming a success is a matter of hard work; luck has little or nothing to do with it. 1 2 3 4 5 6 7
- 29) Trusting to fate has never turned out as well for me as making a decision to take a definite course of action. 1 2 3 4 5 6 7
- 30) By taking an active part in political and social affairs the people can control world events. 1 2 3 4 5 6 7
- 31) The world is run by the few people in power, and there is not much the little guy can do about it. 1 2 3 4 5 6 7
- 32) With enough effort we can wipe out political corruption. 1 2 3 4 5 6 7
- 33) As far as world affairs are concerned, most of us are the victims of forces we can neither understand nor control. 1 2 3 4 5 6 7
- 34) It is difficult for people to have much control over the things politicians do in office. 1 2 3 4 5 6 7
- 35) The average citizen can have an influence in government decisions. 1 2 3 4 5 6 7
- 36) In the long run, the people are responsible for bad government on a national as well as local level. 1 2 3 4 5 6 7
- 37) One of the major reasons why we have wars is because people don't take enough interest in politics. 1 2 3 4 5 6 7

- 38) There will always be wars, no matter how hard people try to prevent them. 1 2 3 4 5 6 7
- 39) No matter how hard you try, some people just don't like you. 1 2 3 4 5 6 7
- 40) It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow. 1 2 3 4 5 6 7
- 41) It is hard to know whether or not a person really likes you. 1 2 3 4 5 6 7
- 42) There's not much use in trying too hard to please people, if they like you, they like you. 1 2 3 4 5 6 7
- 43) Most of the time I can't understand why politicians behave the way they do. 1 2 3 4 5 6 7
- 44) When I make plans, I am almost certain that I can make them work. 1 2 3 4 5 6 7
- 45) How many friends you have depends upon how nice a person you are. 1 2 3 4 5 6 7
- 46) Many times we might as well decide what to do by flipping a coin. 1 2 3 4 5 6 7

APPENDIX CRESPONSE BOOKLET

1) IF YOU DO YOUR BEST, HOW MANY WORDS DO YOU THINK YOU WILL GUESS CORRECTLY ON THE NEXT TRIAL? (CIRCLE ONE):

1 2 3 4 5 6 7 8 9 10

2) IF YOU DO YOUR WORST, HOW MANY WORDS DO YOU THINK YOU WILL GUESS CORRECTLY ON THE NEXT TRIAL? (CIRCLE ONE):

1 2 3 4 5 6 7 8 9 10

3) HOW MANY WORDS DO YOU THINK YOU WILL ACTUALLY GUESS CORRECTLY ON THE NEXT TRIAL? (CIRCLE ONE):

1 2 3 4 5 6 7 8 9 10



TNU WOR  
NPA XMI  
DNE LLA  
NTI TOH  
DIR DRE

---

1) IF YOU DO YOUR BEST, HOW MANY WORDS DO YOU THINK YOU WILL GUESS CORRECTLY ON THE NEXT TRIAL? (CIRCLE ONE):

1 2 3 4 5 6 7 8 9 10

2) IF YOU DO YOUR WORST, HOW MANY WORDS DO YOU THINK YOU WILL GUESS CORRECTLY ON THE NEXT TRIAL? (CIRCLE ONE):

1 2 3 4 5 6 7 8 9 10

3) HOW MANY WORDS DO YOU THINK YOU WILL ACTUALLY GUESS CORRECTLY ON THE NEXT TRIAL? (CIRCLE ONE):

1 2 3 4 5 6 7 8 9 10

OEHR	ESOG
RSTI	WLOH
CRDO	SOAL
EUGR	IKTN
LEID	CEON

1) IF YOU DO YOUR BEST, HOW MANY WORDS DO YOU THINK YOU WILL GUESS CORRECTLY ON THE NEXT TRIAL? (CIRCLE ONE):

1 2 3 4 5 6 7 8 9 10

2) IF YOU DO YOUR WORST, HOW MANY WORDS DO YOU THINK YOU WILL GUESS CORRECTLY ON THE NEXT TRIAL? (CIRCLE ONE):

1 2 3 4 5 6 7 8 9 10

3) HOW MANY WORDS DO YOU THINK YOU WILL ACTUALLY GUESS CORRECTLY ON THE NEXT TRIAL? (CIRCLE ONE):

1 2 3 4 5 6 7 8 9 10

1. 100  
 2. 100  
 3. 100  
 4. 100  
 5. 100

1. 100  
 2. 100  
 3. 100  
 4. 100  
 5. 100

1) IF YOU DO YOUR BEST, HOW MANY WORDS DO YOU THINK YOU WILL GUESS CORRECTLY ON THE NEXT TRIAL? (CIRCLE ONE):

1 2 3 4 5 6 7 8 9 10

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1 2 3 4 5 6 7 8 9 10

3) HOW MANY WORDS DO YOU THINK YOU WILL ACTUALLY GUESS CORRECTLY ON THE NEXT TRIAL? (CIRCLE ONE):

1 2 3 4 5 6 7 8 9 10

ERWI	PAML
NOLA	KJOE
EWGA	OLOC
XNTE	AAPP
SOTS	KMIL

1) IF YOU DO YOUR BEST, HOW MANY WORDS DO YOU THINK YOU WILL GUESS CORRECTLY ON THE NEXT TRIAL? (CIRCLE ONE):

1 2 3 4 5 6 7 8 9 10

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1 2 3 4 5 6 7 8 9 10

3) HOW MANY WORDS DO YOU THINK YOU WILL ACTUALLY GUESS CORRECTLY ON THE NEXT TRIAL? (CIRCLE ONE):

1 2 3 4 5 6 7 8 9 10



UEDK	HIFS
DAPI	KCOM
DHRE	WYAA
AKSE	TTNE
PEHA	UKLC

1) IF YOU DO YOUR BEST, HOW MANY WORDS DO YOU THINK YOU WILL GUESS CORRECTLY ON THE NEXT TRIAL? (CIRCLE ONE):

1 2 3 4 5 6 7 8 9 10

2) IF YOU DO YOUR WORST, HOW MANY WORDS DO YOU THINK YOU WILL GUESS CORRECTLY ON THE NEXT TRIAL? (CIRCLE ONE):

1 2 3 4 5 6 7 8 9 10

3) HOW MANY WORDS DO YOU THINK YOU WILL ACTUALLY GUESS CORRECTLY ON THE NEXT TRIAL? (CIRCLE ONE):

1 2 3 4 5 6 7 8 9 10

NRU DLA  
NTO YRA  
AJR YAN  
ISN BRU  
EWS THU

1) IF YOU DO YOUR BEST, HOW MANY WORDS DO YOU THINK YOU WILL GUESS CORRECTLY ON THE NEXT TRIAL? (CIRCLE ONE):

1 2 3 4 5 6 7 8 9 10

2) IF YOU DO YOUR WORST, HOW MANY WORDS DO YOU THINK YOU WILL GUESS CORRECTLY ON THE NEXT TRIAL? (CIRCLE ONE):

1 2 3 4 5 6 7 8 9 10

3) HOW MANY WORDS DO YOU THINK YOU WILL ACTUALLY GUESS CORRECTLY ON THE NEXT TRIAL? (CIRCLE ONE):

1 2 3 4 5 6 7 8 9 10

FROM: L. W. C.  
TO: B. A. M.  
SUBJECT: C. I. G.  
RE: R. E. F.  
DATE: 10/14

10/14/54

1) IF YOU DO YOUR BEST, HOW MANY WORDS DO YOU THINK YOU WILL GUESS CORRECTLY ON THE NEXT TRIAL? (CIRCLE ONE):

1 2 3 4 5 6 7 8 9 10

2) IF YOU DO YOUR WORST, HOW MANY WORDS DO YOU THINK YOU WILL GUESS CORRECTLY ON THE NEXT TRIAL? (CIRCLE ONE):

1 2 3 4 5 6 7 8 9 10

3) HOW MANY WORDS DO YOU THINK YOU WILL ACTUALLY GUESS CORRECTLY ON THE NEXT TRIAL? (CIRCLE ONE):

1 2 3 4 5 6 7 8 9 10

BSO	WVO
DOD	DNA
OGA	IRA
EAC	ILO
DRO	MSU

WORD SOLUTION TIMES BY LIST

TNU (NUT) 4.	ERWI (WIRE) 24	NRU (RUN) 11
NPA (PAN) 5.	NOLA (LOAN) 25	NTO (NOT) 7
DNE (DEN) 7.	EWGA (WAGE) 27	AJR (JAR) 7
NTI (TIN) 8.	XNTE (NEXT) 40	ISN (SIN) 9
DIR (RID) 8.	SOTS (TOSS) 26	EWS (SEW) 12
WOR (ROW) 4.	PAML (LAMP) 19	DLA (LAD) 6
XMI (MIX) 4.	KJOE (JOKE) 21	YRA (RAY) 10
LLA (ALL) 8.	OLOC (COOL) 33	BRU (RUB) 4
TOH (HOT) 6.	AAPP (PAPA) 23	THU (HUT) 5
DRE (RED) 6.	KMIL (MILK) 32	YAN (ANY) 14
$\bar{X}$ = 6.0 sec.	$\bar{X}$ = 27 sec.	$\bar{X}$ = 9

OEHR (HERO) 20	UEDK (DUKE) 19	EDIS (SIDE) 19
RSTI (STIR) 25	DAPI (PAID) 22	LURC (CURL) 33
CRDO (CORD) 15	DHRE (HERD) 23	HEDS (SHED) 27
EUGR (URGE) 90	AKSE (SAKE) 26	EERP (PEER) 14
LEID (LIED) 30	PEHA (HEAP) 12	ETEM (MEET) 23
ESOG (GOES) 10	HIFS (FISH) 17	PWRA (WRAP) 22
WLOH (HOWL) 60	KCOM (MOCK) 11	BAML (LAMB) 37
SOAL (ALSO) 10	WYAA (AWAY) 13	OLLD (DOLL) 22
IKTN (KNIT) 40	TTNE (TENT) 27	RFIE (FIRE) 39
CEON (CONE) 50	UKLC (LUCK) 14	HPIW (WHIP) 36
$\bar{X}$ = 35 sec.	$\bar{X}$ = 18 sec.	$\bar{X}$ = 32

POH (HPO) 6	IGD (DIG) 9	BSO (SOB) 12	WVO (VOW) 8
PLA (LAP) 13	YOT (TOY) 23	DOD (ODD) 14	DNA (AND) 9
TRA (RAT) 11	DMU (MUD) 21	OGA (AGO) 27	IRA (AIR) 11
WOL (OWL) 34	TPO (POT) 10	EAC (ACE) 23	ILO (OIL) 21
EOT (TOE) 21	HDA (HAD) 19	DRO (ROD) 12	MSU (SUM) 12
$\bar{X}$ = 18 sec.		$\bar{X}$ = 14 sec.	



## APPENDIX E

Items, Factor Loadings on Collin's and Emmott's Analysis  
 (Positive scores assigned for agreeing with item)

Item #	Factor # Loading (Collins)	Factor # Loading (Emmott)	
6.	I/.54	II/.70	Many times I feel that I have little influence over the things that happen to me.
9.	(I)/? *	II/.55	I have often found that what is going to happen will happen.
8.	I/.45	II/.55	Most students don't realize the extent to which their grades are influenced by accidental happenings.
2.	I/.51	II/.53	Sometimes I feel that I don't have enough control over the direction that my life is taking.
1.	I/.55	II/.51	Many times exam questions tend to be so unrelated to course work that studying is really useless.
7.	I/.42	II/.51	Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries.
4.	I/.57	II/.50	Sometimes I can't understand how teachers arrive at the grades they give.
10.	I/.40	II/.48	Without the right breaks, one cannot be an effective leader.
3.	(I)/?*	II/.39	Most people don't realize the extent to which their lives are controlled by accidental happenings.
37.	IV/.39	II/.35	One of the major reasons why we have wars is because people don't take enough interest in politics.

Item #	Factor # Loading (Collins)	Factor # Loading (Emmott)	
5.	I/.45	(II)/?*	Who gets to be the boss often depends on who was lucky enough to be in the right place first.
11.	I/.42	(II)/?*	Getting a good job depends mainly on being in the right place at the right time.
21.	II/.41	I/.78	People who can't get others to like them can't understand how to get along with others.
18.	II/.45	I/.77	People are lonely because they do not try to be friendly.
15.	II/.41	I/.62	In the long run, people get the respect they deserve in this world.
13.	II/.45	I/.59	Capable people who fail to become leaders have not taken advantage of their opportunities.
19.	II/.45	I/.58	Most misfortunes are the result of lack of ability, laziness, ignorance, or all three.
12.	(II)/?*	I/.53	People's misfortunes result from the mistakes they make.
20.	(II)/?*	I/.48	In the long run, the bad things that happen to us are balanced by the good ones.
45.	II/.35	I/.41	How many friends you have depends on how nice a person you are.
16.	II/.43	I/.39	In the case of the well-prepared student, there is rarely if ever such a thing as an unfair test.
22.	II/.35	I/.37	There is a direct connection between how hard I study and the grades I get.

Item #	Factor I Loading (Collins)	Factor I Loading (Emmott)	
14.	II/.41	??*	The idea that teachers are un- fair to students is nonsense.
17.	II/.36	(I)/?	What happens to me is my own doing.
24.	III/.62	III/.74	There is really no such thing as "luck".
28.	III/-.53	III/-.61	Becoming a success is a matter of hard work; luck had little or nothing to do with it.
23.	III/.58	III/.57	In my case, getting what I want has little or nothing to do with luck.
29.	(III)/?*	III/.49	Trusting to fate has never turned out as well formed as making a decision to take a definite course of action.
25.	III/.58	III/.48	It is impossible for me to believe that chance or luck plays an im- portant part in my life.
26.	III/-.56	III/-.45	Many of the unhappy things in people's lives are partly due to bad luck.
44.	(III)/?*	III/-.36	When I make plans, I am almost certain that I can make them work.
27.	III/.48	(III)/?*	Getting people to do the right things depends upon ability; luck has little or nothing to do with it.
34.	IV/.53	IV/.69	It is difficult for people to have much control over the things politicians do in office.
35.	IV/-.62	IV/.63	The average citizen can have an influence in government decisions.

Item #	Factor # Loading (Collins)	Factor # Loading (Emmott)	
36.	IV/-.49	IV/-.45	In the long run the people are responsible for bad government on a national as well as on a local level.
30.	IV/.64	(IV)?*	By taking an active part in political and social affairs the people can control world events.
31.	IV/.64	(IV)/?*	The world is run by the few people in power, and there is not much the little guy can do about it.
32.	IV/-.53	(IV)/?*	With enough effort we can wipe out political corruption.
33.	IV/-.49	(IV)/?*	As far as world affairs are concerned, most of us are the victims of forces we can neither understand nor control.

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\* Indicates that item loads on appropriate factor (same as the other study), but because it did not meet criteria (+/-.35 on one and only one factor), it was not included in scale.

??\* Indicates that item does not load on appropriate factor.