SITUATIONAL DETERMINANTS OF AGGRESSION:

AN S-R APPROACH

Mark Mirotchnick

A THESIS

in

The Department

of

Psychology

Presented in Partial Fulfillment of the Requirements for the
Degree of Master of Arts
at Sir George Williams University

May, 1973.

© Mark Mirotchnick 1973

ABSTRACT

Mark Mirotchnick

SITUATIONAL DETERMINANTS OF AGGRESSION: AN S-R APPROACH

The effects of characterological and situational variables on reported intensity of aggressive responses were investigated in forty-two male and forty-two female college students. A test was designed to assess the reported magnitude of aggressive responses. The data were evaluated by analysis of variance. Situational differences accounted for a greater portion of overall variance than did individual differences. This result held true despite an attempt to include only situations judged to be of similar ability to elicit aggressive responses. It was concluded that while the nature of the sample of subjects should be considered in predicting, understanding or controlling aggressive responses, it may be more important to be familiar with the physical and psychological situation from which the aggressive responses emerge. No significant main effects for sex were observed, although significant interactions were found between situation and sex as well as between modes of response and sex.

ACKNOWLEDGEMENTS

The author would like to express his indebtedness to Dr. S. Munoz, Dr. R. Hooper, and Dr. A. Hilton for their support and guidance during all phases of this research.

To Mrs. B. Cymet, Miss C. Poirier, and Miss W. Zack, appreciation is expressed for their invaluable aid.

TABLE OF CONTENTS

LIST OF TABLES

INTRODUCTION

Background

The prevalent notion in the study of personality is that the main source of variation in behaviour is that attributable to differences among individuals. This notion is referred to as characterology and usually contrasted with situationism which involves the belief that consistency in behaviour is a positive function of situational similarity (Pervin, 1970). Characterology is predicated largely on the tenets of psychoanalytic theory, various personality theories, and factor analytic studies; and it is typically linked with the concept of underlying psychological structures or traits which are modified minimally across situations. Traits are generally defined as distinguishable attributes of individuals which are relatively stable and enduring (Guilford, 1959; Cattell, 1959), and, notwithstanding some baffling inconsistencies, they are widely assumed to be the major determinants of behaviour. Although such reasoning has long held sway, a body of literature which strongly augments the view of situationism is not only being rapidly developed but also is exerting increasing influence on the study of personality. This view, traditionally held by Sociologists, Anthropologists, and Social Psychologists (Secord and Backman,1964), and further developed mainly by the principles emanating from general psychology, learning theory and experimental psychology, supports the claim that behaviour can be understood and predicted if the situation in which it occurs is known (Skinner, 1953).

Psychodynamic theory and that of its various derivatives are consistent with the characterological belief as they regard the underlying personality as relatively stable over the vicissitudes of experience (Hall and Lindzey, 1957). The structure of the individual's personality is ostensibly revealed through observation and appropriate interpretation of all his responses including those from projective tests as well as spontaneous remarks or actions in everyday situations (Freeman, 1965; Mayman, Schafer and Rapaport, 1951). In other approaches, however, environmental stimuli are regarded as more influential with respect to behaviour. Kelly (1955, 1958) favours a cognitive approach to personality. In his personal construct theory, the manner in which an individual perceives, translates and essentially transforms environmental stimuli, is the key feature whereby the salient characteristics of his personality are ultimately revealed to the investigator. The individual not only perceives his environment, but also possesses the capacity to represent, construe, and interpret it constantly, as all of experience is held to be a representation or construction of reality. Kelly also opposes the psychodynamic position in that he rejects the reification of concepts such as traits or tendencies linked to instincts. Such traits or tendencies are to be regarded not as veridical entities, but as constructs which "exist in a theoretician's head" (Kelly, 1958). In ordering an otherwise chaotic environment, the individual developes and utilizes a set of constructs whereby he renders himself able to make increasingly fine discriminations among many kinds of stimuli. Some of these constructs (core constructs) are of fundamental importance to the structure of the personality, while others (peripheral constructs) are less crucial to adequate development so that in their absence or modification

functioning is not vitiated. Like psychodynamic theory, this is a holistic approach, and despite wide, often critical differences, Kelly, too, clearly regards individuals and behaviour as stable over time and across situations. Indeed most personality theorists, regardless of orientation, feel that the individual responds in a consistent manner when confronted with authority figures, sexual objects, mother figures, etc. (Bertocci, 1963).

Such characterological formulations are generally the hallmark of trait theories in which internal characteristics are almost reified and felt not only to exist within the individual, but also to be causally related to overt behaviour (Cattell, 1950). Allport (1966) believed that all individuals may be classified, measured and compared provided that their traits were adequately assessed. Allport and Odbert (1936) found 17,953 trait names in the dictionary which could often be grouped into clusters called syndromes. These trait names were divided into cardinal, central and secondary traits. Cardinal traits were regarded as pervasive and present in small amounts within each individual. Central traits in Allport's schema are the "building blocks of personality" which, when detected by the investigator, ultimately reveal the essential elements of the personality. Secondary traits were the least significant and the most difficult to discern (Allport, 1937). All traits, however, regardless of the rubric under which they are grouped, are not amenable to direct observation, but are inferred from behaviour; and are invoked to describe and explain consistencies.

Cattell (1947) pared Allport's list down to approximately 4,500 trait names (Allport's central traits), and along with Eysenck and Guilford, he was largely responsible for the scientific respectability attained by this approach. The factor analytic method usually was

utilized to determine the characteristics on which individuals should be evaluated and to find the common elements or factors underlying a set of measures (Thompson, 1946). In the assessment of personality, Cattell employed two units: nomative and ipsitive units. The former deals with variation between individuals, the latter with variation within a given individual. For each individual these units are arranged in a manner peculiar to him and a predominate assumption is that the factors are amenable to measurement. These factors may be perceived in two ways; as co-relation clusters or surface traits (Cattell, 1964). From large-scale factor analysis of personality he derived twelve primary factors (Cattell, 1945) and determined their order of mean contribution to the variance of the whole population of personality variables. High variation in an individual's score on the same trait in different situations occurs only in second order factor levels and not in primary factors (Cattell, 1964).

Eysenck (1970, p. 2) defines personality as the "relatively stable and enduring organization of a person's character, temperament, intellect, and physique which determines his unique adjustment to the environment", and he argues cogently in favour of the existence of traits. Each trait or factor determines the individual's score on the specific test designed to evaluate it. He deals with a prodigious number of traits, and by the application of factor analysis, he typically arrives at a decision as to whether the term under consideration is, in fact, a unitary concept adequately defined as "trait". Eysenck also accepts Stern's (1921) model in which there is both a variable and a constant aspect of any given trait, but believes that the effect of traits is always experienced by the individual, and distinguished by "low thres-

hold of arousal" (Eysenck, 1970, p. 9) so that a tendency to respond in accordance with one's traits is always present.

Guilford (1959) regards traits as personality characteristics to be utilized in allowing us to expect certain types of behaviours from an individual to the exclusion of others. He asserts that traits pertain to the individual but not to behaviour, and that they are inferred from behaviour but not observable. He recognized that situations may predominate vis-a-vis traits and this view is elucidated by his concept of "functional fluctuation". This refers to the unfettered position of an individual in behaving according to any given trait which he "has". Over a large number of situations the individual displays a considerable range of variation so that sometimes his behaviour is palpably discrepant from one of his traits, but on most occasions overt behaviour and underlying traits are consistent.

Many studies offer support for characterological claims by attempting either to assess the effect of a given variable on a particular trait whose existence is taken for granted, or to actually demonstrate the cross-situational consistency of the trait so that its existence is confirmed by experimental evidence. For example, desire for certainty and intolerence of ambiguity have been variously investigated (Frenkel-Brunswick, 1949; Eysenck, 1954), in an effort to ascertain whether people characteristically react to their environment by trying to render it both predictable and understandable. Brim and Hoff (1957) who describe desire for certainty as a "human trait" amenable to investigation as an emotional and perceptual personality variable, investigated its cross-situational stability. Using the experimental manipulation originated by Frenkel-Brunswick (1951), they also attempted to discover whether incre-

ments or decrements could be elicited as a function of situational change. The main hypothesis of this experiment was that 2 different measures of desire for certainty (one measure was a test constructed specifically for this "trait", the other was a judgement or attitude test) would produce significant correlations. In accordance with the previous experiments (Frenkel-Brunswick, 1951; Eysenck, 1954) this hypothesis was supported and the conclusions drawn were that there is high individual consistency in desire for certainty over different measures. As there were also significant differences among frustrated, satisfied and control groups, however, they concluded as well that this desire could be increased or decreased by situational variables.

Characterology has also been supported by the notion of an underlying general intelligence or g factor which is generally accepted as demonstrating high situational consistency. Guilford (1964) attributes the high correlations among measures of intelligence to the formerly limited concepts of intelligence and the uniform nature of most tests. Another reason is that most tests were functionally complex which increases their capability to contain common factors. In his study (1964) he found that for over 7,000 correlation coefficients, 17 to 24% could be regarded as zero, largely due to the extension of the concept to encompass the entire realm of human intellect, including dimensions not previously considered. Nevertheless, it is generally accepted that abilities such as intelligence are fairly consistent over situations (Mischel, 1968).

Apart from the few examples cited here, the psychological literature abounds with adherence to and support for the characterological approach to personality, and this acceptance is perhaps exceeded outside the research field. For example, when an individual is given a psychological

assessment, the purpose is usually to determine not how he functions on a given task in a specific type of situation, but the instrument is so constructed as to render the findings amenable to generalization and extrapolation to typical performance in situations outside the testing area (Cronback, 1960). This procedure necessarily presupposes that the personality is comprised of enduring entities which can be measured by a sufficiently sensitive instrument. Such reasoning is prevalent in clinical settings where not only is the client's personality assessed but also an effort is exerted to obviate his undesirable traits, and perhaps instill in him new, more acceptable ones. It is clear that similar logic is invoked in many facets of professional and everyday life. For example, people, when discussed, are described often in terms of their consistent and lasting personality attributes - their traits.

Although the characterological view has been occasionally faced with antithetical evidence, this evidence has, until recently, been rare and sporadic. Increasingly more research (Burwen and Campbell, 1957: Pervin, 1960) appears to question the notion that a so-called trait is actually a unified construct. Typically the reliability and validity coefficients on measures of the trait under investigation are demonstrated to be tenuous and further research is suggested (Burton, 1963; Johnson, 1962). This could indicate either that the trait, in fact, is not a unitary one, or that the measuring instruments are inadequate. For example, Burwen and Campbell (1957) investigated the long-accepted notion that authority figures are generally responded to in a characteristic manner by an individual and this is usually related to his relationship with his father. Assessments were made on the basis of a variety of methods including T A T protocols, inventories, self evaluation, interviews,

judgment of others, of photographs, attitude surveys, sociometrical inventories and an autobiographical questionnaire. Attitudes toward authority, boss, peers and symbolic peers were obtained. As the responses toward either authority or peers were highly consistent, they concluded that generalized attitudes toward such figures were not demonstrated.

Another trait generally accepted as more or less unified is that of rigidity. Freud, for example, regarded rigidity as a mechanism employed by an individual when flexibility leads one into unknown, hence frightening directions (Freud, 1930). Despite some theoretical efforts (White, 1956) as well as those emerging from correlation studies which report a general factor of rigidity (Schaie, 1955) the generality of this factor is becoming increasingly doubtful. Pervin (1960) investigated rigidity in several behavioural areas in neurotics and normals by giving each subject a test of rigidity for each of five areas: problems solving, motor abilities, learning, perception and concept formation. He asserts that in the light of markedly low inter-correlations among the tests "individuals may perform rigidly in one area of personality functioning but not in others". This assertion was corroborated by Wrightman and Baumeister (1961). In their study rigidity was evaluated by the commonly used (Levitt, 1956; Luchins and Luchins, 1950) water jar test. The subjects were administered either a paper and pencil version of the test or a more realistic method which employed actual jars. Their experimental hypothesis that the paper and pencil test would give rise to higher rigidity scores then the real-life version was supported by the results; but when rigidity scores from both varieties of the test were correlated with their responses on a different test of rigidity, the resulting relationships in neither case were consistently high. They concluded that "the modest correlations indicated the lack of a unitary concept."

Hartshorne and May (1928) conducted an extensive survey to demonstrate the fact that moral behaviour in general and honesty in particular can no longer be regarded a unitary trait. Children are often assessed for moral behaviour along the Freudian concept of the super-ego or with respect to certain generalized abstractions such as Piaget's moral realism and moral relativism (Piaget, 1932). Moral realism refers to the fact that younger children usually concretize rules by regarding them as always having existed and immutable. Moral relativism describes the outlook of older children who are capable of differentiating between different types of offenses and understand that the rules - for a marble game in this case - were created by mutual accord. In the Hartshorne, May and Shuttleworth (1930) study, children were placed in a position in which they might steal, lie and cheat in a variety of situations. There were low correlations for the same offenses in different situations and there was no evidence of the existence of a unitary trait such as "honesty".

The determinants of delay of gratification are of obvious consequence in the scientific study of personality and usually related to the commonly used notion of "ego strength" (Freud, 1924). Mischel and Staub (1965) investigated this phenomenon as a function of situational and generalized expectancies. Their formulation was predicated on the work of Rotter (1954) who regarded choice responses between immediate, and delayed but preferred reinforcement as a function of level of reinforcement expectation for a particular situation. Expectancies were experimentally manipulated by having the subjects succeed, fail, or receive no information on tasks. Following this, each subject was required to choose between small, noncontingent rewards and more desirable rewards

which were contingent on successful completion of other tasks. In accordance with the experimental hypothesis, contingent rewards were selected more often after experience of success than failure, and the effects of success in different situations lessened the effect of generalized expectancies.

Aronfreed (1961) investigated responses to transgression using a projective technique of story completion. External cues were found important in determining responses to transgression as moral action was usually the result of the influence of others. Again, there was no evidence of an underlying unitary moral agency such as a superego or conscience. Similar findings are also reported by Sears, Rau, and Allport (1965).

Another study which lends support for such conclusions is that undertaken by Phares and Rotter (1956). Here, a meaningful way to conceptualize situational effects was in terms of the engendered expectencies of response consequences. They hypothesized that preferences for specific reinforcements would differ predictively as a function of their situational contexts. More specifically they presented the subjects with lists on which three kinds of rewards would be scored for desirability - academic, athletic and manual dexterity rewards. It was predicted that the rewards would be ranked differently when the list was administered in English classes, gym classes and woodworking classes so that athletic rewards would be ranked as more desirable in gym class, etc. It was found that there were significant differences between athletic and academic rewards in their respective classes; between athletic and manual dexterity rewards in their respective classes; but not between academic rewards and manual skills in their respective classes. They argued that

the effect of expectencies emerging from the physical setting, the examiner and the test instructions must always be taken into consideration in psychological assessment.

The number of traits which may be validly considered to be stable and unified is increasingly diminishing. Eysenck (1965) investigated a number of studies comparing extraverts and introverts on conditionability. He found that the correlations among different measures of this variable were contingent upon a series of conditions such as the anxiety provoking nature of the situation, the reinforcement schedule, the massed or spaced sequence of stimuli, and another series of more complex interactions among the conditions, anxiety, and extraversion-introversion. He concluded that there is no evidence to support the existence of a "general factor of condition-ability".

Numerous attempts to validate the assumption that individuals evince substantial cross situational consistency in responsiveness to external influence have been unsuccessful (Baumgarterner, 1931; Murphy, 1947). Linton (1955) tested this assumption for perceptual and conformity situations. The perceptual tests were developed to assess the effects of the surrounding field and the difficulty of the subjects in overcoming its influence (in a tilting - room - tilting - chair apparatus). The conformity tests evaluated judgements, attitudes and feelings. Correlating the different measures revealed that a number of different variables are operative in determining conforming behaviour rather than a single "generalized trait". It is also suggested that even if central tendencies toward or away from conformity behaviour do exist for any particular situation, they can be considerably influenced by peripheral factors.

Part of the difficulty in evaluating individuals along these various dimensions lies with the instruments. Validity is often an elusive phenomenon particularly in the absence of operational definitions (Cronbach and Meehl, 1955). Also, more stringent requirements such as convergent and discriminant validity (Campbell and Fiske, 1959) increase considerably the number of studies open to this type of criticism. Low correlations among "traits" measured by different tests are to be expected in traditional approaches but greater accuracy may be achieved by instruments which take into account the fact that the situational context of responses may be, for certain factors, a more precise indicator of behaviour variance. Although evidence for this viewpoint has been accumulated since the Hartshorne and May (1928) study, it has not been highly influential, largely because of the insistence that indicators of "core personality" must be sought, and not samples of behaviour. Situations were important to the extent that they contributed to a minor portion of behaviour variance reflecting fluctuation in mood or disposition germane to the trait in question: and also that questionnaire items which included "always", "sometimes", and "never" were introduced.

Despite the evidence against the characterological approach, it is apparent that individuals do differ and that these differences should be included in any functional analysis of behaviour variation. The most efficacious comparison of situationism and characterology might be to assess directly the behaviour variance attributable to individual differences on that characteristic in question as opposed to that attributable to different situations (Hunt, 1965). Surprisingly, this has been rarely attempted; but a notable exception is the study by Endler, Hunt and Rosenstein (1962). Their inventory of anxiousness employed a sample of

eleven situations which ranged from the seemingly harmless to the highly anxiety-provoking. Each situation was presented to the subject along with fourteen behavioural and physiological indices of anxiety, and the subject was required to indicate the extent to which he experiences each of these indices for the given situation. Thus they were able to compare the relative contributions to total behaviour variance of individual differences, modes of response, situations and interactions. It was found that the contribution of individual differences was very small compared to that of situations; and, it accounted for only a minor proportion of the total variance. In fact, in one of their experiments the contribution to the total variance of situational effects was greater than eleven times that of individual differences. They also found that the contribution of the modes of response to total variance was greater than that of any other variable. Among the difficulties with this inventory is the arbitrary sampling of situations, so that it is indeterminable whether the eleven situations represented an adequate sample of the entire population of possible situations. Also, there is usually a discrepancy between the manner in which individuals respond on tests and the observation of overt behaviour. Thus, Mischel (1968, p. 75) refers to tests such as these as a "shortcut" which may be "one of the costliest efforts to economize in the history of assessment". Clearly it would be difficult to generalize too widely from one study; but corroboration of these findings would contain far-reaching implications and perhaps require a re-evaluation of much previous research as well as much of our everyday thinking.

A typical characterological variable and the one with which this study deals is aggression. Most researchers regard this dimension as a

personality attribute and attempt to correlate it with other variables or to determine its etiology (Berkowitz, 1962). Freud (n.d.) considered aggression to be an essential derivative of the death instinct manifested through the aggressive drive. Inasmuch as a person's death wish is impeded by forces of the life instinct and its derivatives, he struggles against other individuals and may be classified according to psychodynamic theory as aggressive or perhaps as a "passive aggressive personality" (American Psychiatric Association, 1968).

Investigations of aggression often deal with the frustration-aggression (Dollard, et al, 1939) hypothesis which postulates a causal relationship between these phenomena. According to this hypothesis which was developed as an attempt to discuss psychoanalytic concepts in terms of learning theory, aggression is defined as an act whose goal response is injury to another organism. Frustration is defined as a condition which results when an organism is blocked from its goal, and a cardinal assumption is that the occurance of either of these variables presupposes the existence of the other. Frustration (and hence aggression) may be increased or decreased contingent on the importance of the goal, the extent of the interference, and the number of unsuccessful attempts at that goal (Miller, 1958). Perhaps the most controversial aspect of this theory is that aggression is the only response to frustration and frustration is the only cause of aggression (Gechbach, 1964; Dollard et al). Other investigations have questioned this aspect by positing that other variables may be of equal importance as frustration in the determination of aggression, and it seems quite possible that insights into the nature of aggression may be generated from a resolution of the situationism versus characterology issue with respect to this particular response

category.

For example, Murray (1954) found that aggressive responses could be manipulated by situational changes (such as authoritarian versus permissive investigators), while the importance of cultural transmission has elsewhere been stressed (Bates, 1936; Whiting, 1941). One of the most sophisticated approaches, however, is that of Social Learning Theory. According to its proponents, man is innately endowed with the neurophysiological mechanisms necessary for aggression but it is subject to cortical control (Bandura, 1969). Thus, social experience is a powerful determinant of aggressive behaviour. Acquisition of aggression is presumably effected under conditions characterized not by frustration but its absence, and by the presence of appropriate models (Bandura and Walters, 1963; McCord and McCord, 1950). Modelling is considered a crucial aspect of most human learning so that when an individual enters a frustrating situation, for example, he will be most likely to emulate his models. After acquisition of a given response, generalization may occur so that "Subjects readily learn to follow their respective models and generalize copying responses to new situations, new models and to different motivational states" - (Bandura, 1970, p. 122). On the basis of studies refuting the existence of cross-situational consistency it is doubtful that such generalization actually occurs. Social learning theory may correctly describe the variables critical to individual differences, but situational differences may be more influential on human behaviour than this theory recognized.

The Present Study

The present study attempts to assess the relative importance of individual and situational variables in determining aggression and on the

basis of the review of the relevant literature, the following predictions are made:

It was predicted that in accordance with the situationist viewpoint (eg., Mischel, 1968; Hunt, 1965), significant differences in the observed aggressive responses would be found among the various situations.

In the study of Endler, Hunt, and Rosenstein, (1962); it was found that the contribution of situational effects to overall variance was considerably greater than that of individual differences. Accordingly, it was predicted that individual differences would be smaller that those attributable to situations.

Sex differences in aggression were also predicted as has been variously found from other studies (Berkowitz et al, 1962; Jessild and Marley, 1935).

Significant differences in mode of response or manner in which aggression is manifested (Striking, cursing, ridicule, etc.) were also expected as in the study of Endler, Hunt and Rosenstein (1962) this variable was not only found to be highly significant, but was also the one which contributed the largest portion to behaviour variance.

METHOD

Subjects

Subjects for this experiment were forty-two male and forty-two female students at Sir George Williams University. Ss were experimentally naive individuals who differed considerably from one another with respect to such variables as social class, academic background and ethnic origin. All were Canadian citizens of ages eighteen to twenty-six.

Procedure

Each subject was administered the inventory of aggressiveness which required approximately twenty minutes to complete. It was presented as an attitude survey designed to assess feelings and responses to different kinds of situations. Ss were instructed to read the description of each situation (See Appendix A) along with the ten responses to it. The order of presentation of situations was randomized to control for possible order effects. Then they were to recall their reactions to such situations as these or to predict what they would be and indicate the extent to which each of the ten responses would be typical of him for that situation by marking his position on a five point scale. Finally, on a separate answer sheet each respondent printed his name, age, date of birth, sex, income level, field of study, ethnic origin and religion; all of which were ostensibly "crucial variables".

The Test

The inventory was similar in form to the S-R inventory of anxiousness as devised by Endler, Hunt and Rosenstein (1962). There were twenty items (Appendix A) each of which was a description of an interpersonal siuation in which the subject was to perceive himself as being presented with an unpleasant stimulus. These stimuli were thought to be aggression provoking as they involved ridicule, striking behaviour, unfair treatment, verbal abuse, and unjustified accusations. The sample of situations was drawn from a large population of interpersonal aggression-eliciting situations thought to be relatively common to university students and included several from various tests of aggression (EPPS: Edwards, 1954; Manifest Hostility Scale: Allport; 1937; Buss-Durkee Inventory: Buss and Durkee, 1957).

There were two groups of ten situations per group. In the first group, the individual was delivered an aggression eliciting stimulus by peers, and in the second group by individuals in an authority or otherwise privileged position (Employer, teacher, parent, or famous personality). This dichotomy was employed as a control for situational differences stemming from differences in status of the aggressor, as such status discrepancies have variously been found to be influential on aggressive behaviour (Lippett et al, 1952, Cohen, 1958). Beneath each description of a situation were ten responses selected according to consistency with the definition of an aggressive response as provided by Dollard et al (1939). According to this definition, aggression is regarded as an act whose goal response is injury to another organism.

As there were twenty situations each of which included the ten responses, and as each response was evaluated on a five point scale; the maximum total score for each subject was one thousand. As the five

point scale was used however, the scores are presented out of a possible maximum of five.

In order to determine whether the subjects were in fact responding to situations which were sufficiently realistic, and able to evoke aggressive responses, it was decided to employ a group of judges to evaluate the situations. Thirty judges (15 males, 15 females) from the same population as the subjects were chosen and required to rate each of the situations. Each situation (See Appendix C) was judged on a five point scale in terms of how realistic it was and how capable it was of eliciting aggression. Each judge responded for himself and included his opinion as to the response of the average college student. Thus for each situation there were four questions. Two questions were concerned with the aggression-evoking potential of the situation (one question dealt with the judge's personal evaluation while the other question involved his projected evaluation of the average college student), and two others were concerned with the degree to which the situation was realistic. A situation was considered as having met the above mentioned requirements if it was accorded an average of at least 3.5 on the 5 point scale for questions dealing with the extent to which it was realistic and between 3.5 and 4.0 on the scale for questions dealing with effectiveness in eliciting aggression. The latter manipulation reflected the desire to employ a sample of situations judged as realistic as possible and as relatively homogeneous in aggression-evoking potential. This homogeneity was desirable as one of the experimental hypotheses predicted significant situational differences in aggressive responses; thus the test of this hypothesis was rendered more conservative. The results of this evaluation appear in Appendix C.

RESULTS

The main results are summarized in Tables 1-12 of Appendix B. The overall range and means of the scores as well as those for both sexes are found in Table 1 of Appendix B. In Table 1, it is clear that the overall range was 1.005 to 4.370 and the overall mean was 1.9220. The means were 1.955 and 1.888 for males and females respectively. The range for males was 1.105 - 4.370 while that for females was 1.005 - 4.290.

As Ss responded to the test, it became intuitively apparent that they did not respond very differently toward peers as compared with higher status individuals. It will be recalled that the situations were divided into two groups. In the first group the subject responded to an aggressive stimulus reportedly delivered by a peer while in the second group the aggression was experienced at the hands of an individual in a superior or privileged position. In order to determine whether the two groups of situations differed from each other in terms of overall aggression scores, a t-test of means was done on the overall scores for the two groups (Table 2 Appendix B). It was found that the groups did not differ at a level which even approached statistical significance ($t=.841$, $df=18$, $p > .4$). In fact, there was a slight tendency to direct more aggression towards those of higher status than toward peers. Inasmuch as no significant difference was observed, it was concluded that the situations were drawn from the same population; and no variable differentiating among situations with respect to status was included in subsequent analyses.

The data from the three way analysis of variance for the response

of subjects to the twenty situations are presented in Table 3 of Appendix B. In evaluating whether situations differ significantly from one another, it was found that the situations variable was indeed highly significant [$F(19,1558)=27.47$, $p<.001$]. Means for this variable appear in Table 4 of Appendix B.

In testing for differences between male and female subjects, main effects for sex were not found to be significant [$F(1,82)=.95$, $p>.5$] but this variable did interact significantly with other variables as will be shown.

The differences in modes of response were found to be highly significant [$F(9,738)=525.85$, $p<.001$]. The means for this variable are found in Table 5 of Appendix B. In this Table, it is clear that such modes of response as harming others, ridiculing others and throwing or kicking objects occurred with relatively low intensities while those involving becoming angry, showing the aggressor that he is wrong, and attacking the aggressor verbally occurred with relatively high intensities.

The proportion of mean square contributions to overall variance of each variable used in the analysis is presented in Table 6. In assessing the relative effects of situational and individual subjects differences, examination of the data reveals that the contribution of situations to total variance exceeds eight times that attributable to differences among individual subjects. In Table 6 it is clear that the variable which contributed most to total variance was that of mode of response. In fact the mean square of this variable surpassed seven times that of situations which accounted for 11.3 per cent of the variance. The effects of the subjects and sex variables however did not contribute substantially as their mean squares only accounted for 1.4% and 1.3% respectively of the total variance.

Other findings, although not necessarily related to specific hypotheses were nevertheless informative. It was found for example that although the interactions contributed to only 1.24% of the total variance, most of them were statistically significant. The interaction which contributes most to overall variance is that between situations and modes of response. Its significance [$F(171,14022) = 7.57$, $p < .001$] attests to the fact that situational differences are present as a function of the different modes of response. The means for this interaction are found in Table 7 of Appendix B.

The next significant interaction is that between modes of response and sex [$F(9,738) = 5.235$, $p < .05$]. Interestingly, it implies that sex differences although not found for the overall analysis, are presented for different modes of response. The means for this interaction are found in Table 8 of Appendix B.

The triple interaction among situation, modes of response and sex was also significant [$F(171,14022) = 3.27$, $p < .05$.] Means for this interaction appear in Table 9 Appendix B.

It is also worth noting the lack of significance attained by the interaction between the situations variable and the sex variable. This result [$F(19,1558) = .775$, $p > .5$] is indicative of the fact that sex differences are not present for different situations.

FURTHER CONSIDERATION OF RESULTS

The responses of the 30 judges were analysed in an effort to determine which situations were successful in meeting the requirements of the criteria previously set up. A situation was judged as having met the requirements if it was accorded an average of at least 3.5 on the 5 point

scale for questions dealing with the extent to which it was realistic and between 3.5 and 4.0 on the scale for questions dealing with effectiveness in eliciting aggression. It was found that 6 of the original 20 situations (denoted in Appendix C by asterisks) did not adequately meet the necessary requirements in terms of ability to reflect a realistic event, ability to elicit aggression, or similarity to other situations in this ability.

In order to assess the extent to which the above findings were robust, a separate analysis excluding these situations was done which may be compared to the previous one, and the results of this analysis are found in Table 10 (Appendix B). Here it will be seen that significance levels were marginally changed and the results of all hypotheses tested remain unchanged. As before, the modes of response contribute more to the total variance than any other source, the contribution of siuations is next highest, while the variance due to differences among individuals is third highest (See Table 11 Appendix B). Again interactions among variables accounted for only a small proportion of the overall behaviour variance (1.35%), and as in the previous analysis, the interaction with the largest loading on total variance was that between situations and modes of response. Although generally consistent with the results of the analysis done on the original 20 situations the differences are instructive. Certain variables were markedly affected by the elimination of some situations while this was far less true for other variables. Variables undergoing large change were sex (mean square decreased by 70%) and situations (mean square decreased by almost half). On the other hand variables which were less modified were those representing subjects (mean square decreased

by 11%) and modes of response (mean square decreased by 26%). Possible reasons for these differences will be discussed below.

Finally it was observed that the contribution of situational differences to overall variance was just over five times that of individual differences whereas in the previous analysis, it was 8 times as great.

To summarize, in accordance with the experimental hypotheses, effects of modes of response and situations were statistically significant. The hypothesis concerned with the relative effects of individual and situational differences was strongly supported as situational effects proved greater than those due to individual differences when the whole sample of situations were included in the analysis, and somewhat less so when six situations were excluded. Although, no significant sex differences were observed for the overall analysis, the sex variable produced several significant and interesting interactions.

Reliability

As the subjects variable does contribute to overall response variance, then at least some information may be obtained by the arrangement of individuals along a continuum for a particular psychological trait. To the extent that such an arrangment is useful, it becomes reasonable to determine the reliability of the test instrument. A split-half reliability was computed: the instrument was found to be highly reliable as the coefficient for the total score of the inventory was .96. (See Table 12 Appendix B).

DISCUSSION

The observed results of the present study are sufficiently consistent with the situationist approach so as to render this approach amenable to further investigation. Nevertheless, unqualified rejection of characterology is hardly warranted, and at any rate the extreme position of either view was clearly not supported. For example the belief of Allport (1937) and most psychodynamic theorists (Hall and Lindzey, 1957) that prediction and assessment of aggression emanate almost exclusively from insights into the nature of the sample of subjects, appears untenable as situational variables were statistically significant and accounted for more of the total variance than did individual differences. Accordingly, a general trait of aggression was not demonstrated. The presence of the individual differences, however, was hardly unexpected as it reflects the common sense assertion that people score differently from one another on most personality attributes. In opposition to the occasionally espoused extreme situationist view that behaviour is almost totally determined by its situational contexts; these individual differences, although smaller than those due to situations in the present study, have elsewhere been found to be significant and irrefutable. (Endler, Hunt and Rosenstein, 1962).

Support was observed, however, for the more moderate situationist assertion that adequate evaluation of aggression is unobtainable in the absence of prior specification of the physical and psychological situation in which the aggressive responses are embedded. The hypothesis that situational effects would surpass those attributable to individual

differences among subjects appeared to be supported by the data. It is of consequence that even this sampling of situations - the variation of which is at least somewhat delimited as a result of selecting only situations deemed to be of similar potential in eliciting aggressive responses - accounts for more of the variance than that contributed by the sampling of subjects.

Contrary to original predictions, overall sex differences were not significant. One explanation for this finding may be derived from familiarity with the sample of individual respondents. They were all students at the same university and despite some widespread differences with respect to such variables as age, ethnic origin, social class, and academic background; systematic similarities, not commonly found in the population at large, may be present. For example, it may be that university students in general are in greater accord with the notion of sexual equality than might be observed from a random sample of the entire population. Thus female inhibition of that type of aggression commonly expected from males in our culture may be reduced causing similar scores for both sexes.

Apart from such conjecture, the lack of overall sex differences may also be explained by examining the research literature. Women are generally reported to manifest greater conformity to the culturally accepted definition of their sex role, particularly in the inhibition of aggressive behaviour (Janis and Field, 1959). It has been found, however, that distinctions must be made among various means whereby aggression is expressed. For example, quite often males will exhibit more physically or blatently aggressive responses than females, whereas upon consideration of indirect and subtle forms of aggression, the difference disappears (Jessild and Marley, 1935; Berkowitz et al, 1962). Thus the clear pro-

pensity in the present study to emphasize verbal and indirect responses may account for the absence of significant main effects for this variable.

The significance of the modes of response x sex interaction is obviously consistent with such reasoning, as it is indicative of sex differences which exist as a function of the responses.

The means for the sexes appear not to vary to a large extent for any of the modes of response. Thus, the significance of this interaction may be possibly attributable to the fact that the highly significant effect of the modes of response variable magnified the relatively small effects of the sex variable.

Similar reasoning may be evoked upon evaluation of the triple interaction among situations, modes of response and sex; as the situations x sex interaction alone was not significant, but attains statistical significance as a function of the modes of response.

The finding of no significant difference between reported magnitude of aggressive responses in situations involving peers and those involving authority figures, may in a like manner be explained by differentiating among modes of expression. Although individuals are in general less aggressive and more deferential toward authority and power figures than when confronted with peers (Lippitt et al, 1952; Cohen, 1958), there is evidence that such is not necessarily the state of affairs for verbal or other types of aggression not operationally defined (Berkowitz, 1962). Also the discrepency between aggression toward peers as opposed to power figures is contingent upon the degree to which the power figure is capable of impeding the individual's upward mobility (Cohen, 1955, 1958). For the present test of aggression, the predominantly verbal or indirect nature of most of the responses has elsewhere been stressed. Neither were

all the authority figures encountered by the subjects even hypothetically capable of influencing their upward mobility.

The observation that modes of response contributes more to the overall variance than any other source attested to the fact that just as observation of subjects in similar situations is essential for different measures of aggression to be in accord; it is perhaps even more important that the indicator responses must be the same as well.

It was found that such modes of response as harming others, ridiculing others and throwing or kicking objects occurred with relatively low intensities while those involving becoming angry, showing the aggressor that he is wrong, and attacking the aggressor verbally occurred with relatively high intensities. A possible explanation is that the modes with low magnitude of response may not have been sufficiently realistic in which case an evaluation of the indicator responses with regard to accordance with reality may have proved useful as was the case for the situations which were thus evaluated. Another possibility my emanate from consideration of the "social desirability" of the responses (Edwards, 1957) as the low-scoring responses may have been regarded as socially undesirable for this population. Thus, it may be desirable in designing such a test, to evaluate the modes of response by a similar method to that utilized in the selection of situations.

The modes of response x situations interaction was found to be highly significant, and it accounted for a sizeable portion of the interaction variance. The significance of this interaction is indicative of the notion that individuals generally report specific response configurations for particular situations and other response configurations in other situational contexts. Thus in order to distinguish effectively among individuals in terms of an attribute such as aggressiveness; it is imperative to assess

not only the degree of aggression manifested by a given individual in a variety of situations, but also the extent to which he displays the given indicator responses in these situations. It is clear that such modes of response as showing the aggressor to be wrong, getting angry, attacking the aggressor verbally and cursing the aggressor are those which not only yield the highest mean scores but also discriminate most effectively among the various situations. This type of information may prove invaluable to the design of a similar test which takes into consideration not only the extent to which the situation reflects a realistic event and elicits aggression, but also the degree to which the modes of response discriminate among situations evaluated as eliciting similar amounts of aggression.

With this S-R type of inventory, the variance of each main effect as well as their interactions was readily assessed, at least insofar as is reasonably valid for individuals who are required to predict their behaviour under varying circumstances. Support and confirmation of the results may prove instrumental in the elimination of assessments which fail to take into account the extent to which the evaluated behaviour of a subject which appears in a particular situation is representative of his behaviour in other situational contexts. Thus, the standard procedure for clinicians and personologists to assess the personalities of their clients and subjects in terms of stable characteristics may ultimately become modified so that evaluations will be made in certain classes of situations. In such a manner, the evaluated behaviour will be generalized not to all possible situations, but only to these various types of contexts.

When the data were analyzed exclusive of the six situations discarded on the basis of their failure to meet the designated requirements

in terms of potential to evoke aggressive responses and reflection of a realistic event, the resulting change in both main effects and interactions among these followed an intuitively logical pattern. For example, the substantial decrease in the mean square of the situations variable was hardly unexpected as it reflects the fact that situations judged to be very high or very low in terms of aggression eliciting potential were deleted from the analysis. Such a systematic manipulation renders the sample of situations more homogeneous in this respect, and consequently an attenuation of variance is effected.

It was also observed that the effect of sex, although not attaining significance when all twenty situations were incorporated into the analysis, was further diminished after the exclusion of the six situations. Again, the research finding that sex differences emerge in situations involving direct aggression (Bandura, Ross and Ross, 1961; Jessild and Marley, 1935; and Berkowitz et al, 1962), but not necessarily in those involving indirect or covert aggression provides a possible explanation. As five of the six situations dropped from the reanalysis were clearly of the former variety; direct forms of aggression such as its more physical and unreasonable manifestations were not represented in the inventory.

Comparing these results with those observed in the Endler, Hunt and Rosenstein (1962) study reveals a considerable degree of similarity. For both S-R inventories it was found that the variable accounting for the greater proportion of response variance was that of modes of response. In both cases the variable accounting for the next highest proportion was that of situations while individual differences were third highest in this respect. There was also agreement regarding the largest interaction which was that between situations and modes of response, but in both

analyses interactions accounted for only minor portions of total response variance.

Apart from the similarity of results, one of the most crucial differences was in the manner of selecting situations. This variable is clearly central to the whole analysis, and thus caution must be exerted to ensure that effects imputed to situations are not in fact due to other sources. In the earlier study, a rather intuitive and haphazard method of selecting situations was incorporated. The inadequacy of this procedure was recognized and pointed out by the authors. They chose situations that on an intuitive basis seemed to be highly anxiety provoking. Another major assumption was that these situations were of relatively common occurrence to their sample of subjects. The situations were not randomly selected from the entire population of possible situations, nor even from a rather large number of situations. Yet in the analysis of variance the situations variable was treated as random. In the present treatment, however, an attempt was made to select only those situations which evoked a determinable and similar amount of aggression. They were required to be realistic, and an effort was made to obtain a representative sample as twenty were selected randomly from a large population of situations.

Another notable divergence in the studies was the differentiation of subjects on the bases of sex, and this variable was not presented in the previous investigation. As no overall differences were found between the two groups, this may hardly be regarded as a criticism. The sex variable, however, did interact significantly with other variables such as modes of response and the modes x situations interaction.

Major Deficiencies of Present Study

One of the chief weaknesses of the present experiment is that it employs a test of the experimental hypothesis which uses the subjects' paper and pencil responses. There is no guarantee of the assumption that subjects are either capable of or willing to respond accurately to all the items. This defect may be overcome somewhat if discrete samples of overt behaviour are assessed. Nevertheless, to obtain such samples would be very time consuming and would require a heavily funded program. Even if such conditions were met, subjectivity would not be entirely eliminated as judgments would be necessary to determine what constitutes an aggressive response.

It is also desirable to obtain an independent measure of validity from an external criterion such as another test of aggression. Although this matter is only peripherally related to the characterology versus situationism issue; it is a necessary if not sufficient factor for all tests. It was, however, observed that the situations were regarded by an equivalent sample of judges as eliciting aggressive responses and this may be regarded as a form of content validity.

Another area amenable to improvement is the sampling of both situations and subjects. Further research is required to determine the situations which are both representative and defined as giving rise to aggressive responses. The sample of subjects is clearly inadequate as it is drawn from a specific segment of the population. Finally, it is worth noting that a replication as well as correction of the above inadequacies may result in a more fruitful contribution to the situationist approach.

Conclusions

Although the importance of situational variables is underscored by the results of the present experiment, it is nonetheless scientifically unsound to arrogate either the generality of such findings or the inherent truthfulness of the situationist position. Such claims are pointless in the absence of replication, and in any event the extreme situationist viewpoint has not been supported. Relative contributions of situational as opposed to individual effects are seldom directly assessed; and while the approach of the present study allows such a test, it must be remembered that the observed variance is only that of reported magnitude of response. Also it has already been mentioned that as is true of all inventories, the validity of the present inventory is contingent upon the extent to which the subjects respond candidly; and upon their ability to accurately report their past, present, and future behaviour in different situations.

It would be overgeneralizing as well to assert that unqualified support for the situationist argument is warranted on the basis of a few favourable studies. This argument has to an extent been supported for aggressive responses; and although similar conclusions may be justified for other common traits, it is clearly erroneous to claim that a general behavioral law is operative. It is equally erroneous to assume that the extreme situationist view which controverts the importance of differences among individuals is correct. The quantitative superiority of situations in accounting for reported response variance does not effectively reflect the value of these differences, small though they may be in comparison to situational differences; nor are qualitative distinctions sufficiently emphasized. For example, different individuals

may report similar intensities of aggressive responses to a given situation; but the quality of the responses may be highly discrepant. Also, the situations in which aggression is observed may be equal in number but not in nature. In order to acquire a genuine appreciation and understanding of aggressive responses, it would be necessary to evaluate for any individual, his response configuration to the entire spectrum of possible situations. This is clearly impossible as no individual actually experiences all the possible potentially aggression evoking situations in a lifetime. Thus the understanding, prediction, and ultimately, control of aggressive behavior must be limited to aggressive responses which characteristically emerge in various categories of situations.

It is likewise excessive to generalize the results to the extent of imputing causality or to claim that situations determine behaviour. A causal relationship cannot be assumed in the absence of a prior elimination of the possibility that the observed results may be attributable to the influence of other variables (Sellitz, Jahoda, Deutsch, and Cook, 1967). This has hardly been achieved or even attempted as other effects may have exerted considerable influence. For example, the possibility that certain of the indicator responses may be regarded as socially undesirable may have influenced the observed scores; and a significant "social desirability variable" (Edwards, 1957) should be controlled for. Finally the sampling of situations must again be emphasized as only a truly representative sample is amenable to extrapolation and generalization to include other members of the same population. Here it will be noted that as the range of capacity of these particular situations to elicit aggression was diminished in their selection; it follows that a more representative sample of situations would be greater in this capacity, and thus accountable for a larger proportion of response variance.

A possible reconciliation of the hitherto imcompatible viewpoints has been attempted by Second and Backman (1964). In their treatment, an interpersonal approach is recommended. It is suggested that individuals be investigated with regard to the degree to which their traits appear in interpersonal situations. Such questions as "How does a person with a certain trait interact with peers?" are posed. The emphasis is of course on interactions among individuals under varying circumstances. Here it is presupposed that certain traits do exist when in fact many of these are presently of doubtful authenticity, and it may prove more fruitful to compare situational and individual effects. Nevertheless viable alternatives are necessary and contribute positively to undermining extreme characterological assumptions.

It is quite probable that in neither the extreme view of situations nor that of characterology is found a truly appropriate description of the real interplay among traits, individual differences and situational effects. Hostile acts have been traditionally interpreted as typical responses of individuals with traits of aggression. Although the validity of such assumptions is at best questionable, it is by no means established that personality traits do not exist. Just as consistency and cross-situational generality have been found for intelligence and other abilities, in a like manner it may be shown that investigation of other behavioral areas will engender similar conclusions. In either case, it has been usefully demonstrated that evidence is required to replace the assumption of stable and unified traits.

LIST OF REFERENCES

Allport, C. W., and Oddbert, H. S. "Trait-Names: A Psycho-Sexual study." Psychological Monographs, 1936, 47 whole (No. 211).

-------. "Traits Revisited." American Psychologist, 1966, 21, 1-10

-------. Personality: A Psychological Interpretation. New York: Holt, Rinehart and Winston, 1937

American Psychiatric Association (Second Edition). "Diagnostic and Statistical Manual of Mental Disorders". Washington: 1968

Aronfreed, J. "The Nature, Variety and Social Patterning of Moral Responses to Transgression. Journal of Abnormal Social Psychology, 1961, 63, 223-240.

Bandura, A. Principles of Behavior Modification. New York: Holt, Rinehart and Winston, 1969.

-------. "Influence of Models' Reinforcement and Contingencies in the Acquisition of Imitative Responses." Journal of Personality and Social Psychology, 1965, I, 489-595.

-------, and Walters, R. H. Social Learning and Personality Development. New York: Holt, Rinehart and Winston, 1963.

Bateson, G. The Naven. Stanford: Stanford University Press, 1936.

Baumgartener, M. "The Correlation of Direct Suggestibility with Certain Character Traits." Journal of Applied Psychology, 1931, 15, 1-15

Berkowitz, L. Aggression: A Social Psychological Analysis. New York: McGraw Hill, 1962

Bertocci, P. A. Personality and the Good. New York: David McKay, 1963.

Brim, O. G., and Hoff, D. B. "Situational Differences in Desire for Certainty." Journal of Abnormal and Social Psychology, 1957, 54, 225-229

Burton, R. V. "Generality of Honesty Reconsidered." Psychological Review, 1963, 70, 481-499

Burwen, R. S., and Campbell, D. T. "The Generality of Attitudes Towards Authority and Non-Authority Figures." Journal of Abnormal Social Psychology, 1957, 54, 24-31

Buss, A. H., and Durkee, A. "An Inventory of Assessing Different Kinds of Hostility." Journal of Consulting Psychology, 1957, 21, 343-349

Campbell, D. T., and Fiske, D. W. "Convergent and Discriminent Validation by the Multitrait-Multimethod Matrix." Psychological Bulletin, 1959, 56, 81-105

Cattell, R. B. "The Description of Personality: III Principles and Findings in a Factor Analysis." American Journal of Psychology, 1945, 58, 69-90.

———. "Confirmation and Clarification of Primary Personality Factors." Psychometry. 1947, 12, 89-204.

———. Personality Theory Growing From Multivariate Quantitative Research." in M. S. Koch (Ed.) The Study of a Science. New York: McGraw-Hill, 1959, pp 257-327.

———. Personality: A Systematic Theoretical and Factual Study. New York: McHill, 1950

———. Personality and Social Psychology. San Diego: R. R. Knoff, 1964

Cohen, A. R. "Social Norms, Arbitrariness of Frustration and Status of Agent of Frustration in the Frustration Aggression Hypothesis." Journal of Abnormal and Social Psychology. 1955, 51, 222-226.

———. "Upward Communication in Experimentally Created Hierarchies." Human Relations. 1958, 11, 41-54

Cronbach, L. J. Essentials of Psychological Testing. New York: Harper and Row, 1960.

———, and Meehl, P. E. "Construct Validity in Psychological Tests." Psychological Bulletin, 1955, 52, 281-302.

Dollard, J.; Miller, N. E.; Dorf, L. W.; Mower, O. H.; and Sears, R. R. Frustration and Aggression. New Haven: Yale University Press, 1939

Edwards, A. E. Manual of the Edwards Personal Preference Schedule. New York: Psychological Conference, 1954

Edwards, A. L. The Social Desirability Variable on Personality Assessment and Research. New York: Dryden, 1957.

Endler, N. S.; Hunt, J. McV.; and Rosenstein, A. J. "An S-R Inventory of Anxiousness." Psychological Monograph, 1962, 76 whole No. 536.

Eysenck, H. J. The Psychology of Politics. London: Routledge. Regen and Paul, 1954.

———. "Extraversion and the Acquisition of Eyeblind and GSR Conditioned Responses." Psychological Bulletin, 1965, 63, 258-270.

———. The Structure of Human Personality. London: Methuen and Co. Ltd., 1970.

Freeman, P. An Introduction to Sigmund Freud and Psychoanalysis. Englewood Cliffs. New Jersey: Freutice-Hall, 1965.

Fishbach, S. "The Function of Aggression and Regulation of the Aggressive Drive." Psychological Review, 1964, 71, 257-272.

Frenkel, L., and Brunswick, E. "Intolerance of Ambiguity as an Emotional and Perceptual Personality Variable." Journal of Personality, 1949, 18, 108-143

———. "Personality Theory and Perception." In R. R. Blake and G. W. Ramsey (Eds.) Perception: An Approach to Personality. New York: Ronald, 1951, pp 356-419.

Freud, S. Civilization and its Discontents. London: Liveright, 1930.

———. Beyond the Pleasure Principle. In Standard Edition Volume XVII, New York: Boni and Liveright, n.d.

———. Collected Papers, Vo. II London: Hogarth, 1924.

Guilford, J. P. Personality. New York: McHill, 1959.

———. "Zero Correlation Among Tests of Intellectual Abilities." Psychological Bulletin, 1964, 61, 401-404.

Hall, A. S., and Lindzey, G. Theories of Personality. New York: Willey, 1957

Hartshorne and May. Studies in Deceit. New York: MacMillan, 1928.

Hunt, J. McV. "Traditional Personality Theory in the Light of Recent Evidence." American Scientist, 1965, 53, 321-357.

Janis, I. L., and Field, P. R. "Sex Differences and Personality Factors Related to Persuasibility." In I. L. Janis, C. I. Hovladd et al. Personality and Persuasibility. New Haven: Yale, 1959.

Jessild, A. T., and Marley, F. V. "Conflicts Between Pre-School Children." Child Development Monograph, 1935, 21, 107-121.

Johnson, R. C. "A Study of Children's Moral Judgement." Child Development, 1962, 33, 327-354.

Kelly, E. L. "Consistency of the Adult Personality." American Psychologist, 1955, 10, 213-229.

Kelly, G. A. "Theory and Technique of Assessment." Annual Revue of Psychology, 1958, 9, 323-352.

Levitt, E. E. "The Water Jar Einstellary Test as a Measure of Rigidity." Psychological Bulletin, 1956, 53, 347-370.

Linton, H. B. "Dependence on External Influence: Correlates in Perception Attitudes and Judgement." Journal of Abnormal and Social Psychology, 1955, 51, 502-507.

Liffitt, R.; Polansky, N.; Rendl, F.; and Rosen, S. "The Dynamics of Power." Human Relations, 1952, 5, 37-64.

Luchins, A. S., and Luchins, E. A. "New Experimental Attempts at Preventing Mechanization in Problem Solving." Journal of General Psychology, 1950, 42, 279-297.

May, H. A., and Shuttleworth, F. K. Studies in the Nature of Character. Vol. e, 1930

Mayman, M; Schafer, R.; and Rapaport, D. "Interpretation of the Wechsler Bellevue, Intelligence Scale in Personality Appraisal." In H. H. Anderson and G. L. Anderson (Eds.) An Introduction to Projective Techniques. Englewood Cliffs, New Jersey: Prentice-Hall, 1951, pp 541-580

McCord, J., and McCord, W. "The Effects of Parental Role Mode on Criminality." Journal of Social Issues, 1958, 14, 66-75.

Miller, N. E. "Theory and Experiment Relating Psychoanalytic Displacement to S-R Generalization." Journal of Abnormal and Social Psychology, 1958, 43, 155-178.

Mischel, W. Personality and Assessment, New York: J. Wiley and Sons, 1968.

———, and Staub, E. "Effects of Expectancy on Working and Waiting for Larger Rewards." Journal of Personality and Social Psychology, 1965, 2, 625-633.

Murphy, G. Personality: A Biosocial Approach to Origins and Structure. New York: Harper, 1947.

Murray, E. J. "A Case Study in a Behavioural Analysis of Psychotherapy." Journal of Abnormal and Social Psychology, 1954, 49, 305-310.

Pervin, L. A. "Rigidity in Neurosis and General Personality Functioning." Journal of Abnormal and Social Psychology, 1960, 61, 389-395.

———. Personality: Theory Assessment and Research. New York: Wiley, 1970.

Phares, E. J., and Rotter, J. B. "Effect of Situation on Psychological Testing." Journal of Consulting Psychology, 1956, 20, 291-293.

Piaget, J. The Moral Judgement of the Child. New York: Harcourt, Brace and World, 1932.

Rotter, J. B. Social Learning and Clinical Psychology. Englewood Cliffs, New Jersey: Prentice-Hall, 1954.

Schaie, K. W. "A Test of Behavioural Rigidity." Journal of Abnormal And Social Psychology, 1953, 51, 270-277.

Sears, R. R.; Rau, L.; and Alport, R. Identification and Child Rearing. Stanford: Stanford University Press, 1965.

Secord, P. F., and Backman, C. W. Social Psychology. New York: McGraw-Hill, 1964.

Selltiz, C.; Jahoda, M.; Deutsch, M., and Cook, S. W. Research Methods in Social Relations. New York: Holt, Rinehart and Winston, 1967.

Skinner, B. F. Science and Human Behaviour. New York: MacMillan, 1953.

Thompson, G. W. The Factorial Analysis of Human Ability. (2nd ed.) London: University of London, 1946.

White, R. W. The Abnormal Personality. New York: Ronald, 1956.

Whiting, J. W. M. Becoming a Kwoma. New Haven: Yale University Press, 1941.

Wright, L. S., and Baumeister, A. A. "A Comparison of Actual and Paper and Pencil Versions of the Water Jar Test of Rigidity." Journal of Abnormal and Social Psychology, 1961, 63, 191-193.

APPENDIX A

Questionnaire and Instructions

to Subjects.

I am going to present you with descriptions of different situations. For every situation there are 10 responses. The responses are always the same. I want you to show me how true each response would be for you in each particular situation.

Read the first description carefully. Then read the first response. If this response is never true for you, then put a 1 on your answer sheet. If it is always true for you, then put a 5 on your answer sheet. A 2, 3, or 4 represent something between these extremes and you should scale them accordingly. Then go on to the second response. When you have answered all ten responses, go on to the second description. Do not skip any. Remember to put all your answers on the separate answer sheet at the top of which you are to fill out name, age, etc. as indicated.

1

Your employer wrongly accuses you of taking something that belongs to him:

a) Get revenge — 1 2 3 4 5 (Never — Always)

b) Throw things; pound or kick objects. — 1 2 3 4 5 (Never — Always)

c) Try to harm others — 1 2 3 4 5 (Never — Always)

d) Get Angry — 1 2 3 4 5 (Not at all — Very angry)

e) Show him that he's wrong; stand up for your rights — 1 2 3 4 5 (Never — Always)

f) Strike him — 1 2 3 4 5 (Never — Always)

g) Attack — 1 2 3 4 5 (Not at all — Strongly)

h) Ridicule, embarass others — 1 2 3 4 5 (Not at all — Strongly)

i) Curse him — 1 2 3 4 5 (Not at all — Strongly)

j) Criticize others — 1 2 3 4 5 (Not at all — Strongly)

2

Your employer is trying to strike up a conversation with you. You aren't interested and explain politely that you are in a hurry to leave. He becomes angry and strikes you.

a) Get revenge

1 2 3 4 5
Never Always

b) Throw things, pound or kick objects

1 2 3 4 5
Never Always

c) Try to harm others

1 2 3 4 5
Never Always

d) Get angry

1 2 3 4 5
Not at all Always

e) Show him that he's wrong; stand up for your rights

1 2 3 4 5
Never Always

f) Strike him

1 2 3 4 5
Never Always

g) Attack him verbally; tell him off

1 2 3 4 5
Not at all Always

h) Ridicule, embarass others

1 2 3 4 5
Not at all Always

i) Curse him

1 2 3 4 5
Not at all Always

j) Criticize others

1 2 3 4 5
Not at all Always

3

You are hotly arguing a point with a policeman who has stopped you. You are with some friends. By judging the expressions on your friends' faces, you sense that he is prevailing. You still feel inside that you are right.

a) Get revenge	1 2 3 4 5 Never Always
b) Throw things, pound or kick objects	1 2 3 4 5 Never Always
c) Try to harm others	1 2 3 4 5 Never Always
d) Get angry	1 2 3 4 5 Not at all Always
e) Show him that he's wrong; stand up for your rights	1 2 3 4 5 Never Always
f) Strike him	1 2 3 4 5 Never Always
g) Attack him verbally; tell him off	1 2 3 4 5 Not at all Strongly
h) Ridicule, embarass others	1 2 3 4 5 Not at all Strongly
i) Curse him	1 2 3 4 5 Not at all Strongly
j) Criticize others	1 2 3 4 5 Not at all Strongly

4

You are standing in line for over an hour waiting to buy a ticket to a concert. The manager spots a wealthy and influential member of the community in the line behind you, and places him in front of you.

a) Get revenge
1 2 3 4 5
Never Always

b) Throw things, pound or kick objects
1 2 3 4 5
Never Always

c) Try to harm others
1 2 3 4 5
Never Always

d) Get angry
1 2 3 4 5
Not at all Always

e) Show him that he's wrong; stand up for your rights
1 2 3 4 5
Never Always

f) Strike him
1 2 3 4 5
Never Always

g) Attack him verbally; tell him off
1 2 3 4 5
Not at all Always

h) Ridicule, embarrass others
1 2 3 4 5
Not at all Always

i) Curse him
1 2 3 4 5
Not at all Always

j) Criticize others
1 2 3 4 5
Not at all Always

5

You are a student and you hand in work which the instructor criticizes as worthless before the whole class.

a) Get revenge

1 2 3 4 5
Never Always

b) Throw things, pound or kick objects

1 2 3 4 5
Never Always

c) Try to harm others

1 2 3 4 5
Never Always

d) Get angry

1 2 3 4 5
Not at all Very Angry

e) Show him that he's wrong; stand up for your rights

1 2 3 4 5
Never Always

f) Strike him

1 2 3 4 5
Never Always

g) Attack him verbally; tell him off

1 2 3 4 5
Not at all Strongly

h) Ridicule or embarass others

1 2 3 4 5
Not at all Strongly

i) Curse him

1 2 3 4 5
Not at all Strongly

j) Criticize others

1 2 3 4 5
Not at all Strongly

6

You are walking along a corridor in a hospital. A doctor accidentally bumps into you, and does not apologize.

a) Get revenge — 1 2 3 4 5 (Never ... Always)

b) Throw things, pound or kick objects — 1 2 3 4 5 (Never ... Always)

c) Try to harm others — 1 2 3 4 5 (Never ... Always)

d) Get angry — 1 2 3 4 5 (Not at all ... Very Angry)

e) Demand an apology — 1 2 3 4 5 (Never ... Always)

f) Strike him — 1 2 3 4 5 (Never ... Always)

g) Attack him verbally; tell him off — 1 2 3 4 5 (Not at all ... Strongly)

h) Ridicule, embarass others — 1 2 3 4 5 (Not at all ... Strongly)

i) Curse him — 1 2 3 4 5 (Not at all ... Strongly)

j) Criticize others — 1 2 3 4 5 (Not at all ... Strongly)

7

Your personal friend expresses displeasure with you at least once a week. Sometimes your clothes are criticized; other times your ideas, etc.

a) Get revenge — 1 2 3 4 5 (Never ... Always)

b) Throw things, pound or kick objects — 1 2 3 4 5 (Never ... Always)

c) Try to harm others — 1 2 3 4 5 (Never ... Always)

d) Get angry — 1 2 3 4 5 (Not at all ... Very angry)

e) Show him that he's wrong; stand up for your rights — 1 2 3 4 5 (Never ... Always)

f) Strike him — 1 2 3 4 5 (Never ... Always)

g) Attack him verbally; tell him off — 1 2 3 4 5 (Not at all ... Strongly)

h) Ridicule, embarass others — 1 2 3 4 5 (Not at all ... Strongly)

i) Curse him — 1 2 3 4 5 (Not at all ... Strongly)

j) Criticize others — 1 2 3 4 5 (Not at all ... Strongly)

8

You are engaged in conversation with several friends. An individual approaches you. He identifies himself as a former playmate of yours in your public school days. He tells you that he thought you were stupid then and he thinks the same now. He is obviously angry.

a) Get revenge — 1 2 3 4 5 (Never — Always)

b) Throw things, pound or kick objects — 1 2 3 4 5 (Never — Always)

c) Try to harm others — 1 2 3 4 5 (Never — Always)

d) Get angry — 1 2 3 4 5 (Not at all — Very angry)

e) Show him that he's wrong stand up for your rights — 1 2 3 4 5 (Never — Always)

f) Strike him — 1 2 3 4 5 (Never — Always)

g) Attack him verbally; tell him off — 1 2 3 4 5 (Not at all — Strongly)

h) Ridicule or embarass others — 1 2 3 4 5 (Not at all — Strongly)

i) Curse him — 1 2 3 4 5 (Not at all — Strongly)

j) Criticize others — 1 2 3 4 5 (Not at all — Strongly)

9

You have a relationship with a member of the opposite sex. This relationship is extremely important to you and you spend at least part of every day with this person for three months. Then this person decides to terminate the relationship. There is no specific reason except that he (she) feels differently about you although quite freindly.

a) Get revenge on him (her)

1 2 3 4 5
Never Always

b) Throw things, pound or kick objects

1 2 3 4 5
Never Always

c) Try to harm others

1 2 3 4 5
Never Always

d) Get angry

1 2 3 4 5
Not at all Very angry

e) Try to remedy the situation; try to change his (her) mind

1 2 3 4 5
Never Always

f) Strike him (her)

1 2 3 4 5
Never Always

g) Attack him (her) verbally; tell him (her) off

1 2 3 4 5
Not at all Strongly

h) Ridicule, embarass others

1 2 3 4 5
Not at all Strongly

i) Curse him (her)

1 2 3 4 5
Not at all Strongly

j) Criticize others

1 2 3 4 5
Not at all Strongly

10

You are hotly arguing a point with an opponent in the presence of your friends. You sense that his is prevailing by judging the expressions on your friends' faces. You still feel inside that you are right.

a) Get revenge — 1 2 3 4 5 (Never — Always)

b) Throw things, pound or kick objects — 1 2 3 4 5 (Never — Always)

c) Try to harm others — 1 2 3 4 5 (Never — Always)

d) Get angry — 1 2 3 4 5 (Not at all — Very angry)

e) Show him that he's wrong; stand up for your rights — 1 2 3 4 5 (Never — Always)

f) Strike him — 1 2 3 4 5 (Never — Always)

g) Attack him verbally; tell him off — 1 2 3 4 5 (Not at all — Strongly)

h) Ridicule, embarass others — 1 2 3 4 5 (Not at all — Strongly)

i) Curse him — 1 2 3 4 5 (Not at all — Strongly)

j) Criticize others — 1 2 3 4 5 (Not at all — Strongly)

11

Somebody accidentally bumps into you as you're walking down the street, and does not apologize.

a) Get revenge

1 2 3 4 5
Never Always

b) Throw things, pound or kick objects

1 2 3 4 5
Never Always

c) Try to harm others

1 2 3 4 5
Never Always

d) Get angry

1 2 3 4 5
Not at all Very angry

e) Demand an apology

1 2 3 4 5
Never Always

f) Strike him

1 2 3 4 5
Never Always

g) Attack him verbally; tell him off

1 2 3 4 5
Not at all Strongly

h) Ridicule, embarass others

1 2 3 4 5
Not at all Strongly

i) Curse him

1 2 3 4 5
Not at all Strongly

j) Criticize him

1 2 3 4 5
Not at all Strongly

12

Somebody in a superior position to you (eg. teacher, boss) expresses displeasure with you at least once a week. Sometimes your clothes are criticized, other times your work, etc.

a) Get revenge — 1 2 3 4 5 (Never — Always)

b) Throw things, pound or kick objects — 1 2 3 4 5 (Never — Always)

c) Try to harm others — 1 2 3 4 5 (Never — Always)

d) Get angry — 1 2 3 4 5 (Not at all — Very Angry)

e) Show him that he's wrong; stand up for your rights — 1 2 3 4 5 (Never — Always)

f) Strike him — 1 2 3 4 5 (Never — Always)

g) Attack him verbally; tell him off — 1 2 3 4 5 (Not at all — Strongly)

h) Ridicule, embarass others — 1 2 3 4 5 (Not at all — Strongly)

i) Curse him — 1 2 3 4 5 (Not at all — Strongly)

j) Criticize others — 1 2 3 4 5 (Not at all — Strongly)

13

A neighbour with whom you are vaguely familiar wrongly accuses you of taking something that belongs to him.

a) Get revenge
1 2 3 4 5
Never Always

b) Throw things, pound or kick objects
1 2 3 4 5
Never Always

c) Try to harm others
1 2 3 4 5
Never Always

d) Get angry
1 2 3 4 5
Not at all Very angry

e) Show him that he's wrong; stand up for your rights
1 2 3 4 5
Never Always

f) Strike him
1 2 3 4 5
Never Always

g) Attack him verbally; tell him off
1 2 3 4 5
Not at all Strongly

h) Ridicule, embarass others
1 2 3 4 5
Not at all Strongly

i) Curse him
1 2 3 4 5
Not at all Strongly

j) Criticize others
1 2 3 4 5
Not at all Strongly

14

An acquaintance laughs at you for making a mistake.

a) Get revenge

1 2 3 4 5
Never Always

b) Throw things, pound or kick objects

1 2 3 4 5
Never Always

c) Try to harm others

1 2 3 4 5
Never Always

d) Get angry

1 2 3 4 5
Not at all Very angry

e) Show him that he's wrong; stand up for your rights

1 2 3 4 5
Never Always

f) Strike him

1 2 3 4 5
Never Always

g) Attack him verbally; tell him off

1 2 3 4 5
Not at all Always

h) Ridicule, embarass others

1 2 3 4 5
Not at all Always

i) Curse him

1 2 3 4 5
Not at all Always

j) Criticize others

1 2 3 4 5
Not at all Always

15

You have a relationship with a member of the opposite sex who happens to be a well known T.V. personality. The relationship is extremely important to you and you spend at least part of every day with this person for three months. Then this person decides to terminate the relationship. There is no specific reason except that he (she) feels differently about you although quite friendly.

a) Get revenge — 1 2 3 4 5 (Never … Always)

b) Throw things, pound or kick objects — 1 2 3 4 5 (Never … Always)

c) Try to harm others — 1 2 3 4 5 (Never … Always)

d) Get angry — 1 2 3 4 5 (Not at all … Very angry)

e) Show that he or she is wrong; stand up for your rights — 1 2 3 4 5 (Never … Always)

f) Strike him (her) — 1 2 3 4 5 (Never … Always)

g) Attack him (her) verbally; tell him (her) off — 1 2 3 4 5 (Not at all … Strongly)

h) Ridicule, embarass others — 1 2 3 4 5 (Not at all … Strongly)

i) Curse him (her) — 1 2 3 4 5 (Not at all … Strongly)

j) Criticize others — 1 2 3 4 5 (Not at all … Strongly)

16

A classmate or somebody with whom you work is trying to strike up a conversation with you. You aren't interested and explain politely that you are in a hurry to leave. He becomes angry and strikes you.

a) Get revenge

1 2 3 4 5
Never Always

b) Throw things, pound or kick objects

1 2 3 4 5
Never Always

c) Try to harm others

1 2 3 4 5
Never Always

d) Get angry

1 2 3 4 5
Not at all Very Angry

e) Show him that he's wrong; stand up for your rights

1 2 3 4 5
Never Always

f) Strike him

1 2 3 4 5
Never Always

g) Attack him verbally; tell him off

1 2 3 4 5
Not at all Strongly

h) Ridicule, embarass others

1 2 3 4 5
Not at all Strongly

i) Curse him

1 2 3 4 5
Not at all Strongly

j) Criticize others

1 2 3 4 5
Not at all Strongly

17

You are engaged in conversation with several friends. An individual identifies himself as a former teacher of yours in your public school days. He tells you that he thought that you were stupid then and he thinks the same now. He is obviously angry.

a) Get revenge

1 2 3 4 5
Never Always

b) Throw things, pound or kick objects

1 2 3 4 5
Never Always

c) Try to harm others

1 2 3 4 5
Never Always

d) Get angry

1 2 3 4 5
Not at all Very angry

e) Show him that he's wrong; stand up for your rights

1 2 3 4 5
Never Always

f) Strike him

1 2 3 4 5
Never Always

g) Attack him verbally; tell him off

1 2 3 4 5
Not at all Strongly

h) Ridicule, embarass others

1 2 3 4 5
Not at all Strongly

i) Curse him

1 2 3 4 5
Not at all Strongly

j) Criticize others

1 2 3 4 5
Not at all Strongly

18

You're standing in line for over an hour waiting to by a ticket to a concert and a stranger pushes in front of you.

a) Get revenge

1 2 3 4 5
Never Always

b) Throw things, pound or kick objects

1 2 3 4 5
Never Always

c) Try to harm others

1 2 3 4 5
Never Always

d) Get angry

1 2 3 4 5
Not at all Very angry

e) Show him that he's wrong; stand up for your rights

1 2 3 4 5
Never Always

f) Strike him

1 2 3 4 5
Never Always

g) Attack him verbally; tell him off

1 2 3 4 5
Not at all Strongly

h) Ridicule, embarass others

1 2 3 4 5
Not at all Strongly

i) Curse him

1 2 3 4 5
Not at all Strongly

j) Criticize others

1 2 3 4 5
Not at all Strongly

19

You are a student and you hand in work which is presented to the whole class by the instructor. A classmate criticizes your work as worthless before the whole class.

a) Get revenge

1 2 3 4 5
Never Always

b) Throw things, pound or kick objects

1 2 3 4 5
Never Always

c) Try to harm others

1 2 3 4 5
Never Always

d) Get angry

1 2 3 4 5
Not at all Very angry

e) Show him that he's wrong; stand up for your rights

1 2 3 4 5
Never Always

f) Strike him

1 2 3 4 5
Never Always

g) Attack him verbally; tell him off

1 2 3 4 5
Not at all Strongly

h) Ridicule, embarass others

1 2 3 4 5
Not at all Strongly

i) Curse him

1 2 3 4 5
Not at all Strongly

j) Criticize others

1 2 3 4 5
Not at all Strongly

20

Your teacher laughs at you for making a mistake.

a) Get revenge

1 2 3 4 5
Never Always

b) Throw things, pound or kick objects

1 2 3 4 5
Never Always

c) Try to harm others

1 2 3 4 5
Never Always

d) Get angry

1 2 3 4 5
Not at all Very angry

e) Show him that he's wrong; stand up for your rights

1 2 3 4 5
Never Always

f) Strike him

1 2 3 4 5
Never Always

g) Attack him verbally; tell him off

1 2 3 4 5
Not at all Strongly

h) Ridicule, embarass others

1 2 3 4 5
Not at all Strongly

i) Curse him

1 2 3 4 5
Not at all Strongly

j) Criticize others

1 2 3 4 5
Not at all Strongly

APPENDIX B

Data Analysis

APPENDIX B - TABLE 1

Mean total aggression scores for male and female subjects in the 20 situations on the test.*

	MEAN	RANGE
SUBJECTS		
Male	1.955	1.105 - 4.370
Female	1.889	1.005 - 4.290
Overall	1.922	1.005 - 4.370

* Possible scores range from 1 to 5

APPENDIX B - TABLE 2

Comparison of mean scores for situations involving peers and non peers.

	MEAN	STANDARD DEVIATION	t
Peers (10 situations)	1508	279.35	
			0.841
Non-Peers (10 situations)	1592.5	323.89	

APPENDIX B - TABLE 3

Analysis of variance for reported intensity of aggressive responses including all twenty situations.

Source	D F	M S	F	p
BETWEEN SUBJECTS				
Sex	1	18.467	.9513	
Error	82	19.3914		
WITHIN SUBJECTS				
Situations	19	160.679	27.4698	$p < .001$
Situations x Sex	19	4.148	.7754	
Error	1558	5.3493		
Modes of Response	9	1173.7070	525.85	$p < .001$
Modes of Response x Sex	9	5.235	2.345	$p < .05$
Error	738	2.232		
Situations x Modes	171	7.5720	40.492	$p < .001$
Situations x Modes x Sex	171	.6110	3.2674	$p < .01$
Error	14022	.18		

APPENDIX B - TABLE 4

Mean scores for situations

SITUATIONS	SCORES
1	2.0714
2	2.8024
3	1.7536
4	2.1440
5	1.9845
6	1.2560
7	1.7976
8	1.9607
9	1.5321
10	1.6690
11	1.3893
12	1.7060
13	2.0119
14	1.5524
15	1.5393
16	2.7762
17	2.1381
18	2.7143
19	1.9476
20	1.6929

APPENDIX B - TABLE 5

Means scores for modes of response

MODES	SCORES
1	1.5518
2	1.2935
3	1.2220
4	3.1542
5	3.3744
6	1.3399
7	2.6750
8	1.2744
9	1.9696
10	1.3649

APPENDIX B - TABLE 6

Relative contribution to overall behaviour variance for main effects and interactions; (twenty situations).

SOURCE	% MEAN SQUARE CONTRIBUTION TO TOTAL VARIANCE
Subject	1.4
Sex	1.3
Situations	11.3
Situation x Sex	.3
Modes of Response	82.8
Modes x Sex	.4
Situation x Modes	.5
Situation x Modes x Sex	.1

APPENDIX B - TABLE 7

Means scores for interaction between situations and modes of response.

	MODES						
SITUATIONS	1	2	3	4	5	6	7
1	1.6429	1.3095	1.1905	3.6905	4.1548	1.1548	2.7381
2	2.4881	1.8929	1.6667	4.3452	4.4286	2.5714	3.8810
3	1.3810	1.1190	1.0714	3.0714	3.6786	1.0119	2.2500
4	1.6548	1.3690	1.2024	4.0119	3.6429	1.2262	3.0714
5	1.5238	1.2143	1.2262	3.8571	3.7262	1.1310	2.7143
6	1.0238	1.0119	1.0119	1.8095	1.6310	1.0119	1.5357
7	1.5833	1.1190	1.1071	2.8333	3.2857	1.1548	2.8095
8	1.7381	1.2619	1.2143	3.0595	3.1310	1.2976	3.1548
9	1.2381	1.3095	1.0595	2.2976	3.0714	1.0952	1.7143
10	1.1905	1.0357	1.0714	2.4762	3.5000	1.0714	2.4048
11	1.0833	1.0238	1.0595	2.0952	1.6905	1.0357	1.6071
12	1.2857	1.1190	1.0952	3.0000	3.2262	1.1310	2.3571
13	1.3810	1.2976	1.1905	3.4643	4.0000	1.2500	2.9286
14	1.3333	1.0833	1.0714	2.4881	2.5119	1.1071	2.1548
15	1.1548	1.2262	1.1190	2.3810	2.9643	1.0833	1.7857
16	2.5119	1.8690	1.6190	4.3452	4.2500	2.6010	4.0238
17	1.7500	1.5000	1.4048	3.4286	3.4048	1.5000	3.1905
18	2.2262	1.8452	1.7738	4.2500	4.2262	2.0000	3.7976
19	1.5357	1.1548	1.2262	3.1905	3.9048	1.1667	2.9881
20	1.3095	1.1071	1.0595	2.9881	3.0595	1.1667	2.3929

APPENDIX B - TABLE 7 (Con't)

SITUATIONS	MODES 8	9	10
1	1.2738	2.0238	1.5357
2	1.7143	3.1786	1.8571
3	1.1548	1.4167	1.3810
4	1.3333	2.3571	1.5714
5	1.2143	1.9048	1.3333
6	1.0357	1.3333	1.1548
7	1.1310	1.7381	1.2143
8	1.3095	2.1548	1.2857
9	1.0595	1.4286	1.0476
10	1.1548	1.5476	1.2381
11	1.0952	1.5476	1.6548
12	1.0952	1.6071	1.1429
13	1.3095	1.9881	1.3095
14	1.0595	1.6667	1.0476
15	1.0833	1.5119	1.0833
16	1.6905	3.0238	1.7976
17	1.4881	2.2857	1.4286
18	1.9524	3.1905	1.8810
19	1.2262	1.7976	1.2857
20	1.1071	1.6905	1.0476

APPENDIX B - TABLE 8

Mean scores for interaction between modes of response and sex.

MODES	MALE	FEMALE
1	1.5214	1.5821
2	1.3595	1.2274
3	1.2667	1.1774
4	3.1012	3.2071
5	3.4464	3.3024
6	1.4619	1.2179
7	2.7036	2.6464
8	1.3298	1.2190
9	1.9345	2.0048
10	1.4262	1.3036

APPENDIX B - TABLE 9

Interaction among situations, modes of response and sex (Mean Scores)

SITUATION 1		
	Male	Female
MODES		
1	1.5476	1.7381
2	1.3571	1.2619
3	1.2143	1.1667
4	3.6905	3.6905
5	4.3095	4.0000
6	1.2143	1.0952
7	2.8095	2.6667
8	1.4048	1.1429
9	1.8810	2.1667
10	1.7143	1.3571

SITUATION 2		
	Male	Female
MODES		
1	2.5714	2.4048
2	1.9524	1.8333
3	1.7143	1.6190
4	4.3333	4.3571
5	4.4524	4.4048
6	3.0476	2.0952
7	3.9524	3.8095
8	1.6667	1.7619
9	3.2381	3.1190
10	1.9048	1.8095

APPENDIX B - TABLE 9 (Con't)

SITUATION 3 (Con't)

Modes	Male	Female
7	2.3333	2.1667
8	1.1905	1.1190
9	1.3333	1.5000
10	1.5000	1.2619

SITUATION 4

Modes	Male	Female
1	1.5476	1.7619
2	1.4048	1.3333
3	1.1905	1.2143
4	3.9762	4.0476
5	3.7619	3.5238
6	1.4048	1.0476
7	3.1667	2.9762
8	1.4048	1.2619
9	2.4048	2.3095
10	1.5000	1.6429

SITUATION 5

Modes	Male	Female
1	1.3810	1.6667
2	1.2381	1.1905
3	1.0476	1.4048
4	3.7619	3.9524
5	3.6905	3.7619
6	1.0714	1.1905
7	2.7143	2.7143
8	1.1667	1.2619
9	1.8095	2.0000
10	1.3095	1.3571

SITUATION 6

Modes	Male	Female
1	1.0000	1.0476
2	1.0238	1.0000
3	1.0238	1.0000
4	1.5952	2.0238
5	1.5714	1.6905

APPENDIX B - TABLE 9 (Con't)

SITUATION 6 (con't)

Modes	Male	Female
6	1.0000	1.0238
7	1.5952	1.4762
8	1.0476	1.0238
9	1.2619	1.4048
10	1.1905	1.1190

SITUATION 7

Modes	Male	Female
1	1.4524	1.7143
2	1.1429	1.0952
3	1.0714	1.1429
4	2.7381	2.9286
5	3.5000	3.0714
6	1.1905	1.1190
7	2.6905	2.9286
8	1.2143	1.0476
9	1.8095	1.6667
10	1.2857	1.1429

SITUATION 8

Modes	Male	Female
1	1.6429	1.8333
2	1.2857	1.2381
3	1.2619	1.1667
4	2.8571	3.2619
5	3.2381	3.0238
6	1.4524	1.1429
7	2.9524	3.3571
8	1.2143	1.4048
9	2.2857	2.0238
10	1.3095	1.2619

APPENDIX B - TABLE 9 (Con't)

SITUATION 9

Modes	Male	Female
1	1.2381	1.2381
2	1.3810	1.2381
3	1.0476	1.0714
4	2.3333	2.2619
5	3.1190	3.0238
6	1.1667	1.0238
7	1.7381	1.6905
8	1.1190	1.0000
9	1.2857	1.5714
10	1.0952	1.0000

SITUATION 10

Modes	Male	Female
1	1.1667	1.2143
2	1.0714	1.0000
3	1.1429	1.0000
4	2.3333	2.6190
5	3.4762	3.5238
6	1.1190	1.0238
7	2.3333	2.4762
8	1.2143	1.0952
9	1.5000	1.5952
10	1.2857	1.1905

SITUATION 11

Modes	Male	Female
1	1.0476	1.1190
2	1.0476	1.0000
3	1.1190	1.0000
4	1.9048	2.2857
5	1.5476	1.8333
6	1.0714	1.0000
7	1.5476	1.8333
8	1.1905	1.0000
9	1.4286	1.6667
10	1.5714	1.7381

APPENDIX B - TABLE 9 (Con't)

SITUATION 12

Modes	Male	Female
1	1.2857	1.2857
2	1.2143	1.0238
3	1.1667	1.0238
4	3.1429	2.8571
5	3.5238	2.9286
6	1.2619	1.0000
7	2.6429	2.0714
8	1.1667	1.0238
9	1.6190	1.5952
10	1.2619	1.0238

SITUATION 13

Modes	Male	Female
1	1.1905	1.5714
2	1.2619	1.3333
3	1.2143	1.1667
4	3.2143	3.7143
5	4.0714	3.9286
6	1.2619	1.2381
7	2.7857	3.0714
8	1.2381	1.3810
9	1.7619	2.2143
10	1.2619	1.3571

SITUATION 14

Modes	Male	Female
1	1.3333	1.3333
2	1.1190	1.0476
3	1.1429	1.0000
4	2.5952	3.3810
5	2.3810	2.6429
6	1.2143	1.0000
7	2.1429	2.1667
8	1.1190	1.0000
9	1.6429	1.6905
10	1.0952	1.0000

APPENDIX B - TABLE 9 (Con't)

SITUATION 15

Modes	Male	Female
1	1.1905	1.1190
2	1.3333	1.1190
3	1.1667	1.0714
4	2.5714	2.1905
5	3.0714	2.8571
6	1.1429	1.0238
7	1.7857	1.7857
8	1.1429	1.0238
9	1.4286	1.5952
10	1.1667	1.0000

SITUATION 16

Modes	Male	Female
1	2.5714	2.4524
2	1.9762	1.7619
3	1.6190	1.6190
4	4.2619	4.4286
5	4.2857	4.2143
6	3.0000	2.2619
7	3.9762	4.0714
8	1.7381	1.6429
9	2.9762	3.0714
10	1.7857	1.8095

SITUATION 17

Modes	Male	Female
1	1.9286	1.5714
2	1.7857	1.2143
3	1.6429	1.1667
4	3.5000	3.3571
5	3.7143	3.0952
6	1.7143	1.2857
7	3.4286	2.9524
8	1.7857	1.1905
9	2.3095	2.2619
10	1.7619	1.0952

APPENDIX B - TABLE 9 (Con't)

SITUATION 18

Modes	Male	Female
1	2.2857	2.1667
2	2.0476	1.6429
3	1.9762	1.5714
4	4.1905	4.3095
5	4.2143	4.2381
6	2.4048	1.5952
7	3.9524	3.6429
8	2.0952	1.8095
9	3.2619	3.1190
10	2.0476	1.7143

SITUATION 19

Modes	Male	Female
1	1.5952	1.4762
2	1.2143	1.0952
3	1.3333	1.1190
4	3.0476	3.3333
5	4.0952	3.7143
6	1.3095	1.0238
7	3.0238	2.9524
8	1.3095	1.1429
9	1.7857	1.8095
10	1.3810	1.1905

SITUATION 20

Modes	Male	Female
1	1.2857	1.3333
2	1.1667	1.0476
3	1.1190	1.0000
4	3.0000	2.9762
5	2.9762	3.1429
6	1.1667	1.1667
7	2.5000	2.2857
8	1.1667	1.0476
9	1.6667	1.7143
10	1.0952	1.0000

APPENDIX B - TABLE 10

Analysis of variance for reported intensity of aggressive responses with six situations judged unacceptable deleted.

SOURCE	D F	M S	F	p
BETWEEN SUBJECTS				
Sex	1	5.230	.30	
Error	82	17.3491		
WITHIN Ss				
Situations	13	92.277	19.7595	$p<.001$
Situations x Sex	13	3.152	.6749	
Error	1066	4.67		
Modes of Response	9	868.728	501.141	$p<.001$
Modes of Response x Sex	9	3.616	2.086	$p<.05$
Error	738	1.7335		
Situations x Modes	117	6.333	31.3981	$p<.001$
Situations x Modes x Sex	117	.525	2.6029	$p<.01$
Error	9594	.2617		

APPENDIX B TABLE 11

Relative contributions to overall behavior variance for main effects and interactions. (20 situations versus 14 situations)

SOURCE	% MEAN SQUARE CONTRIBUTION TO TOTAL VARIANCE	
	Analysis including all 20 situations	Analysis excluding 6 situations
Subjects	1.4	1.6
Sex	1.3	.5
Situations	11.3	9.0
Situation x Sex	.3	.3
Modes of Response	82.8	85.1
Modes x Sex	.4	.4
Situation x Modes	.5	.6
Situations x Modes x Sex	.1	.1

APPENDIX B - TABLE 12

Split-half reliability of total score

Total Score (Odd Situations) x	Total Score (Even Situations) y	xy	x^2	y^2	r
15142	16871	3101836	2787214	3458237	.96

APPENDIX C

Evaluation of Situations

APPENDIX C

Instructions to Judges

I am going to present you with descriptions of some situations. I want you to read each description carefully and then to answer the following four questions. The four questions are always the same, but the situations are all different. You are to answer each question by putting down a number between 1 and 5 on your answer sheet. Do you understand?

The four questions are:

1.	Is this situation realistic in your opinion?	Not realistic 1 2 3 4 5 Very realistic
2.	Would this situation seem realistic to the average college student?	Not realistic 1 2 3 4 5 Very realistic
3.	Would you act aggressively (verbal, physical, etc. aggression) in this situation?	Not at all 1 2 3 4 5 Very aggressively
4.	Would the average college student act aggressively in this situation?	Not at all 1 2 3 4 5 Very aggressively

APPENDIX C - TABLE 1

Mean Judgment per criterion per situation

Situation	Criterion Evaluated by Judges			
	Realistic probability (Judge)	Realistic probability (Peer)	Aggression-evoking potential (Judge)	Aggression-evoking potential (Peer)
	1	2	3	4
1	4.2	4.1	3.6	3.7
2*	1.7	2.6	4.7	4.8
3	3.7	3.9	4.0	3.6
4	4.1	4.3	3.9	3.7
5	4.5	4.7	3.7	3.8
6*	4.0	3.9	1.2	1.5
7	3.7	3.7	3.9	3.7
8*	1.5	1.5	4.6	4.8
9	3.5	3.7	3.5	4.0
10	4.4	3.8	3.8	3.8
11	4.3	4.3	3.5	3.5
12	3.8	4.0	3.6	3.7
13	3.5	3.7	3.8	3.8
14	3.9	4.2	3.6	3.7
15*	2.0	2.3	3.6	3.9
16*	2.2	2.5	4.6	4.5
17*	1.3	1.6	4.4	4.6
18	4.0	4.1	3.8	3.7
19	3.5	3.6	3.8	3.6
20	3.6	3.7	3.6	3.7

*Situations deleted for re-analysis