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**THE NATURE OF DEFENSIVE BEHAVIOR AS STUDIED
BY PERCEPTUAL DISTORTION**

by
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of the requirements for the degree of
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ABSTRACT

THE NATURE OF DEFENSIVE BEHAVIOR AS STUDIED BY PERCEPTUAL DISTORTION

Theory and Hypotheses

When there is conflict between the satisfaction of a given impulse and anticipation of painful sequelae, some means of compromise must be attempted. The person will first repress awareness of the impulse, thus trying to avoid anxiety. Since this does not do away with the impulse, further compromise in the form of defenses is necessary to enable the individual to achieve satisfaction. The behavioral distortions and incongruities resulting from compromises are called derivatives. Recognition of a conflict situation and the derivatives produced prior to recognition are theoretically a function of two factors: the intensity of the affect elicited by the situation, and the amount of information the person has about the situation. Several predictions were made with regard to these factors:

1. Amount of information required for recognition of situations should differ depending on whether or not the person has indicated conflict surrounding the area, and on the intensity of affect elicited by the situation.
2. When a person does not recognize conflict material, derivatives should be produced. The more intense the affect elicited by the material, the greater should be the likelihood of derivatives.
3. Derivatives should be more distorted as situations manifest more intense affective connotations surrounding a conflict area.
4. With minimal information about a conflict situation, we might expect fairly undistorted derivatives. As information becomes more plentiful more distortion should occur unless and until a point is reached where the necessity for dealing with reality forces less distortion.

Experimental Design

To test this theory three groups of female subjects were used. One group was prone to conflict in the area of sex; one to conflict in the area of aggression; the third group had no conflict in either area. The subjects were presented with pictures of persons

engaged in various sexual and aggressive activities which were designed to elicit affects of varying intensity. The pictures were shown tachistoscopically in order to control the amount of information the person had about the situation, making it more or less necessary for the subject to deal with reality. The subject responded each time by choosing from a list of alternatives the best interpretation of what she had seen. The alternatives were set up to represent derivatives.

Findings and Conclusions

1. Recognition varied not only with the intensity of conflict, but varied equally as much with the stimulus situation.

a. Among people with no abnormal conflict there was relative sensitivity or vigilance to stimuli related to mild sexual behavior, and relative repression or avoidance of stimuli related to directly sexual situations. The sex conflict group reacted similarly to the no conflict group but was less consistent. They did not differentiate in their behavior between conflict and no conflict situations.

b. Among people with no abnormal conflict there was avoidance of stimuli related to mild aggression in contrast to comparative sensitivity to directly hostile situations. The aggression conflict group did not react to changes in the affective intensity of the stimulus, but rather tended to avoid recognition of all aggressive situations.

2. The derivatives produced by persons without conflict in response to sex situations were quite undistorted in comparison to the extreme distortion of the derivatives these same persons produce in aggression situations. On the other hand, the groups in conflict showed no difference in the mode of defense.

3. The predicted variation in distortion with change in intensity of affect was not observed. The derivatives of the sex conflict group do not vary with changes in intensity of affect. In people prone to aggression conflict distortion tends to decrease as affect increases.

4. Variations in amount of information supplied about a conflict are related to variations in distortions in a more or less linear manner rather than the predicted curvilinear fashion; the less information, the more distortion.

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CHAPTER I

INTRODUCTION

Insofar as man has by nature, and acquires by learning, many impulses which result in the disruption of other people's lives there has arisen a need for social control. Individuals are forced to learn techniques of satisfying their motives within the bounds allowed by society. Personality theorists and clinical practitioners have of necessity become quite interested in the manner in which this takes place. Most people are able, sometimes with the aid of culturally prescribed paths, to find a maximum of satisfaction for some of their needs. But at times maximum satisfaction of some need states is difficult to attain. Society may frown upon the existence of a given impulse, or its gratification, in all forms, or in certain specific forms. Even where this is not so the person's past learning may have aroused so much tension and anxiety centering around a given impulse that the arousal and recognition of this impulse is as painful as the lack of gratification. When such an insoluble conflict is set up, a process then takes place which has been called "defense." Psychoanalytic theory (10) which has the most to say about this process, seems to assume that the conflict first leads to repression; the person seeks to avoid anxiety by not recognizing what is painful for him. But this does not eliminate the impulse. Although the person cannot directly express the impulse and is in fact unable to admit to himself that he has it, the economy of his functioning will demand its gratification by some indirect means.

Other defenses are therefore instituted, which attempt a compromise between the impulse and the inhibitions against it. The exact form of this compromise is a function of the kind of defense applied. While we cannot observe this intervening variable itself, we are enabled to reconstruct the process through its overt behavioral effects, or "derivatives."

Since these derivatives appear in most, if not all people, it becomes important to explore their nature more thoroughly. Much speculation and research has been done in the area of impulses and defenses as they appear in behavior. Most of this work has dealt with some specific conflict, its genetic development, the impulses and defenses involved, and the type of personalities most likely to demonstrate it. Clinical evidence (10, 12) indicates that a person will use different mechanisms at different times according to the situation in which the person finds himself, the type of conflict with which the person is faced, and its intensity. This variation in behavior is described as a hierarchy of defenses. It would appear most profitable to study this general kind of process by means of which a person defends himself in various conflict situations. Such a study should clarify the effects of conflict on variations in defensive behavior, as well as offering useful information about the relationships of defenses.

In planning such a study, what variables must be considered? To study any behavior we must first consider the external situation surrounding the individual. Physical needs and learned ways of meeting them make up a second set of behavioral determinants, the internal situation. Thirdly, the cues from the external and internal situations must reach sensory organs and central nervous centers to be appreciated. If they do not reach sensory organs, or are only incompletely received, because of blindness, darkness, or emotional states, "errors" may result. The type of field conditions

necessary for perception and the kind of "errors" made vary from one person to another, and from one situation to another.

We cannot study errors or distortions of perception of the internal situation for we cannot measure it. However, much work has been done on misperception of external stimuli. Bruner and Postman (5), Carter and Schooler (6), McGinnies and Bowles (17), Levine, Oheir and Murphy (14), McClelland and Atkinson (16), Eriksen (9) have all shown that with ambiguous presentations of external stimuli some of the cues guiding behavior stem from the person's needs, values, interests, and the behavior habits he has formed to satisfy these. By manipulating field conditions much has been discovered concerning the influences of such internal states on perception and, theoretically, on behavior.

Our interest lies in studying influences of conflicts and the resultant compromises between impulse expression and defenses against it, which appear as derivatives. In view of the results of previous experiments, it seems likely that the distortions of need related materials may represent such derivatives. Proceeding on the basic assumption that the techniques used to study need-influenced perception may be applicable to the study of the formation of derivatives, let us turn to a consideration of the influences of the three variables: external situation, internal situation, and conditions of stimulation.

CHAPTER II

THEORETICAL CONSIDERATIONS AND VARIABLES

Variable: External Situation

That things outside our own bodies are important in our behavior is so obvious it hardly seems necessary to speak of it. However, we must pinpoint some of the causal relationships. In simple lower animals such as the paramecium we see the influence of external stimulation at its height. These organisms are governed almost entirely by physical and chemical changes in their surroundings rather than by internal states. In higher animals external objects seen, heard, felt, or otherwise experienced are of prime importance in living for they influence the animal in adapting to its environment. Life would be impossible without such adaptation. The intricate systems of social interaction, communication, and control which surround each of us from birth on, and so profoundly alter the animal nature of the human organism point to the importance of the external situation in any consideration of human activity.

External cues influence behavior in several ways:

1. They have meaning or convey information about the external world which may serve to guide and direct ongoing behavior.
2. External stimuli are capable not only of guiding already motivated behavior along certain lines, but can also initiate behavior by means of arousing motivational states.
3. Changes in intensity of stimulation may result in changes in

behavior. A stronger stimulus may be more necessary to cope with, is less easily ignored or distorted than a weak one. A strong stimulus may also be more difficult to assimilate and react to, that is, may be more disrupting.

Variable: Internal Situation, Conflict

The impulses, aspirations, values, fears of the individual are all sources of cues. The external situation may be what the individual responds to, but how he responds will depend upon these "internal cues" which are the motive forces of animal activity. When a need or impulse is activated the organism seeks to satisfy it in some way. On the basis of similar experiences in the past the person can anticipate the outcomes of the numerous courses of action open to him. These anticipations include not only expectations as to which acts will or will not lead to satisfaction, but also expectations of how other people will react to the various possible modes of behavior. The socialization process which an infant undergoes involves the gradual acquisition of these anticipations.

The child (or adult) learns that certain forms of behavior will be punished. He must find ways of avoiding pain and punishment and retaining security in the form of continued parental care and affection, social acceptance, etc. The young child learns that not only are certain actions wrong, but even to think of acting a certain way, or to feel certain things is wrong. Some of the natural impulses with which he is equipped must be quelled. At first these restrictions must be enforced by the environment. As the child grows older and finds more rewards in social living he comes to accept the rules more and more as values of his own, and sees them less and less as imposed by outside sources. Thus, violation would lead not

only to punishment but to a loss of self respect, for a person would be unable to integrate such personally unacceptable behavior into his value system. A person adjusted in this fashion to society's demands would be able to behave so as to achieve the maximum gratification allowed in his culture with a minimum of social disturbance.

However, many things can go wrong in the socialization process. A child's relationship with parents and other early love objects may result in his being unable to learn, or his not wanting to learn socially acceptable modes of response. This may happen for a number of reasons. Emotional reactions may be aroused which make for even greater problems in control and adjustment. The child may be so rejected that he finds no rewards in conforming. Demands may be made for socialized behavior beyond the child's ability, or prohibitions may be so strong that there is no way of satisfying some impulses. All socialized behavior probably has something of a compromise nature, but in these extreme cases conflict arises between the satisfaction of some natural need and the perceived demands of the social environment. Neither can be satisfied without sacrificing the other. In such a situation anxiety appears as a sort of danger signal. Many theorists, such as A. Freud (12, pp. 52-57), Fenichel (10, pp. 141-167), and Cattell (7, pp. 245-250) hold that the first solution in such a conflict is the repression or avoidance of conscious awareness of the troublesome impulse. The person already knows that he should not have such impulses or feelings since they lead to punishment and self recrimination. Therefore he would be threatened by awareness of them and avoids pain by not recognizing them. Any thoughts and ideas connected with these painful, forbidden impulses are also repressed. Repression, however, does not eliminate the impulse which can still act as a determiner of behavior albeit one of which the

person is unaware. The conflict still exists, though now it is unconscious and again compromise becomes necessary. Other defenses are called in which allow for some distorted expression of the impulse. The person's past experiences with attempts at solutions of conflict, as well as the present conflict, will determine what he now does (12, p. 54).

Most personality theories hold that much of the original learning and organization of defenses takes place in childhood and that the type of problem with which the child is faced will determine the kinds of solutions or defenses he sets up. The problems described are many: the biological conflicts of orthodox psychoanalytic theory, social interpersonal conflicts of the neo-Freudians, etc. But no matter what the particular genesis of the learned conflict solutions, they are likely to be used again whenever a conflict is re-instituted either through some change in internal cues or in external cues. The solution as it appears in behavior will be a derivative of the conflict; it will usually have some aspects of the original impulse as modified by the inhibitions and prohibitions stemming from the need to maintain security and to avoid pain. The nature of this compromise, as observed in its overt derivatives will be a result of the particular defense used. By a derivative we mean a bit of behavior which represents both the impulse and the inhibition of it in some sort of compromise. Derivatives are identifiable in that they are inappropriate to the internal and/or external situation in which they occur, requiring as they do a distortion of cues.

Let us now turn to some of the factors which may, by affecting the conflict, be expected to influence its derivatives.

When there is no conflict, i. e., when neither impulse nor situation arouse anticipations of pain, unpleasantness, or continuing tension,

there is no need for compromise. In such a case there would be no distortion, no derivatives.

In conflict situations, on the other hand, we might also find occasions where no "derivatives" were present, if we restrict the term derivative to fairly direct manifestations of the impulse in overt behavior. In some situations the anticipations of painful sequelae could be so great, the inhibitions aroused so strong, that the person is totally unable to find any compromise. Then he might withdraw completely, giving up for the moment any attempt to deal with the situation and the impulse. Behavior in such a case would be motivated by a need to escape pain and/or unpleasantness. This is certainly a defensive maneuver, but one involving compromise of the sort where the person gives up the struggle completely. What we see is a "derivative" of the conflict in which the threat and inhibitions are so strong that compromise is one in which the impulse is temporarily blocked out; if the impulse strength were to be increased (or threat decreased) the person might be forced to deal with it, thus producing less distorted derivatives. When an impulse is blocked, it does not disappear, it "goes underground", so to speak. Later satisfaction may be sought for it when the circumstances are less threatening. The type of defensive behavior we speak of here is partially illustrated in the Barker, Dambo, and Levin (1) study of frustration. When the child was placed in the frustrating situation alone with the adult experimenter, and presumably was threatened because of his anticipations of how the adult might react to aggressive behavior, his aggression was indirect or nonexistent. When, on the other hand, children were placed in the frustrating situation as a group, and could expect social support, their mode of expression of aggression was a direct attack, verbal or physical, on the frustrating adult.

The usual case is that the derivative represents a distortion of both impulse and the situation in which the person finds himself. In seeking an explanation, we recall that the source of defensive behavior or derivatives lies in the fact that the person represses and distorts when things are too threatening, i. e., when they produce anticipations of pain and/or unpleasantness. We must conclude that both impulse and situation would be distorted because cues from both arouse such anticipations. As threat increases, through increase in stimulation, we would expect still more distortion and derivatives should become increasingly indirect. Freud (13) makes the statement that the more threatening an impulse is, the more it must be distorted to achieve recognition. This is also implied in the regression hypothesis of analytic theory: a person returns to an earlier mode of behavior, or at least a more primitive one, when a more mature one is unsuccessful in relieving pain. This earlier mode provides compromise formations which distort reality more than the mature modes. In normal people, however, an impulse might become so overpowering that it could no longer be ignored if the person is to maintain his orientation to reality. In this tendency to adjust in terms of reality another factor enters into the conflict. To be unrealistic may eventually become more painful than the avoidance of unpleasant outcomes with which the person was originally concerned.

Variable: Ambiguity

Numerous factors apart from the content of external and internal cues may affect the type of responses or derivatives which result. Besides the cues themselves, what one perceives and does also depends upon the conditions under which stimulation takes place, i. e., the ambiguity of the

situation. These factors may be entirely independent of the stimulus content and therefore comprise a third set of variables. The variable of ambiguity is important because it is a factor in determining how much the person's behavior in a situation is guided by information from the situation and how much must be based on cues or information which may or may not be relevant. While presumably conditions could exist which would make for ambiguity in the internal situation, lack of knowledge and difficulty of control make it more convenient to deal with manipulations in the amount of ambiguity in the external situation alone. By increasing ambiguity we can prevent the full impact of conflict eliciting stimuli from reaching the person and are thus enabled to discover what happens in relatively unthreatening situations where, although he may be made anxious, he does not have to respond in terms of the situation. By decreasing ambiguity, and letting the person have more information about the situation, we can force him to cope in some manner with impulses aroused by it. Insofar as a person must face unstructured situations in real life, must deal with threats and demands and forbidden invitations of varying intensities, the variable of ambiguity has relevance outside the laboratory. It must be pointed out, however, that for our purposes the greatest importance of ambiguity is as a means of controlling necessity of dealing with reality, thus allowing to observe the effects of conflict on this variable.

Let us consider duration of stimulation as an example of ambiguity. There is a certain threshold beyond which speed is so fast that the individual objectively cannot perceive anything. When the stimulus finally acts long enough to innervate some receptor the person can begin to perceive some aspects of the situation, but probably still cannot get enough information to recognize, name or categorize the stimulus. He will still make errors,

and the nature of these errors will be determined by whatever information is dominant for the individual at the moment. The same is true of the earlier responses before recognition is possible. In many cases there may be internal cues stemming from active and/or repressed needs. As the stimulus acts for a longer and longer time it may finally offer a great enough number of strong cues so that these become dominant and the person acts in terms of them. How long this will take seems to depend on how this person reacts to the cues he receives. This process of gradual recognition can be seen in any of the current perception studies, which employ the variable of recognition speed. It is particularly evident in Stein's study (21) in which Rorschach cards were presented tachistoscopically at various speeds. The results show more "deep" material was revealed on the faster levels of presentation. The responses seemed more card determined at slower levels. This kind of ambiguity is also seen in the Levine, Chein and Murphy (14) use of ground glass screens to distort stimuli.

We see that ambiguity has two important effects for us. First, it may allow repressed needs to influence the person's behavior. Second, it makes it more or less necessary to deal with reality.

When a person blocks impulse expression entirely or seeks satisfaction through some sort of compromise mechanism it is doubtful if full gratification is ever achieved since it is of necessity indirect. If this were the case, the impulse would remain activated to some extent. Freudian theory holds that such unsatisfied impulses will tend to "sneak through" the control structures and fairly direct manifestations of them may appear in other places. Dreams are an example of this. While sleeping a person's control is theoretically weakened so that the inhibitions against impulses

are not so strong. The residue of forbidden impulses tends to seek release. In order to preserve sleep and self respect these impulses must be disguised in some way, and the result is the "fantastic" dream material. This phenomenon can also be seen on projective tests. Here presented with a situation which offers no rules, the person is guided by whatever cues there are available to him. Bruner and Postman (5) also have shown that in judging the content of pictures that are ambiguous because they have not yet reached the level of stimulation required for conscious recognition, the person is guided by hypotheses stemming from his dominant system of values or needs. One explanation of this phenomenon is that the person anticipates some sort of stimulation and thus is set to respond to it. This is the explanation given by Bruner and Postman for their results; they have given the process the name "resonance" (5, p. 85).

On a different experimental level, both Clapp (8) and Blum (3) have found vigilance or selective sensitivity in response to pictures relating to psychosexual conflict, when the pictures are presented at fast speeds. With slower speeds (more information) they both found avoidance or defense against the repressed impulse. Blum explains this as a result of the fact that repressed impulses are constantly pushing and seeking outlet, but must be repressed when they approach consciousness because they are too threatening.

It would appear that in a more or less ambiguous situation the individual may be expected to respond on the basis of whatever cues are dominant. In our case dominant cues would be those from residual impulses. So long as these impulses are weak we would not necessarily expect great distortions (13). The resultant derivatives should be fairly direct. However, if more cues are added which reintegrate the threat of the impulse,

the individual will again resort to more indirect derivatives.

The time it takes to recognize a stimulus is important since the longer a person takes to become aware of reality the longer is his behavior guided by cues which are not based on reality and which may or may not be appropriate to reality. Reaction time studies were the first to show that conflict slowed down response time. More recently Bruner and Postman (5, pp. 92-93) investigated how various degrees of threat affected recognition. They point out that apparently perceptual defense acts only to a certain level of threat; beyond this level the person becomes alert and vigilant to increased threat. There were exceptions, however. Some subjects blocked on threat words. We know from clinical observation that an unusually slow reaction time on the Rorschach or other projective tests is indicative of threat. While unusually fast reaction times are also felt to be significant blocking seems, for the clinician, to be a far more important index of threat. Mental disorders show us that when the world is too threatening it may be denied entirely as in the schizophrenic. While it is possible that cases which are exceptions to the general trends found by Bruner and Postman can be explained by differences in situation, set, or some idiosyncratic factor, it would also appear that these authors did not attempt to represent several intensities of threat. Their demonstration of vigilance compared threat words regardless of intensity with mildly pleasant ones. What would happen if several levels of threat were used? The following are possible:

<u>Fast Reaction</u>	<u>Normal or Medium</u>	<u>Slow Reaction</u>
strong threat	neutral no threat	weak threat

(this would seem to be the prediction of the vigilance-defense hypothesis);

<u>Fast Reaction</u>	<u>Normal or Medium</u>	<u>Slow Reaction</u>
weak threat	neutral	strong threat

(this prediction is based on clinical observations and would explain block-

ings in certain subjects found in the Bruner and Postman experiment). Other possibilities are progressively increasing defense or vigilance with increasing threat, or some other kind of interaction between the two. On the other hand, vigilance or defense may be a purely individual matter, based on personality, rather than intensity of threat.

Summary

Theory leads us to believe that behavior and recognition of a situation will vary with the meaning of the stimuli and the intensity of the affect elicited by these stimuli. When there is conflict between satisfaction of a given impulse and anticipation of painful sequelae, some means of compromise must be attempted. First, the person will tend to repress awareness of the impulse. Since this does not do away with the impulse, further compromise in the form of defenses is necessary to enable the individual to achieve satisfaction. The behavioral distortions and incongruities resulting from compromises are called derivatives. The intensity of conflict stimuli should determine both the appearance and the nature of derivatives: derivatives should be more likely when stimuli are more intense; they should also be more indirect than with weak stimuli. Conflict affects not only the nature of derivatives, but also the person's ability to deal with reality. Recognition of a situation and the nature of derivatives depend in part on the amount of information available concerning the reality situation. Prior to the provision of adequate information, the person will be influenced by whatever cues he has if he is called upon to act. If some impulse has been blocked but still remains activated, it may become a behavioral determinant, resulting in fairly direct derivatives. As more information is available, the person must respond not only in terms of

his own motivations, but also in terms of the new information. Were information to elicit affects related to conflict areas, derivatives should become more indirect. As the situation becomes more and more clear, behavior will be based more and more on the actual situation, although conflict may still prevent adequate or realistic reaction.

General Predictions

1. People will differ in the amount of information they need to recognize a situation depending on:

- (a) whether or not they have indicated conflict with respect to the situation;
- (b) the intensity of the affect elicited by the stimulus.

2. Prior to conscious recognition of an affect eliciting situation, the person's behavior will depend upon whatever other sources of information he has.

- (a) When there is no conflict the person's behavior may be guided by such numerous possibilities that we could expect results to vary so widely as to be almost chance.
- (b) Where the stimulus material relates to conflict in the subjects we might expect derivatives.
- (c) When there is conflict the likelihood of derivatives should increase as stimuli come to have increasingly intense connotations related to the conflict area.

3. There will be differences in the nature of derivatives dependent on whether or not the person has indicated conflict with respect to the situation. We are not saying here that people without conflict will be completely unaffected by conflict stimuli. Insofar as they do distort

perception of stimuli, the degree of distortion should be less than for subjects with conflict.

4. There will be changes in the nature of derivatives produced by persons with conflict depending on the affective intensity of the stimuli.

(a) With stimuli that have connotations which elicit only weak affects related to conflict we would expect direct derivatives.

(b) When stimuli are stronger with respect to these connotations the derivatives should become indirect.

5. There will be changes in the nature of derivatives produced by persons with conflict as information about the situation increases.

(a) With ambiguous situations which offer little information subjects having conflict with respect to an impulse may be expected to produce fairly direct derivatives of that impulse.

(b) As information increases about the affect eliciting situation, the derivatives should become more indirect.

(c) A point will finally be reached where the derivatives will again become direct, and/or recognition will occur.

(d) If more intense stimuli produce indirect derivatives (see 4) then, where the stimulus has intense connotations of a conflict area, the reappearance of direct derivatives will be delayed in comparison to less intense stimuli.

While each of the hypotheses will be discussed in further detail in the chapters following, a schematic graphical description of these general predictions may help to clarify them. Figures I and II show the relationships hypothesized with respect to determinants of the appearance and nature of derivatives (Predictions 2 through 5, above). The predictions with regard to

the determinants of recognition of stimuli (Prediction 1, above) are not presented graphically, since the direction of differences is not specified here, and since the statement above is relatively simple.

FIGURE I

DETERMINANTS OF APPEARANCE OF DERIVATIVES

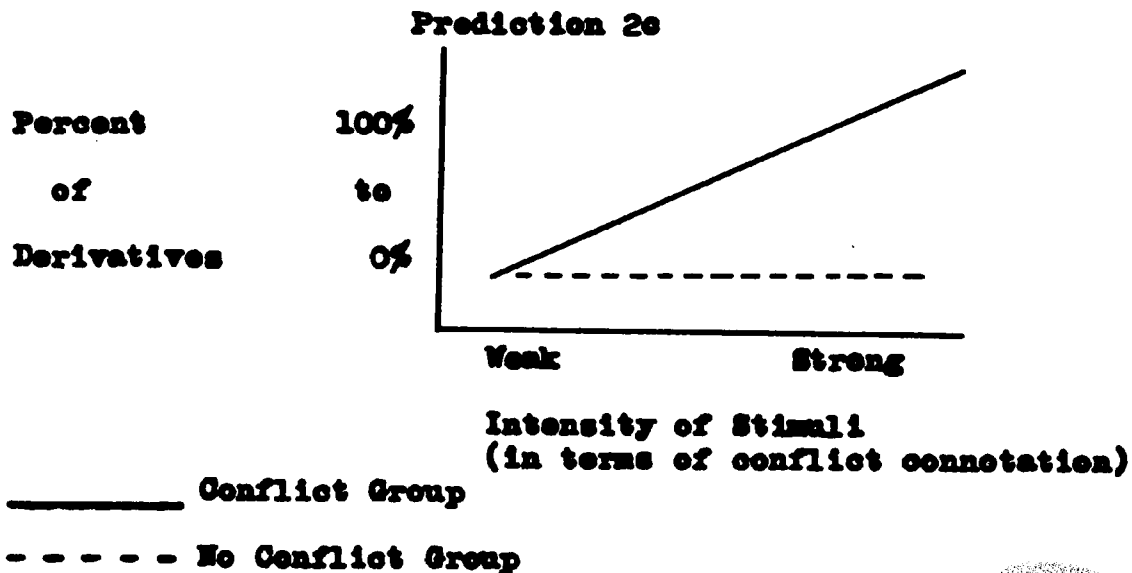
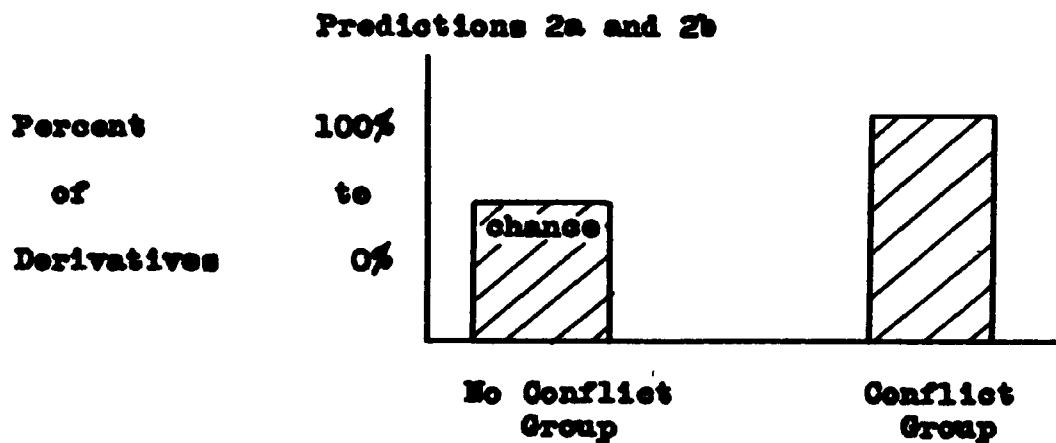
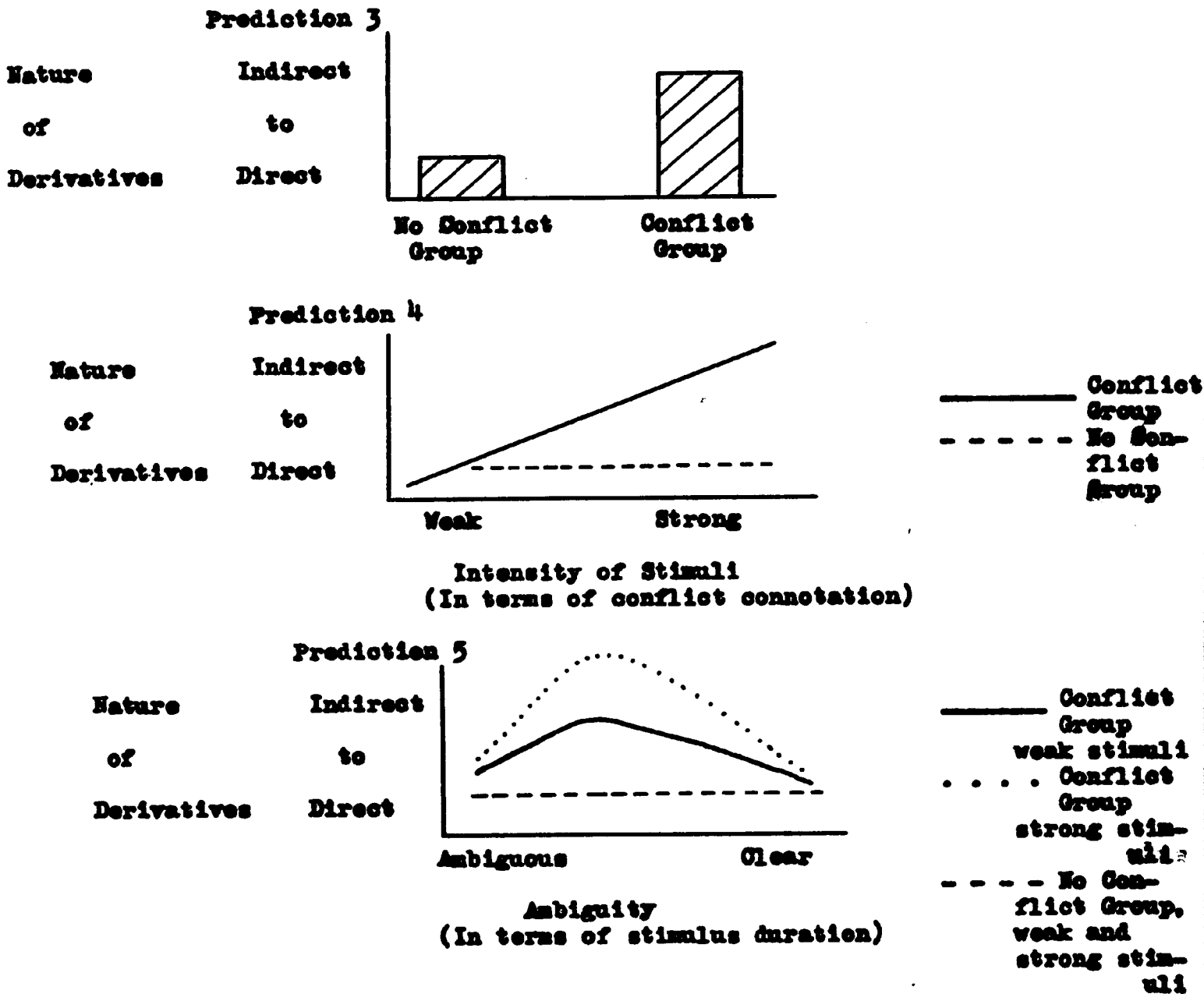


FIGURE II

DETERMINANTS OF THE NATURE OF DERIVATIVES



CHAPTER III

EXPERIMENTAL DESIGN

Variable: External Situation

In seeking control and manipulation of external stimuli it was decided to use pictures of situations which might be expected to represent various types and intensities of conflict inducing material. As is obvious from the theoretical discussion, the pictures, if they are to test the principles involved, must offer cues which will elicit affects related to some impulse which is conflictful for the individual subject. These stimuli should vary in the amount of affective reaction they elicit. There must also be pictures which do not arouse any conflict at all, so that the differential effect of cues upon behavior may be analysed. The pictures must range from those which arouse no conflict through those which arouse only mild conflict to those which arouse intense conflicts. To test the generality of our findings, we also need to study the effects of more than one kind of impulse.

Most economical for such a problem will be conflicts commonly found in our culture. We decided, therefore, to use pictures offering cues to aggressive and sexual impulses. Each impulse was represented in four pictures, one very mild, one medium, one strong, and one very strong. In addition another set of four pictures was used which was entirely neutral.

One problem came about in connection with ranking the intensity of the pictures. Would women being aggressive mean something different than

men being aggressive in the same way? Would it mean the same for men and women subjects? Since these subtle points are unrelated to the main concern of this thesis, it was decided to circumvent them by using subjects of one sex and by having all persons in the aggression pictures of that same sex.

It was necessary to gain some objective evaluation of the nature of the stimulus, and the intensity or directness of aims or motives represented in them. A large number of pictures, 10 representing various aggressive activities, 15 representing sexual activities, and 4 representing various neutral activities were drawn by an artist. Every effort was made to hold position of persons in the picture, size of people and of shaded areas constant from one picture to the next. These pictures were given in a pre-arranged order to five judges, all of whom could be considered experts in that they were either Ph. D's. in psychology ($N = 3$) or advanced graduate students ($N = 2$). The judges were asked to sort the pictures into piles according to what basic impulse they thought was represented in each picture. After the judges had sorted all the pictures, the judges were told that the pictures had been set up to represent various degrees of sex and aggression impulses, and were asked to sort the pictures from each set from least intense (1) to most intense (10) for aggression and (15) sex. On neutral pictures they were merely asked if they agreed that the pictures were neutral. On the basis of the agreement of these rankings, a number of sex and aggression pictures were selected to represent four broad intensity levels, which we might label weak, mild, strong, and intense. These pictures were then shown tachistoscopically to a group of pre-test subjects who were asked to describe what they saw at each presentation. Following this four pictures from sex and aggression sets were selected as test pictures. The following criteria

were used in choosing these pictures:

- (a) the judges should show high agreement on content (except in the case of neutral pictures where disparity was a criterion);
- (b) there should be a weak picture, a mild one, a strong one, and an intense one. This intensity value was determined by the median rank assigned to a picture;
- (c) the picture should not overlap with those above or below it, as determined by average deviation;
- (d) the picture should produce a broad spread of pre-recognition hypotheses;
- (e) the picture should finally be recognized by most subjects.

For our purposes, the pictures were reproduced with drawing pencil on 2 x 4 inch etched glass slides. The pictures are reproduced in Appendix A. The judges' ratings of content and intensity are included in Appendix B.

Variable: Conflict (Internal Situation)

The external situation in general, and our pictures in particular, have only the potential for eliciting conflict. Whether or not they do induce conflict depends upon the individual's own problems. It was therefore necessary to locate people who had difficulty in handling sexual or aggressive impulses; a control group was also necessary, i. e., people who had no apparent difficulty with either sex or aggression.

The subjects used were 52 women students from Psychology 31 classes at the University of Michigan, obtained as "volunteers" by their instructors. No attempt was made to control or match for such things as social class, age, and wearing of glasses. In the case of social class and age, these were

allowed to range freely and randomly, since the entire group was fairly homogeneous. In the case of glasses, Clapp (8) has shown that this appears to have no effect. Subjects were chosen from a larger group ($N = 89$) on the basis of stories they wrote about the 12 pictures later used in the experiment. As an aid in writing their stories they were supplied with mimeographed sheets with a series of questions about the picture (e. g., Who are the people in the picture? What is happening now? etc.). By answering these questions the subject could tell a complete story. A priori criteria were set up for scoring the amount of difficulty the person had in dealing with the pictured situation. These criteria were based on reactions which previous clinical experience had shown were indicative of conflict. These reactions included disgust, attempts to defend, disorganization, distortion, etc. Separate scales were set up for sex conflict and for aggression conflict. Each protocol was scored on both scales.

The reliability of this set of criteria was ascertained by giving a representative protocol, containing the twelve stories of one subject, to four judges. These judges were experts in the sense that all were advanced graduate students in clinical psychology. The average percent of agreement between each individual judge and the experimenter was obtained, and found to be within the usual range of inter-judge agreement on screening criteria (around 70%). The criteria and instructions to the judges, the sample protocol, and the percents of agreement for the individual judges, as well as other calculations which may be of interest are included in Appendix C.

It must be noted that there was no effort to obtain an estimate of validity of the criteria at this time, other than the face validity of these indices in clinical usage. This is perhaps understandable in the light of

the fact that such validity could only be established by lengthy interviews and life histories, which would have led far from the purpose of this experiment.

The subjects were assigned to groups on the basis of their scores on the two scales. Those subjects whose scores on sexual conflict were in the highest half of the sex distribution and whose scores on aggression were in the lowest half of the aggression distribution were placed in the sex conflict group. Those who scored in the highest half of the aggression distribution, while scoring in the lowest half of the sex distribution were placed in the aggression conflict group. A third group whose scores were in the lowest half on both sex and aggression conflict comprised the no conflict group. A few subjects (final $N = 8$) in the highest half of both distributions were also tested, but their results will not be considered here.

Since the initial testing occurred early in the semester, and the final experiment about a month later, there was a certain loss of the original N . In addition to the factor of delay, there was an epidemic of influenza and a heavy examination schedule the week of the experiment. Only two or three girls refused to return out of distaste for the experiment. Because of the loss of subjects it was necessary to include in the sex group four subjects who were in the upper half on both sex and aggression distributions. These subjects had previously been assigned as alternates to the sex group. They were on, or just above, the aggression median, and scored very high on sex. In the aggression group five subjects were in the upper half of the distribution on both aggression and sex, but the sex scores were on or near the median, and the aggression scores were extremely high. These subjects had previously been considered as possible alternate members of the aggression group. In the no conflict group three subjects

were just above the median on one of the scales, but below it on the other. As part of the analysis of the data an examination of individual behavior was made to determine if these subjects had an idiosyncratic effect on the data for their groups. Since their reactions were no different (on examination) from the other subjects in their group no statistical tests were made. The final number of subjects in the sex group was 15; the aggression group included 16 subjects; the no conflict group included 18. The scores of all the subjects on the sex and aggression scales, as well as their quartile scores are included in Appendix D.

Variable: Ambiguity

It was noted above that by controlling the amount of information available to the subject, we may make it more or less necessary for him to recognize or deal with a situation. We also wished to observe the effect of conflict on this recognition factor. The means of control of ambiguity used here was a standard Keystone overhead lantern slide projector with a tachistoscopic attachment¹. The particular tachistoscope did not allow for the desired range of presentation speeds, for it could not produce shutter speeds of less than 1/100th of a second. It was determined in a pre-test that many subjects could recognize pictures at this time. Since there was also a device on the mechanism for controlling size of shutter opening (and thus amount of light on the screen), it was decided to compound light and speed as a means of controlling ambiguity. A second pre-test was run to determine the best possible combinations of these. The final conditions of presentation were as follows:

¹The tachistoscopic attachment was a Keystone Flashmeter, made by the Ilex Optical Company.

Fast	(	first presentation;	1/100th of a second with dim light ¹
		second presentation;	1/100th of a second with brighter light
Medium	(	third presentation;	1/5th of a second with dim light
		fourth presentation;	1/5th of a second with brighter light
Slow	(	fifth presentation;	2 seconds with dim light
		sixth presentation;	2 seconds with brighter light

The projector was placed so that the lens was 9 feet 4 inches from the screen.

Subjects were tested in small groups ranging in size from 1 to 15. All experimental sessions were run late in the afternoon and evening. The experimental room was a large class room equipped with blackout shades so that it could be completely darkened. One fluorescent ceiling light was left on in the back of the room to provide light for the subjects to work by. No other light was ever turned on, even before the experiment began. Subjects were seated in rows of seats directly in front of the screen, between 18 and 29 feet from the screen; most subjects sat in a row of seats 22 feet from the screen. The subjects chose for themselves the session to which they came, and within certain definite limits as to distance and angle of vision, chose their own positions in the room.

Dependent Variable: Response

It is the usual procedure to allow free response to tachistoscopically presented material, but for the purpose of this experiment we wished to distribute responses into a limited number of categories. Moreover, coding

¹ The projector was lighted by a 500watt Mazda bulb for picture projection. The order code for the bulb was:

500T20P - 120V

T-20-0-13 F MHD PF

For the dim shutter setting, the opening in the diaphragm was exactly 1/2 inch in diameter. For the brighter shutter setting the opening was exactly 1 1/4 inch in diameter.

difficulties of all kinds could be anticipated if free responses were used. It was decided to control the situation by forcing the subject to respond in one of several set ways, by providing her with a list of alternative interpretations of the picture. These alternatives were chosen to represent various kinds of derivatives and various kinds of distortion. Some of these alternatives were taken from pre-test responses. Most of them were composed by the experimenter in an effort to duplicate various defensive procedures, e. g., rationalization or intellectualization, denial, reaction formation. A list of eleven such alternatives, and one statement implying the real content was set up for each sex and aggression picture. Several different descriptions of the neutral pictures, neutral in content, were also set up. These lists were given to a group of eight judges, experts in the sense that all were either Ph. D's. in psychology ($N = 2$) or advanced graduate students ($N = 6$). These judges were asked to rank the statements about the sex and aggression pictures as to the degree of distortion of the picture shown in each statement. The judges were also asked to pick out which statements about the neutral pictures were most neutral. A distribution of judges' rankings of each set of statements was then set up, and from this distribution four statements were selected according to the following criteria:

- (a) a statement was to be selected to represent each of the four quartiles of the distribution of ranks. Thus we wanted a statement ranked between 1 and 3 to represent the "real content" of the picture. We wanted a statement ranked between 4 and 6 to represent mild distortion or direct derivatives. We wanted a statement ranked between 7 and 9 to represent great distortion or indirect derivatives. We wanted a fourth statement ranked between 10 and 12 to

represent extreme distortion or very indirect derivatives. Median ranks of each statement were computed to determine the quartile placement,

(b) we wished to choose the statement which was most consistently ranked within the desired quartile. A percent of agreement on quartile placement was set up to satisfy this requirement,

(c) we wished to be sure that the statement did not overlap in its rank with statements above or below it. The range of ranks was used as a measure of overlap.

When it was not possible to satisfy these requirements exactly, that statement was chosen which was the closest approximation to them. As a double check on the suitability of each of the statements finally chosen, a second set of three graduate student judges was asked to rank the final set of statements about each picture. Each statement or alternative is included in Appendix E along with the median, range, and percent of agreement of both sets of judges.

The problem arose as to how to present these statements, allowing for the full range of behavior in which we were interested and still prevent emphasis on certain content from giving the subjects hints as to the nature of the picture. The problem was solved by including in the list given to each subject alternatives referring to other pictures. Three pictures, one dealing with a sexual situation, one dealing with an aggressive situation, and one dealing with a neutral situation, were matched as completely as possible, and the alternatives describing each were combined into one list of eight alternatives. An effort was made to have all the alternatives applicable to the basic positions of the characters in each of the three pictures. In this list were three sex alternatives or "deriva-

tives", three aggression "derivatives", one neutral alternative and one alternative describing the real content of the picture¹. Each list of alternatives was prepared in three different orders so that the subjects would not know when they were getting the same list repeated. The order of the list was varied each time it was given with a picture, and none of the matched pictures were ever presented side by side. These lists were collected into an answer booklet for ease in handling, one page for each presentation, or seventy-two pages in all.

It is felt that this method of disguise was successful in its purpose, for it was not until the slow presentation speeds that the majority of subjects chose the "real content" of the picture. In passing, it is important to note that this arrangement of lists, including alternatives which were irrelevant to the stimuli provided for additional varieties of defense (complete denial or escape from the field), and enabled the subject to project other impulses into the situation if she desired.

The use of ranked alternatives also negated the need for setting up extensive codes in evaluating data. The only coding necessary was a recording of the rank of the statement chosen by the subject and the nature of the impulse content chosen.

Procedure

The first part of the experiment consisted of a one hour session at which time the subjects were shown all 12 pictures and asked to tell stories about them. This was done, as indicated previously, in order to provide

¹ Despite the fact that lists always included an alternative pertaining to a neutral picture, a second alternative pertaining to neutral pictures was added in the place of the "real content" alternative to keep the lists the same length when the lists were presented with neutral pictures.

information for placement of the subjects into one of the groups. It also had the function of providing equal familiarity with the stimuli. At the close of this session, the girls were told that this was an experiment in the measurement of social attitudes in various areas, and of how these attitudes influence behavior. The experiment was further disguised and the emphasis on individual response was discounted by telling the subjects it was the purpose to compare their group with another group elsewhere. They were told that a second session would follow in several weeks and that they would be contacted later with regard to appointments. It may be important to notice that neither of the experimental sessions were anonymous since it was necessary to have the names and addresses in order to arrange for appointments for the second session.

At the beginning of the second session, the subjects were instructed as follows:

I am going to show you a series of pictures at various speeds. You have been supplied with an answer booklet with a separate sheet for each picture. On each page are listed a number of interpretations of the picture. You are to check the alternative which seems most likely to you. At times the pictures will be shown too rapidly for you to be sure of what you have seen. Please indicate what it seems to be; your best guess or hunch will be as important as if you were thoroughly sure of what was going on. Give a response to each picture, even though you aren't sure of it. Indicate your choice by underlining the first word of the alternative. Please read through the entire list before making your choice. Be careful in turning the page to turn only one at a time. If you have any difficulty finding a choice on the list please tell me, for there may be some confusion of lists. Before beginning, please put your name on the front of the booklet.

Before beginning the presentation of the slides the subjects were given a demonstration of the speed of the flash, so they would know what to expect and where to look on the screen. Each picture was presented six times, making a total of seventy-two stimulus presentations for each subject. For the first, third and fifth presentations the ordinal position of the twelve pictures was retained. In the second, fourth, and sixth series

the order of presentation was: 6, 5, 4, 3, 2, 1, 12, 11, 10, 9, 8, 7. At the half way point subjects were given a short break. Following the experiment there was a brief explanation of how attitudes might affect the use of cues, and prevent or encourage the recognition of situations. The subjects were never made aware of the true nature of the study since it was felt that this would have been too threatening.

Preparation of Data

In preparing a code for evaluating the subjects' responses the value of the alternative choices as determined by the judges' ratings was used. The subject was given, as a score, the "value" of the statement she has chosen. These codes or scores were as follows:

- R - Choice of alternative representing real content
- 2 - Choice of most direct derivative
- 3 - Choice of indirect derivative
- 4 - Choice of most indirect derivative
- 2I - Choice of alternative representing a direct derivative of irrelevant impulse (i. e., choice of sex derivative on aggression picture)
- 3I - Choice of alternative representing an indirect derivative of an irrelevant impulse
- 4I - Choice of alternative representing most indirect derivative of irrelevant impulse
- N - Choice of alternative representing a neutral picture
- H1 - Blocking, absence of any choice

The score value of each response of each subject to each picture was recorded on a data sheet. No attempt was made to compute an overall

individual score since it was the effect of changing conditions and not individual response in which we were interested. In the tabulation of data, the purpose was to show the frequencies of various types of behavior under various conditions of ambiguity and picture content and intensity. From these frequency tabulations it was a simple matter to put these totals into chi square tables.

The chi square statistic was chosen since it was relevant to the questions asked of the data yet did not require extensive assumptions about the distributions. These assumptions, basic to parametric statistics, cannot be met in simple rank order data. Chi square tests were computed by the method recommended by Mood (20). This test is an adaptation of the exact method of computing chi square, employing transformation into logarithms. If appropriate computing tables are available, the method is a fast and efficient way of obtaining chi square. It is not applicable to fourfold tables, since it tends to over-rate the relationship. For fourfold tables, the formulae given by McNemar (18) were employed. In several individual instances some other statistical technique was used. It is difficult to describe and explain these apart from the data on which they were used. Discussion will therefore be postponed until the occasions for use of these techniques arise.

CHAPTER IV

HYPOTHESES AND RESULTS REGARDING RECOGNITION TIME

In this and the chapters which follow the same general form will be employed. We will first review the theoretical basis for the general hypothesis we are to test. Then we will review the parts of the experimental design which will be pertinent to testing it. Having accomplished this review, we will be ready to consider the experimental tests of the hypothesis. Each general hypothesis states several factors which will influence a certain phenomenon. We will consider each of these factors separately, deducing from the abstract statement specific relationships we would expect to find in our experiment if the general prediction is true. Following each of these specific predictions we will give the findings in regard to it. When all of the predictions and results about a particular factor have been set forth, we will discuss and summarize them before proceeding to the predictions regarding the next factor.

It will be recalled that the ambiguity variable was controlled in such a way as to give various amounts of information to the subject. By controlling information about situations eliciting affect related to conflict we make it more or less necessary for the subject to deal with reality situations. Sometimes ambiguity was so great that recognition was impossible; other times the stimuli were extremely clear. Previous studies led us to believe that the amount of information necessary for a person to recognize a stimulus situation is related to whether or not he has

conflict in that area. It was felt that when there was conflict there would be repression, at least at certain times. The occurrence of such repression was of importance because the longer the person avoided recognizing what he was dealing with, the longer might his behavior be guided by factors other than "reality." On the other hand, we knew that conflict might also lead, on certain occasions, to vigilance. It was impossible to predict which factors would lead to vigilance, and which to repression, but we knew that in general we could expect differences in the amount of information needed to recognize various stimuli when there were differences in the intensity of affect elicited by these stimuli.

Our general prediction was:

People will differ in the amount of information they need to recognize a situation depending on:

- (a) whether or not they have indicated conflict with respect to this situation;
- (b) the intensity of the affect elicited by the situation.

The means for testing the first part of this prediction were embodied in the way the experimental groups were set up. Subjects were divided into a group which was prone to sex conflict, a group which was prone to aggression conflict, and a group with no observable conflict in either area. These three groups were shown a set of 12 pictures tachistoscopically at six different speeds. Four of these pictures related to sexual situations and might be expected to elicit affect related to sex conflict. Four of the pictures represented aggression situations, and presumably had the potentiality of eliciting affect related to aggression conflict. Four of the pictures were of neutral situations. The subjects were given a list of alternative interpretations of each picture as it was presented. One

item on this list represented the real content of the picture, the rest were distortions. When the subject finally chose the real content alternative, and continued from there on to choose it, we assumed that the person had recognized the picture. By comparing the recognition time of the three groups on a given kind of situation we could gauge its effect on those prone to conflict as compared to those who were not. The intensity of the elicited affect was supposedly a result of the intensity of the subject matter of the pictures. We had judges' rankings of these pictures which allowed us a measure of their relative intensity.

With this review of theoretical considerations and the pertinent parts of the experimental design we are ready to draw from the general prediction a number of hypotheses specific to the variables employed in this experiment.

Specific Predictions and Results:

Differences in Recognition Time Depending on Whether or
Not there is Conflict Concerning the
Stimulus

Differential Reactions to Same Stimulus

In general we would expect persons prone to a specific conflict to differ from persons without conflict in the amount of information required to recognize affect eliciting situations. The raw data on recognition are reproduced in Table 1. The tables which follow throughout the chapter are derived from this table.

1. Conflict Group vs. No Conflict Group and Irrelevant Conflict Group on Aggression Stimuli

The aggression group should require a different amount of information to recognize aggression stimuli than a no conflict or an irrelevant (sex) conflict group¹. These data are available in Column A in Table 1.

¹ Theory gives us no basis for predicting whether the no conflict and the irrelevant conflict group will differ from each other.

TABLE 1

SUMMARY OF RAW DATA ON RECOGNITION SPEEDS OF THE VARIOUS GROUPS TO VARIOUS STIMULI¹

	Presentation Speeds	Column A Aggression Pictures			Column B Sex Pictures			Column C Neutral Pictures		
		Weak (#1)	Mild (#2)	Strong Intense (#11) (#6)	Weak (#4)	Mild (#10)	Strong Intense (#9) (#3)	Weak (#7)	Mild (#5)	Strong Intense (#8)
Row 1	(1) 1/100" v dim light	2	0	1	1	2	3	0	2	5
Aggression	(2) 1/100" v bright light	3	6	4	5	6	9	2	5	4
	(3) 1/5" v dim light	2	8	7	8	6	4	6	5	3
	(4) 1/5" v bright light								5	3
Group	2" v dim light	9	2	4	2	0	0	8	4	4
	2" v bright light									
Row 2	(1) 1/100" v dim light	2	1	4	2	4	3	1	2	6
Sex	(2) 1/100" v bright light	2	7	5	7	3	11	5	9	5
	(3) 1/5" v dim light	5	4	6	5	10	4	3	5	4
	(4) 1/5" v bright light									
Group	2" v dim light	9	6	3	4	4	2	1	3	3
	2" v bright light									
Row 3	(1) 1/100" v dim light	0	2	2	4	4	1	3	3	4
No Conflict	(2) 1/100" v bright light	3	6	7	11	6	9	4	8	11
	(3) 1/5" v dim light	1	5	3	2	6	4	4	6	2
	(4) 1/5" v bright light									
Group	2" v dim light	14	5	6	1	2	4	7	1	1
	2" v bright light									

¹ In this and the following chapters we will use the following abbreviations for convenience: Agg. for aggression, Sp. for group, Stim. for stimuli, 1 for presentation speed 1/100 second dim light, 2 for presentation speed 1/100 second bright light, 3 for presentation speed 1/5 second dim light, 4 for presentation speeds 1/5 second bright light, 2 seconds dim light and 2 seconds bright light. These three slower speeds were combined to avoid small theoretical frequencies on the chi square tables.

In testing this prediction we will consider weak and strong¹ pictures separately because, as we will see later, they may tend to have different effects.

With respect to the strong pictures the no conflict group shows a greater proportion of recognitions under conditions of minimal information than does the aggression group (Table 2). The aggression group tends to require more information to recognise the pictures. That is to say, they are more defensive than the no conflict group. The responses of the sex group are intermediate. They respond similarly to the no conflict group, but not in the same degree.

TABLE 2

NUMBER OF SUBJECTS IN EACH EXPERIMENTAL GROUP RECOGNIZING STRONG AGGRESSION STIMULI WITH DIFFERENT AMOUNTS OF INFORMATION : CHI SQUARE TEST OF HOMOGENEITY

Time	Agg. Gp. on Strong Agg.	Sex Gp. on Strong Agg.	No Conflict Gp. on Strong Agg.	Total
1, 2 ² fast	11	18	24	53
3	15	11	5	31
4 slow	6	7	7	20
Total Recognitions	32	36	36	104
$\chi^2 = 10.42$	df = 4	$p < .05$		

From the general hypothesis, one would expect differences in the recognition of weak stimuli (sub-columns 1 and 2, Column A, Table 1), depending

¹ "Weak" stimuli will refer to the two pictures of the set of four selected for the low intensity ratings they were given by judges, "strong" stimuli to the two pictures selected for the high intensity ratings they were given.

² In some cases two presentation speeds had to be combined to allow for theoretical frequencies of sufficient size that the chi square statistic could justifiably be applied to the data.

upon whether or not there was conflict in the area the stimulus represented. No significant difference was found (see Appendix F, Table 1)¹.

2. Conflict Group vs. No Conflict Group and Irrelevant Conflict Group on Sex Stimuli

In accordance with our hypothesis, the sex group should require a different amount of information to recognize sex stimuli than a no conflict group or an irrelevant (aggression) conflict group². As before, weak and strong sex stimuli are tested separately.

The behavior of the three groups on strong sex stimuli is shown in sub-columns 3 and 4, Column B, Table 1. A chi square comparison showed no significant differences among them (see Appendix F, Table 2). Nor were significant differences found in the three groups' behavior to weak stimuli. These data are shown in raw form in sub-columns 1 and 2 of Column B, Table 1 and are reproduced in a chi square table in Appendix F, Table 3.

3. Sex Group vs. Aggression Group vs. No Conflict Group on Neutral Stimuli

Since the neutral stimuli are not expected to elicit affect in any of the three groups, there should be no difference in the amount of information required for recognition.

As predicted, there was no significant difference in the amount of information required by the three groups for recognition of neutral stimuli. These data are shown in raw form in Column C of Table 1. The chi square is reproduced in Appendix F, Table 4.

1 For the convenience of the reader, all tables yielding non-significant results are presented in Appendix F.

2 Again, theory gives us no basis for predicting whether irrelevant conflict group and no conflict group will differ from each other.

Summary and Discussion

For a graphical summary of the predictions and their outcome, the reader is referred to Table 3.

TABLE 3

SUMMARY OF PREDICTIONS AND RESULTS: THE DIFFERENTIAL EFFECT OF PRESENCE OR ABSENCE OF CONFLICT ON RECOGNITION OF STIMULI

Predictions	Results
Recognition of Agg. Stim.	
(Strong Stim.) Agg. Gp. different from Sex Gp. and No Conflict Gp.	Confirmed (Agg. Gp. more defensive)
(Weak Stim.) Agg. Gp. different from Sex Gp. and No Conflict Gp.	Not Confirmed
Recognition of Sex Stim.	
(Strong Stim.) Sex Gp. different from Agg. Gp. and No Conflict Gp.	Not Confirmed
(Weak Stim.) Sex Gp. different from Agg. Gp. and No Conflict Gp.	Not Confirmed
Recognition of Neutral Stim.	
No differences between groups	Confirmed

Our hypothesis was that the groups would differ with respect to the amounts of information they required to recognize various stimulus situations depending upon whether or not they had indicated conflict surrounding the particular area. With one exception, the data do not validate our hypotheses; the presence or absence of proneness to a given conflict makes very little difference in the amount of information required for recognizing stimuli which have the potentiality of eliciting affect related to that conflict. The exception to this is the reaction of the aggression group to strong aggression stimuli. In comparison to the no conflict group, we found that the aggression group required more information to recognize strong aggression stimuli. The aggression group presumably must defend against the affect elicited by these strong aggression stimuli. It seems that only when reality impinges on them quite sharply do they find dealing with it less threatening than continuing to avoid conflict by repressing it. None of the comparisons of the groups on the other conflict stimuli (weak aggression, weak and strong sex) were significant. As predicted, the neutral stimuli, having no differential potentiality for eliciting affect in any of the groups, had no differential effect on recognition time.

Specific Predictions and Results

Intensity of Affect and Recognition Time

In general we would expect persons to be affected by intensity of stimuli if they were prone to conflict with respect to those stimuli.

1. Differential Reactions of Aggression Group to Weak and Strong Aggression Stimuli

According to our hypothesis, the aggression group should require

different amounts of information to recognize weak aggression stimuli and strong aggression stimuli. These data are available in the square formed by Column A and Row 1 in Table 1. Contrary to prediction, the chi square comparison of the reactions of the aggression group on weak and strong aggression was not significant (see Appendix F, Table 5).

2. Differential Reactions of the Sex Group to Weak and Strong Sex Stimuli

The sex conflict group will require different amounts of information to recognize weak and strong sex stimuli. These data are available in the square formed by Column B and Row 2 in Table 1.

TABLE 4

FREQUENCY OF RECOGNITION OF WEAK AND STRONG SEX STIMULI BY SEX GROUP WITH DIFFERENT AMOUNTS OF INFORMATION: CHI SQUARE TEST OF HOMOGENEITY

Time	Sex Gp. on Weak Sex	Sex Gp. on Strong Sex	Total
1 fast	7	3	10
2	8	16	24
3	15	7	22
4 slow	6	10	16
Total Recognitions	36	36	72
$\chi^2 = 8.35$ $df = 3$ $p < .05$			

Table 4 shows that the recognition times of the sex group vary for strong and weak pictures. But no clear pattern emerges in favor of earlier recognitions of weak versus strong pictures or vice versa. Examination of the data reveals that the variation appears to be some-

what related to the intensity of the individual picture.

3. No Conflict Group on Weak and Strong Sex, and Weak and Strong Aggression Stimuli

Since the no conflict group is not expected to be unduly disturbed by sex and aggression stimuli, there should be no difference in the amount of information it needs to recognize weak as compared to strong aggression stimuli. Similarly, there should be no difference in the amount of information the no conflict group needs to recognize weak and strong sex stimuli. These data are available in the squares formed by Row 3 and Columns A and B in Table 1.

TABLE 5

FREQUENCY OF RECOGNITION OF WEAK AND STRONG AGGRESSION STIMULI BY NO CONFLICT GROUP WITH VARIOUS AMOUNTS OF INFORMATION: CHI SQUARE TEST OF HOMOGENEITY

Time	No Conflict Gp. on Strong Agg.	No Conflict Gp. on Weak Agg.	Total
1, 2 fast	24	11	35
3, 4 slow	12	25	37
Total Recognitions	36	36	72
$\chi^2 = 9.40$ $df = 1$ $p < .01$			

Contrary to prediction, table 5 shows that the no conflict group requires more information to recognize weak aggression than to recognize strong aggression stimuli.

TABLE 6

FREQUENCY OF RECOGNITION OF WEAK AND STRONG SEX STIMULI BY NO
CONFLICT GROUP WITH DIFFERENT AMOUNTS OF INFORMATION: CHI SQUARE
TEST OF HOMOGENEITY

Time	No Conflict Gp. on Strong Sex	No Conflict Gp. on Weak Sex	Total
1, 2 fast	17	24	41
3, 4 slow	19	12	31
Total Recognitions	36	36	72
$\chi^2 = 5.41$	$df = 1$	$p < .05$	

Again contrary to prediction, the no conflict group requires less information to recognize weak sex, more information to recognize strong sex (Table 6).

4. Sex Conflict Group on Sex vs. Aggression Group on Aggression

While we can make no adequate prediction from theory, we may test the hypothesis that there will be no differences in the recognition time of the two conflict groups for stimuli which elicit affect related to their conflicts. A difference will indicate that either the two types of conflict are not equivalent, or that the stimuli are not equally representative for each of the two conflicts. The usual practice of considering the reactions to weak and strong stimuli separately will be continued here. The data are available in the square formed by Row 1 and Column A, and in the square formed by Row 2 and Column B, Table 1.

Turning first to the weak stimuli, we find as predicted, that there

is no significant difference between the sex group on weak sex stimuli and the aggression group on weak aggression stimuli (see Appendix F, Table 6).

TABLE 7

FREQUENCY OF RECOGNITION BY CONFLICT GROUPS OF STRONG CONFLICT STIMULI WITH VARIOUS AMOUNTS OF INFORMATION: CHI SQUARE TEST OF HOMOGENEITY

Time	Agg. Gr. on Strong Agg. Stim.	Sex Gr. on Strong Sex Stim.	Total
1, 2 fast	11	19	30
3	15	7	22
4 slow	6	10	16
Total Recognitions	32	36	68
$\chi^2 = 5.91$ $df = 2$ $.10 > p > .05$			

When we turn to strong stimuli results, as indicated in Table 7, fall within the level of questionable significance. There appears to be a slight possibility that the sex group and the aggression group do differ in the amount of information they require to recognize stimuli which elicit strong affect related to their conflict. We find the largest proportion of the sex group recognizing strong sex stimuli with relatively little information. Another large group avoids recognition until the amount of information is extremely high. Examination of the raw data shows that the variation is related to the particular pictures involved. Picture #9 requires less information to recognize than the more intense picture, #3. The aggression group avoids recognition

until they have more information than the sex group require to recognize picture #9, but require less information than the sex group needed to recognize picture #3.

Summary and Discussion

A graphical summary of predictions and results is given in Table 8.

TABLE 8

SUMMARY OF PREDICTIONS AND RESULTS: THE DIFFERENTIAL REACTION TO VARIOUS INTENSITIES OF CONFLICT STIMULI

Predictions	Results
Recognition of Agg. Stim. by Agg. Gp. Weak different from Strong	Not Confirmed
Recognition of Sex Stim. by Sex Gp. Weak different from Strong	Confirmed (Direction inconsistent)
Recognition of Agg. Stim. by No Conflict Gp. Weak no different from Strong	Not Confirmed (More vigilant on Strong Agg.)
Recognition of Sex Stim. by No Conflict Gp. Weak no different from Strong	Not Confirmed (More defensive on Strong Sex)

These findings are extremely complex, and can only be understood by first considering the various stimuli separately. The key to the results rests in the comparison of the differential reactions to weak and strong stimuli by the no conflict group (Tables 5 and 6). We had predicted that

they would have little reason to react in a differential manner to differences in intensity of these stimuli since they presumably were not affected by them. We find this is not the case. The no conflict group did not recognize strong sex stimuli as rapidly as they recognize weak sex stimuli. Since we judged these people to have no "abnormal" conflicts about sex we can perhaps infer that this mode of dealing with sex impulses may be determined by the person's culture which places taboos on sex. Our culture permits, and in fact urges us to interact with the opposite sex, encourages dating, calendar girls, etc. But narrow or directly sexual behavior is taboo, and thus to be aware of the affect related to such an impulse is probably more painful than ignoring it. The effect of this taboo even extends into this research, for it would have been impossible for us to present to our subjects pictures of people engaged in directly sexual behavior without invading the illegal realm of "pornography." One can live without seeking actual sexual release, and on the other hand, can be very uncomfortable if he faces recognition of these impulses.

The situation is the opposite with aggression impulses, the no conflict group avoids recognition of weak aggression stimuli, but by comparison is very sensitive to strong aggression. This also seems to represent a cultural or biological mode. Despite our economic philosophy, our religion and social philosophies teach us that aggression and competition are bad and should be avoided whenever possible. Thus, we might be expected to defend against awareness of weak aggressive impulses. Strong aggressive impulses, however, can result in physical danger, so that one must be alert to such impulses, even though one may be made uncomfortable by this awareness.

The nature of the trends shown by the chi square comparison can best be pointed up by considering the reactions to individual pictures, as has been done in Table 9, and the graphical presentation of this table in Figure III.

TABLE 9

**MEDIAN RECOGNITION SPEEDS OF NO CONFLICT GROUP TO
INDIVIDUAL SEX AND AGGRESSION PICTURES**

Sex Picture	Median Recognition Speed	Aggression Picture	Median Recognition Speed
1 (weak)	2.00	1	4.05
2	2.33	2	2.70
3	2.38	3	2.50
4 (strong)	3.00	4	1.96

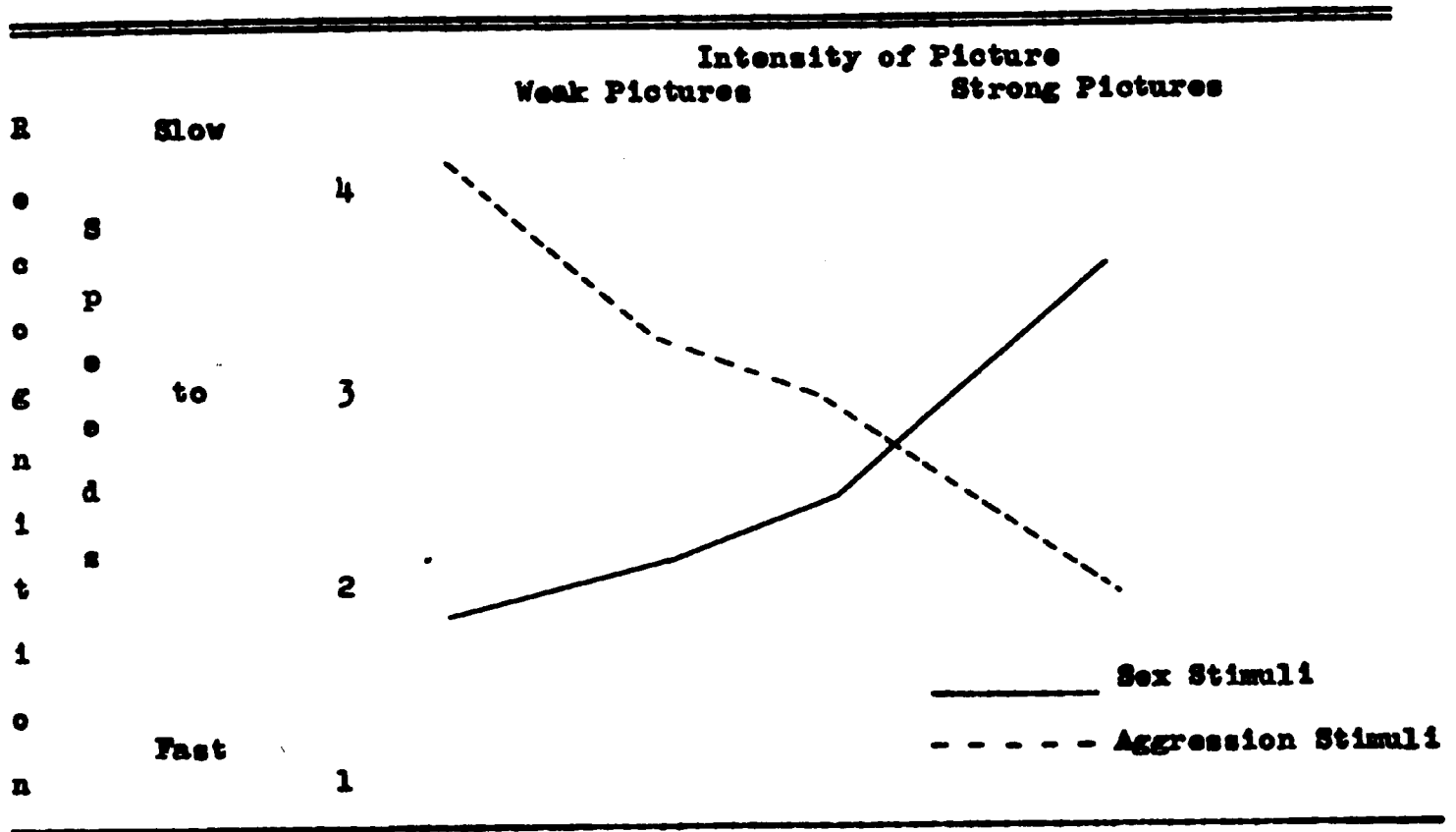
In Table 9 the trend shown in the chi square comparisons of weak and strong stimuli appears, but we can now see the relationship between the two. Figure III shows the opposing modes even more clearly.

Examination of individual responses in the raw data revealed another interesting phenomenon (Table 10). In dealing with conflict, sex or aggression, many subjects adopted a fixed or consistent speed of recognition for both weak and strong stimuli. In the case of aggression pictures, these fixed speeds were predominantly defensive, i. e., avoided recognition. On sex pictures these patterns were predominantly ones of early recognition. It was not necessarily the same person who produced such patterns on the different kinds of situations. In contrast, very few fixed speeds of recognition were noted on neutral stimuli.

In view of the opposite kinds of reactions which no conflict people show to sex and aggression stimuli it becomes very important that the conflict

FIGURE III

NO CONFLICT GROUP'S RECOGNITION SPEEDS FOR INDIVIDUAL
SEX AND AGGRESSION PICTURES



groups do not differ significantly on weak stimuli and only approach significance on strong stimuli. Conflict would seem to have the effect of negating the cultural trend, or at least making the person less consistent. The former appears to be the case with aggression conflict subjects, the latter more peculiar to the sex group.

In the aggression conflict group we did not find differential behavior to weak and strong aggression stimuli. The subjects appear to respond to conflict in the same fashion whether it is weak or strong. For recognition to occur great amounts of information are needed relative to the amounts of information required by other groups. In other kinds of situations

TABLE 10

RECOGNITION TIMES OF INDIVIDUAL SUBJECTS TO AGGRESSION,
SEX, AND NEUTRAL PICTURES¹

		Column A				Column B				Column C			
		Aggression Pictures				Sex Pictures				Neutral Pictures			
Sub- ject		Weak #1	Mild #2	Strong #11	Intense #6	Weak #4	Mild #10	Strong #9	Intense #3	#7	#5	#8	#12
Section 1 Ag- gres- sion Group	15	3	2	2	3	2*	2	2	3	3	2	3	1
	18	4*	3	3	3	1	4	2	3	2	4	4	1
	55	3*	4	3	3	3	1	3	4	2	3	3	1
	24	4*	3	3	3	3	2	3	4	4	2	4	2
	51	2	2	3	3	1	2	2	3	1*	2	1	1
	47	4*	3	3	3	2	3	2	4	1	3	4	4
	72	2	2	4	3	2*	2	2	2	2*	1	1	1
	17	4*	3	3	3	3*	3	3	3	4	1	4	1
	44	4	2	1	1	2*	3	2	2	3*	2	3	3
	22	4*	2	2	2	3	4	2	4	4*	4	4	1
	27	1	3	4	3	3*	3	1	3	2	1	4	1
	38	2*	2	2	2	2	2	1	3	2	2	1	4
	66	4	3	4	2	2	3	2	3	3	1	4	1
	86	4	2	3	3	2*	2	2	4	3	2	1	4
	57	4*	3	4	4	1	1	3	4	4	4	3	2
	43	1	4	2	2	3	1	1	3	2	1	1	2

¹ The numbers in the body of the table refer to presentation speed at which recognition occurred: 1 refers to 1/100" with dim light; 2 refers to 1/100" with bright light; 3 refers to 1/5" with dim light; 4 refers to last three speeds (1/5" at bright light, 2" at dim light, and 2" at bright light).

A subject was assumed to be recognizing stimuli at a fixed speed if three of the four stimuli were recognized at the same level. An asterisk (*) is used to indicate this phenomenon.

TABLE 10 (Cont.)

		Column A				Column B				Column C			
		Aggression Pictures				Sex Pictures				Neutral Pictures			
		Weak #1	Mild #2	Strong #11	Intense #6	Weak #4	Mild #10	Strong #9	Intense #3	#7	#5	#8	#12
Section 2 Sex Group	30	2*	4	2	2	2*	3	2	2	3	2	4	1
	11	3	2	3	1	4	3	1	4	2	3	1	4
	83	4*	4	3	4	3*	3	2	3	3	1	2	1
	40	2*	2	2	2	1	3	1	2	2	4	3	1
	53	3*	4	3	3	4*	4	2	4	2	2	4	1
	67	4	2	2	3	1	3	3	2	2	1	1	4
	16	4	3	3	4	4*	4	3	4	1	1	4	4
	60	3	2	1	3	2*	2	2	2	1	2	3	1
	50	1	2	4	1	4*	1	4	4	2	1	4	1
	39	4	1	3	2	2*	3	2	2	2	1	3	4
	12	3	4	4	3	3*	3	3	4	2	3	2	3
	48	4	3	2	3	2	3	2	4	3	3	4	4
	63	4	2	1	2	1	3	2	4	3*	3	1	3
	32	1	2	3	4	3	1	3	1	2	4	4	1
	46	4	4	1	3	3*	3	3	4	4*	2	4	4
	21	3	4	2	2	1	1	2	4	2	1	3	2
	73	4	2	1	2	2*	2	2	3	2*	3	3	3
	45	4*	3	4	4	3*	3	2	3	4*	4	4	4

TABLE 10 (Cont.)

		Column A				Column B				Column C				
		Aggression Pictures				Sex Pictures				Neutral Pictures				
		Sub- ject	Weak #1	Mild #2	Strong #11	Intense #6	Weak #4	Mild #10	Strong #9	Intense #3	#7	#5	#8	#12
Sec- tion 3 No Con- flict Group		69	2*	2	2	2	2*	2	2	2	2	1	2	1
		75	4	1	1	2	2	3	3	1	3*	3	3	3
		49	4	1	3	4	1	1	3	4	2	2	4	1
		68	4	3	2	3	1	2	4	3	3	2	4	1
		19	1	3	2	3	1	3	2	4	2	3	3	4
		81	4*	4	4	1	4*	4	4	4	2	4	2	1
		1	4*	4	3	4	4*	4	4	4	4	2	4	2
		42	2	4	2	1	2	3	1	2	3	2	2	3
		13	4	2	1	2	2*	2	2	1	2	2	3	1
		76	4*	2	4	4	2*	1	2	2	2	2	3	1
		65	2*	2	2	2	2*	2	2	2	3	2	3	1
		56	4	3	4	2	2	3	2	3	1	2	4	1
		33	4	3	3	2	2	1	2	3	1	1	4	2
		41	3*	2	2	2	2	2	3	4	2	3	4	1
		59	4*	4	4	3	3	3	2	4	3	2	3	1
		82	4*	4	4	4	3	1	4	3	2	3	3	1
		58	4	3	2	3	1*	3	1	1	3	3	1	2
		10	4	3	4	2	2*	2	2	4	3	1	4	3

such as where sex pictures or neutral ones are presented, the aggression group resembles the no conflict subjects.

Examination of the data for individuals indicates that many of the aggression group adopt fixed, usually defensive, patterns for dealing with aggression stimuli, not varying the pattern with the intensity of stimuli. A few of the subjects adopt a consistent pattern toward sexual stimuli, usually vigilant. Fixed speeds were not noted on neutral stimuli (Table 10).

In the sex group we find differences between weak and strong sex stimuli (Table 4). In general sex group subjects require relatively little information to recognize weak sex stimuli. When stimuli become stronger they tend to avoid recognition, particularly on the picture which elicits the strongest affect. In this general sort of behavior, the sex group is similar to the no conflict group. But they present a type of behavior noticed in no other group. The comparisons show them recognizing weak stimuli at presentation speeds 1 and 3, strong stimuli at speeds 2 and 4. It is difficult to explain this phenomenon, but an examination of individual data and the median recognition times for various pictures may give us some cues.

Table 11 shows a trend toward increased recognition time with increasing intensity. Picture 3, however, represents a reversal in this trend.

Examination of Table 12 shows that picture 1 was recognised more often at speed 1 than were the other pictures, picture 2 was recognised predominantly at speed 3, picture 3 at level 2, and picture 4 at level 4. To the extent that our pictures represent different intensities it would seem possible that in sex conflict there is a less consistent trend than

TABLE 11

MEDIAN RECOGNITION TIMES OF SEX GROUP TO INDIVIDUAL SEX
PICTURES

Sex Picture	Sex Group Median Recognition Time
1 (weak)	2.50
2	2.80
3	2.14
4 (strong)	3.50

TABLE 12

FREQUENCY OF RECOGNITION OF SEX PICTURES AT EACH PRESENTATION
SPEED

Time	Sex Picture 1	Sex Picture 2	Sex Picture 3	Sex Picture 4
1 fast	4	3	2	1
2	5	2	10	5
3	5	11	5	3
4 slow	4	2	1	9

in aggression. The person may openly express conflict when it is weak, tend to repress as it gets stronger, express it again at a still more intense level, only to repress it again and perhaps more thoroughly if pressure

increases¹.

We will continue to see, throughout the analysis of results that the sex group is less selective, more inconsistent, more subject to generalizing behavior to situations which are not conflictful for them. What data we have at the present time in the comparison of sex and aggression groups on strong conflict stimuli (Table 7) bears out what we already found out about the sex conflict group.

In summary, we have found that while the conflict groups do not differ significantly from each other, people who we judged were not troubled by these impulses are subject to differences. In the case of both sex and aggression stimuli, the behavior that results depends upon the intensity of eliciting stimuli. The usual or "normal" method for handling affect related to aggression conflict is to repress it when it is weak, but to recognize it when it is strong. In comparison to the mode, persons with troubles in the area of aggression tend to adopt a consistent mode of avoiding recognition throughout, showing no change with changes in intensity. The normal mode for handling sexual material is to recognize affective stimuli when they are weak, but to repress stronger stimuli. In comparison, those with sex conflict, though they go along with this general mode, are less consistent. Moreover, they are not so selective in their behavior, and tend to generalize modes of reacting to conflicting situations which are not related to conflict.

¹ The sex group shows similar inconsistent reactions when their median recognition times to aggression stimuli are considered. This time they reverse a trend toward easier recognition with increasing intensity. Examination of the median recognition speeds of the aggression group also reveals the same type of reversals of trends. Since the no conflict group shows consistent trends with increasing intensity we can assume that it is not the particular pictures which cause these unexpected reversals, but some peculiarity of conflict states. These were not predicted, and therefore can only be noted in passing. At the moment, there seems to be no explanation, but it is something one might wish to look for in future research.

Outgrowths: Vacillation

Among the subjects there were a few in each group who would recognize the picture at one speed, and then proceed to distort it again at several subsequent presentations. These people were dubbed "vacillators." There were too few of these individuals to analyze their behavior as thoroughly as we have done in the regular data on recognition time. It is possible, however, to discuss when, where, and in which groups this phenomenon occurred.

TABLE 13

FREQUENCY OF VACILLATION ON VARIOUS STIMULI BY AGGRESSION GROUP WITH DIFFERENT AMOUNTS OF INFORMATION; CHI SQUARE TEST OF HOMOGENEITY

Time	Agg. Gp. on Agg. Stim.	Agg. Gp. on Sex Stim.	Agg. Gp. on Neutral Stim.	Total
1, 2 fast	10	9	19	38
3, 4 slow	12	9	5	26
Total Vacillation	22	18	24	64
$\chi^2 = 6.63$	$df = 2$	$p < .05$		

We find that at fast speeds vacillations occur for all stimuli, but when the situation is clearer they predominate in the conflict stimuli (this is shown in Tables 13 and 14; a similar, but not significant tendency is shown in Table 15). Recognition at fast speeds must have had a large element of chance. A person making a choice from a list of alternatives more or less blindly might tend to steer clear of taboo subjects and choose

TABLE 14

FREQUENCY OF VACILLATION ON VARIOUS STIMULI BY NO CONFLICT GROUP WITH DIFFERENT AMOUNTS OF INFORMATION: CHI SQUARE TEST OF HOMOGENEITY

Time	No Conflict Gp. on Sex Stim.	No Conflict Gp. on Agg. Stim.	No Conflict Gp. on Neutral Stim.	Total
1, 2 fast	12	10	20	42
3, 4 slow	7	6	1	14
Total Vacillation	19	16	21	56
$\chi^2 = 8.76$	$df = 2$	$p < .05$		

TABLE 15

FREQUENCY OF VACILLATION ON VARIOUS STIMULI BY SEX GROUP WITH DIFFERENT AMOUNTS OF INFORMATION: CHI SQUARE TEST OF HOMOGENEITY

Time	Sex Gp. on Sex Stim.	Sex Gp. on Agg. Stim.	Sex Gp. on Neutral Stim.	Total
1, 2 fast	11	14	19	44
3, 4 slow	11	7	6	24
Total Vacillation	22	21	25	68
$\chi^2 = 3.51$	$df = 2$	$p - \text{Not Significant } (p > .10)$		

neutral ones since she was forced to respond in some way¹. As pictures become clearer choices are no longer as blind, the subject will begin to respond in terms of the situation. Where the subject has enough evidence that she can say "This is a sex situation" might she not find such perception sufficiently threatening that she might avoid it the next time the picture was presented? This might be an example of what McCleary (15) has called "subception."

¹ If subject tends to steer clear of taboo alternatives in responding to highly ambiguous situations, then more neutral choices are likely to be made. This is especially true here where the list presented with neutral pictures had two neutral alternatives in order to keep the list the same length. Where the stimuli presented are actually neutral this tendency would produce a spuriously high number of accurate responses on neutral stimuli and a spuriously low number of accurate responses on affective stimuli during the period before there was enough information to force behavior in terms of it.

CHAPTER V

HYPOTHESES AND RESULTS REGARDING SITUATIONS PRODUCTIVE OF DERIVATIVES

We have studied the amount of information necessary for recognition of material of varying degrees of affective content by subjects showing several types of conflict. We are now in a position to speculate as to what kinds of behavior may be shown prior to recognition.

Our theory says that where the awareness of an impulse is painful and conflict producing, the person learns certain compromise solutions which allow for some sort of indirect release. The effects of these compromises are derivatives, for they manifest more or less recognizable remnants of the original impulse as it has been modified by the defensive process. These derivatives represent modifications which are inappropriate to, and distortions of, the person's underlying motives. They are often inappropriate to the external situation as well. As conflict increases it should be more and more difficult to deal with an impulse, and thus there should be greater likelihood of derivatives. Increased conflict should also make it more difficult to give up defenses since the danger of ignoring reality may be less than the danger of dealing with it.

Our general prediction was:

Prior to recognition the person's behavior will depend upon whatever other sources of information he has.

- (a) When there is no conflict, the person's behavior may be guided by such numerous possibilities that we could expect

chance results.

- (b) Where the stimulus material relates to conflict in the subjects we might expect derivatives as a result of repressive and defensive processes.
- (c) When there is conflict the likelihood of derivatives should increase as stimuli come to have increasingly intense connotations related to the conflict area.

It will be recalled that the subjects, in responding to the pictures, were given a list of eight alternatives from which they were to choose what they thought to be the most likely interpretation of what they had seen. One alternative on each list represented the real content of the picture. The choice of this response represented recognition. We have already dealt with recognition in the previous chapter, and so are not concerned with it here. Three other alternatives on the list were set up to represent various degrees of distortion of the real content of the picture. These were considered derivatives of the conflict eliciting material which the picture represented. Four other alternatives were included in each list. Three of these pertained to derivatives of a conflict irrelevant to the present stimulus (e. g., if the real content of the picture was aggression, these irrelevant alternatives related to a sex picture). One alternative pertained to a neutral picture. These four alternatives were considered to be non-derivatives. Altogether the person had seven choices if she did not recognize the picture. Three were derivatives, four were unrelated to the picture.

Specific Predictions and Results Production of Derivatives as Determined by the Presence or Absence of Conflict¹

¹ The raw data for this section will not be reproduced in a table, since it is included in reporting the results.

In general, we would expect stimuli that are potentially affect eliciting to produce derivatives in those prone to conflict. These stimuli will lead to more or less chance behavior when there is no conflict.

1. Behavior of Persons Without Conflict

According to the hypothesis we might expect that the no conflict group's responses to sex and aggression would be distributed over derivative and non-derivative alternatives more or less by chance.

It will be necessary to examine sex and aggression stimuli separately since we have found differences between them. When we eliminate the recognition alternative from consideration there are, out of a total of seven choices, three possibilities for choosing alternatives representing derivatives. By chance $3/7$, or 43 percent of the no conflict group's responses could be derivatives. We will examine the behavior of the no conflict group for all conflict pictures, one presentation speed at a time. The latter procedure is necessary to avoid the factor of an unknown correlation between an individual's responses at several presentation speeds. The prediction we make is that the observed per cent of derivatives will be a chance variation from 43 per cent. The limits of chance variation from 43 per cent are obtained from tables prepared by Mainland (19).

The results of the set of tests on aggression stimuli, as summarized in Table 16 show that the no conflict group does not choose predominantly either derivatives or non-derivatives, but rather behaves in a chance fashion as we predicted. One exception to this chance behavior occurred at the least ambiguous presentation speed where all of the non-recognition responses are derivatives. This is difficult to explain. If this exception were a sign of conflict, we would expect the aggression

conflict group to produce a higher per cent of derivatives than the no conflict group at all presentation speeds. A glance at Table 18 will show that this is not true.

TABLE 16

FREQUENCY, PER CENT, AND P VALUE OF DERIVATIVE RESPONSES GIVEN BY NO CONFLICT GROUP TO AGGRESSION STIMULI WITH DIFFERENT AMOUNTS OF INFORMATION

Time	Number of derivatives over total number of responses other than recognition	Percent derivatives given by no conflict group on aggression stimuli	p Value ¹
1/100", Dim ²	27/62	43	NS ³
1/100", Bright	20/45	44	NS
1/5", Dim	15/35	43	NS
1/5", Bright	10/21	48	NS
2", Dim	4/7	57	NS
2", Bright	6/6	100	.005

The no conflict group behaves contrary to prediction on sex stimuli, as shown in Table 17. They choose derivatives predominantly, rather than behaving in a random fashion.

1 p value here, and in the other tables in this chapter refers to the probability that the observed percent falls within limits of chance variation from 43%. Mainland's (19) tables are set up to provide a one tail test which is appropriate.

2 Behavior is to be considered at one presentation level at a time to avoid the factor of an unknown correlation between responses at several speeds.

3 Throughout this chapter NS will mean not significantly different from chance, or 43% derivatives. No .05 level of significance is given in Mainland's (19) tables. It was therefore decided to call anything beyond the .10 level significant.

TABLE 17

FREQUENCY, PER CENT, AND P VALUE OF DERIVATIVE RESPONSES GIVEN BY NO CONFLICT GROUP TO SEX STIMULI WITH DIFFERENT AMOUNTS OF INFORMATION

Time	Number of derivatives over total number of responses other than recognition	Percent derivatives given by no conflict group on sex stimuli	p Value
1/100", Dim	29/58	50	NS (.20 > p > .10)
1/100", Bright	22/37	59	.025
1/5", Dim	13/16	82	.005
1/5", Bright	8/11	73	.10 > p > .025
2", Dim	6/9	67	NS (.20 > p > .10)
2", Bright	7/10	70	.10 > p > .025

2. Behavior of Persons With Conflict

Our hypothesis would lead us to expect conflict groups would choose significantly more than a chance number of derivatives.

This was tested again by asking whether the observed per cent could be a chance variation from 3/7 or 43 per cent (three being the number of possible choices of derivatives out of a total of seven alternatives). This time we predicted the per cent of derivatives would be greater than could be expected by chance.

In Table 18 it is seen that the aggression group does not choose significantly more than a chance number of derivatives on aggression stimuli. In fact, they behave in the same manner as the no conflict group distributing their behavior between derivatives and non-derivatives on a chance basis.

TABLE 18

FREQUENCY, PER CENT, AND P VALUE OF DERIVATIVE RESPONSES GIVEN BY AGGRESSION CONFLICT GROUP TO AGGRESSION STIMULI WITH DIFFERENT AMOUNTS OF INFORMATION

Time	Number of derivatives over total number of responses other than recognition	Percent derivatives given by aggression group on aggression stimuli	p Value
1/100", Dim	24/58	41	NS
1/100", Bright	23/43	54	NS
1/5", Dim	8/23	35	NS
1/5", Bright	6/9	67	NS (.20 > p > .10)
2", Dim	3/6	50	NS
2", Bright	6/9	67	NS (.20 > p > .10)

TABLE 19

FREQUENCY, PER CENT, AND P VALUE OF DERIVATIVE RESPONSES GIVEN BY SEX CONFLICT GROUP TO SEX STIMULI WITH DIFFERENT AMOUNTS OF INFORMATION

Time	Number of derivatives over total number of responses other than recognition	Percent derivatives given by sex group on sex stimuli	p Value
1/100", Dim	23/59	38	NS
1/100", Bright	24/42	57	.10 > p > .025
1/5", Dim	13/22	59	.025
1/5", Bright	6/10	60	NS (.20 > p > .10)
2", Dim	5/7	71	.10
2", Bright	6/9	67	NS (.20 > p > .10)

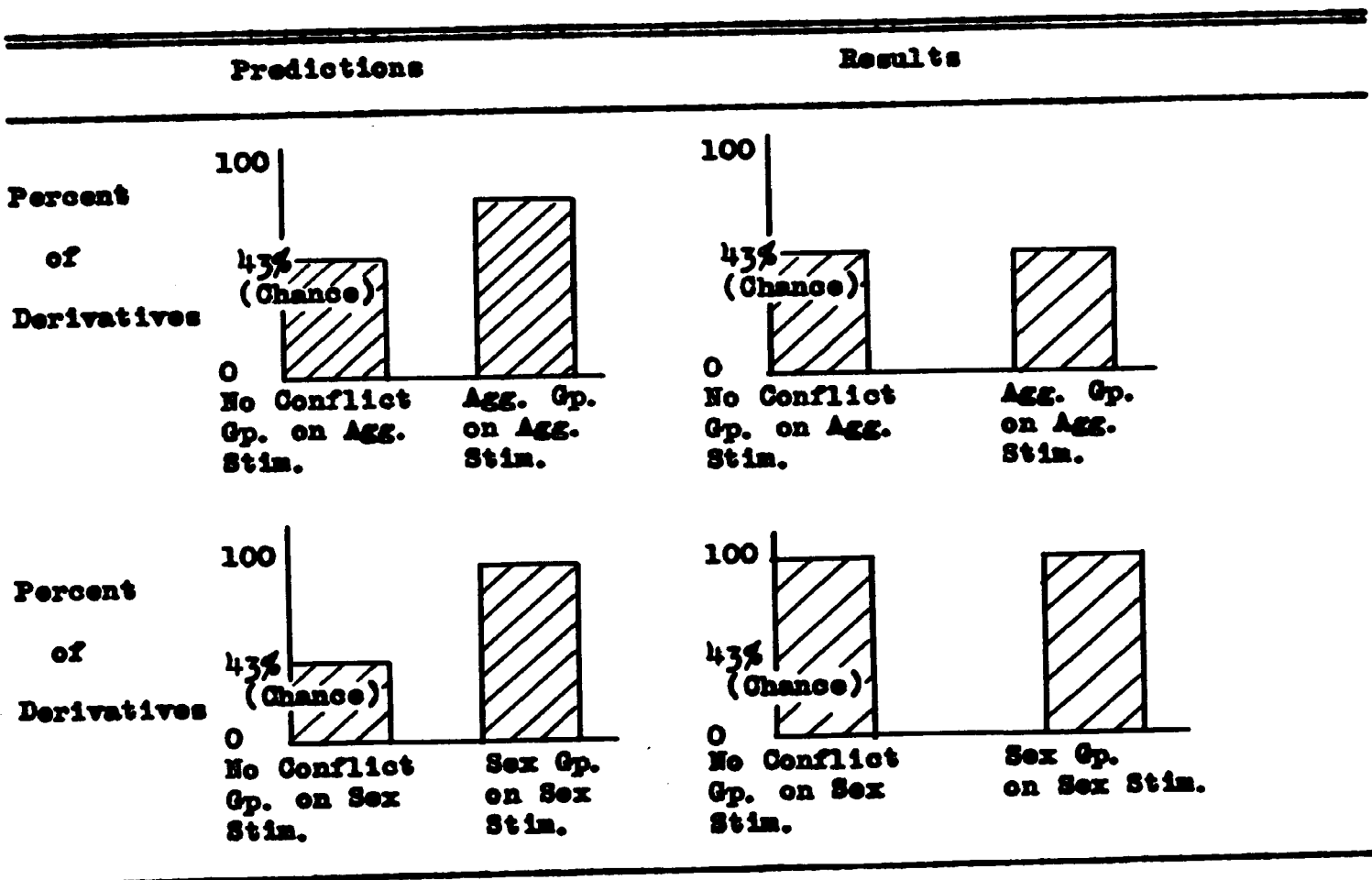
The sex group, as seen in Table 19, choose significantly more than a chance number of derivatives on sex stimuli, just as the no conflict group do.

Summary and Discussion

A graphical summary of the predictions and results regarding appearance of derivatives is given in Figure IV.

FIGURE IV

SUMMARY OF PREDICTIONS AND RESULTS: PRODUCTION OF DERIVATIVES AS DETERMINED BY THE PRESENCE OR ABSENCE OF CONFLICT



We have found that the aggression stimuli produce no more derivatives than could be expected by chance in either the no conflict group or the aggression group. The sex pictures tend to produce a greater number of derivatives than could be expected by chance, in both no conflict and sex conflict subjects.

The findings call for several modifications in our reasoning:

1. We had hypothesized that the presence or absence of conflict would be important in determining behavior during the period before the person recognized the picture. The findings suggest that rather than the presence or absence of conflict, the kind of eliciting situation is of equal or greater importance.

2. Insofar as conflict groups and no conflict groups respond in a similar manner, we must either assume that the stimuli do not create conflict or that they must also elicit conflict (or affect) of some sort even in people whom we have called "normal." We have already discussed the fact that cultural taboos on sex and aggression seem to lead to at least mild problems for all people. The present findings may be further confirmation of this point. An alternative explanation of the reactions lies in the possibility that the behavior observed here may be due to sampling error. The responses discussed here could be a peculiarity of the pictures used, or of the choices in the list of alternatives given to the subjects. The consistency of the findings tends to negate the idea of sampling error.

3. We might possibly conclude that aggression pictures do not elicit conflict since they are not consistently followed by derivatives. The results reported on recognition time would tend to contradict this conclusion. We might conclude conversely that aggression conflict does not produce defenses. Clinical evidence contradicts this conclusion. A third

possibility is that the choice of alternatives on the list which were not related to the stimulus at hand, and thus were called non-derivatives, may also have a defensive function. When a person was presented with an aggression picture and chose descriptions of sex or neutral pictures, he may have been avoiding aggression entirely. We will discuss this possibility further in the next chapter. If it were found to be true that our "non-derivative" alternatives had defensive functions, then the tests of defensive behavior via choice of "derivatives" were inappropriate.

A major finding appears to be that in defense against sex conflict (at least insofar as it is induced by these pictures) we can expect the person to produce behavior which has disguised sexual implications. Such behavior is what Bruner and Postman (5) would call resonance. This may be related to the tendency toward vigilance or early recognition that appeared with weak sex pictures.

In situations eliciting aggression conflict, there appears to be a less distinct pattern in this particular arrangement of the data. We cannot say that either derivatives or non-derivatives predominate in response to aggression stimuli. Perhaps the examination of other factors, such as strength of affect, or changes in ambiguity can clarify the nature of the defensive process in the case of aggression.

Specific Predictions and Results
**The Likelihood of Derivatives Occurring with Increase in
 Affect Related to Conflict**

In general, we would expect the likelihood of derivatives to be greater when the stimulus material has more intense affective connotations. The raw data pertaining to the likelihood of derivatives are given in

Table 20. The comparisons which follow throughout this chapter are based on these data. It is important to note that the "vacillator" subjects are not included in these data. They were deleted since there was no way of knowing if they would react to changes in intensity as other subjects do.

TABLE 20

SUMMARY OF RAW DATA ON LIKELIHOOD OF DERIVATIVES WITH INCREASING AFFECTIVE INTENSITY OF STIMULI

		Column A Aggression Pictures				Column B Sex Pictures			
		Weak	Mild	Strong	Intense	Weak	Mild	Strong	Intense
		#1	#2	#11	#6	#4	#10	#9	#3
Row 1									
Aggression Group	Derivatives	12	12	20	10	9	13	8	18
	Non-Derivatives	23	15	11	17	10	9	8	19
Row 2									
Sex Group	Derivatives	16	16	12	11	12	17	9	18
	Non-Derivatives	23	18	15	18	15	12	11	24
Row 3									
No Conflict Group	Derivatives	20	19	17	11	9	18	17	20
	Non-Derivatives	31	18	18	20	16	9	13	13

1. Intensity of Stimuli Related to Aggression Conflict

(a) The hypothesis leads us to expect that the aggression group will produce more derivatives on strong aggression stimuli than on weak aggression stimuli.

This prediction was tested, as were all other hypotheses in this

section, by comparing the number of derivatives on weak and strong pictures with the number of non-derivatives on weak and strong pictures, the comparison being made by means of a chi square test. The raw data are available in the square formed by Column A and Row 1 of Table 20. The chi square for the number of derivatives produced by the aggression group on weak and strong aggression pictures was not significant, contrary to prediction (see Appendix F, Table 7). Changes in intensity of the stimuli related to aggression conflict does not seem to have any influence on the likelihood of derivatives.

(b) We have no reason to expect that the pre-recognition behavior of the no conflict group would show a tendency to more derivatives on strong as compared to weak aggression stimuli. Similarly, we have no reason to expect the likelihood of derivatives produced by the sex group on aggression stimuli to vary with intensity of the pictures. The raw data are available in the squares formed by Rows 2 and 3 and Column A of Table 20. As we had predicted, the chi square test for the number of derivatives produced by the no conflict group on weak and strong aggression stimuli was not significant (see Appendix F, Table 9). In a like manner, the chi square for the number of derivatives produced by the sex group on weak and strong aggression stimuli was not significant (see Appendix F, Table 8).

2. Intensity of Stimuli Related to Sex Conflict

(a) According to the hypothesis, the sex group should produce more derivatives (as compared with non-derivatives) on strong than on weak sex stimuli. The data are available in the square formed by Row 2 and Column B in Table 20. Contrary to prediction, the chi square test for the number of derivatives produced by the sex group on weak and strong sex

stimuli was not significant (Appendix F, Table 10). Changes in the intensity of material related to sex conflict seem to have no effect on the likelihood of derivatives.

(b) There is no reason to expect that derivatives would be more likely on strong than on weak sex pictures among groups not abnormally influenced by such conflict, i. e., the no conflict group and the aggression group. These data are available in the square formed by Rows 1 and 3, and Column B, Table 20. As predicted, the chi square for the number of derivatives produced by the no conflict group on weak and strong sex stimuli was not significant (Appendix F, Table 12). Similarly, the chi square for the number of derivatives produced by the aggression group on weak and strong sex pictures was not significant (Appendix F, Table 11).

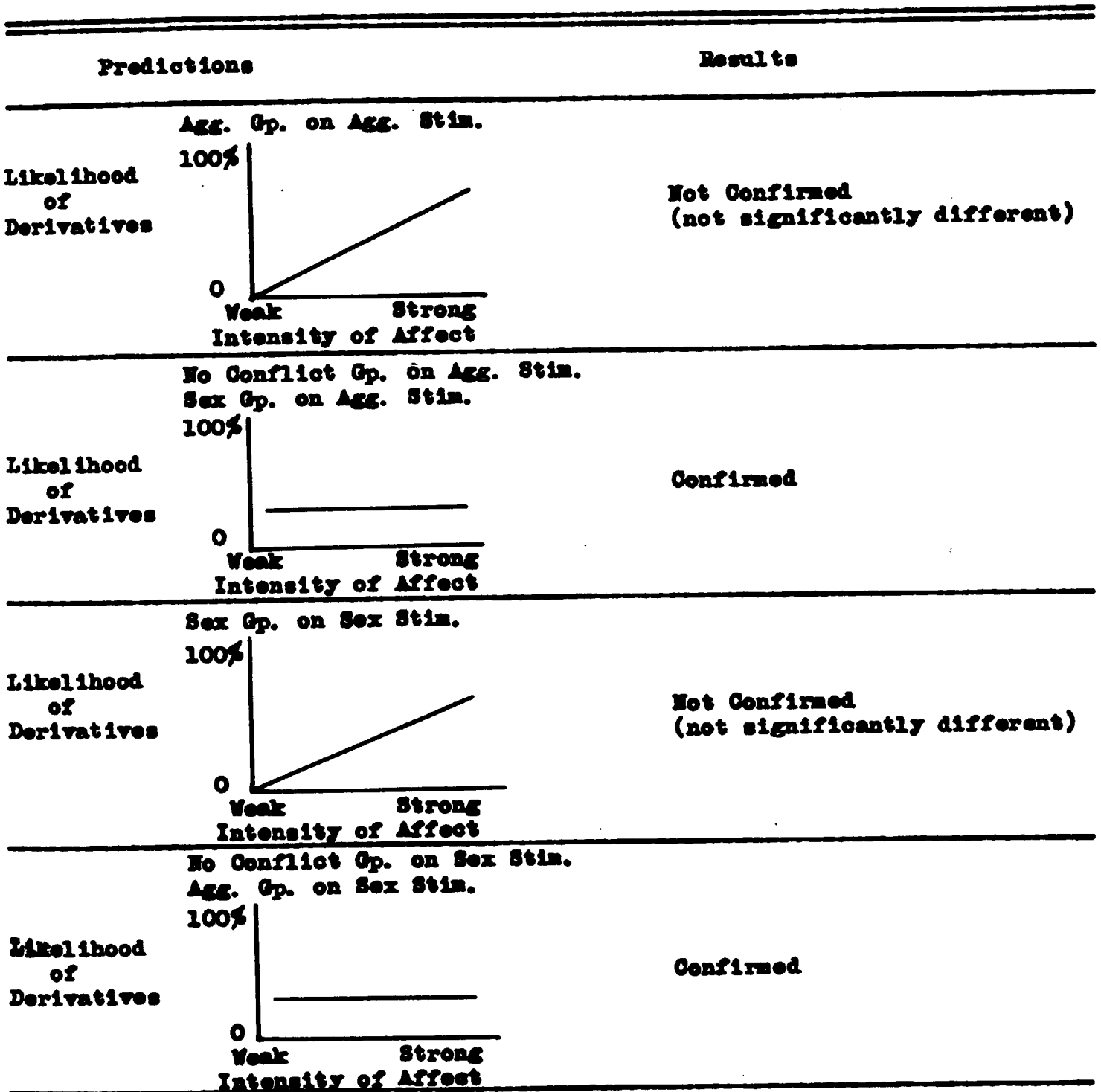
When none of these comparisons were significant, we combined all groups on sex stimuli and all groups on aggression stimuli to see if any general effect of the intensity of either set of stimuli could be isolated. The chi square for the number of derivatives chosen by all groups on weak and strong sex pictures was not significant (Appendix F, Table 14). Similarly, the chi square for the number of derivatives chosen by all groups on weak and strong aggression was not significant (Appendix F, Table 13).

Summary and Discussion

Figure V will serve as a graphical summary of the predictions and findings regarding the likelihood of derivatives with changes in affective intensity. We had predicted that if we compared for conflict groups the number of derivatives on weak and strong pictures we would find more derivatives on strong pictures (and more non-derivatives on weak pictures). Contrary to this prediction, there was no difference in the number of

FIGURE V

SUMMARY OF PREDICTIONS AND RESULTS: THE LIKELIHOOD OF DERIVATIVES OCCURRING WITH INCREASE IN AFFECT RELATED TO CONFLICT



derivatives and non-derivatives produced on weak as compared to strong pictures.

In the previous section the possibility was mentioned that choice of "non-derivatives" may actually have a defensive function (that of avoiding or escaping the conflict area). If this were true, it appears that any sort of non-recognition behavior can be the result of a defensive process. If both derivative alternatives and "non-derivative" alternatives have defensive functions, a more appropriate test of the hypotheses regarding increase in the probability of behavioral manifestations of defensive processes would be to test for differences in total amount of non-recognition behavior (derivatives and non-derivatives) on weak and strong pictures. If the hypothesis were true, we would expect fewer non-recognition responses on weak pictures and more on strong pictures. Applying this test we found that there were changes in the likelihood of defensive behavior, but not necessarily the predicted ones. The change in affective intensity has no effect on the likelihood of non-recognition in conflict groups (Appendix F, Table 15). From Tables 21 and 22 we see that when the no conflict or irrelevant conflict people are presented with sex stimuli, there is an increase in the likelihood of defensive behavior with increases in intensity as predicted for the conflict group. When no conflict and irrelevant conflict people are presented with aggression stimuli, they again show unpredicted variations in behavior; the likelihood of defensive behavior decreases as intensity of stimuli increases. It is obvious that the likelihood of defensive behavior has an inverse relationship to amount of information required for recognition. Since we found a tendency to recognize affects related to weak sexual activities when little information was available, we would necessarily expect the likelihood of defensive behavior

TABLE 21

FREQUENCY OF NON-RECOGNITION RESPONSES IN NO CONFLICT GROUP WITH CHANGES IN THE INTENSITY OF SEX AND AGGRESSION STIMULI: CHI SQUARE TEST OF HOMOGENEITY

	No Conflict Gp. on Sex Stim.	No Conflict Gp. on Agg. Stim.	Total
Weak Pictures	52	88	140
Strong Pictures	63	66	129
Total Non-Recognitions	115	154	269
$\chi^2 = 3.75$ $df = 1$ $.10 > p > .05$			

TABLE 22

FREQUENCY OF NON-RECOGNITION RESPONSES IN IRRELEVANT CONFLICT GROUPS WITH CHANGES IN INTENSITY OF SEX AND AGGRESSION STIMULI: CHI SQUARE TEST OF HOMOGENEITY

	Agg. Gp. on Sex Stim.	Sex Gp. on Agg. Stim.	Total
Weak Pictures	41	73	114
Strong Pictures	53	56	109
Total Non-Recognitions	94	129	223
$\chi^2 = 9.00$ $df = 1$ $p < .05$			

to be less than for affects related to strong sexual activities where recognition is systematically avoided. In contrast on the aggression pictures we found a tendency for no conflict and irrelevant conflict people to avoid recognition of affect related to weak aggressive activities, thus making

for a greater likelihood of defensive behavior.

We had predicted conflict groups would be affected by changes in intensity and no conflict groups would not. The opposite of this prediction was observed.

CHAPTER VI

HYPOTHESES AND RESULTS REGARDING THE NATURE OF THE DERIVATIVES

We have in previous chapters demonstrated that recognition time of pictures is related to their stimulus content, and that proneness to conflict also has an effect, though not an entirely consistent one, on recognition. We have demonstrated, in addition, that the likelihood of producing distorted representations of a situation varies with whether the subject is faced with a sex or aggression picture. The likelihood of distortion varies also with the intensity of stimuli when the person responding has no conflict surrounding the stimulus. When there is conflict, intensity of stimuli has no effect on the likelihood of derivatives. It follows from the questions raised in the last chapter that we turn to an examination of the nature of derivatives. This chapter will deal with the various conditions which might affect the nature of the distorted representations of stimuli which we consider to be defensive behavior.

We may first consider the relationship of distortion to conflict and stimulus intensity. We might be led to expect more direct and less distorted derivatives with weak stimuli, and an increase in distortion as the connotative intensity of the stimuli increases. Similarly, the amount of information should also affect the type of derivative. When little information is available, we would expect the person to respond on the basis of whatever cues are available to him. If conflicts have

resulted in the blocking of impulse satisfaction, so that the impulse is still active to some extent, it may furnish cues which may result in fairly direct derivatives. As information increases, and affect related to a conflict is elicited, the derivatives should become more indirect unless and until the need to deal with reality becomes stronger than the affect. At this point, derivatives should become more direct. These relationships would be expected on the basis of the theory and research discussed in Chapter II.

Our general prediction was:

1. There will be differences in the nature of distortion dependent on whether or not the person has indicated conflict surrounding the situation. We are not saying here that people without conflict will be completely unaffected by conflict stimuli. Insofar as they do choose distorted alternatives relating to the picture, the degree of distortion should be less than for conflict subjects.
2. There will be changes in the nature of derivatives produced by persons with conflict depending on the affective intensity of the stimuli.
 - (a) With stimuli that have connotations which elicit only weak affects related to conflict we would expect direct derivatives.
 - (b) When stimuli are stronger with respect to these connotations the derivatives should become indirect.
3. There will be changes in the nature of derivatives produced by persons with conflict as information about the situation increases.
 - (a) With ambiguous situations which offer little information subjects having conflict with respect to an impulse may be expected to produce fairly direct derivatives of that impulse.

- (b) As information about the affect eliciting situation increases, the derivatives should become more indirect.
- (c) A point will finally be reached where the derivatives will again become direct, and/or recognition will occur.
- (d) If more intense stimuli produce indirect derivatives (see 2), then, where the stimulus has intense connotations of a conflict area the reappearance of direct derivatives will be delayed in comparison to less intense stimuli.

Our measure of directness or indirectness is based on judges' rankings of the various alternative statements. The judges were requested to rank a number of statements according to the amount of distortion of the picture manifested in the individual statement. A distribution was prepared, and this distribution was divided into quartiles. The most reliably judged statement from each quartile was then selected as representative of a certain level of distortion. For example, the statement from the first quartile represented the real content or recognition (with which we will not be concerned here); statement 2 represented a direct derivative; statement 3 represented an indirect derivative; statement 4 represented an extremely indirect derivative. The list of alternatives given to the subject included each of the derivative categories, as well as three alternatives pertaining to derivatives of an irrelevant picture, and one pertaining to a neutral picture. Because the differences between derivatives 3 and 4 were not always reliable these two categories were ordinarily combined in the analysis of the data. Since it may be that choosing the so called non-derivatives or irrelevant alternatives is also defensive behavior, demonstrating extreme distortion, these were included in the analysis under the category of "unrelated" choices.

Specific Predictions and Results
The Nature of Derivatives Occurring in the Presence or Absence of Conflict

In general, insofar as the no conflict group will be minimally affected by situations eliciting affect, we would expect them to produce more direct derivatives than those subjects with greater conflict. The raw data for the test of this hypothesis are given in Table 23.

TABLE 23

SUMMARY OF RAW DATA ON THE NATURE OF DERIVATIVES OCCURRING IN THE PRESENCE AND ABSENCE OF CONFLICT

	Column A					Column B				
	Response to all Aggression Pictures at all Presentation Speeds					Response to all Sex Pictures at all Presentation Speeds				
	Di-rect	Indi-rect	Most Indi-rect	Unre-lated	Total	Di-rect	Indi-rect	Most Indi-rect	Unre-lated	Total
Row 1 Aggression Group	28	18	24	69	139	32	26	13	50	121
Row 2 Sex Group	30	21	23	88	162	41	23	13	72	149
Row 3 No Conflict Group	32	21	29	95	177	41	25	19	56	141
Total	90	60	76	252	478	114	74	45	178	411

All tables in the section which follows will be based on these data¹.

1. Aggression Conflict Group vs. No Conflict and Irrelevant Conflict Group on Aggression Pictures

(a) The aggression group should, according to our hypothesis, produce more indirect derivatives on aggression pictures than the no conflict or irrelevant (sex) conflict group. Data are available in squares formed by Rows 1, 2 and 3, and Column A of Table 23. Contrary to prediction, the chi square comparison for the number of direct, indirect, most indirect derivatives, and unrelated choices for the aggression group was not significantly different from the number of choices by the no conflict group (Appendix F, Table 16). A similar comparison of the aggression group and the irrelevant conflict group was also not significant (Appendix F, Table 17).

(b) The irrelevant (sex) conflict group and the no conflict group, since they are presumably not influenced by abnormal conflict in the area of aggression, should not differ from each other in the way they handle aggression pictures. Data are available in the squares formed by Rows 2 and 3, and Column A of Table 23. As predicted, the chi square comparison of the kinds of alternatives chosen by the no conflict group and the sex conflict group on aggression pictures was not significant (Appendix F, Table 18).

¹ The hypothesis makes a general statement about the reactions to all stimuli without respect to intensity or to presentation time. To reproduce the data picture by picture, and speed by speed would make for an extremely complex table. The purpose of the tables of raw data is to aid the reader in following the reasoning behind the particular comparisons made. It therefore seems best to reproduce the data in a form most applicable to the analysis in question. In this case, interest lies in the general nature of response to all sex and all aggression pictures by the three experimental groups. When our interest turns to matters relating to intensity of the picture or presentation speed, appropriate tables will be given.

2. Sex Conflict Group vs. No Conflict Group and Aggression Conflict Group on Sex Pictures

(a) According to the hypothesis, the sex conflict group should produce more indirect derivatives on sex stimuli than the no conflict group or the irrelevant (aggression) group. Data are available in the squares formed by Rows 1, 2 and 3, and Column B of Table 23. The chi square, contrary to prediction, was not significant (Appendix F, Table 19). A similar test comparing the sex group with the aggression group on sex stimuli was also not significant (Appendix F, Table 20).

(b) The irrelevant (aggression) group and the no conflict group, since they are presumably not influenced by abnormal conflict in the area of sex, should not differ from each other in the way they handle sex pictures. Data are available in the squares formed by Rows 1 and 3, and Column B of Table 23. As predicted, the chi square comparison of the kinds of alternatives chosen by the no conflict group and the aggression conflict group on sex pictures was not significant (Appendix F, Table 21).

3. Sex Conflict vs. Aggression Conflict Group

Since both are influenced by conflict, presumably to an equal degree, the sex group should produce the same kind of derivatives on the sex pictures as the aggression group produces on aggression stimuli. Data are available in the square formed by Row 1 and Column A, and the similar square formed by Row 2 and Column B, Table 23. As predicted the chi square comparison showed the derivatives produced by the sex group on sex stimuli were no different from the derivatives produced by the aggression group on aggression pictures (Appendix F, Table 22).

Discussion and Summary

A graphical summary of predictions and results relating the nature of derivatives to the presence or absence of conflict is given in Figure VI.

FIGURE VI

SUMMARY OF PREDICTIONS AND RESULTS: THE NATURE OF DERIVATIVES OCCURRING IN THE PRESENCE OR ABSENCE OF CONFLICT

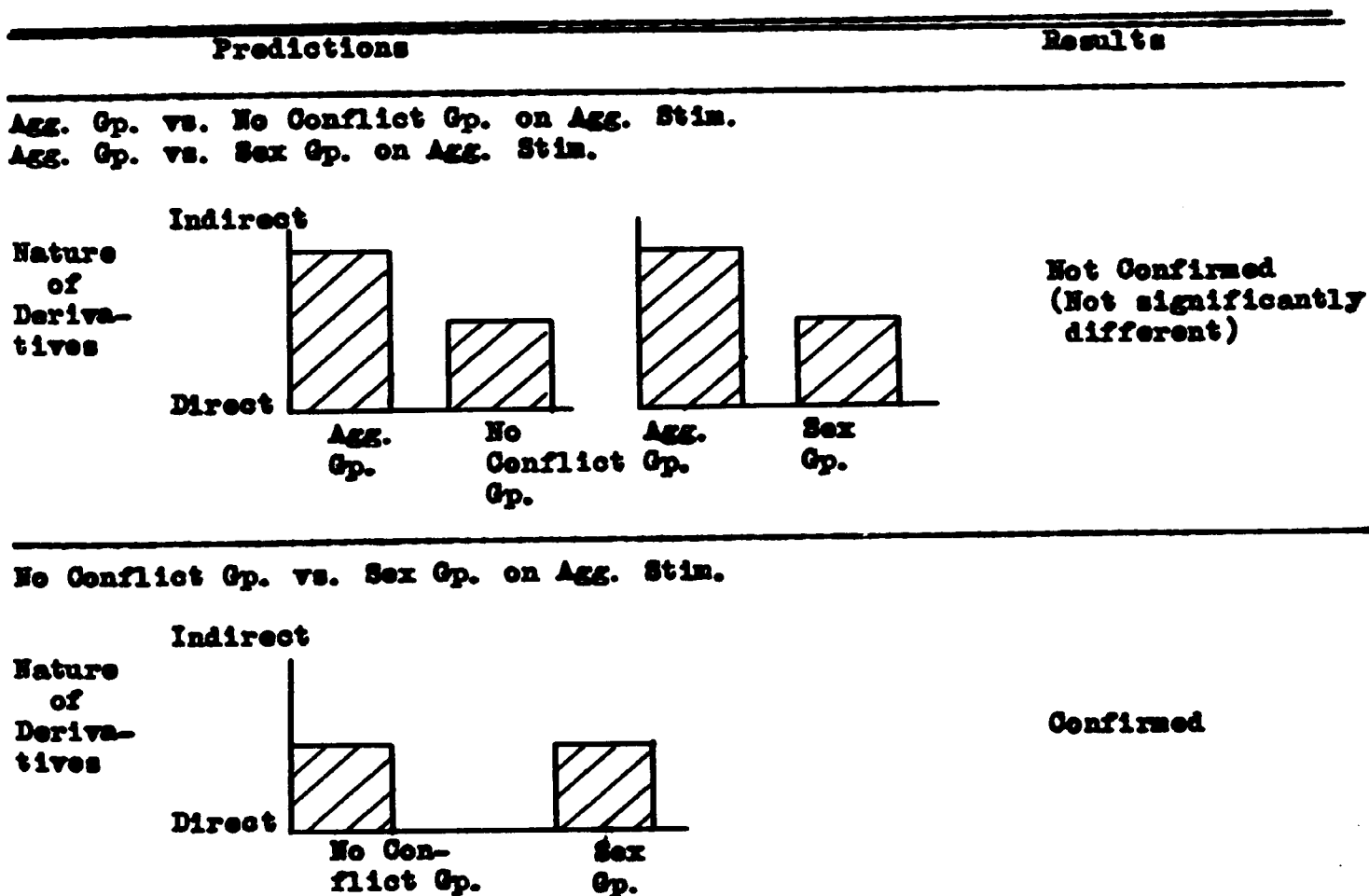
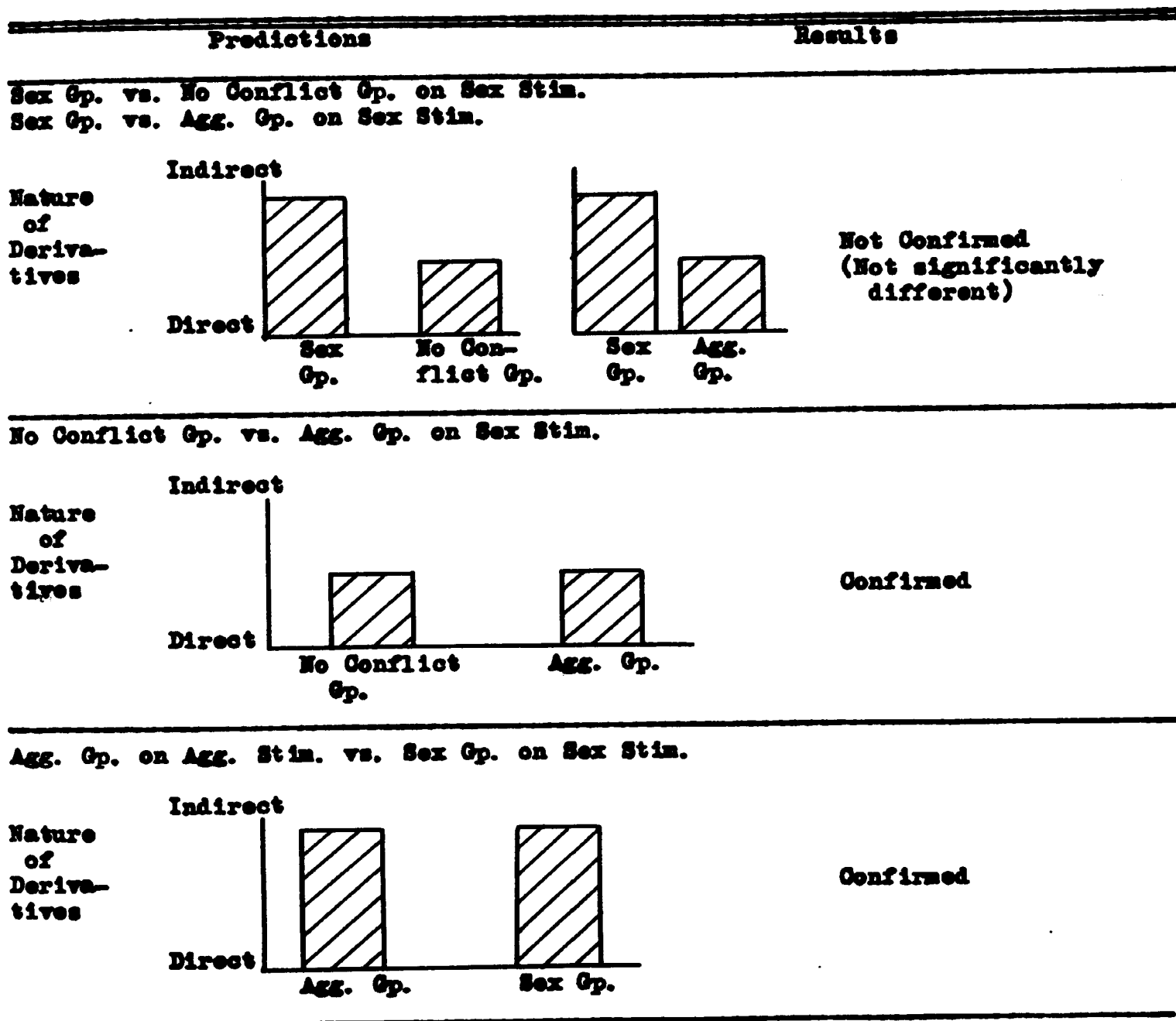


FIGURE VI(Cont.)



The hypothesis that persons in conflict will produce more indirect derivatives than people without conflict did not hold up.

We had expected on the basis of psychoanalytic theory minor structural differences in defense from person to person, but thought these would involve the same general hierarchical relationships. The form of the defense might vary.

but theory did not lead us to believe that equal amounts of conflict would result in totally different amounts of distortion. We had anticipated, again according to psychoanalytic theory, that defenses would be almost entirely a function of personality, past learning, and the intensity of the conflict, but had hardly foreseen the possibility that the present situation might be the main determinant of the mode of defense. These assumptions about hierarchical relationships and genesis of defensive reactions were implicit in much of our reasoning, and seemed so obvious that they were not stated as hypotheses. Having found contradictory evidence, we feel justified in studying it in much the same manner we would study our other predictions.

Examination of the data (see Totals row in Table 23) reveals that the sex and aggression pictures appear to produce different patterns of behavior (except in conflict groups as observed in the test of the hypotheses listed in part 3 of this section). It would seem that our lack of predicted differences between conflict groups vs. other groups may have been due to a common effect of stimuli, which overrode any group differences.

When we compare the reactions to sex and aggression pictures given by persons without conflict (the no conflict group and the group with conflict irrelevant to the picture) we find (Table 24) that on sex stimuli people choose more direct and "indirect" derivatives, i. e., tend to distort less¹. When faced with aggression conflict eliciting situations people

¹ It may clarify this finding if we know the kind of distortions these choices represent. An example of the direct derivatives would be "people posing for a magazine illustration", an example of the indirect derivatives is "woman fell, man helping her regain her balance." These are alternatives for the intense sex picture, #3. Those who wish to examine further the nature of the derivatives referred to here will find the complete list of alternatives in Appendix E. The pictures to which they pertain are reproduced in Appendix A.

choose the "most indirect" derivatives of aggression as compared to their reactions to sex situations, or escape the field by choosing material unrelated to aggression¹.

Recalling the general results with respect to recognition time, i. e., a tendency for the individual subjects to be relatively vigilant on all sex stimuli, and to become relatively defensive on aggression, we find here what seems to be other evidence for the same tendency. The kind of defenses employed for sex pictures are, in being less distorted, more vigilant and more tolerant of sex. The defenses employed for aggression distort more, avoid aggression outlet of any sort.

TABLE 24

FREQUENCY OF CHOICES OF VARIOUS DERIVATIVE ALTERNATIVES BY THE NO CONFLICT GROUP, AND THE GROUP WITH IRRELEVANT CONFLICT TO SEX AND AGGRESSION STIMULI:
CHI SQUARE TEST OF HOMOGENEITY

	Direct Derivatives (Statement 2)	Indirect Derivatives (Statement 3)	Most Indirect Derivatives (Statement 4)	Unrelated Alternatives	Total
No Conflict and Sex Gps. on Agg. Stim.	62	42	52	183	339
No Conflict and Agg. Gps. on Sex Stim.	73	51	32	106	262
Total Derivatives	135	93	84	289	601
$\chi^2 = 12.84$	$df = 3$	$p < .01$			

Returning to the behavior of the conflict groups, it now becomes extremely important that the sex conflict group on sex stimuli was not

¹ An example of the most indirect derivatives of aggression pictures is "people shaking hands, one seated." This is an alternative for the intense aggression picture, #6.

significantly different from the aggression conflict group on aggression stimuli (Appendix F, Table 22). We may interpret this to mean that when a person is exposed to a situation related to an area in which she is prone to conflict, she does not react according to the defensive mode ordinarily distinctive to the situation. She will instead defend in a relatively undifferentiated fashion.

It would appear that there are two patterns of reaction to sexual situations and two to aggressive situations. One we might call a "no conflict" mode and one we might call a "conflict" mode. The "no conflict" modes of reacting to sex and aggression are distinctive, the "conflict" modes are not. We found a similar difference between conflict and no conflict groups in regard to non-recognition of situations (see final section of preceding chapter).

The question arises as to whether persons with conflict react differently to stimuli related to their conflict than stimuli related to irrelevant material. If they do not react differentially, we might wonder if they were behaving unselectively, i. e., carrying over their "conflict" mode of behavior to situations where it was not called for.

Specifically, we would likewise expect the aggression group to behave differently to aggression and sex stimuli unless they carry over conflict behavior to irrelevant situations.

In Table 25 it can be seen that the aggression group may behave somewhat differently when in and out of conflict. They tend to extreme distortions of aggression situations, and lesser distortions of sex situations.

We would likewise expect the sex group to behave differently to sex and aggression stimuli unless they carry over conflict behavior to

TABLE 25

FREQUENCY OF CHOICE OF VARIOUS DERIVATIVE ALTERNATIVES BY AGGRESSION GROUP TO SEX AND AGGRESSION STIMULI: CHI SQUARE TEST OF HOMOGENEITY

	Direct Derivatives (Statement 2)	Indirect Derivatives (Statement 3)	Most Indirect Derivatives (Statement 4)	Unrelated Alternatives	Total
Agg. Gr. on Agg. Stim.	28	18	24	69	139
Agg. Gr. on Sex Stim.	32	26	13	50	121
Total Derivatives	60	44	37	119	260
$\chi^2 = 6.85$	df = 3	$.10 > p > .05$			

irrelevant situations. When a chi square test was made of the sex group's reactions to sex and aggression stimuli no significant difference was found (Appendix F, Table 23). Insofar as the chi square may have approached significance, the sex group may have tendencies to react differently to sex and aggression stimuli, but they are not strong enough to be shown on these data. It would seem that the group of people with sex conflict tend less to adopt the no conflict mode when dealing with aggression conflict. We have already seen that they are somewhat less consistent and less selective in recognition time, now they appear also to be less selective in the kinds of defenses they use. The lack of selectivity might be compared to a proneness to generalization on the part of the sex group. This is in contrast to persons with conflict in the area of aggression who are somewhat more likely to adopt common and differential modes of dealing with their own, and other kinds of conflict situations.

There are two alternatives to the suggestion that the observed differences are due to different modes of reacting to sex and aggression situations. One is to the effect that sex and aggression pictures are not equally conflictful, so that we might be getting differences in defense due to inequalities in intensity of conflict. We can offer no proof that our sex pictures are as sexy as the aggression pictures are aggressive. For that matter, we cannot guarantee that the sex group is as conflicted as the aggression group. The differences we have seen between the reactions of conflict and no conflict groups with respect to recognition and with respect to derivatives lead us to believe, however, that this interpretation could not be the explanation. Another possible interpretation of the observed differences involves the idea that there may be popular choices among the alternatives; sex pictures result in the choice of sex alternatives. Aggression pictures result in the choice of unrelated alternatives; most of these unrelated alternatives came from sex pictures. Perhaps sex alternatives are less threatening, easier to choose. We will see later that there are conditions under which direct aggression alternatives are chosen and occasions when "unrelated" alternatives are chosen for sex pictures. At present, however, we can present no incontrovertible evidence against the idea that there may be popular alternatives.

Specific Predictions and Results
Changes in the Nature of Derivatives with Changes in the
Affective Intensity of the Situation

In general, we would expect derivatives to be direct when the affective intensity is weak, and to be indirect when the affective intensity is greater. The raw data for the test of this hypothesis are

given in Table 26¹.

1. Change in Derivatives with Weak and Strong Aggression Pictures;
Conflict and No Conflict Groups

(a) The hypothesis would lead us to expect that the aggression conflict group should produce more direct derivatives on weak pictures related to aggression conflict, and more indirect derivatives on strong pictures. The data for this comparison are available in the square formed by Row 1 and Section A of Table 26.

The chi square comparison showed a significant difference in the reaction of the aggression group to weak and strong aggression (Table 27). It appears, from examination of this table, that contrary to our prediction, those persons prone to conflict in aggression react to situations related to their conflict by producing extreme distortions (unrelated behavior) when the affective connotations are weak. When the affective connotation increases the derivatives tend to become more direct, although many distorted representations are still produced.

(b) The no conflict group and the sex conflict group should not be influenced by changes in intensity of aggression pictures. Data for these comparisons can be found in the squares formed by Rows 2 and 3, and Section A of Table 26. As predicted, the chi square comparison for the no conflict group's choices of alternatives for the various intensities of aggression pictures was not significant (Appendix F, Table 24). Similarly, the chi square comparison of the irrelevant conflict group's

¹ It is important to note that these data do not include vacillators since there is no way of knowing as yet whether they belong to the same population. Up to now this has not been a problem in this chapter since we were dealing with general kinds of behavior, and probabilities, rather than patterns of behavior.

SUMMARY OF RAW DATA ON THE CHANGES IN THE NATURE OF DERIVATIVES WITH CHANGES IN THE AFFECTIVE
INTENSITY OF THE SITUATION

Section A: Aggression Stimuli																
	Weak (#1)			Mild (#2)			Strong (#11)			Intense (#6)						
	Di-rect rect and (2) (3)			Most Unre-Indi-rect rect and (4) Block			Di-rect rect and (2) (3)			Most Unre-Indi-rect rect and (4) Block						
Row 1	1	9	24	2	8	2	15	12	1	7	11	2	6	2	18	
Aggression Group	2															
Row 2	4	7	26	3	9	4	19	5	2	5	15	6	3	2	18	
Sex Group	5															
Row 3	4	3	13	33	6	10	3	20	8	2	7	19	4	2	5	22
No Con- flict Group																

Section B: Sex Stimuli

	Weak (#4)				Mild (#10)				Strong (#9)				Intense (#3)			
	Most Unre- D1- Indi- Indi- lated fect rect rect and (2) (3) (4) Block				Most Unre- D1- Indi- Indi- lated fect rect rect and (2) (3) (4) Block				Most Unre- D1- Indi- Indi- lated fect rect rect and (2) (3) (4) Block				Most Unre- D1- Indi- Indi- lated fect rect rect and (2) (3) (4) Block			
Row 1																
Aggression	3	2	4	10	5	7	1	9	2	4	2	9	5	9	4	19
Group	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Row 2																
Sex	6	2	4	16	3	10	4	13	5	2	2	13	8	8	2	24
Group	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Row 3																
No Conflict	2	2	5	16	7	6	5	10	5	9	3	14	8	6	6	14
Group	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 27

FREQUENCY OF CHOICE OF VARIOUS DERIVATIVE ALTERNATIVES BY AGGRESSION GROUP WITH CHANGES IN AFFECTIVE INTENSITY OF AGGRESSION STIMULI:
CHI SQUARE TEST OF HOMOGENEITY

Picture	Direct Derivatives (Statement 2)	Indirect Derivatives (Statements 3 and 4)	Unrelated Statements and Block ¹	Total
1. 3 weak	4	20	39	63
11. 6 strong	14	16	29	59
Total Derivatives	18	36	68	122
$\chi^2 = 7.43$	$df = 2$	$p < .05$		

choices on various intensities of pictures was not significant (Appendix F, Table 25).

2. Changes in Derivatives with Weak and Strong Sex Pictures;
Conflict and No Conflict Groups

(a) From the general prediction, we would expect the sex conflict group to show more direct derivatives on weak affective pictures related to their conflict and to show more indirect derivatives on pictures that are more strongly affective. Data are available in the square formed by Row 2 and Section B of Table 26. Contrary to prediction, the chi square was not significant (Appendix F, Table 26).

¹ "Block" refers to those subjects who gave no choice on a picture.

(b) The no conflict group and the aggression conflict group should not be affected by changes in intensity of sex pictures. The data for the no conflict group are available in the square formed by Row 3 and Section B of Table 26. As predicted, the chi square comparison of the derivatives chosen by the no conflict group on the individual sex pictures was not significant. Likewise, the similar comparison of choices of the aggression group on the individual sex pictures, based on data in the square formed by Row 2 and Section B, Table 26, was not significant (Appendix F, Table 27).

Summary and Discussion

A graphical summary of the predictions and results regarding reactions to changes in intensity of stimuli is given in Figure VII. The persons with difficulties in aggression appear to react to weak stimuli related to their conflict with extreme distortion. As stimuli become stronger in aggressive connotations the proportion of extreme distortions decreases. This trend which is opposite from that predicted is perhaps similar to the clinical phenomenon of the gradual decompensation of defenses with increased conflict.

The sex conflict group appears to be less affected by changes in affective intensity and again show their lack of selectivity.

Outgrowths: The Kinds of Derivatives Shown by Vacillators

There were subjects who would recognize stimuli at one level, then misperceive for several subsequent levels. These people were called "vacillators." In Chapter IV we discussed the kinds of situations and levels of ambiguity which seem to call out this sort of behavior. We

FIGURE VII

**SUMMARY OF PREDICTIONS AND RESULTS: CHANGES IN THE NATURE OF DERIVATIVES
WITH CHANGES IN THE AFFECTIVE INTENSITY OF THE SITUATION**

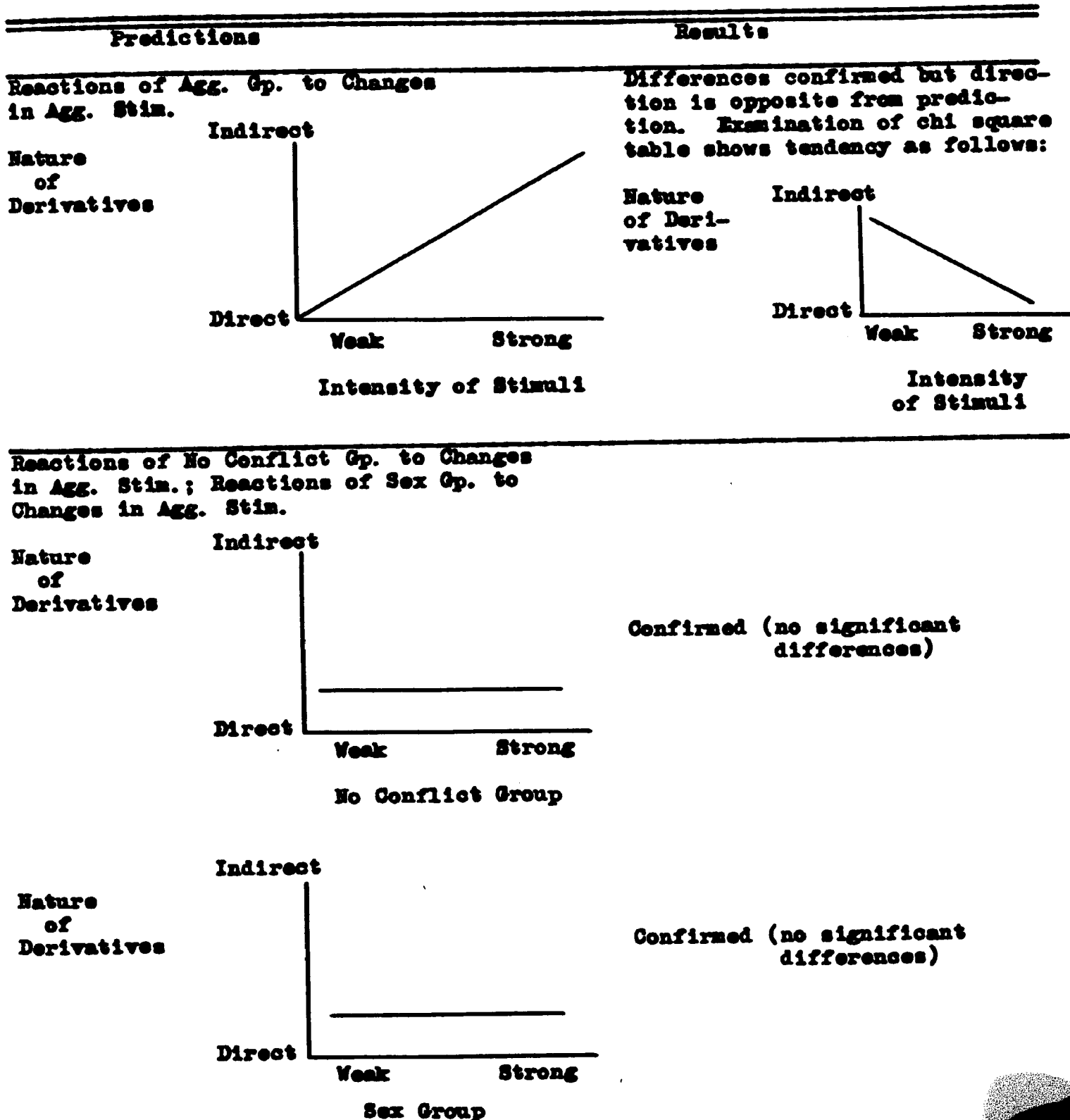
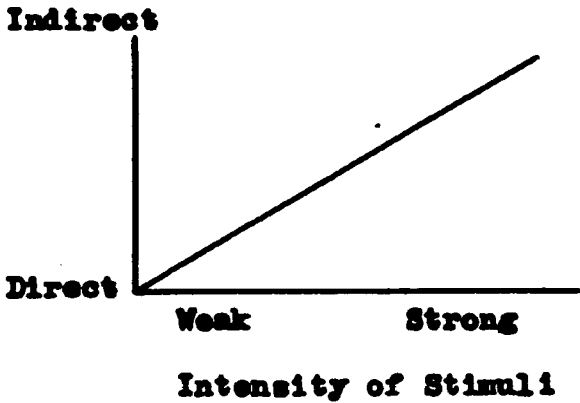
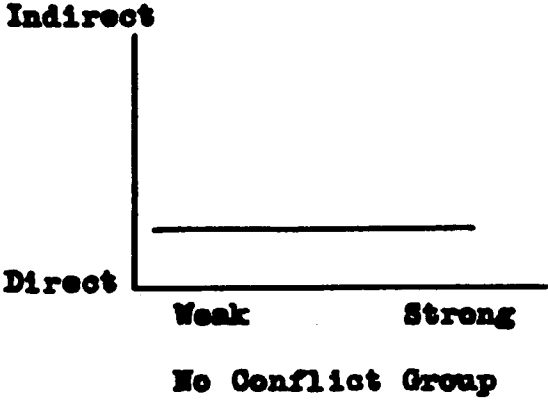
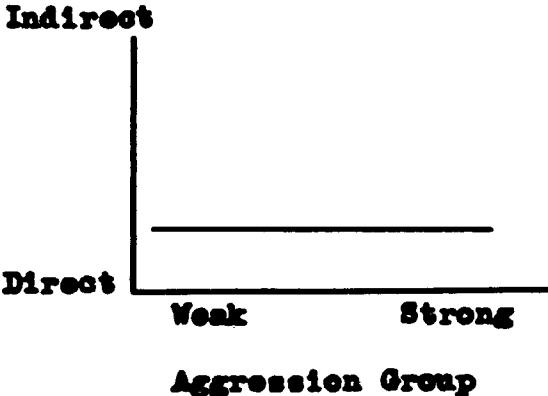


FIGURE VII (Cont.)

Predictions	Results
Reactions of Sex Gp. to Changes in Sex Stim.	Nature of Derivatives  Not Confirmed (no significant differences)
Reactions of No Conflict Gp. to Changes in Sex Stim.; Reactions of Agg. Gp. to Changes in Sex Stim.	Nature of Derivatives  Confirmed (no significant differences) Nature of Derivatives  Confirmed (no significant differences)

might now inquire as to whether these subjects showed defenses different from the usual ones shown by the conflict groups in the period after they had recognized the picture the first time, and before they recognized it again.

We will not deal with this matter in detail because the number of vacillators was so small that it was necessary to combine the responses of all groups in a manner that did not make good psychological sense. From the information we could glean from chi square comparisons of the reactions of the vacillators to weak and strong sex, and to weak and strong aggression, it would seem that they, too, show a tendency to produce greater distortion on weak than on strong pictures (Appendix F, Table 29).

Specific Predictions and Results
Changes in the Nature of Derivatives with Changes in
Amount of Information

The raw data for this series of comparisons are given in Table 28.

1. Behavior of Conflict Groups with Changes in Amount of Information about Weak Pictures

According to our hypothesis when the conflict groups are responding to weak affective stimuli under extremely ambiguous conditions there should be a period during which fairly direct derivatives should appear. As information increases about the stimuli, derivatives should become more indirect. As information increases still more, the person should begin to produce more direct derivatives again, although there may be some people who never approach recognition of the situation¹. The raw data for this

¹ Previous chi squares had shown that the sex group on weak sex pictures and the aggression group on weak aggression pictures did not differ in the general kinds of derivatives they produced. As a result, the groups were combined. Vacillators were also included here since previous chi squares had shown they were responding in a similar manner to the rest of the conflict groups. These combinations were necessary to allow for large enough theoretical frequencies in the individual cells.

SUMMARY OF RAW DATA ON THE CHANGES IN THE NATURE OF DERIVATIVES WITH CHANGE IN THE AMOUNT OF INFORMATION

Section A: Aggression Pictures				Section B: Sex Pictures				
Column 1 Week		Column 2 Strong		Column 3 Weak		Column 4 Strong		
Presenta- tion Speeds	Most Unre- lated Indi- rect rect (2) (3) (4)		Most Unre- lated Indi- rect rect (2) (3) (4)		Most Unre- lated Indi- rect rect (2) (3) (4)		Most Unre- lated Indi- rect rect (2) (3) (4)	
	Di- rect rect (2) (3)	Unre- lated (4)	Di- rect rect (2) (3)	Unre- lated (4)	Di- rect rect (2) (3)	Unre- lated (4)	Di- rect rect (2) (3)	Unre- lated (4)
Row 1 Aggression Group	1	1 5 4	20 6 2 6	16 6 2 4	14 4 2 4	6 2 4	2 17	
	2	2 4 6	10 4 5 2	10 2 6 2	5 1 6 4	9		
	3	0 0 3	12 4 0 1	3 3 0 1	1 4 2 0	2		
	4	5 2 0	6 5 0 2	4 5 0 1	3 11 3 0	2		
Row 2 Sex Group	1	4 6 5	18 5 3 4	18 2 3 7	17 4 4 3	22		
	2	0 5 6	15 5 0 2	14 3 9 1	10 7 3 1	8		
	3	1 5 1	13 4 2 2	3 5 1 0	1 4 3 0	9		
	4	7 1 1	7 3 1 2	3 6 0 1	5 11 0 3	2		
Row 3 No Con- flict Group	1	3 6 8	16 5 3 2	22 2 7 7	12 4 4 5	19		
	2	2 5 6	13 3 2 2	12 4 3 2	7 4 7 2	8		
	3	1 5 1	15 5 0 3	7 1 0 1	2 6 3 2	2		
	4	10 0 1	9 3 0 7	9 6 0 0	6 14 2 1	4		

comparison are the result of combining figures in the square formed by Row 1 and Column 1 of Table 28 with the equivalent figures in the square Row 2 and Column 3.

TABLE 29

FREQUENCY OF CHOICE OF VARIOUS DERIVATIVE ALTERNATIVES BY CONFLICT GROUPS ON WEAK AFFECT ELICITING STIMULI WITH CHANGES IN AMOUNT OF INFORMATION: CHI SQUARE TEST OF HOMOGENEITY

Time	Direct Derivatives (Statement 2)	Indirect Derivatives (Statements 3 and 4)	Unrelated and Block	Total
1 fast	3	19	37	59
2	5	20	20	45
3	5	4	13	22
4 slow	11	3	11	25
Total Derivatives	24	46	81	151
$\chi^2 = 25.21$ $df = 6$ $p < .05$				

The nature of derivatives produced by the conflict groups was compared over the series of presentation speeds as shown in Table 29. A significant difference was found. Examination of the chi square table suggests that at high ambiguity "unrelated" behavior and indirect derivatives predominate. When more information is available, the indirect derivatives tend to drop out while the direct derivatives appear increasingly. The "unrelated" behavior decreases with increase in information, but even with very clear situations there is as much of this "unrelated" (apparently escape type) behavior as there is of direct derivatives.

2. Behavior of No Conflict Groups with Changes in Amount of Information about Weak Pictures

Although we cannot predict the direction, we may expect the no conflict group to react differently from the conflict groups to changes in the amount of information about the weak pictures¹.

To test this prediction, we must first discover what, if any, effect change in amount of information has on the pre-recognition behavior of the no conflict subjects, and must then compare their reactions with those of the conflict groups' to see if there is any difference.

Turning first to the no conflict group on weak aggression stimuli, we find the data available in the square formed by Row 3 and Column 1. Table 28.

TABLE 30

FREQUENCY OF CHOICE OF VARIOUS DERIVATIVE ALTERNATIVES BY NO CONFLICT GROUP ON WEAK AGGRESSION STIMULI WITH CHANGES IN AMOUNT OF INFORMATION:
CHI SQUARE TEST OF HOMOGENEITY

Time	Direct Derivatives (Statement 2)	Indirect Derivatives (Statements 3 and 4)	Unrelated and Block	Total
1 fast	3	14	16	33
2	2	11	13	26
3	1	6	15	22
4 slow	10	1	9	20
Total Derivatives	16	32	53	101

$\chi^2 = 24.62$ $df = 6$ $p < .001$
(Unreliable due to small expected frequencies)

¹ Since the no conflict group appeared, upon examination, to react somewhat differently to weak sex and weak aggression, these stimuli were studied separately. "Vacillators" were included as with the conflict groups.

This behavior of the no conflict group on weak aggression stimuli (Table 30) was compared with the pattern of response obtained from the conflict groups (Table 29) by the Fisher (11) method of comparing chi square patterns. The pattern of behavior of the conflict groups on weak conflict stimuli does not differ from the pattern of the no conflict group on weak aggression stimuli (Appendix F, Table 30). We again find a predominance of indirect derivatives and "unrelated" (i. e., extreme distortions) behavior with high ambiguity, and a predominance of direct derivatives when information is complete enough to make the picture clear.

Shifting our attention to the no conflict group on weak sex stimuli, the same thing was found.

TABLE 31

FREQUENCY OF CHOICE OF VARIOUS DERIVATIVE ALTERNATIVES BY NO CONFLICT GROUP ON WEAK SEX STIMULI WITH CHANGES IN AMOUNT OF INFORMATION: CHI SQUARE TEST OF HOMOGENEITY

Time	Direct Derivatives (Statement 2)	Indirect Derivatives (Statements 3 and 4)	Unrelated and Block	Total
1 fast	2	14	12	28
2	4	5	7	16
3. 4 slow	7	1	8	16
Total Derivatives	13	20	27	60
$\chi^2 = 14.03$ $df = 4$ $p < .01$ (Unreliable due to small expected frequencies)				

When the reaction of the no conflict group on weak sex stimuli

(Table 31) was compared with the pattern of response obtained from the conflict group (Table 29) there was no significant difference (Appendix F, Table 31). As with the conflict group, we find the no conflict group producing indirect derivatives or "unrelated" behavior with high ambiguity. When the situation becomes clearer, the indirect derivatives drop out, while the direct derivatives appear in great number. The "unrelated" behavior decreases with increase in information, but even in very clear situations there is as much of the unrelated behavior as there is of direct derivatives.

3. Behavior of Irrelevant Conflict Groups with Change in Amount of Information about Weak Pictures

Although no prediction of direction can be made, people should react differently to changes in amount of information about weak pictures irrelevant to their conflict than they do to pictures related to their conflict¹. Data are available in square formed by Row 1 and Column 3, and in similar square formed by Row 2 and Column 1 in Table 28. We found no significant variations in behavior with changes in amount of information about pictures irrelevant to the individual subject's conflict area (Appendix F, Tables 32 and 33). (The comparisons did, however, fall consistently between the 20 per cent and 10 per cent level of confidence.) Since no significant trend was revealed, the reactions to irrelevant conflict materials could not be compared with the patterns of behavior shown on conflict materials. Examination of the tables suggests, however, that the tendencies shown to the irrelevant conflict pictures were similar to those shown in previous comparisons.

¹ Since the sex group seemed to react, on examination, differently to irrelevant pictures than the aggression group, they were studied separately. "Vacillators" were included as in previous tests.

4. Behavior of Conflict Groups with Changes in Amount of Information about Strong Pictures

The reaction to changes in information about strong stimuli should be similar to the reaction to weak stimuli, except that conflict groups should delay the production of direct derivatives (i. e., should require more information before they can produce direct derivatives). Data are available by combining the square formed by Row 1 and Column 2 with the equivalent figures in the square formed by Row 2 and Column 4 of Table 28.¹

TABLE 32

FREQUENCY OF CHOICE OF VARIOUS DERIVATIVE ALTERNATIVES BY THE CONFLICT GROUPS ON STRONG CONFLICT STIMULI WITH CHANGES IN THE AMOUNT OF INFORMATION: CHI SQUARE TEST OF HOMOGENEITY

Time	Direct Derivatives (2)	Indirect Derivatives (3 and 4)	Unrelated and Block	Total
1 fast	10	15	38	63
2	11	11	18	40
3	8	4	12	24
4 slow	16	5	6	27
Total Derivatives	45	35	74	154
$\chi^2 = 18.92$	$df = 6$	$p < .01$		

The pattern obtained from this test (Table 32) was compared by

Fisher's (11) method with the pattern produced by the same people on

1 As with weak stimuli, it was possible to combine the reactions of the sex group on strong sex stimuli, and the aggression group on strong aggression stimuli (including the reactions of the vacillators in both groups).

weak stimuli (Table 29). There was no significant difference between the curves (Appendix F, Table 34).

It would seem that conflict groups do not behave differently with changes in amount of information, whether that information pertains to stimuli which elicit strong or weak affect. There seems to be no more avoidance of direct derivatives when strong affect is elicited. In fact, comparison of the number of direct derivatives in Tables 29 and 32 shows there are more direct derivatives at all levels on strong stimuli.

5. Behavior of No Conflict Group with Changes in Amount of Information about Strong Pictures

Although we cannot predict the direction, the no conflict subjects should react differently to changes in amount of information about strong pictures than do those subjects who are prone to a specific conflict¹. The data are available in the squares formed by Row 3 and Column 4, and by Row 3 and Column 2.

When we examine the reactions of the no conflict group on strong aggression pictures we fail to find any significant change in reaction with changes in the amount of information available (Appendix F, Table 35). Instead, the no conflict group seems to choose "unrelated" alternatives at all levels of ambiguity.

Turning to the sex stimuli, a significant relationship is found.

The pattern obtained for the no conflict group on strong sex stimuli (Table 33) was compared with the conflict groups on strong pictures (Table 32) by Fisher's (11) method. There was no significant difference (Appendix F, Table 36).

¹ The reactions of the no conflict group to strong sex and aggression were considered separately. "Vacillators" were included as on previous tests.

TABLE 33

FREQUENCY OF CHOICE OF VARIOUS DERIVATIVE ALTERNATIVES PRODUCED BY NO CONFLICT GROUP ON STRONG SEX STIMULI WITH CHANGES IN THE AMOUNT OF INFORMATION: CHI SQUARE TEST OF HOMOGENEITY

Time	Direct Derivatives (2)	Indirect Derivatives (3, 4)	Unrelated and Block	Total
1 fast	4	9	19	32
2	4	9	8	21
3, 4 slow	20	8	6	34
Total Derivatives	28	26	33	87
$\chi^2 = 21.55$	$df = 4$	$p < .001$		

6. Behavior of Irrelevant Conflict Groups to Changes in Amount of Information about Strong Pictures

Although no prediction of direction can be made, people should react differently to changes in amount of information about strong pictures irrelevant to their conflict than they do to strong pictures related to their conflict¹. Data are available in the square formed by Row 1 and Column 4, and the square formed by Row 2 and Column 2, Table 28.

When the reaction of the aggression group on strong sex pictures (Table 34) was compared with the conflict groups on strong affect eliciting stimuli (Table 32) there was no significant difference (Appendix F, Table 37).

¹ The reactions of the sex group to strong aggression, and of the aggression group to strong sex were studied separately. "Vacillators" were included.

TABLE 34

FREQUENCY OF CHOICE OF VARIOUS DERIVATIVE ALTERNATIVES PRODUCED BY THE AGGRESSION GROUP ON STRONG SEX STIMULI WITH CHANGES IN AMOUNT OF INFORMATION: CHI SQUARE TEST OF HOMOGENEITY

Time	Direct Derivatives (2)	Indirect Derivatives (3, 4)	Unrelated and Block	Total
1 fast	4	8	17	29
2	1	10	9	20
3, 4 slow	15	5	4	24
Total Derivatives	20	23	30	73
$\chi^2 = 25.32$	$df = 4$	$p < .001$		

TABLE 35

FREQUENCY OF CHOICE OF VARIOUS DERIVATIVE ALTERNATIVES BY THE SEX GROUP ON STRONG AGGRESSION STIMULI WITH CHANGES IN THE AMOUNT OF INFORMATION: CHI SQUARE TEST OF HOMOGENEITY

Time	Direct Derivatives (2)	Indirect Derivatives (3, 4)	Unrelated and Block	Total
1	5	7	18	30
2	5	2	14	21
3, 4	7	7	6	20
Total Derivatives	17	16	38	70
$\chi^2 = 8.16$	$df = 4$	$.10 > p > .05$		
(Unreliable due to small expected frequencies)				

When the reactions of the sex group on strong aggression stimuli (Table 35) were compared with the conflict groups on strong affect eliciting stimuli (Table 32) there was no significant difference (Appendix F, Table 38).

Discussion and Summary

A graphical summary of the predictions and results relating to changes in the nature of derivatives with changes in the amount of information is given in Figure VIII.

It seems probable that we may expect derivative behavior to alter with changes in the amount of information though not as we had predicted. In Tables 29 and 32 we found a predominance of indirect derivatives and "unrelated" behavior when ambiguity was extreme, with a dropping out of indirect derivatives, and the appearance of direct derivatives as the situation grows clearer. The choice of "unrelated" alternatives, which we interpreted as an escaping the field type of reaction seems to decrease as information increases, but is still found almost as often as direct derivatives when the situation is clear. The differences we had predicted between conflict and no conflict groups, and between weak and strong stimuli did not appear, however. It is important to discuss each of these contradictions thoroughly.

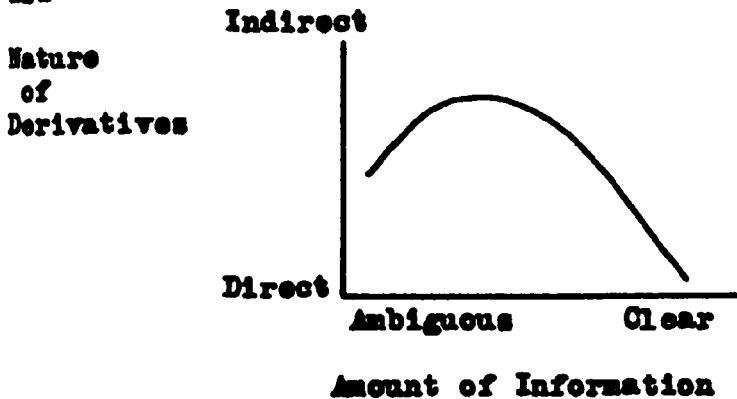
First let us consider the differences in patterns of reaction. Changes in the amount of information, it was felt, make it more or less necessary for the subject to deal with the situation. In varying the amount of information we might consider that we placed people in the position of having to distort stimuli to avoid unpleasant affective reactions, while at the same time we made it gradually more necessary for the subjects

FIGURE VIII

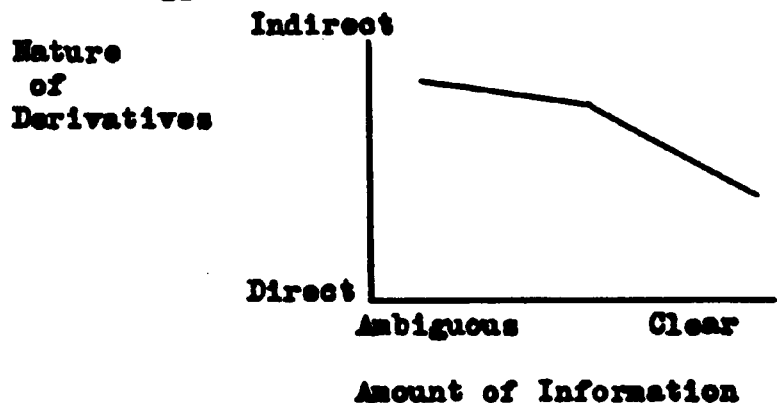
**SUMMARY OF PREDICTIONS AND RESULTS: CHANGES IN THE NATURE OF DERIVATIVES
WITH CHANGES IN THE AMOUNT OF INFORMATION**

Predictions**Results**

**Reactions of Conflict Groups to Changes
in Information about Weak Conflict Stimuli**



Chi square significant. Examination of table suggests the following:



**Reactions of No Conflict Group to
Changes in Information about Weak Con-
flict Stimuli**

No Direction Predicted.
Should be different from
conflict groups

Not Confirmed
(No significant difference from conflict
groups)

**Reactions of Conflict Groups to Changes
in Information about Weak Stimuli Irre-
levant to their Conflict**

No Direction Predicted.
Should be different than
reactions to conflict stimuli

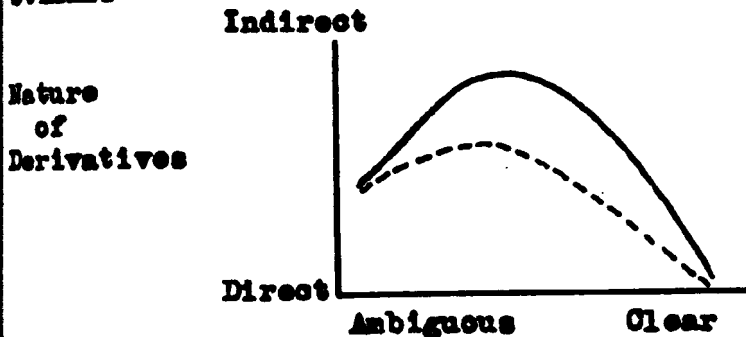
No Change in Behavior to Changes in Infor-
mation. (Could not be compared to reaction
to conflict stimuli)

FIGURE VIII (Cont.)

Predictions

Results

Reactions of Conflict Groups to Changes
in Information about Strong Conflict
Stimuli



Not Confirmed
(Behavior to changes in strong stimuli
no different from behavior to weak)

———— Strong Stimuli

- - - - - Weak Stimuli

Reactions of No Conflict Group to
Changes in Information about Strong
Conflict Stimuli

No Direction Predicted.
Should be different from reaction
of conflict groups

Not Confirmed
(No significant difference from conflict
groups)

Reaction of Conflict Groups to Changes
in Information about Strong Stimuli
Irrelevant to their Conflict

No Direction Predicted.
Should be different from reaction
to conflict stimuli

Not Confirmed
(No significant difference from reaction
to conflict stimuli)

to deal with reality. We assumed that the subjects would distort increasingly as the affect elicited by the situation increased until some point where the need to orient oneself to reality entered, forcing less distortion and finally recognition. It would seem, rather, that for many of our subjects the increased necessity for dealing with the situation was more important than avoiding threat. Perhaps this is true because the subjects come within the section of the population considered "normal", i. e., without incapacitating conflict.

There were people in all experimental groups who apparently behaved counter to this tendency and continued to distort and avoid direct derivatives regardless of amount of information. Future research might well deal with an investigation of these individuals and how they differ from their peers.

It is interesting to note that increased necessity for dealing with a situation has somewhat the same effect on derivatives as increase in affective intensity. Stress on the ego, whether it be from intensity of impulse, or need to deal with unpleasant reality, seems to have similar effects.

In view of the stress we were placing on the ego it is interesting that persons whether or not they are prone to conflict react in the same way. With the exception of the no conflict group's reaction to the strong aggression pictures, which may have been a chance variation, we find them behaving in a manner not significantly different from those persons who have conflict in the areas tapped by the pictures. There are several explanations possible. The subjects in the conflict group may not have had severe enough conflict to behave differently from the no conflict groups. This is particularly true when we recall that a few subjects

in each group did not satisfy the criteria for group classification. This did not appear to have any effect, but does make for more overlap of the groups. On the other hand, from the findings so far discussed it would seem that the no conflict group subjects are sufficiently affected by their cultural background that they too must defend against the affect elicited by the pictures. Even "normal" people may be expected to employ defenses. Our hypothesis seems to have dealt with a clinical ideal rather than the average or normal individual. If we were to find such a group we might be able to validate our no conflict group hypotheses, but for practical purposes, such speculation appears to have little application.

It is possible, then, that the predicted differences were not observed due to the fact that the samples did not represent appropriate populations. However, insofar as our subjects may truly be considered conflict and no conflict groups it may be that changes in increase in stress on the ego may have a similar effect on all people whether or not the person is prone to conflict. Inclusion of more disturbed groups in future studies will be necessary to clarify this issue.

When people were shown weak pictures irrelevant to their conflict there was no significant trend. Also, the reaction to variations in amount of information about strong irrelevant stimuli was no different from the reactions to variations in information about strong conflict stimuli.

We had predicted that the conflict groups on strong conflict would avoid direct derivatives until there was a good deal of information. The obtained reactions to weak and strong conflict stimuli are not significantly different.

CHAPTER VII

CONCLUSIONS AND IMPLICATIONS

Understanding of the conclusions may be implemented by a review of the theory which led to our general hypotheses, and of the manner in which we attempted to test them.

Theory led us to believe that behavior and recognition of a situation will vary with the meaning of the stimuli and the intensity of the affect elicited by these stimuli. When there is conflict between satisfaction of a given impulse and anticipations of painful sequelae, some means of compromise must be attempted. First the person will tend to repress awareness of the impulse. Since this does not do away with the impulse, further compromise in the form of defenses is necessary to enable the individual to achieve satisfaction. The behavioral distortions and incongruities resulting from such compromises are called derivatives. The intensity of conflict stimuli should determine both the appearance and the nature of derivatives; derivatives should be more likely when stimuli are more intense; they should also be more indirect than with weak stimuli. It is obvious that conflict affects not only the nature of derivatives, but also the person's ability to deal with reality. Recognition and the nature of derivatives depend in part on the amount of information available concerning the reality situation. Prior to the provision of adequate information, the person will be influenced by whatever cues he has. If some impulse has been blocked but still remains activated it may become

a behavioral determinant, resulting in fairly direct derivatives. As more information is available, the person must respond not only in terms of his own motivations, but also in terms of the new information. Were information to elicit affects related to conflict areas, derivatives should become more indirect. As the situation becomes more and more clear behavior will be based more and more on it, although conflict may still prevent adequate or realistic reaction.

To test this theory, three groups of female subjects were used. One group was prone to conflict in the area of sex; one group was prone to conflict in the area of aggression; the third group had relatively little conflict in either area. The subjects were presented with pictures of persons engaged in various sexual and aggressive activities designed to elicit affects related to these activities. Varying the activity should lead to variation in intensity of the affect elicited. By presenting the pictures tachistoscopically we could control the amount of information the person had about the situation, making it more or less necessary for the subject to deal with reality. A subject's response was channeled into a sample of the possible range of behavior by giving her a list of alternative interpretations of each picture at each presentation. Some of these alternatives were considered to be derivatives.

We are now ready to consider the results of this experiment. We will first present the general prediction and follow it with our conclusions, adding any qualifications or refinements we may now deem wise in view of the results. Before going into the conclusions, it is important to note that in every case there is the implicit qualification that the conclusion applies to people in general only insofar as the subjects of this experiment can be considered a sample of people as a whole.

General Prediction: Recognition Time

The amount of information needed for a person to recognize a situation differs depending on:

- (a) whether or not the person has indicated conflict with respect to the situation;
- (b) the intensity of the affect elicited by the stimulus.

The general prediction was partially upheld in our data. At the same time, several modifications and additions are necessary.

I. The kind of situation is as important as the presence, absence, or amount of conflict in determining how much information a person will need to recognize it (Tables 4 - 7).

II. The data show that even persons without abnormal conflict surrounding the expression of an impulse seem to be affected by social taboos, since they vary their behavior with the presence or absence of these taboo situations, and with the intensity of them. There appears, in fact, to be a cultural or biological mode for handling and expressing such taboo impulses.

A. Situations eliciting sexual impulses

When situations elicit weak affect, i. e., affect related to sexual impulses which have as their aim mere interpersonal relationship between sexes, these will be recognized, even when information is minimal. It is as if the person were rendered sensitive or vigilant to such impulses (Table 6).

When situations elicit strong affect, i. e., affect related to impulses whose aim is directly sexual in the narrowest sense of the term, the person will repress or avoid awareness of them until he has considerable evidence as to the nature

of the stimulus situation.

B. Situations eliciting aggression impulses

When situations elicit weak affect, i. e., affect related to aggressive impulses which are mild in aim such as competition with others, the "normal" person will avoid recognition of them even when information is relatively plentiful (Table 5).

When situations elicit strong affect, i. e., affect related to aggressive impulses which are strong and hostile, the person will require less information to recognize them, but will still require more information than was required for weak sex impulses (Tables 5, 6).

III. The conflict groups differ from the no conflict people in the amount of information they require.

A. In general, the sex conflict people follow the mode of those without conflict, but they differ in that they are much less consistent. Although they tend to avoid recognition of situations with strong sexual connotations, they may on some occasions be more sensitive to stronger sexual affects than to somewhat weaker ones (Table 4).

B. Those with conflict in the area of aggression differ from no conflict people in that they do not react to changes in intensity of affect related to aggression. They avoid recognition of both weak and strong affect. This is in contrast to the normal trend of sensitivity to strong aggression shown by other people (Appendix F Table 5).

IV. Many people in both the no conflict group and the sex and aggression groups were found to adopt fixed modes of dealing with situations eliciting affect, and change little from these, even with changes in intensity. In the case of sexual situations, these modes ordinarily reflect sensitivity or vigilance. In the case of aggression stimuli they are repressive. On neutral stimuli there is no fixed trend; the reaction varies with the content of the situation (Table 10).

V. The group of people who vacillated, i. e., recognized a situation at one presentation and then distorted it for several subsequent ones, seems to indicate that at some point there may be recognition followed by repression because of the affect involved (Tables 13 - 15).

Implications:

As we will stress throughout this chapter, by far the most important implication of our findings is the influence of the situation in determining the response. Theory seems to weight personality too much, and external situation too lightly in considering defensive behavior.

In view of the varied effects of situations, and the intensity of affect, it is no wonder we found the research on recognition time so contradictory that we were not able to make specific predictions as to direction of differences. In future research on perceptual "vigilance" and "defense" it appears that more attention must be given to the kind of situation in which a particular type of reaction was observed, and the intensity of affect this particular situation might arouse in comparison to others of the same general nature.

General Prediction: The Production of Derivatives

Prior to conscious recognition, the person's behavior will depend

upon whatever other sources of information he has.

- (a) When there is no conflict the person's behavior may be guided by such numerous possibilities that we could expect chance results.
- (b) Where the stimulus material relates to conflict in the subjects we might expect derivatives as a result of the repressive and defensive processes.
- (c) When there is conflict the likelihood of derivatives should increase as stimuli come to have increasingly intense connotations related to the conflict area.

I. The behavior of conflict and no conflict people was similar insofar as occurrence of derivatives was concerned (Tables 16 - 19). We could conclude from this that the stimuli were not of such a nature as to create conflict. This conclusion, however, seems to be negated by differences in the responses of conflict and no conflict people observed elsewhere in the study. The other possibility is that the no conflict people were sufficiently affected by the conflict stimuli that they behaved no differently from those prone to conflict. Situations surrounded by cultural taboos may cause even normal people to resort to defensive measures.

II. We found that derivative types of behavior, i. e., behavior with disguised manifestations of material of which the person is not consciously aware, does occur in situations eliciting affect related to sexual activities (Tables 17 and 19).

III. The pre-recognition behavior of the aggression group included in about equal number both derivatives and presumably irrelevant material (Table 18). In testing further hypotheses regarding the likelihood of derivatives it was necessary to include pre-recognition behavior of all kinds since theoretically all such behavior could have a defensive function.

IV. Contrary to prediction, the conflict groups show no changes in probability of derivatives (defensive behavior) with changes in intensity of stimuli (Appendix F Table 15). Again contrary to prediction, those not prone to conflict surrounding the area represented by the stimulus manifest changes in the likelihood of derivatives with changes in intensity of stimuli. The nature of these changes is dependent on the stimulus content, being parallel but reciprocal to recognition behavior.

Implications

In theory, we must put more emphasis on the fact that defenses are a natural outcome of socialized living and must be expected in everyone as a normal mode of dealing with situations where one must modify, or exercise control over impulses in order to make their expression acceptable. The defenses of persons not seriously affected by conflict are similar to those who are prone to conflict. The difference between the two seems to lie in the finding that the conflict groups apply defenses more indiscriminately, rather than in a culturally integrative fashion.

General Prediction: The Nature of Derivatives

1. There will be differences in the nature of distortion, depending on whether or not the person has indicated conflict surrounding the situation. We are not saying here that people without conflict will be completely unaffected by conflict stimuli. Insofar as they do choose distorted alternatives relating to the picture, the degree of distortion should be less than for conflict subjects.

2. There will be changes in the nature of derivatives produced by persons with conflict depending on the affective intensity of the stimuli.

- (a) With stimuli that have connotations which elicit only weak affect related to conflict we would expect direct derivatives.
 - (b) When stimuli are stronger with respect to these connotations the derivatives should become indirect.
3. There will be changes in the nature of derivatives produced by persons with conflict as information about the situation increases.
- (a) With ambiguous situations which offer little information subjects having conflict with respect to an impulse may be expected to produce a fairly direct derivative of that impulse.
 - (b) As information about the affect eliciting situation increases, the derivatives should become more indirect.
 - (c) A point will finally be reached where the derivatives will again become direct, and/or recognition will occur.
 - (d) If more intense stimuli produce more indirect derivatives (see 2), then, where the stimulus has intense connotations for a conflict area, the re-appearance of direct derivatives will be delayed in comparison to less intense stimuli.

In the light of the findings of this study many modifications of these predictions seem in order.

I. It is not only personality but the situation eliciting conflict which determines defense. Different kinds of conflict produce different kinds of derivatives (Tables 24, 25).

II. Persons without abnormal conflict in the handling of socially prohibited impulses vary their behavior in a manner suggesting that there is a common mode of defense for these situations, a correlate to the common

modes of recognition or avoidance of affect related to the impulse (Table 24).

- A. In the case of situations eliciting affect related to sex, in the period before the affect is recognized, there will appear fairly direct derivatives which de-emphasize or rationalize the sexual aspects, but nonetheless have sexual implications.
- B. In the case of situations eliciting affect related to aggression, the derivatives produced prior to recognition will be of the extremely distorted type, denying or escaping from even the faintest implications of hostility.

III. The subjects in conflict over sex and aggression do not differ in the types of derivatives they produce. As opposed to the common mode of defense, there appears to be a conflict mode of defense (Appendix F Table 22).

IV. The conflict groups differ in the way they respond to situations not relevant to their conflict.

- A. Persons with conflict in the area of aggression defend in a manner similar to the common mode both in situations eliciting aggression, and in irrelevant situations eliciting sex conflict (Table 25).
- B. Persons with conflict in the area of sex are less consistent and selective in their defense. One might say they generalize more, for they react no differently in or out of (sex) conflict situations (Appendix F Table 23).

V. When we vary the intensity of affect we find differences in the nature of derivatives, but these differences are in the opposite direction from that predicted.

1. The aggression conflict group data (Table 27) suggest that situations eliciting weak affects related to aggression conflict are met with very distorted derivatives. As the strength of affect increases, more direct derivatives appear.
2. Persons with conflict in the area of sex show no significant change of derivatives with change in intensity of affect (Appendix F Table 26).
3. Persons without conflict show no significant changes in derivatives with change of intensity of affect (Appendix F Tables 24, 25, 27 and 28).

VI. When we vary the amount of information a person receives about situations related to a conflict area we find changes in the nature of derivatives. These changes are not the ones we predicted, however (Tables 29 - 35). Examination of the chi square tables suggests the following trend:

- A. When information is low there is a predominance of indirect derivatives, and of the denial or escaping field type of behavior. This is contrary to the original prediction that fairly direct derivatives would occur with high ambiguity.
- B. As information increases, the indirect derivatives drop out and direct derivatives appear.
- C. The denial type of behavior decreases as information increases, but even with relatively plentiful information it is almost

as prominent as the direct derivatives.

VII. Contrary to prediction, there were no differences between conflict and no conflict groups in the patterns of behavior changes with variation in information (Appendix F Tables 30 - 33, 35 - 38). It appears that reality orientation, or ego processes, of persons prone to conflict are affected no differently from the ego processes of persons without conflict as it is made more necessary to recognize affect related to taboo impulses.

VIII. The expected avoidance of direct derivatives until incontrovertible information about strong affective situations was available did not occur (Table 32).

Implications

The most important implication of this entire study is the significance it gives to the present situation as a determinant of defensive behavior. Defenses may be learned in childhood, but the findings based on our sample show that how and when they are applied is as much a result of the present situation as it is of the personality of the individual. It is necessary first to know what the situation's influence will be before we can judge the individual's behavior as discrepant, and thus apparently influenced by his own individual system of needs and defenses.

It is also important that in many of our subjects the reaction of the ego to stress was determined as much by their need to remain oriented to reality as it was to their avoidance of threat. Thus, when it became more necessary to deal with an unpleasant situation they dealt with it. However, there were some individuals in all groups who went counter to this trend. These people avoided the situation even when information was plentiful. Future research might well deal with the nature of their reversal.

Implications for Future Research

Our results convinced us that the greatest need in the way of future research is replication. We must now temper all our conclusions with the fact that we were working with a "normal" group, that is, a group without incapacitating conflict. To be sure of some of our tentative findings we feel the need to repeat the study with other normals. But also it should be repeated with samples of really maladjusted people. We do not know either whether these findings would hold true of men.

Other sets of pictures might produce different results, as might other sets of distorted interpretation alternatives, or "derivatives."

It will be necessary too, to study the specific nature of the various derivatives, and the defenses from which they come, as well as their hierarchical relationships.

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APPENDIX A

PICTURES EMPLOYED IN THIS EXPERIMENT

On the pages which follow the pictures employed as experimental stimuli have been reproduced. As an aid to the reader their content and their relative intensity are listed here.

<u>Picture No.</u>	<u>Content</u>	<u>Intensity</u>
1	Aggression	Weak
2	Aggression	Mild
3	Sex	Intense
4	Sex	Weak
5	Neutral	_____
6	Aggression	Intense
7	Neutral	_____
8	Neutral	_____
9	Sex	Strong
10	Sex	Mild
11	Aggression	Strong
12	Neutral	_____



1

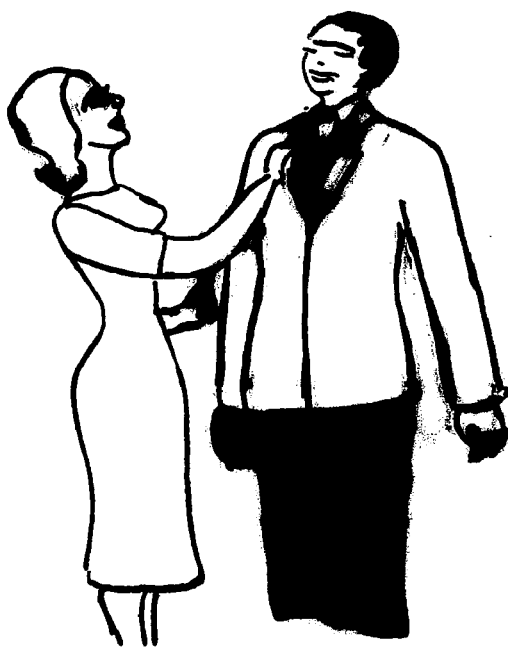


2

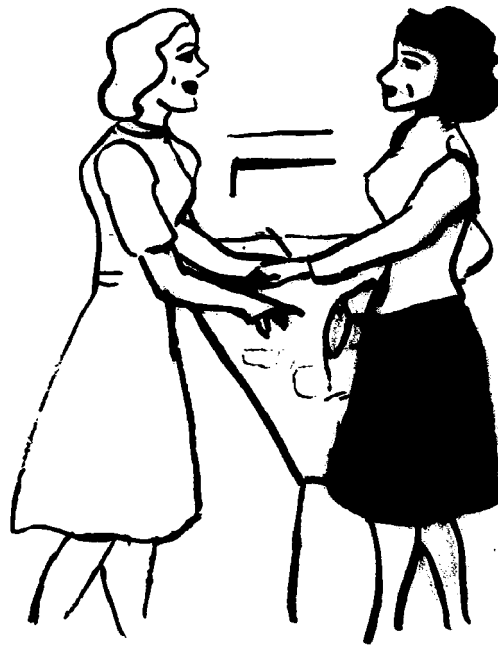
2



3



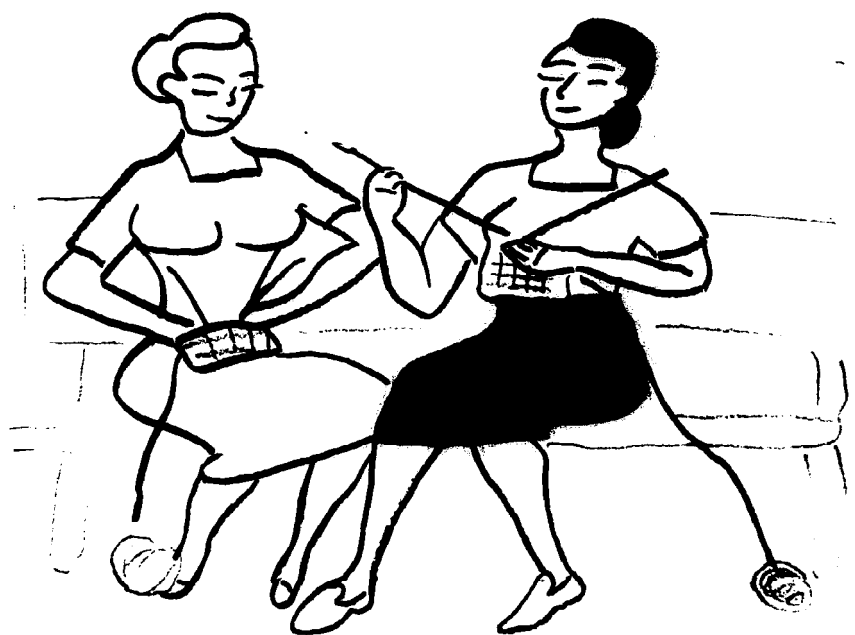
4



5

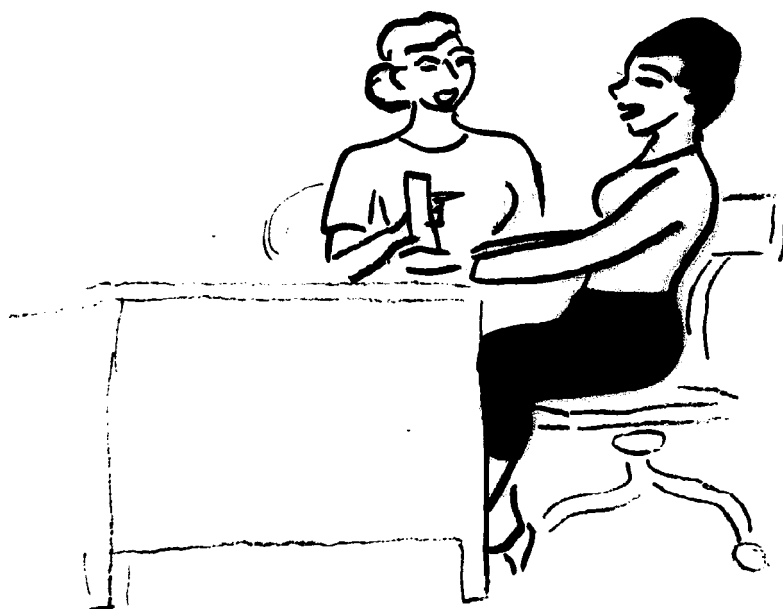


6

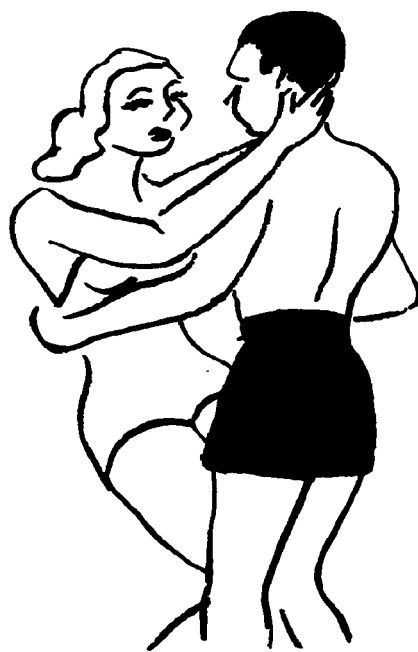


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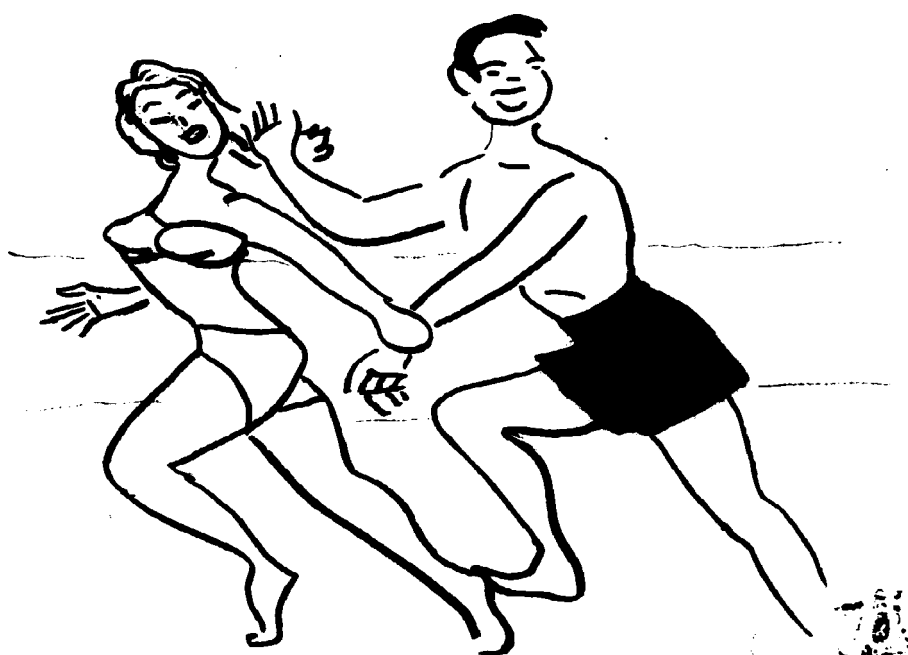
7



8



9

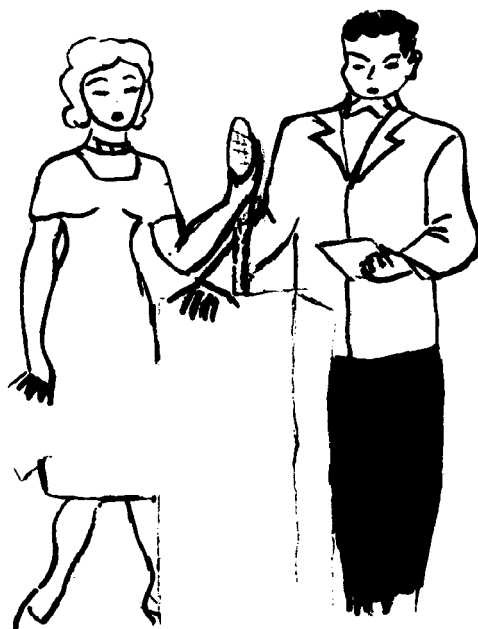


10



11.

11



12

128

APPENDIX B

CONTENT AND INTENSITY OF PICTURES AS DETERMINED BY JUDGES' RATINGS

As described in the text, a large number of pictures were set up to represent neutral, sexual, or aggressive activities. These were given to nine judges in a prearranged order. The judges were instructed:

You are being asked to serve as a judge as to the content of some pictures. Look at each picture and place it in a pile according to what basic impulse seems to be involved here. Record your results by impulse and number of each picture in each pile. Use a questionable category for those you cannot judge.

In the table summarizing the judges' ratings, the per cent of agreement on the content of the experimental pictures is given. It was suggested to the judges that they use a questionable category and it was hoped that they would place neutral pictures here. Most judges attempted to categorize neutral pictures in some way, but showed little agreement. The experimenter decided that the judges' lack of agreement was sufficient evidence that the neutral pictures really represented no definite sort of behavior. Therefore, pictures were called neutral if there was low interjudge agreement. Once the judge had made these sortings, he was told:

It was the experimenter's design in choosing these pictures to represent various degrees of impulse aggression and impulse sex. Will you now rank pictures number . . . which we believed to be related to sex. Please rank from most to least intense and record your results. (1 is weak, 15 is strong.)

Now do the same thing with the aggression pictures, numbers . . . (1 is weak, 10 is strong.)

In your opinion, are pictures number fairly neutral?

The median rank and the average deviation were computed and used as the basis for choosing the experimental pictures. The appropriate data for each of the pictures finally selected is given in the accompanying tables.

SEX PICTURES

Picture Number	Percent of Judges Who Said Picture Represented Sexual Impulse	Median Rank of Intensity Given by Judges	Average Deviation of Ranks
4	80	2	.8
10	100	6	.6
9	100	12	.4
3	100	14	.2

AGGRESSION PICTURES

Picture Number	Percent of Judges Who Said Picture Represented Aggression Impulses	Median Rank of Intensity Given by Judges	Average Deviation of Ranks
1	80	1	.4
2	80	5	.2
11	100	7	.4
6	100	9	.6

NEUTRAL PICTURES¹

Picture Number	Percent of Judges Who Agreed on Impulse Represented by Picture
5	0
7	40
8	40
12	40

¹Judges were told these pictures were supposed to be neutral, and were asked if they agreed. They accepted all pictures as neutral, but all suggested a change in facial expression in number 7. This change was made and accepted by the judges.

APPENDIX C

CRITERIA FOR SCORING PROJECTIVE STORIES AND THEIR RELIABILITY

Following are the criteria for evaluating projective material for conflict in the handling of sexual and aggressive impulses. For each story the numbers or letters which might appropriately be scored were recorded in the margin beside the story. In order to differentiate sex scores from aggression scores they were listed in separate columns. These scores were totaled for each story, and for the entire protocol, counting one point for each letter or number in the marginal list. When reactions appeared particularly intense a plus was added. The number of plus reactions was indicated parenthetically beside the total score for story and protocol.

Example of Scoring of Stories

<u>Story 1</u>		<u>Story 2</u>	
<u>Sex</u>	<u>Aggression</u>	<u>Sex</u>	<u>Aggression</u>
A	12	M	1
B	3		2
C+			3
D			4+
G+			6
Total			
5s (2 +)	2A	1S	5A (1+)

Criteria for Scoring Sex Conflict

I. Specific Pictures

- A. Mention of steady dating on Pictures 4 and 10, newlyweds, or unusual relationships such as brother and sister, secretary and boss (not mother-son, which was a popular interpretation).

(Note: These will sometimes be the only things scorable on these 2 pictures, though the stories should be checked for other points below.)

II. General Categories for All Sex Pictures

- B. Mention of difficult, unhappy, boring, insecure, unsuccessful or anxiety inducing endings, even if recovered from. This includes jealousy on sex pictures (where an aggression score may also be called for); or ambivalence, as "They'll have fun but the party is no good;" uncertainty about dating on son's part if Picture 4 is seen as mother-son picture; mother's inability to relate to son on Picture 4.

Score plus if such things are mentioned more than once. (This score is earned by any expression that the relationship ends with these feelings.)

- C. Mention of above in connection with character's feelings about the situation as apart from the way in which the relationship ends.

Score plus if mentioned more than once.

- D. Any mention of "using" the relationship for personal gain (e. g., he's taking advantage of her, she's doing it for money), one person leading another person on, one person being intellectually or experientially superior to the other, or indicating lack of love in the relationship.

Score plus if mentioned more than once.

- E. Ascription of low social status to one or both members (circus girl, prostitute, ignorant people, cheap girl), or if people are called adolescents, or referred to as male and female instead of man and woman where S does not ordinarily use the former in other stories.

Score plus if several derogatory adjectives are applied, as cheap and dumb.

- F. Mention of the need for one character to be seduced or maneuvered into the relationship, or a pick-up (e. g., she seduced him, he propositioned her).

- G. Ascription of animal or socially undesirable motives, or use of liquor (e. g., they're drunk, want sex, physical attraction, "I hope they're married," he's stepping out on his wife).

H. Indication the relationship is not permanent, is short term, broken off, or postponed (e. g., they neck awhile and go home, never see each other again, date once or twice and forget each other, she'll kiss him and go). Do not score if they leave beach, part to change clothes, and then go out again.

I. Mention by subject of personal disapproval, disgust, fear, confusion, upset, tension, shock. Noting behavior shouldn't occur in public. Denial of concern; "It's O.K. with me, if that's what they want." Statements like, "You can't trust men," "Should love nice people, if they're that kind, I don't care."

Score plus if S indicates real concern as, "I'm disgusted, or embarrassed," or is extremely condemnatory, or says, "I don't like it." Caution should be used with plus, for what often first appears an intense reaction is not when a frame of reference is built up.

J. Mention of some social disparagement of the act, punishment by society, by fate, loss of loved ones, or of partner in story because of sexual relationship.

Score plus if leads to divorce, real loss of status, if immorality of members are mentioned, or if dangers of sex are mentioned, as "It's dangerous to be in a parked car, some man might come and take girl."

K. Any distortion of the picture. Denial of sex, seeing the picture as some other type of relationship. Seeing it as a radio play, movie, book, comic strip.

Score plus if sex is completely denied, or picture is given sexual connotations beyond the picture (e. g., "I hope it only leads to kissing.")

Score double plus if must be denied twice, as comic strip and book both, if sex comes through despite the complete denial, or if character's sex is misperceived, as two boys. (This does not include mother-son on Picture 4.) Score 2Ks if denial is so complete as to rule out other scores (does not include mother-son on #4).

L. Erasures on story, blocking, incomplete story if S has completed others, cutting down obviously on number of words used. Evasiveness, as "God only knows how it will end!"

III. Sexual Connotations on Neutral or Irrelevant Pictures

M. Mention of dates, boy friends, babies, pregnancies or any sort of sexual relationship on any picture not labeled as sex picture, including both aggression and neutral (e. g., fighting over a man, expectant mothers knitting).

This may be a mere mention, or may go on to describe a whole sexual relationship, as in Picture 12 described as a soap opera story about

a man who deserts his wife. Categories B, G, H, I, J, K, and L are the ones most commonly concerned with M (e. g., pregnant and unhappy about it, score M and B; or pregnant women berating unwed mother score M, K, and J).

This does not include the mention of children being watched or discussed, nor a story in which husband intercedes in wife-mother-in-law fight.

Criteria for Scoring Aggression Conflict

I. Specific Pictures

1. Mention of winning, contest or opposition or opponents on Picture 1.
Score plus if mentions tension, competitive feeling. (Note: This will sometimes be scored alone, but attention should be given to below categories as well.)

II. General Categories for All Aggression Pictures

2. Creation of rift in relationship as a result of aggression, reacting to being beaten, hurt by the other's action, or a denial of these as "She won't feel badly about losing." Score also if story says fighting will prove nothing, or person shows or is attributed feelings of persecution.

Score plus if they never speak again, have further quarrels (though not if they merely get along poorly). Plus if mentioned more than once.

3. Bringing in authority relationship between females, as maid-employer, older-younger, matron-in-mate, mother or mother-in-law and daughter. Do not score mother-son (on sex and/or neutral pictures) unless the authority relationship is a problem.

Score plus for mother-daughter, or if the relationship is mentioned more than once in any way except for identifying characters.

4. Reaction to authority by rebelling, knuckling under, seeking authority for teaching or counsel.

Score plus if mentioned more than once, or if rebellion or submission is extreme, or in the latter case done with resentment, or if S says strife is typical of the relationship.

5. Ascription of low social status to one or both members, either aggressor or object (as maids, scrubwomen, insane people, prisoners or hard people). Be careful to note whether it is an authority relationship which is described and which would be scored 3, or whether it is the status which explains or rationalizes the act, which would be scored 5.

6. Ascription of animal motives, lack of self control, use of liquor, immaturity to aggressors. This would include women fighting over children's fights, and statements that S can find no motive for such an act.

Score plus for liquor, insanity, enjoyment of aggression.

7. Necessity for separation rather than ending the fight on their own, i. e., the appearance of some outside agent who curbs the aggression.
8. If aggression results in death, injury, or if S feels called upon to say she won't die, fear of death, or if death, illness or injury are brought into the story.

Score plus for death, including murder, or for death or injury on neutral stories.

Two murders in one story can be scored with two 8's if necessary to express the disturbance, i. e., if other scores cannot be given.

9. Mention of personal reaction of disgust, confusion, upset, disparagement of characters, statement that the picture seems unreal, saying people should stay away from each other, statement that all's fair in competition or the like, comment that they would like to see the aggressive play or movie they have described.

Score plus if S says aggression is justified, if she wishes people bad luck or does not sympathize with their plight, if she is glad one person wins, or says she dislikes one of the characters (and appears to like the other), statements such as "I hope she clobbers her." Statements of extreme personal reaction, "I'm afraid, tense, disgusted."

(Note: Mild criticism of the act, or statement that there are better ways to express anger, it's silly, or they're both to blame, or "I can't blame them for being angry but they could settle it differently," are considered within normal bounds. Thus do not score for a minor criticism of the act, but for violent reaction to it, or reaction and criticism to the whole idea of anger and hostility.)

10. Punishment, reprimand, or rejection for aggression by society, guilt over action, apology for act, fear of aggression, or anticipation of counter-aggression, sorrow because of act.

Score plus for death or imprisonment.

11. Any distortion of picture, denial of aggression or rationalization of picture as play, movie, book, radio. Saying picture seems unreal, making the characters into boys. Stories of helping or teaching relationships on aggression pictures. Gossiping as on Picture 2, if mention is made of how they're doing it, as "They're tearing her apart" (usually other aggression is denied in such cases). Adding more aggression than picture connotes (as wrestlers on Picture 12).

Score plus if aggression is denied completely; double plus if repeatedly denied, as "They're really friends except for this play," or if it is denied and reappears.

Score two 11's if so completely denied that no other score is possible.

12. Erasures on story, blocking (lack of completion of story) cutting down on the number of words obviously (providing the latter two do not occur on two neutrally interpreted stories). Evasiveness, as "God knows what caused it!"

III. Aggression Conflict on Neutral or Irrelevant Pictures

Mention of competition or aggression on any picture not labeled aggression, including getting ahead in the world, prizes, grades¹, quiz shows; if there are interpersonal difficulties due to person's feeling of superiority or snobbery; illness or death; if woman's dominance is noted on Pictures 1 or 2; persecution complex or suicide.

May be scored alone or in combination with other general categories, most usually with 3, 4, 8, 9, 10 (especially gossiping), 11. For example:

If authority relationships are mentioned on irrelevant or neutral pictures, score 3 (13), i. e., only one score, e. g., employer-employee, student-teacher relationships. If this relationship leads to difficulty, give a second score, category 4.

Score 13 and 4 for making fun of boss who'd be angry if he knew; or if teacher and student are discussing grades.¹

Score 13 and 9 for "I don't like that person," or "They shouldn't expect to be so happy all their lives."

Score 13 and 11 if girl enlists in armed forces with idea that men are forced to fight but women can choose; or "Mary grabbed John's hand, she's much too aggressive, and a water fight ensued."

Score 13+ if more than one of above items is mentioned, as valedictorian with highest grades¹, quiz show with prizes, or if person is unsuccessful in the competition introduced.

These criteria, as they are reproduced, were given to four judges along with the sample protocol which follows. They were requested to read the criteria, then score the stories. The experimenter's scores for each

¹In the case of scoring aggression for the mention of grades, do so only when the grades are a competitive matter, not when they are an index of difficulty, as in a story in which student and teacher are talking about why students get such poor marks. This would be scored 3 (13), 4. If the teacher were praising student for high grades, score would be 3, (13), 4.

story are given in the margin beside the item which determined their use. (Naturally, these were not given to the judges, but are included here for the convenience of the reader.) Scores were totaled for each picture, and at the end of the protocol for the entire protocol. Since the pictures were presented in a different order than in the final experiment, the final number of the picture is indicated parenthetically so that the reader may refer to the picture should he desire to do so.

Sample Protocol

Sex Aggression
Score Score

Story 1, Neutral (8)

- 3(13)
1. Who are the people in the picture?
Employer and prospective employee.
 2. What is happening now?
Employer has just hired girl.
 3. What led up to, or caused the situation?
Girl wants job, employer needs girl.
 4. How will the story end?
Both will be satisfied with each other.
 5. How do the people in the story feel about what's going on?
They are very happy.
 6. How do you feel about it?
I feel they are happy and that I'd enjoy a similar situation.
-

OS 1A

Story 2, Aggression (1)

- 1
1. Who are the people in the picture?
Two girl friends.
 2. What is happening now?
They are playing tennis.
 3. What led up to or caused the situation?
A desire for recreation and/or a love for the sport.
 4. How will the story end?
One girl will win, they will finish an enjoyable game.
 5. How do the people in the story feel about what is going on?
They are enjoying themselves.
 6. How do you feel about it?
The sport itself doesn't affect me, but I feel that I, too, would enjoy an afternoon spent in playing at a sport I liked, with a friend. I hope the girl in white wins!
- 9
-

OS 2A

Sex Aggression
Score Score

Story 3, Sex (10)

1. Who are the people in the picture?
Boy and his girl friend.
2. What is happening now?
They are running into the water, ready for a swim.
3. What led up to or caused the situation?
They are taking a day off from other cares to have fun.
4. How will the story end?
They will swim, romp, and spend a carefree afternoon, change clothes and go home.
5. How do the people in the story feel about what is going on?
They are very happy.
6. How do you feel about it?
I, too, am happy playing with those I care for and leaving my cares behind in childlike gaiety. I do think the girl is a bit dominating, pulling the boy.

13

OS

1A

Story 4, Sex (4)

1. Who are the people in the picture?
A mother and her son.
2. What is happening now?
Mother is straightening son's tie.
3. What led up to or caused the situation?
The son is going out on a date and was nervous and got his tie crooked and his mother wants him to look well.
4. How will the story end?
The son will thank her and leave, and won't resent her being helpful.
5. How do the people in the story feel about what's going on?
The mother is happy to be helping her son; he's appreciative, but he is nervous cause this is his first date and he doesn't know how to act.
6. How do you feel about it?
The mother is doing right, considering that her son doesn't feel babied by her help.

B

1S

OA

Story 5, Aggression (6)

1. Who are the people in the picture?
Mother and daughter.
2. What is happening now?
Mother is punishing daughter.

3

Sex Aggression
Scores Scores

Story 5 (cont.)

- 4 3. What led up to or caused the situation?
Daughter did something of which mother didn't approve.
- 2 4. How will the story end?
Daughter will dislike mother; mother will be angry and hurt.
5. How do the people in the story feel about what's going on?
Mother is furious, daughter is in pain, mentally as well as physically.
- 9 6. How do you feel about it?
Mother shouldn't get angry and violent, daughter is no longer a child.

OS 4A

Story 6, Neutral (12)

1. Who are the people in the picture?
Master of ceremonies and contestant.
2. What is happening now?
They are about to go on the air.
3. What led up to or caused the situation?
Girl was chosen out of the audience to participate.
- 13+ 4. How will the story end?
She will not win.
5. How do the people in the story feel about what's going on?
M.C. waiting to do his job. Girl frightened.
- 9 6. How do you feel about it?
Girl shouldn't be so timid or if she is, shouldn't be on radio.

OS 2A+

Story 7, Sex (3)

- E 1. Who are the people in the picture?
Man and woman of "ill repute."
2. What is happening now?
They are in car, she is on his lap.
3. What led up to or caused this situation?
He took her out and parked the car.
- J 4. How will the story end?
Since she is immoral he will make love to her.
- D, G+ 5. How do the people in the story feel about what's going on?
She is passive, she hopes for money. He is momentarily happy, wants sex.
- I 6. How do you feel about it?
It's their business, not mine.

5S+ OA

Sex Aggression
Score Score

Story 8, Aggression (2)

- | | | |
|----|----|--|
| | | 1. Who are the people in the picture? |
| | 3 | Mother and daughter. |
| | | 2. What is happening now? |
| | 4 | They are having an argument. |
| M | | 3. What led up to or caused the situation? |
| | | Mother's disapproval of daughter's beau. |
| H | 2 | 4. How will the story end? |
| | | Daughter will give him up, but will carry grudge against mother. |
| | | 5. How do the people in the story feel about what's going on? |
| | | Mother thinks she knows best, daughter is unhappy because she loves the boy and her mother and must give one up. |
| | | 6. How do you feel about it? |
| | | Girl should give up boy for awhile just to see. |
| | | Mother shouldn't interfere if she can possibly accept the boy. |
| 2S | 3A | |

Story 9, Neutral (7)

- | | | |
|----|----|---|
| | | 1. Who are the people in the picture? |
| | 3 | Mother and daughter. |
| | | 2. What is happening now? |
| | | They are knitting and talking. |
| M | | 3. What led up to or caused the situation? |
| | | Daughter is going to have a baby and they're knitting for it and talking about it. |
| | | 4. How will the story end? |
| | | Both mother and daughter will enjoy baby. |
| | | 5. How do the people in the story feel about what's going on? |
| | | They are very happy about it. |
| | | 6. How do you feel about it? |
| | | It is very pleasant to be able to have your mother with you to help you plan for your expected child. |
| 1S | 4A | |

Story 10, Aggression (11)

- | | | |
|---|--|--|
| | | 1. Who are the people in the picture? |
| | | Girl friends. |
| | | 2. What is happening now? |
| | | They are fighting. |
| M | | 3. What led up to or caused the situation? |
| | | One girl stole another girl's boy friend. |
| | | 4. How will the story end? |
| H | | Old girl will be minus boy and girl friend will have boy but won't want him. |

Sex Aggression
Score Score

Story 10 (cont.)

- 2, 10 5. How do the people in the story feel about what's going on?
Old girl very hurt and angry, new girl sorry, but
has to fight and has to take boy.
6. How do you feel about it?
Old girl shouldn't fight. If boy really liked her
he wouldn't have fallen for her friend.

2S

2A

Story 11, Sex (9)

1. Who are the people in the picture?
Girl and her boy friend.
2. What is happening now?
They are about to kiss.
3. What led up to or caused the situation?
They are on the beach, went swimming, are now talking
of love.
4. How will the story end?
They will kiss and will marry eventually.
5. How do the people in the story feel about what's going on?
They are very much in love.
6. How do you feel about it?
It is very wonderful to love someone and know you
are sincerely and deeply loved in return.

OS

OA

Story 12, Neutral (5)

- 13 1. Who are the people in the picture?
Girl and WAVE.
2. What is happening now?
WAVE is about to re-enlist.
3. What led up to or caused the situation?
WAVE liked the service, wants to join again.
4. How will the story end?
She will go back into service and see more of the
world.
5. How do the people in the story feel about what's going on?
WAVE is eager to re-enlist, woman is glad she's
doing it.
- 11 6. How do you feel about it?
Women are lucky that they can enlist and see the
world, men must fight and have no choice.

OS

2A

11S 19A Total score on protocol.

Per cent of agreement was calculated between each judge and the experimenter. It was noted that quite often there was agreement on the total score for a picture, even when there was no agreement on the use of a particular scoring category. Thus, both kinds of agreement were computed. For the convenience of the reader, and the writer, we will reproduce only the average per cent agreement on all sex and aggression categories, and the average per cent agreement on total scores for pictures.

	Average Percent Agreement With Experimenter on Category Scored	Average Percent Agreement With Experimenter on Total Score per Story
Judge 1	67	72
Judge 2	67	76
Judge 3	68	74
Judge 4	81	84

These figures indicate that the criteria are as reliable as most screening techniques of this sort.

It may be desirable to present a more detailed picture of the reliability of the specific categories. For these purposes, the experimenter lumped her judgments with those of the other judges, and computed the per cent of all judges who agreed on the use of each category. A question arose in connection with these computations which we could not answer. If judges are consistent in not using a category on one occasion and in using it on another, is this also a measure of reliability? To by-pass the question we calculated the average per cent of agreement in two ways. In one agreement was defined as consistency in the use of a category. In the other agreement was defined as consistency both in use and disuse of a

category. The dashes in the following tables refer to the fact that no judge employed that particular category on that particular picture. In the calculations of average per cent of agreement according to the second definition (consistency of use and disuse) these dashes were assumed to equal 100 per cent agreement on the disuse of the category.

RELIABILITY OF CRITERIA FOR
SCORING SEX CONFLICT

Cate- gor- ies	Pictures												Av. % Agreement in Use	Av. % Agree- ment in Use and Disuse
	1	2	3	4	5	6	7	8	9	10	11	12		
A	-	-	-	-	-	-	-	-	-	-	-	-		100
B	-	-	60	-	-	-	-	-	-	20	-	-	40	90
C	-	-	20	-	-	-	-	-	-	20	-	-	20	87
D	-	-	-	-	-	-	100	-	-	-	-	-	100	100
E	-	-	-	-	-	-	100	-	-	-	-	-	100	100
F	-	-	-	-	-	-	-	-	-	-	-	-		100
G	-	-	-	-	-	-	60	-	-	-	-	-	60	97
H	-	-	-	-	-	-	40	20	-	20	-	-	27	82
I	-	-	20	-	-	-	80	-	-	-	-	-	50	92
J	-	-	-	-	-	-	20	-	-	-	-	-	20	93
K	-	-	20	20	-	-	-	-	-	-	-	-	20	87
L	-	-	-	-	-	-	-	-	-	-	-	-		100
M	-	-	-	-	-	-	-	100	-	80	-	-	90	99

Average Agreement on 53
All Sex Categories

93

RELIABILITY OF CRITERIA FOR SCORING
AGGRESSION CONFLICT

Cate- gor- ies	Pictures												Av. % Agreement in Use	Av. % Agree- ment in Use and Disuse
	1	2	3	4	5	6	7	8	9	10	11	12		
1	-	80	-	-	-	-	-	-	-	-	-	-	80	99
2	-	-	-	-	80	-	-	80	-	100	-	-	87	97
3	80	-	-	20	100	-	-	100	60	-	-	-	72	88
4	-	-	-	-	20	-	-	80	20	-	-	-	40	85
5	-	-	-	-	40	-	-	-	-	-	-	-	40	95
6	-	-	-	-	-	-	-	-	-	-	-	-		100
7	-	-	-	-	-	-	-	-	-	-	-	-		100
8	-	-	-	-	-	-	-	-	-	-	-	-		100
9	-	40	-	-	60	40	-	-	-	20	-	-	40	80
10	-	-	-	-	-	-	-	-	-	20	-	-	20	93
11	-	-	-	-	-	-	-	-	-	-	-	100	100	100
12	-	-	-	-	-	-	-	-	-	-	-	-		100
13	-	20	80	-	20	100	-	20	-	-	-	100	57	78

Average Agreement on
All Aggression
Categories

59

93

It was possible in the criteria to indicate especially violent reactions by adding a plus to the score. Calculations of the reliability of plus scoring were made separately from the computations on the criteria. We will give only the average amount of agreement of judges with the experimenter.

Average Per Cent Agreement
with Experimenter on Plus
Scorings on Sex Categories

79

Average Per Cent Agreement with
Experimenter on Plus Scorings
on Aggression Categories

71

APPENDIX D

SCORES OF INDIVIDUAL SUBJECTS

Before examining the scores of the subjects, it may be well to have some idea of the basis for the assignment of subjects to groups. A distribution of the total scores of all subjects on sex criteria was set up, and the median and inter-quartile ranges were computed. A similar distribution of aggression scores was set up. These distributions were as follows:

Aggression Distribution		Sex Distribution	
Median	12	Median	7
First Quartile	0-10	First Quartile	0-3
Second Quartile	10-11	Second Quartile	4-6
Third Quartile	12-14	Third Quartile	7-9
Fourth Quartile	15-25	Fourth Quartile	10-25

Once the quartile placement of each subject on sex and aggression was available, the subject was assigned to the most suitable group. If she scored in the upper half of the distribution on sex and the lower half on aggression she was placed in the sex group. If she scored in the upper half of the aggression distribution and the lower half of the sex distribution she was placed in the aggression group. If she scored in the lower half of the distribution on both she was placed in the no conflict group.

SCORES OF INDIVIDUAL SUBJECTS:
SEX GROUP

Subject Number	Total Sex Score	Quartile on Sex	Total Aggression Score	Quartile on Aggression
30	14	4	7, 2+	1
11	13, 3+	4	10, 2+	2
83	12	4	8	1
40	11	4	8, 2+	1
53	10	4	4, 2+	1
67	10, 2+	4	9, 1+	1
16	9	3	8	1
60	9	3	10	2
50	9	3	11	2
46	9	3	11, 1+	2
39	8	3	9	1
21	8	3	10	2
73	8, 1+	3	11, 1+	2
45	8, 1+	3	11, 2+	2

(Subjects below were in sex group because, although they did not fit criteria of highest half of distribution on sex, and lowest half on aggression, they still were more appropriate members of the sex group than of any other, and were used to expand the size of the group.)

12	12	4	12	3
48	12, 2+	4	13	3
63	11	4	13, 3+	3
32	9	3	12, 1+	3

SCORES OF INDIVIDUAL SUBJECTS:
AGGRESSION GROUP

Subject Number	Total Aggression Score	Quartile on Aggression	Total Sex Score	Quartile on Sex
15	18, 4+	4	5	2
18	17	4	3	1
55	17, 3+	4	4	2
24	15, 1+	4	3	1
51	14, 3+	3	0	1
47	14, 2+	3	2	1
72	14, 1+	3	3, 1+	1
17	14	3	6	2
44	13, 4+	3	1	1
43	13, 2+	3	4	2
22	12, 1+	3	5	2

Subjects below were in aggression group because, although they did not fit the criteria of highest half of distribution on aggression, and lowest half on sex, they still were more appropriate members of aggression group than any other, and were used to expand the size of the group.

27	24, 1+	4	11	3
38	21	4	9	3
66	20, 1+	4	10, 2+	4
86	16, 3+	4	7	3
57	15, 3+	4	7, 2+	3

**SCORES OF INDIVIDUAL SUBJECTS:
NO CONFLICT GROUP**

Subject Number	Total Aggres- sion Score	Quartile on Aggression	Total Sex Score	Quartile on Sex
69	7	1	3	1
75	7, 2+	1	3, 1+	1
49	7	1	2, 1+	1
68	7	1	4	1
19	9	1	2	1
81	9, 1+	1	2	1
1	9, 3+	1	3	1
42	9, 1+	1	4, 2+	2
13	10, 2+	2	3	1
76	10, 2+	2	2	1
65	9, 1+	• 1	6, 1+	2
56	10	2	4	2
33	10	2	5	2
41	10	2	6	2
59	11	2	4	2

Subjects below were in no conflict group because although they did not fit the criteria of being in the lowest half of both sex and aggression distributions, they still were more appropriate members of the no conflict group than of any other, and were used to expand the size of the group.

82	7, 1+	1	7, 1+	3
58	9, 2+	1	8	3
10	12	3	5	2

APPENDIX E

THE LIST OF RESPONSE ALTERNATIVES: RATINGS OF AMOUNT OF DISTORTION

Rather than allow subjects free range in responding, we attempted to control response by giving the subject a list of alternative interpretations of the picture which would sample the whole range of behavior. This forced the subject to produce the kind of behavior we were interested in, in a manner which we could easily understand and code.

As described in the text, twelve alternative interpretations of each picture were set up. An effort was made to represent in these alternatives various kinds of defenses. Because we were using amount of distortion of an impulse as the criteria of how "drastic" the derivative was, we needed some objective measure of this distortion, both as a means of choosing which alternatives to give the subjects, and as a way of evaluating what it meant later, when the subject indicated his choice.

The twelve statements about each picture were given to eight judges, experts in the sense that they were all advanced graduate students ($N = 6$), or Ph. D.'s in psychology ($N = 2$). They were shown the picture, and asked to rank the statements according to the amount of distortion of the picture each statement showed. In their rankings 1 was to be undistorted, 12 was to be extremely distorted. Two of the judges behaved most peculiarly, ranking undistorted alternatives as extreme distortions, and demonstrating other erratic behavior not manifested by the rest of the judges. One of these judges had misunderstood the instructions. It appeared that the behavior of the other was a matter of personality. To include the ratings of these two judges tended to give a misleading

impression of the reliability of judgments. Therefore, a second distribution of judges' rankings was prepared from which these two judges were excluded. Both sets of figures are included in the tables given in this Appendix.

The criteria for choosing a statement were as follows:

1. A statement was to be selected to represent each of the four quartiles of the distribution of ranks. Thus we wanted a statement ranked between 1 and 3 to represent the "real content" of the picture, we wanted a statement ranked between 4 and 6 to represent mild distortion or direct derivatives; we wanted a statement ranked between 7 and 9 to represent great distortion or indirect derivatives; and one ranked between 10 and 12 to represent extreme distortion or very indirect derivatives. The median of the judges' rankings of each of the statements was computed. The statements were assigned to a quartile on the basis of this median.

2. We wished to choose the statement which was most consistently ranked within the desired quartile. A per cent of agreement on quartile placement was set up to satisfy this requirement.

3. We wished to be sure that the statement did not overlap in its rank with statements above or below it. The range of ranks was used as a measure of overlap.

When it was not possible to satisfy these requirements exactly, that statement was chosen which was the closest approximation to them.

Once four statements for each picture were selected, they were given to three other judges to rank in order 1 to 4. This was done as an extra check on the reliability of the rankings. These rankings are included in the tables which follow.

After the statements were chosen, the statements (except for the real content) from a sex picture, an aggression picture, and a neutral

picture were mixed together and the list presented in various orders each time one of these pictures was shown. The appropriate "real content" was added to the list each time it was presented.

The alternatives of the following pictures were combined:

- List A - Picture 6 (aggression), Picture 3 (sex), Picture 8 (neutral)
- List B - Picture 1 (aggression), Picture 10 (sex), Picture 7 (neutral)
- List C - Picture 2 (aggression), Picture 4 (sex), Picture 12 (neutral)
- List D - Picture 11 (aggression), Picture 9 (sex), Picture 5 (neutral)

AGGRESSION PICTURES

153

Statement	First Set of Judges			First Set Without The 2 Unreliable Judges			2nd Set of Judges Ranking Test Statements Only		
	Median	Range	Per cent Agreement on Quartile Placement	Median	Range	Per cent Agreement on Quartile Placement	Median	Range	Per cent Agreement on Quartile Placement
<u>Picture #1:</u>									
People playing a game of tennis	1	1-4	87	1	0	100	1	0	100
A scene from a movie about the Olympic games	4	3-5	75	4	4-5	100	2	0	100
A footrace at a picnic	8	6-10	62	7	6-9	67	3	3-4	67
A girl modeling a dress	11	5-12	62	11	6-11	67	4	3-4	67

Picture #2:

Two women arguing about something	1	1-4	86	1	0	100	1	0	100
Person warning another of some emergency	4	1-6	72	4	3-6	80	2	0	100
Girl reaching for helping hand of another person	8	7-9	86	8	7-9	80	3	0	100
Women exchanging gifts at a party	11	9-12	72	11	9-12	60	4	0	100

AGGRESSION PICTURES (Continued)

Statement	First Set of Judges			First Set Without the 2 Unreliable Judges			2nd Set of Judges Ranking Test Statements Only		
	Median	Range	Per cent Agreement on Quartile Placement	Median	Range	Per cent Agreement on Quartile Placement	Median	Range	Per cent Agreement on Quartile Placement
<u>Picture #11:</u>									
Women fighting, pushing each other in face	1	0	100	1	0	100	1	0	100
Gym teacher showing stu- dent how to guard in basketball	5	2-7	57	5	2-6	80	2	0	100
Children playing a clapping game	9	6-11	72	9	6-9	100	3	3-4	67
Nurse helping crippled patient walk	11	8-12	72	11	11-12	100	4	3-4	67
<u>Picture #6:</u>									
One woman strangling another	1	1-6	86	1	0	100	1	0	100
Ballet scene dealing with an argument	5	2-7	57	5	4-7	80	2	0	100
Ice skaters, one spin- ning the other	9	7-11	72	9	7-11	80	3	0	100
People shaking hands, one seated	11	10-12	100	11	10-12	100	4	0	100

SEX PICTURES

Statement	First Set of Judges			First Set Without The 2 Unreliable Judges			2nd Set of Judges Ranking Test Statements Only		
	Median	Range	Per cent Agreement on Quartile Placement	Median	Range	Per cent Agreement on Quartile Placement	Median	Range	Per cent Agreement on Quartile Placement
<u>Picture #4:</u>									
Woman fixing man's tie, going to party	1	1-9	88	1	0	100	1	0	100
Make-up artist and actor	4	3-10	62	4	3-6	67	2	0	100
Woman shoving man away	7.5	6-12	50	8	6-12	67	3	0	100
Woman brushing child's coat	12	11-12	100	12	10-12	100	4	0	100
<u>Picture #10:</u>									
Two people running on the beach	1	1-2	100	1	0	100	1	0	100
Advertisement for bathing suits	3	1-12	75	3	2-6	83	2	0	100
Boy helping girl who just tripped on something	9	6-12	50	9	6-12	67	3	3-4	67
A person singing, acting, dramatizing	11	6-12	62	11.5	6-12	67	4	3-4	67

SEX PICTURES (continued)

Statement	First Set of Judges			First Set Without The 2 Unreliable Judges			2nd Set of Judges Ranking Test Statements Only		
	Median	Range	Per cent Agreement on Quartile Placement	Median	Range	Per cent Agreement on Quartile Placement	Median	Range	Per cent Agreement on Quartile Placement
<u>Picture #9:</u>									
Man and woman embracing on the beach	1	1-2	100	1	0	100	1	0	100
People posing for sun tan oil ad	4	3-6	50	4	3-6	50	2	0	100
Old friends greeting each other after long separation									
	6.5	4-9	50	7	4-9	67	3	0	100
Man helping girl up some stairs	11.5	8-12	87	12	10-12	100	4	0	100
<u>Picture #10:</u>									
Woman sitting on man's lap	1	1-3	100	1	1-2	100	1	0	100
People posing for magazine illustration	4	3-8	50	3+5	3-5	67	2	0	100
Woman fell, man helping her regain balance	7	5-12	75	7.5	5-12	67	3	3-4	67
Mother talking to her small son	11	7-12	87	11	9-12	83	4	3-4	67

NEUTRAL PICTURES

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Statement	Per cent Agreement that Statement is Neutral
<u>Picture #12:</u>	
People at high school assembly	100
Person giving a speech	100
<u>Picture #8:</u>	
Mother talking to teacher about child	90
Two women discussing some work they are doing	100
<u>Picture #7:</u>	
Women sewing and chatting in doctor's office	90
Woman entertaining afternoon guest	100
<u>Picture #5:</u>	
Woman making dental appointment	90
Two friends visiting at lunch counter	100

APPENDIX F

ADDITIONAL CHI SQUARE TABLES

Included here are the tables of frequency of various types of behavior for which chi square tests of homogeneity were either not significant or were not crucial and meaningful to the research as a whole. These tables are included to show the full results of the study, but are relegated to an appendix for ease in reading.

TABLE 1

NUMBER OF SUBJECTS IN EACH EXPERIMENTAL GROUP
RECOGNIZING WEAK AGGRESSION STIMULI WITH
DIFFERENT AMOUNTS OF INFORMATION

Time	Aggression Group on Weak Aggression	Sex Group on Weak Aggression	No Conflict Group on Weak Aggression	Total
1,2	11	12	11	34
3	10	9	6	25
4	11	15	19	45
Total	32	36	36	104

$\chi^2 = 2.99, df = 4, p > .10$

TABLE 2

NUMBER OF SUBJECTS IN EACH EXPERIMENTAL GROUP
RECOGNIZING STRONG SEX STIMULI WITH
DIFFERENT AMOUNTS OF INFORMATION

Time	Aggression Group on Strong Sex	Sex Group on Strong Sex	No Conflict Group on Strong Sex	Total
1, 2	14	19	17	50
3	10	7	8	25
4	8	10	11	29
Total	32	36	36	104
$\chi^2 = 1.5, df = 4, p > .10$				

TABLE 3

NUMBER OF SUBJECTS IN EACH EXPERIMENTAL GROUP
RECOGNIZING WEAK SEX STIMULI WITH
DIFFERENT AMOUNTS OF INFORMATION

Time	Aggression Group on Weak Sex	Sex Group on Weak Sex	No Conflict Group on Weak Sex	Total
1	5	7	8	20
2	12	8	16	36
3, 4	15	21	12	48
Total	32	36	36	104
$\chi^2 = 5.71, df = 4, p > .10$				

TABLE 4

NUMBER OF SUBJECTS IN EACH EXPERIMENTAL GROUP
RECOGNIZING ALL NEUTRAL STIMULI AT
DIFFERENT LEVELS OF PRESENTATION

Time	Aggression Group on Neutral	Sex Group on Neutral	No Conflict Group on Neutral	Total
1	21	18	18	57
2	12	17	26	55
3	13	17	17	47
4	18	20	11	49
Total	64	72	72	208
$\chi^2 = 8.72, df = 6, p > .10$				

TABLE 5

FREQUENCY OF RECOGNITION OF WEAK AND STRONG
AGGRESSION STIMULI BY AGGRESSION GROUP
WITH VARIOUS AMOUNTS OF INFORMATION

Time	Aggression Group on Weak Aggression	Aggression Group on Strong Aggression	Total
1, 2	11	11	22
3	10	15	25
4	11	6	17
Total	32	32	64

$\chi^2 = 2.50, df = 2, p > .10$

TABLE 6

FREQUENCY OF RECOGNITION OF WEAK CONFLICT STIMULI
BY CONFLICT GROUPS WITH VARIOUS
AMOUNTS OF INFORMATION

Time	Aggression Group on Weak Aggression	Sex Group on Weak Sex	Total
1, 2	11	15	26
3	10	15	25
4	11	6	17
Total	32	36	68

$\chi^2 = 2.88, df = 2, p > .10$

TABLE 7

FREQUENCY OF DERIVATIVE AND NON-DERIVATIVE RESPONSES
IN THE AGGRESSION GROUP WITH CHANGES IN
AFFECTIVE INTENSITY OF AGGRESSION
STIMULI

Pictures	Derivative	Non-Derivative	Total
Weak	24	38	62
Strong	30	28	58
Total	54	66	120

$\chi^2 = 1.05, df = 1, p > .10$

TABLE 8

FREQUENCY OF DERIVATIVE AND NON-DERIVATIVE RESPONSES
IN SEX GROUP WITH CHANGES IN THE AFFECTIVE
INTENSITY OF AGGRESSION STIMULI

Pictures	Derivatives	Non-Derivatives	Total
Weak	32	41	73
Strong	23	33	56
Total Non-Recognition	55	74	129
Not significant by examination			

TABLE 9

FREQUENCY OF DERIVATIVE AND NON-DERIVATIVE RESPONSES
IN THE NO CONFLICT GROUP WITH CHANGES IN AFFECT-
IVE INTENSITY OF AGGRESSION STIMULI

Pictures	Derivatives	Non-Derivatives	Total
Weak	39	49	88
Strong	28	38	66
Total Non-Recognition	67	87	154
Not significant by examination			

TABLE 10

FREQUENCY OF DERIVATIVE AND NON-DERIVATIVE RESPONSES
IN THE SEX GROUP WITH CHANGES IN AFFECTIVE
INTENSITY OF SEX STIMULI

Pictures	Derivatives	Non-Derivatives	Total
Weak	29	27	56
Strong	27	35	62
Total Non-Recognition	56	62	118
Not significant by examination			

TABLE 11

FREQUENCY OF DERIVATIVE AND NON-DERIVATIVE RESPONSES
IN THE AGGRESSION GROUP WITH CHANGES IN THE
AFFECTIVE INTENSITY OF SEX STIMULI

Pictures	Derivatives	Non-Derivatives	Total
Weak	22	19	41
Strong	26	27	53
Total Non-Recognition	48	46	94
$\chi^2 = 1.94, df = 1, p > .10$			

TABLE 12

FREQUENCY OF DERIVATIVE AND NON-DERIVATIVE RESPONSES
IN THE NO CONFLICT GROUP WITH CHANGES IN THE
AFFECTIVE INTENSITY OF SEX STIMULI

Pictures	Derivatives	Non-Derivatives	Total
Weak	27	25	52
Strong	37	26	63
Total Non-Recognition	64	51	115
Not significant by examination			

TABLE 13

FREQUENCY OF DERIVATIVE AND NON-DERIVATIVE RESPONSES
IN ALL GROUPS ON AGGRESSION STIMULI

Pictures	Derivatives	Non-Derivatives	Total
Weak	95	128	223
Strong	81	99	180
Total Non-Recognition	176	227	403
Not significant by examination			

TABLE 14

FREQUENCY OF DERIVATIVE AND NON-DERIVATIVE RESPONSES
IN ALL GROUPS WITH CHANGES IN THE AFFECT-
IVE INTENSITY OF SEX STIMULI

Pictures	Derivatives	Non-Derivatives	Total
Weak	78	71	149
Strong	90	88	178
Total Non-Recognition	168	159	327
Not significant by examination			

TABLE 15

FREQUENCY OF NON-RECOGNITION BEHAVIOR IN SEX AND
AGGRESSION GROUPS WITH CHANGES IN AFFECTIVE
INTENSITY OF SEX AND AGGRESSION STIMULI

Pictures	Sex Group on Sex Stimuli	Aggression Group on Aggression Stimuli	Total
Weak	56	62	118
Strong	62	58	120
Total Non- Recognition	118	120	238
Not significant by examination			

TABLE 16

FREQUENCY OF CHOICE OF VARIOUS DERIVATIVE ALTERNATIVES TO
AGGRESSION PICTURES BY AGGRESSION GROUP
AND NO CONFLICT GROUP

Group	Direct Derivatives (2)	Indirect Derivatives (3)	Most Indirect Derivatives (4)	Unrelated Alternatives	Total
Aggression Group on Aggression	28	18	24	69	139
No Conflict Group on Aggression	32	21	29	95	177
Total Non- Recognition	60	39	53	164	316
Not significant by examination					

TABLE 17

FREQUENCY OF CHOICE OF VARIOUS DERIVATIVE ALTERNATIVES TO
AGGRESSION PICTURES BY AGGRESSION GROUP AND SEX GROUP

Group	Direct Derivatives (2)	Indirect Derivatives (3)	Most Indirect Derivatives (4)	Unrelated Alternatives	Total
Aggression Group on Aggression	28	18	24	69	139
Sex Group on Aggression	30	21	23	88	162
Total Non- Recognition	58	39	47	157	301
Not significant by examination					

TABLE 18

FREQUENCY OF CHOICE OF VARIOUS DERIVATIVE ALTERNATIVES TO
AGGRESSION PICTURES BY NO CONFLICT GROUP AND SEX GROUP

Group	Direct Derivatives (2)	Indirect Derivatives (3)	Most Indirect Derivatives (4)	Unrelated Alternatives	Total
Sex Group on Aggression	30	21	23	88	162
No Conflict Group on Aggression	32	21	29	95	177
Total Non- Recognition	62	42	52	183	339
Not significant by examination					

TABLE 19

FREQUENCY OF CHOICE OF VARIOUS DERIVATIVE ALTERNATIVES TO
SEX PICTURES BY SEX GROUP AND NO CONFLICT GROUP

Group	Direct Derivatives (2)	Indirect Derivatives (3)	Most Indirect Derivatives (4)	Unrelated Alternatives	Total
Sex Group on Sex	41	23	13	72	149
No Conflict Group on Sex	41	25	19	56	141
Total Non- Recognition	82	48	32	128	290
$\chi^2 = 2.62, df = 3, p > .10$					

TABLE 20

FREQUENCY OF CHOICE OF VARIOUS DERIVATIVE ALTERNATIVES TO
SEX PICTURES BY SEX GROUP AND AGGRESSION GROUP

Group	Direct Derivatives (2)	Indirect Derivatives (3)	Most Indirect Derivatives (4)	Unrelated Alternatives	Total
Sex Group on Sex	41	23	13	72	149
Aggression Group on Sex	32	26	13	50	121
Total Non- Recognition	73	49	26	122	270
$\chi^2 = 2.34, df = 3, p > .10$					

TABLE 21

FREQUENCY OF CHOICE OF VARIOUS DERIVATIVE ALTERNATIVES TO
SEX PICTURES BY NO CONFLICT GROUP AND AGGRESSION GROUP

Group	Direct Derivatives (2)	Indirect Derivatives (3)	Most Indirect Derivatives (4)	Unrelated Alternatives	Total
Aggression Group on Sex	32	26	13	50	121
No Conflict Group on Sex	41	25	19	56	141
Total Non- Recognition	73	51	32	106	262
Not significant by examination					

TABLE 22

FREQUENCY OF CHOICE OF VARIOUS DERIVATIVE ALTERNATIVES TO
CONFLICT STIMULI BY CONFLICT GROUPS

Group	Direct Derivatives (2)	Indirect Derivatives (3)	Most Indirect Derivatives (4)	Unrelated Alternatives	Total
Sex Group on Sex	41	23	13	72	149
Aggression Group on Aggression	28	18	24	69	139
Total Non- Recognition	69	41	37	141	288
$\chi^2 = 5.75, df = 3, p > .10$					

TABLE 23

FREQUENCY OF CHOICE OF VARIOUS DERIVATIVE ALTERNATIVES TO
SEX AND AGGRESSION STIMULI BY SEX GROUP

Group	Direct Derivatives (2)	Indirect Derivatives (3)	Most Indirect Derivatives (4)	Unrelated Alternatives	Total
Sex Group on Sex	41	23	13	72	149
Sex Group on Aggression	30	21	23	88	162
Total Non- Recognition	71	44	36	160	311
$\chi^2 = 5.67, df = 3, p > .10$					

TABLE 24

FREQUENCY OF CHOICE OF VARIOUS DERIVATIVE ALTERNATIVES IN NO
CONFLICT GROUP WITH CHANGES IN AFFECT-
IVE INTENSITY OF AGGRES-
SION PICTURES

Picture	Direct Derivatives (2)	Indirect Derivatives (3 & 4)	Unrelated & Block	Total
Weak (#1) and Mild (#2)	10	29	53	92
Strong (#11) and Intense (#6)	12	16	41	69
Total Derivatives	22	45	94	161

$\chi^2 = 2.27, df = 2, p > .10$

TABLE 25

FREQUENCY OF CHOICE OF VARIOUS DERIVATIVE ALTERNATIVES IN SEX GROUP WITH
CHANGES IN AFFECTIVE INTENSITY OF AGGRESSION PICTURES

Picture	Direct Derivatives (2)	Indirect Derivatives (3 & 4)	Unrelated and Block	Total
Weak (#1) and Mild (#2)	8	24	45	77
Strong (#11) and Intense (#6)	11	12	33	56
Total Derivatives	19	36	78	133

Not significant by examination

TABLE 26

FREQUENCY OF CHOICE OF VARIOUS DERIVATIVE ALTERNATIVES IN
SEX GROUP WITH CHANGES IN AFFECTIVE
INTENSITY OF SEX PICTURES

Picture	Direct Derivatives (2)	Indirect Derivatives (3 & 4)	Unrelated and Block	Total
Weak(#4) & Mild(#10)	9	20	29	58
Strong(#9)&Intense(#3)	13	14	37	64
Total Derivatives	22	34	66	122

Not significant by examination

TABLE 27

FREQUENCY OF CHOICE OF VARIOUS DERIVATIVE ALTERNATIVES IN
NO CONFLICT GROUP WITH CHANGES IN AFFECT-
IVE INTENSITY OF SEX PICTURES

Picture	Direct Derivatives (2)	Indirect Derivatives (3 & 4)	Unrelated and Block	Total
Weak (#4) and Mild (#10)	9	18	26	53
Strong (#9) and Intense (#3)	13	24	28	65
Total Derivatives	22	42	54	118
Not significant by examination				

TABLE 28

FREQUENCY OF CHOICE OF VARIOUS DERIVATIVE ALTERNATIVES IN
AGGRESSION GROUP WITH CHANGES IN AFFECTIVE
INTENSITY OF SEX PICTURES

Picture	Direct Derivatives (2)	Indirect Derivatives (3 & 4)	Unrelated and Block	Total
Weak (#4) and Mild (#10)	8	14	19	41
Strong (#9) and Intense (#3)	7	19	28	43
Total Derivatives	15	33	47	95
Not significant by examination				

TABLE 29

FREQUENCY OF CHOICE OF VARIOUS DERIVATIVE ALTERNATIVES IN
VACILLATORS IN ALL GROUPS WITH CHANGES IN
AFFECTIVE INTENSITY OF CONFLICT STIMULI

Pictures	Direct Derivatives (2)	Indirect Derivatives (3 & 4)	Unrelated and Block	Total
Weak	19	14	24	57
Strong	37	11	17	65
Total Vacillators	56	25	41	122
$\chi^2 = 6.93, df = 2, .05 > p > .02$				

TABLE 30

FREQUENCY OF CHOICE OF VARIOUS DERIVATIVE ALTERNATIVES BY NO CONFLICT GROUP ON WEAK AGGRESSION STIMULI WITH CHANGES IN AMOUNT OF INFORMATION VS. FREQUENCY OF SIMILAR CHOICES BY CONFLICT GROUPS ON WEAK CONFLICT STIMULI

A comment on the Fisher Method (11) for comparing chi square patterns is in order before we procede to the test:

chi square 1				total	chi square 2				total
a	b	c		m	g	h	i		s
d	e	f		n	j	k	l		t
total	r	q	p	o	x	w	v		u

Combining the two chi squares into a single table we get:

				total
	A	B	C	G
	D	E	F	H
total	L	K	J	I

where $A = a + g$

This combined table is then used to compute the expected frequencies for each of the smaller tables.

Expected frequency for "a" = $\frac{A}{I} o$

Expected frequency for "g" = $\frac{A}{I} u$

Combining Tables 29 and 30 in Chapter VI, we get:

Time	Direct Derivatives (2)	Indirect Derivatives (3 & 4)	Unrelated and Block	Total
1	6	33	53	92
2	7	31	33	71
3	6	10	28	44
4	21	4	20	45
Total	40	78	134	252

Using this table as a basis for computing a new set of theoretical frequencies for Table 30, a new chi square was calculated:

$$\chi^2 = 3.72, \quad df = 6, \quad p > .10$$

TABLE 31

FREQUENCY OF CHOICE OF VARIOUS DERIVATIVE ALTERNATIVES BY NO CONFLICT GROUPS ON WEAK SEX STIMULI WITH CHANGES IN AMOUNT OF INFORMATION VS. FREQUENCY OF SIMILAR CHOICES BY CONFLICT GROUPS ON WEAK CONFLICT STIMULI

Combining Tables 29 and 31 in Chapter VI, we get:

Time	Direct Derivatives (2)	Indirect Derivatives (3 & 4)	Unrelated and Block	Total
1	5	33	39	87
2	9	25	27	61
3, 4	23	8	32	63
Total	37	66	108	211

Using this table as a basis for computing new expected frequencies for Table 31, a new chi square was calculated:

$$\chi^2 = 2.55, df = 4, p > .10$$

TABLE 32

FREQUENCY OF CHOICE OF VARIOUS DERIVATIVE ALTERNATIVES BY AGGRESSION GROUP ON WEAK SEX STIMULI WITH CHANGES IN AMOUNT OF INFORMATION

Time	Direct Derivatives (2)	Indirect Derivatives (3 & 4)	Unrelated and Block	Total
1	6	6	14	26
2	2	8	5	15
3, 4	5	3	4	12
Total	13	17	23	53

$$\chi^2 = 6.11, df = 4, p > .10$$

(Unreliable due to small expected frequencies)

TABLE 33

FREQUENCY OF CHOICE OF VARIOUS DERIVATIVE ALTERNATIVES BY SEX GROUP ON WEAK AGGRESSION STIMULI WITH CHANGES IN AMOUNT OF INFORMATION

Time	Direct Derivatives (2)	Indirect Derivatives (3 & 4)	Unrelated and Block	Total
1	4	11	18	33
2	0	11	15	26
3, 4	5	8	20	33
Total Derivatives	9	30	53	92

$\chi^2 = 7.67, df = 4, p > .10$

TABLE 34

FREQUENCY OF CHOICE OF VARIOUS DERIVATIVE ALTERNATIVES BY CONFLICT GROUPS ON STRONG CONFLICT STIMULI WITH CHANGES IN AMOUNT OF INFORMATION VS. FREQUENCY OF SIMILAR CHOICES BY CONFLICT GROUPS ON WEAK CONFLICT STIMULI

Combining Tables 29 and 32 in Chapter VI we get:

Time	Direct Derivatives (2)	Indirect Derivatives (3 & 4)	Unrelated and Block	Total
1	13	34	75	122
2	16	31	38	85
3	13	8	25	46
4	27	8	17	52
Total	69	81	155	305

Using this table as a basis for computing a new set of expected frequencies for Table 32, a new chi square was calculated:

$$\chi^2 = 6.77, df = 6, p > .10$$

TABLE 35

FREQUENCY OF CHOICE OF VARIOUS DERIVATIVE ALTERNATIVES
BY NO CONFLICT GROUP ON STRONG AGGRESSION WITH
CHANGES IN THE AMOUNT OF INFORMATION

Time	Direct Derivatives (2)	Indirect Derivatives (3 & 4)	Unrelated and Block	Total
1	5	5	22	32
2	3	4	12	19
3, 4	8	9	11	28
Total	16	18	45	79

$\chi^2 = 5.79, df = 4, p > .10$

TABLE 36

FREQUENCY OF CHOICE OF VARIOUS DERIVATIVE ALTERNATIVES
BY NO CONFLICT GROUP ON STRONG SEX STIMULI WITH
CHANGES IN AMOUNT OF INFORMATION VS. FRE-
QUENCY OF SIMILAR CHOICES BY CONFLICT
GROUPS ON STRONG CON-
FLICT STIMULI

Combining Tables 32 and 33 in Chapter VI, we get:

Time	Direct Derivatives (2)	Indirect Derivatives (3 & 4)	Unrelated and Block	Total
1	14	24	57	95
2	15	20	26	61
3,4	44	17	24	85
Total	73	61	107	241

Using this table as a basis for computing new theoretical frequencies for Table 33, a new chi square was calculated:

$$\chi^2 = 2.57, df = 4, p > .10$$

TABLE 37

FREQUENCY OF CHOICE OF DERIVATIVE ALTERNATIVES BY AGGRESSION GROUP ON STRONG SEX STIMULI WITH CHANGES IN AMOUNT OF INFORMATION VS. FREQUENCY OF SIMILAR CHOICES BY CONFLICT GROUPS ON STRONG CONFLICT STIMULI

Combining Tables 32 and 34 in Chapter VI, we get:

Time	Direct Derivatives (2)	Indirect Derivatives (3 & 4)	Unrelated and Block	Total
1	14	23	55	92
2	12	21	27	60
3, 4	39	14	22	75
Total	65	58	104	227

Using this table as a basis for computing new expected frequencies for Table 34, a new chi square was calculated:

$$\chi^2 = 4.75, \text{ df} = 4, p > .10$$

TABLE 38

FREQUENCY OF CHOICE OF DERIVATIVE ALTERNATIVES BY SEX GROUP ON STRONG AGGRESSION STIMULI WITH CHANGES IN AMOUNT OF INFORMATION VS. FREQUENCY OF SIMILAR CHOICES BY CONFLICT GROUPS ON STRONG CONFLICT STIMULI

Combining Tables 32 and 35 in Chapter VI, we get:

Time	Direct Derivatives (2)	Indirect Derivatives (3 & 4)	Unrelated and Block	Total
1	15	22	56	93
2	16	13	32	61
3, 4	31	16	24	71

Using this table as a basis for computing a new set of expected frequencies for Table 35, a new chi square was calculated:

$$\chi^2 = 1.59, \text{ df} = 4, p > .10$$