

POSTHYPNOTIC CONFLICT, REPRESSION
AND PSYCHOPATHOLOGY

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ABSTRACT

POSTHYPNOTIC CONFLICT, REPRESSION AND PSYCHOPATHOLOGY

by Harold S. Sommerschield

Reyher's (1967) procedure for posthypnotic activation of hypnotically induced conflicts was used to study the relationships between repression of sexual and aggressive impulses and the frequency of symptomatology, types of psychopathology, anxiety, and cognitive behavior. Three types of psychosomatic theories also were evaluated.

While deeply hypnotized, 12 normal, male Ss were given two conflicts which aroused sexual and aggressive feelings towards an older, attractive woman. The conflicts were implanted in consecutive sessions and counterbalanced across Ss. A counting procedure was used to intensify the impulses from mild to intense to overwhelming. The conflicts were posthypnotically activated by the presentation of conflict words (c-words), which were temporally and meaningfully related to the conflicts. Neutral words (n-words), which were randomly presented with the c-words at each level of impulse intensity, were employed to evaluate the psychopathological reactions to c-words. C- and n-words

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were reversed for the two conflicts. Each S was instructed to pronounce each word and then to give an accurate and complete description of how he was doing. Five Ss, who were good hypnotic Ss, were given instructions to simulate the behavior of hypnotic Ss by a co-experimenter. Three potential simulating Ss became hypnotized during a brief induction of hypnosis prior to the implanting of the conflicts and thus were removed from the simulating condition. All hypnotic Ss including the three Ss, who were removed from the simulating condition, were divided into good and poor repressors on the basis of their Index of Repression Scores (Reyher, 1967).

Analysis of the results indicated that psychopathology can be produced by this procedure. Comparisons between hypnotic and simulating Ss refuted the hypothesis that the psychopathology of hypnotic Ss was elicited by the demand characteristics of the experimental design.

The symptomatology of hypnotic Ss was consistently and significantly related to the degree of repression. Support for the repression hypothesis was provided by the GSR analyses and the postconflict reports and behavior of hypnotic Ss. Since the poor repressors had significantly greater repression on the sexual conflict in comparison with the conflict involving anger, it was concluded that the sexual conflict was more pathogenic. Significant negative relationships were found between repression and the

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frequency of symptom reactions and number of symptom types. Initially as repression decreased both anxiety and symptoms increased. With the resolution of the anger conflict, both anxiety and symptomatic complaints decreased.

Psychosomatic symptoms occurred when repression began to decrease in highly repressed Ss. The type of psychosomatic symptoms appeared to be a function of the individual's characteristic pattern of autonomic nervous system activity to stress as well as a function of the pattern of physiological activation associated with specific drives.

The predicted differences were not found between hypnotic good and poor repressors on the cognitive measures of drive representation. It was hypothesized that Perkin's (1965) findings were not replicated because (1) the poor repressive group contained some Ss who did not comply with posthypnotic suggestions for expressing the impulses and (2) the selection of the TAT cards maximized impulsive themes which may have reduced the differences between groups.

Approved:

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POSTHYPNOTIC CONFLICT, REPRESSION
AND PSYCHOPATHOLOGY

By

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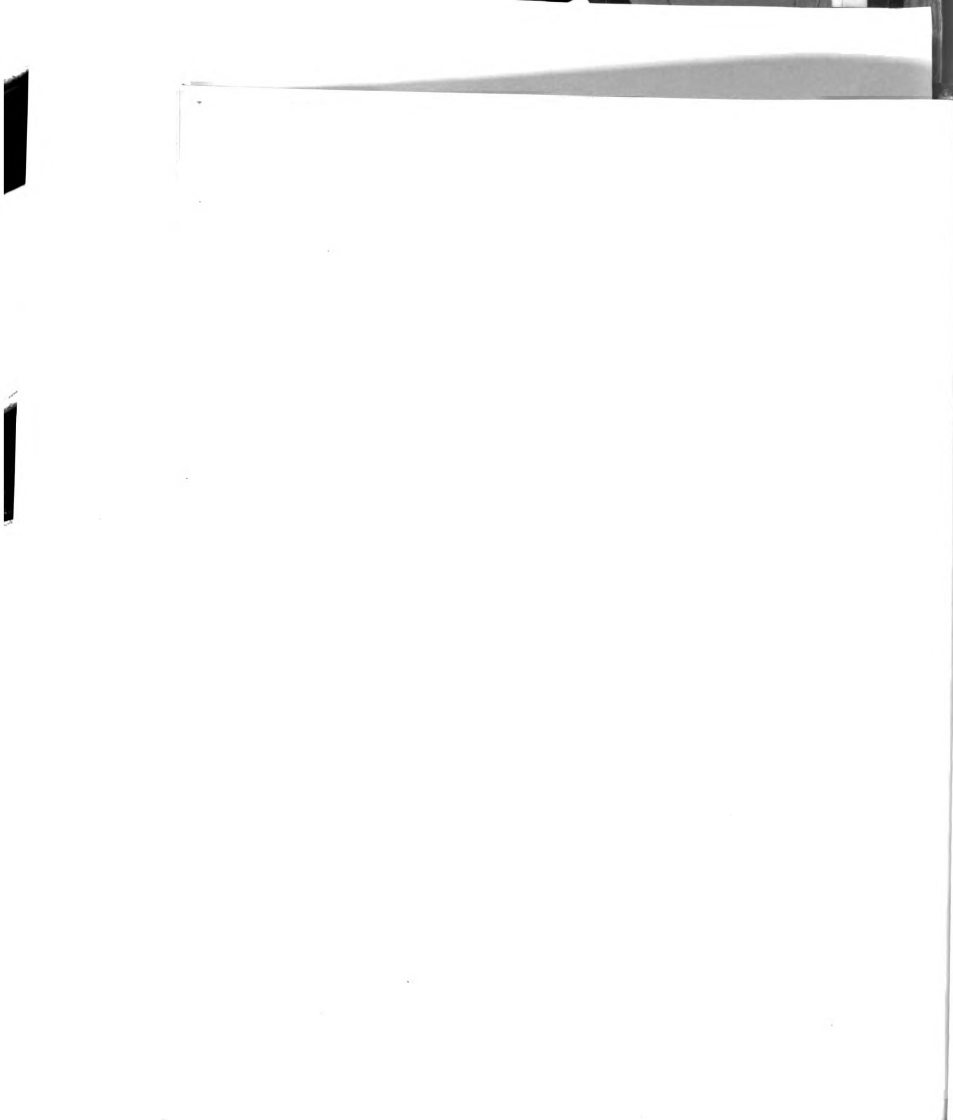
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POSTHYPNOTIC CONFLICT, REPRESSION
AND PSYCHOPATHOLOGY¹

INTRODUCTION

Hypnotic implantation and posthypnotic stimulation of intense rage and a destructive impulse have resulted in the spontaneous occurrence of a wide variety of symptoms, including psychosomatic reactions (Reyher, 1958, 1961, 1962, 1967; Moore, 1963; and Perkins, 1965). Both Reyher and Perkins reported that the frequency of symptoms and number of types of symptoms are inversely related to the degree of repression. That is, good repressors (GR) tend to have predominately psychosomatic reactions, while poor repressors (PR) have a greater variety of symptoms. Appendix A contains a more extensive review of the literature related to this study.

Sheehan (1959) has suggested that the psychopathology produced by the posthypnotic stimulation of implanted conflicts is not primarily related to repression, but rather is the result of compliance with the demand characteristics of the research. Reyher (1969) attributed Sheehan's conclusions to the following deviations from the procedures followed by Reyher and Perkins: (1) specific posthypnotic



suggestions regarding psychopathology were given to both simulating and hypnotic Ss, (2) relatively weak, pathogenic conflicts were implanted, and (3) the unexpected, psychopathological reactions experienced by the hypnotic Ss as they responded to the battery of personality tests were minimized. The following quotation indicates that Sheehan observed, but disregarded identical reactions which were initially of focal importance in the development of the repression hypothesis (Reyher and Perkins):

The subjective reality of their feelings argues for changes and distortions in their behavior which accord with individual differences in the personality dynamics of Ss. In support of this, the evidence showed that hypnosis had no single effect on Ss' personalities even though the same paramnesia was suggested to all Ss. Subjective reactions ranged from expression of somatic symptoms such as headaches to symptoms of unspecified distress, paranoid ideas, and aggressive urges. Hypnotic Ss all reported that they experienced amnesia for the conflict material yet showed varying signs of breakdown of ego defenses. The most extreme reaction came from a hypnotic S who was agitated enough to hurl the TAT card at E and say that he felt as if the police were watching him through a one-way screen which was placed in the room (p. 24).

Reyher and Perkins implanted paramnesias involving:

(1) anger towards an authority figure, (2) coupled with an impulse to destroy important papers belonging to the authority figure, (3) activated by posthypnotic cues, and (4) intensified from mild to overwhelming and uncontrollable. GSR activation data supported the repression hypothesis in both studies. Hypnotic Ss had significantly more GSR activity than simulating Ss. Hypnotic PRs had significantly more GSR activity than hypnotic GRs.

Perkins also found that there was a correlation between repression as measured on the TAT and elicited by the hypnotic procedures. GRs produced neurotic impulse representation on the TAT, while PRs expressed psychopathic impulse representation.

Research in psychosomatics has been meager and mainly of a statistical or clinical nature rather than on an experimental nature. The lack of effective and reliable experimental methods has curtailed experimentation. However, the hypnotic introduction and posthypnotic activation of conflicts has been an effective method for generating psychosomatic reactions and thus appears to be a potential method for studying psychosomatic reactions.

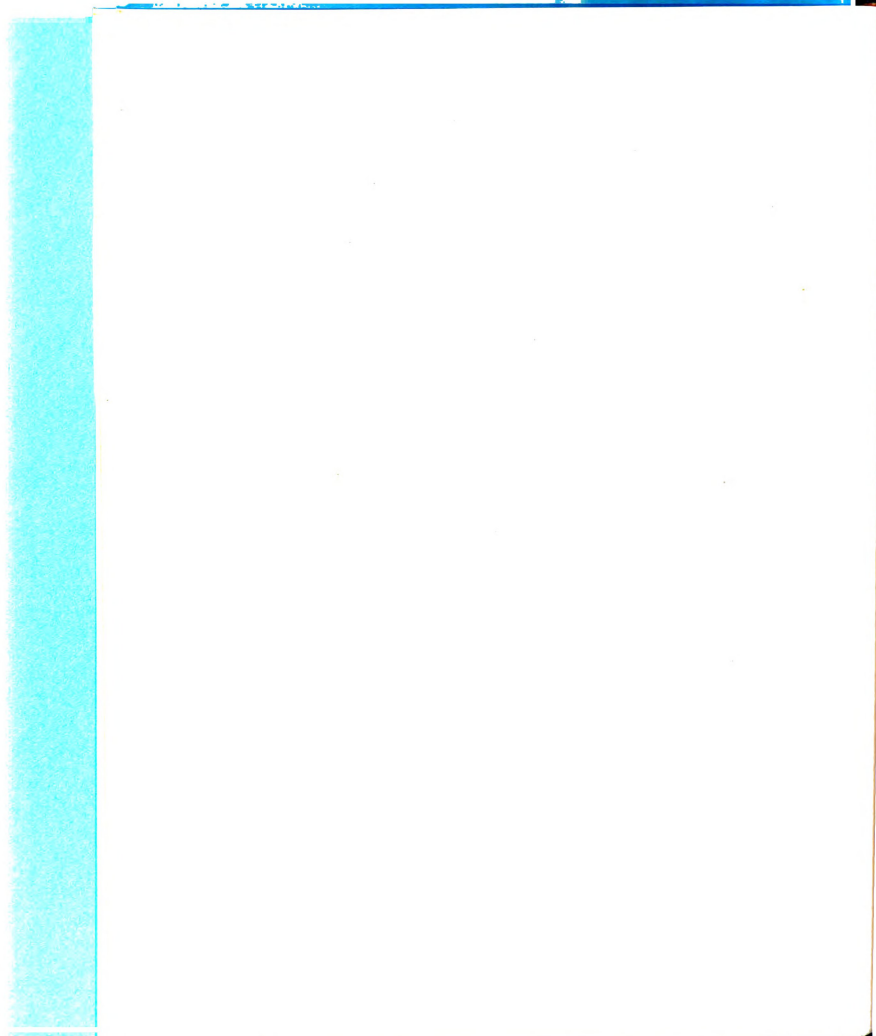
Mendelson, Hirsh, and Weber (1956) have critically evaluated some of the major theories of psychosomatic reactions. For the purpose of this study theories are classified into stimulus specificity theories, response specificity theories, and a degree of repression theory. Alexander (1950) is the most representative proponent of the stimulus specificity theorists. He posited a chronic, specific emotional conflict or constellation exists in each psychosomatic reaction. Furthermore, each emotional conflict has its specific physiological accompaniment. Proponents of the response specificity theories (Hendrick, 1953; Lacey, Bateman, and Van Lehn, 1953; Wenger, Clemens, Coleman, Cullen, and Engel, 1961; and Wolff, 1950) have postulated

that individuals react to all stimuli with the same autonomic pattern of activation. A degree of repression theory has been developed by Reyher from White's observations (1956). White proposed that it is necessary to consider the status of the impulse as well as the specific emotional conflict associated with each disorder. Reyher's experimental data suggests that the degree of repression is a critical variable related to the type and frequency of symptoms.

This study was designed to replicate the findings regarding the repression of anger and psychopathology as well as to investigate the relationships between repression of a sexual impulse and psychopathology with Reyher's procedure for induced posthypnotic conflict. After dividing the hypnotic Ss into GRs and PRs, it was predicted that GRs and PRs would respond to the TAT with neurotic and psychopathic impulse representation, respectively. Since the two paramnesias involve two different impulses, it was possible to evaluate the three types of theories pertaining to psychosomatic reactions.

Hypotheses

Hypothesis I: There is an inverse relationship between the degree of repression and the frequency of symptoms regardless of the drive.



Hypothesis II: There is an inverse relationship between the degree of repression and the variety of symptoms expressed regardless of the drive.

Hypothesis III: There is a sequence of symptoms as repression weakens regardless of the drive.

Hypothesis IV:

A. Stimulus specificity theory: Different autonomic nervous system symptoms are produced by different drives.

B. Response specificity theory: The same autonomic nervous system symptoms are produced regardless of the drive.

C. Degree of repression theory: An increase in frequency and types of symptoms occurs with a decrease in repression regardless of the drive.

Hypothesis V: A high percentage of symptoms generated by the activation of the implanted conflicts are experienced by Ss in everyday life.

Hypothesis VI: Hypnotic PRs respond to selected TAT cards with more psychopathic impulse representation than hypnotic GRs regardless of the drive.



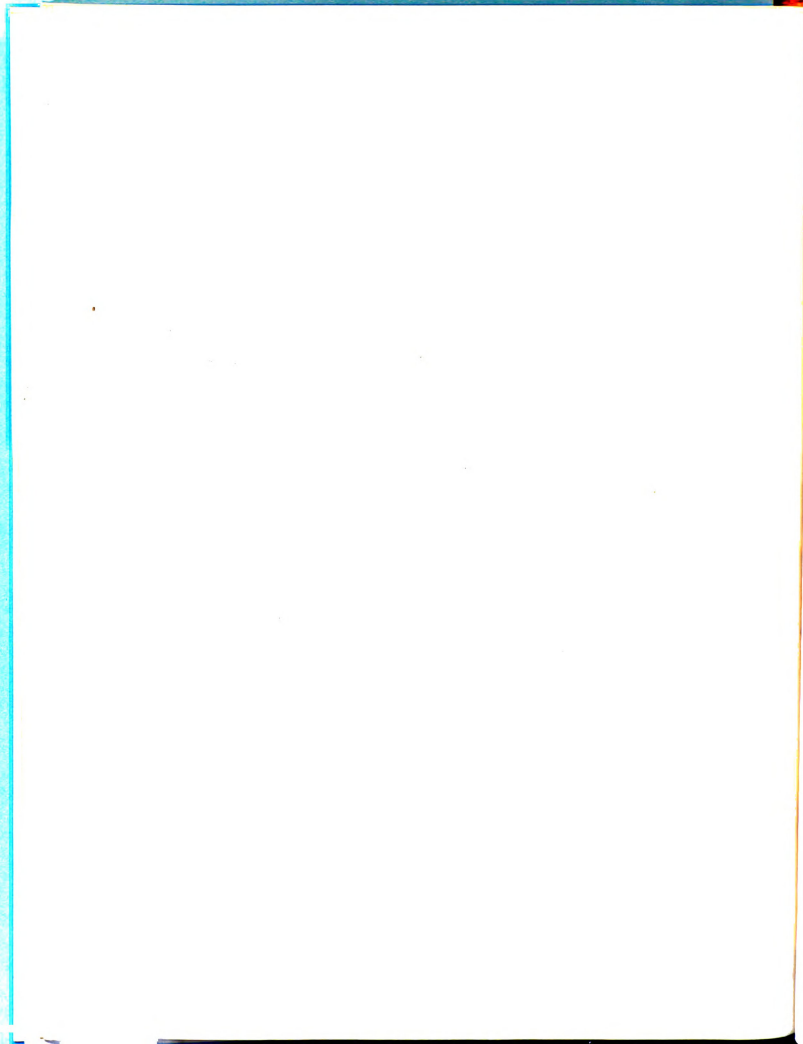
METHOD

Subjects

All Ss were selected from a population of male volunteers, who had signed up to participate in a hypnotic experiment. All Ss met the criteria for deep hypnotizability, which included: (1) positive visual and auditory hallucinations, (2) amnesias, and (3) hyperesthesia. Each S's hypnotic susceptibility was determined by his performance on the Harvard Group Scale of Hypnotic Susceptibility (1962) and his performance in individual sessions. A brief interview was conducted with each S in order to exclude potential Ss with severe psychopathology.

Each S was randomly assigned to either a hypnotic or stimulating condition by a co-experimenter (E_2). The simulating (S) Ss were treated exactly like the hypnotic (H) Ss except that E_2 instructed them to simulate hypnosis during the sessions involving the paramnesias. The hypnotist-experimenter (E_1) was not aware of the placement of Ss in the two groups.

Originally it was planned to have twelve hypnotic and six simulating Ss. However, three of the first four potential simulating Ss reported becoming hypnotized during

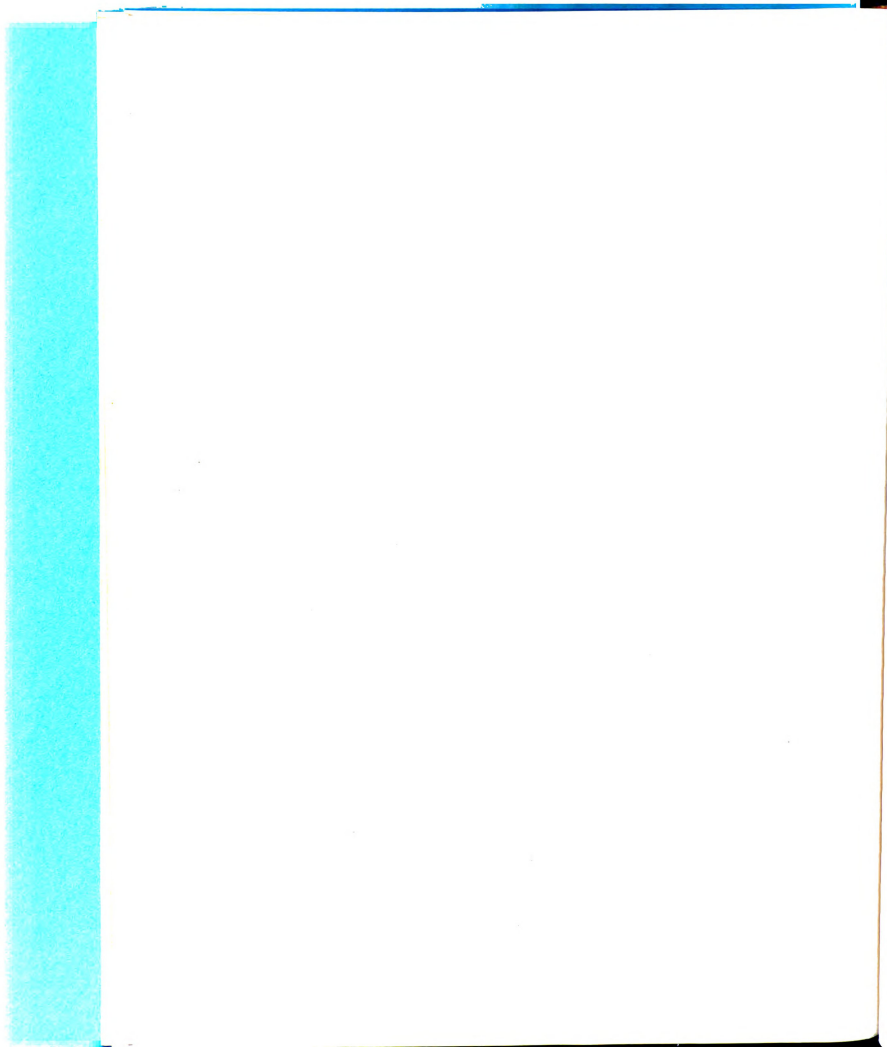


a brief induction prior to implanting the paramnesias. Neither a direct suggestion before nor a direct suggestion given after the co-experimenter had hypnotized each S was strong enough to prevent possible simulating Ss from becoming hypnotized. Finally, the co-experimenter gave post-hypnotic suggestions regarding the simulating instructions and this method proved to be quite effective. The last four simulating Ss were given their instructions as post-hypnotic suggestions. Research reported by Reyher (1968) indicates that Ss perform posthypnotic suggestions without re-entering the hypnotic state. In addition, the simulating S's reports attest to the successful simulation of hypnosis.

For all comparisons involving simulating and hypnotic conditions there were five simulating and twelve experimental Ss. The three hypnotized simulating Ss were added to the hypnotic group for comparisons between PRs and GRs.

Procedure

Each S was seen for four two hour sessions. In the first session the Harvard Group Scale of Hypnotic Susceptibility was administered. In the second session additional hypnotic experience was provided for each S, base-line data was obtained for the stimulus words, and the TAT was administered. The paramnesias were presented in counterbalanced order across Ss in the third and fourth sessions. In order



to keep Ss as naive as possible about the research, at the end of the third session each S was rehypnotized and given the suggestion that the paramnesia was like a dream and would disappear from consciousness (Reyher, 1958). At the end of the fourth session each S was rehypnotized and given an amnesia for the experimental procedures. Then the self-report symptom inventories were completed. Finally, the nature of the experiment was explained to each S in the hypnotic and waking state.

Paramnesia Introduction

The paramnesias were introduced following Erickson's (1944) instructions:

Now as you continue to sleep, I am going to recall to your mind this event, which occurred not long ago. As I recount this event to you, you will recall fully and completely everything that happened. You will remember each and every detail fully. Now, bear in mind, that while I repeat what I know of this event, you will recall fully and completely everything just as it happened, and more than that, you will re-experience the various emotions which you had at that time and you will feel exactly as you did while this event was taking place. Now, the particular event of which I am going to tell you is this . . .

Paramnesias

The sexual paramnesia was adapted from Eisenbud's (1937) original. The paramnesia is as follows:

These events occurred one evening while S was out walking. As S was leisurely walking, his attention was drawn to an attractive, older woman who seemed quite upset. S offered to be of assistance as the woman was about to pass him. Frantically, the woman revealed that she had lost her purse and did not have enough money for her bus fare. S wishing to help the woman,

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reached into his pockets and his wallet. He only had a ten dollar bill. He then offered to accompany her to the bus and pay her fare. She, however, felt very indebted to S and insisted that he accompany her to her apartment in order that she might repay him. Somewhat reluctantly he agreed. Once within her apartment she suggested that he might like to look at her coin and metal collections (conflict words introduced) while she left to find some money for the bus fare. When she returned, she seemed very friendly and reluctant to have him leave. After talking about the collections, she offered him a drink and snack. She then turned on the record player and S danced awhile with the woman. Gradually S became aware of some stimulating, but disquieting thoughts and feelings. She was very good looking and it seemed like such a pity to have all her beautiful softness and curves go to waste. She seemed to be silently inviting him; her closeness, glances, words, and breathing suggested to him that she was becoming sexually aroused. And he too found himself becoming extremely sexually aroused. S was just starting to make love to her when suddenly, more thoughts ran through his mind. She was older, respectable, perhaps married, and undoubtedly very experienced. S wondered if he would be able to satisfy her. How traumatic it would be if she laughed at his advances. In spite of these thoughts he found himself becoming increasingly excited and aroused. He wanted to make love to her right there, but the telephone rang. While he waited, he became so aroused and excited that he could hardly speak. He made a hurried excuse for leaving, promised to call her back, and left the apartment. The only way S could attain peace of mind was to completely push the whole experience into the back of his mind.

Reyher's (1967) paramnesia involving anger was also modified to meet the requirements of this study. This paramnesia is as follows:

This experience involved the events of a recent party. While being introduced to an attractive, older woman, he was insulted by this woman. As soon as possible he found his friends and began to relax again and enjoy the party. One of the things he noticed a little later on in the evening was a beautiful art object, which was constructed from hundreds of geometrically (conflict words introduced) shaped pieces of glass. As he gazed at this piece of art, he was eating some very delicious

refreshments from a table that contained a wide variety of foods (rest of conflict words introduced). Later in the evening he was attracted to a group of strangers, who were engrossed in a very lively conversation. Very quietly, he stood off to the side and listened to the conversation. Suddenly, a woman turned around to brush the ashes off her cigarette into an ashtray by S. The woman's ashes brushed against S and he jumped back in order to avoid being burned. But as he jumped back, he knocked over and destroyed the beautiful art object. Everyone stared at S with expressions of anger and disbelief. The shock was even greater when S realized that it was the same woman, who had insulted him earlier. Staring at him, she accused him of being a stupid, clumsy oaf and she walked away with an air of righteous indignation. S was left feeling completely humiliated and angry. In fact, he was so angry at her that he could hardly speak. Shortly afterwards he left the party and found that the only way he could attain peace of mind was to completely push the whole experience into the back of his mind.

The conflict words (c-words) for the sexual paramnesia were words belonging to the concepts of metal and money. The neutral words (n-words) for the sexual paramnesia were words belonging to the concepts of food and geometry. The c-words and n-words were reversed for the paramnesia involving anger. C-words were used to activate posthypnotically the conflicts.

Activation of Conflict Instructions

The following instructions were used to activate the conflicts posthypnotically:

Now listen carefully. The woman I have told you about actually works in this laboratory. In fact, you will meet with her briefly following this experiment. After you are awakened, you will not be able to remember anything about this session. However, sexual (anger) feelings will well up inside of you, whenever words associated with (classes of words relating to paramnesias) are mentioned. You will realize that the feelings (sex or anger) are directed toward the woman whom you'll see

shortly and you will want to tell me how you would like to express these feelings toward her. The sexual (anger) feelings will be mild when I mention the number one and you will have a mild desire to tell me how you would like to express these feelings toward her. When I mention the number two, your sexual (anger) feelings will be very intense and you will have an intense desire to tell me how you would like to express these feelings. And then when I say the number three, your sexual (anger) feelings will be overwhelming and uncontrollable. You will have an irresistible urge to tell me how you would like to express these sexual (anger) feelings toward this woman when you see her. The sexual (anger) feelings will boil up inside of you and you will feel compelled to talk about expressing your uncontrollable sexual (anger) feelings.

This counting procedure was designed to increase the intensity of the impulse and conflict in order to gain information regarding changes in repression and symptomatology. It is important to note that the Ss were only given an amnesia for the paramnesias. Amnesias were not suggested for the impulses and posthypnotic suggestions to talk about expressing the impulses.

Post-conflict Activation

After the conflict-inducing instructions were given, the Ss were awakened. While the Ss were in the waking state, the conflicts were activated by the presentation of c-words. At each of the three levels of intensity nine c- and n-words were presented randomly to each S. Words were made conflictual by their association with the paramnesias. S was asked to pronounce each word. In response to E's question, "how are you doing?", S was asked to give a

"complete and accurate description of how he was doing."

He was urged not to withhold any of his reactions.

Materials

GSR activity was recorded by a Grass #5 Polygraph. The electrodes were attached to the first and second fingers on the right hand.

Reyher's (1958) word list was used to provide the stimuli for the elicitation of the S's reactions. These fifty-four words included twenty-seven c-words and twenty-seven n-words. These words were equated for length and frequency of usage according to the Thorndike-Lorge word count. Base rate GSR activity and the sexual or aggressive associations to these words were obtained in pretesting each S. Each word was typed in the center of a 3 x 5 card.

Five TAT cards, a modified version of card 18GF, and a blatant oedipal-sexual card were administered. In order to maximize impulsive themes the two blatant cards were added to the TAT selection and each S was asked to produce two stories to each TAT card. Cards 3BM, 8BM, 13MF, and 4 were utilized by Perkins (1965) because they elicited frequent impulsive themes. Card 13 elicits both aggressive and sexual themes (Murstain, 1966). Cards 3BM, 8BM, and the modified 18GF were selected to elicit primarily aggressive themes and cards 6GF, 4 and the oedipal-sexual card were chosen to elicit sexual themes.

Basch's (1967) true-false questionnaire, which was derived from Reyher's (1967) classification of symptoms, was expanded to obtain each S's reported symptoms. Some additional questions were obtained from the Cornell Medical Index (1949).

Scoring Procedures

A GSR deflection was considered to be significant if it was greater than 2,000mm. A frequency of GSR measure to c-words (which controlled for base rate differences to c-words), was computed according to the following formula:

$$\text{GSR Frequency} = (CT_{ca} - CT_{pc})$$

where: CT = frequency of GSR to a c-word on a trial
 ca = trial when c-word was in a paramnesia condition
 pc = trial when c-word was in a pretest condition

Biasing effects such as adaptation and polarization of the electrodes were controlled by using a relative GSR measure. This measure was used to obtain the difference in GSR between c- and n-words at each level of intensity. The relative GSR difference score was obtained for each S at each level of impulse intensity according to the following formula:

$$\text{Relative GSR} = (CT_{ca} - CT_{pc}) - (NT_{ca} - NT_{pc})$$

where: CT = frequency of GSR to a c-word on a trial
 NT = frequency of GSR to a n-word on a trial
 ca = trial when a c-word or n-word was in a par-
 amnesia condition
 pc = trial when a c-word or n-word was in a pretest
 condition

Finally a GSR amplitude difference measure was devised. This measure was obtained by subtracting the amplitude of GSR to n-words from the amplitude of GSR to c-words at each level of intensity according to the following formula:

$$\text{GSR Amplitude} = (C_a T_{ca} - C_a T_{pc}) - (N_a T_{ca} - N_a T_{pc})$$

where: CaT = amplitude of GSR to a c-word on a trial
 NaT = amplitude of GSR to a n-word on a trial
 ca = trial when c-word or n-word were in a par-
 amnesia condition
 pc = trial when c-word or n-word were in a pretest
 condition

Since the amplitude of the GSR activity is taken into consideration, this measure is probably the most accurate measure of the physiological activation. Progressive biasing effects such as adaptation and polarization of the electrodes also are minimized with this procedure.

All of the TAT stories were scored for drive representation following Pine's (1960) scoring system. Drive was defined in psychoanalytic terms as follows:

. . . to refer to instinctual drives and their derivatives. This includes aggressive and libidinal drives and partial drives (oral, anal, phallic, genital, exhibitionistic, voyeuristic, sadistic, masochistic, and narcissistic).

The three indices of drive representation which were used are as follows:

- (1) Drive content represents the total number of reasonably direct derivatives of aggressive and libidinal drives which appear in ideational form in the manifest content of the TAT stories;
- (2) drive integration reflects the degree to which content is integrated into the stories; and
- (3) drive socialization reflects the degree to which the drive content is modulated in intensity and socialized in aim.

A description of the Pine scoring system is presented in Appendix B.

To test hypothesis VII it was predicted that the presence of drive content was greater, the degree of drive socialization was lower, and the degree of drive integration was higher for PRs than GRs regardless of the drive. Three repression measures were derived from the sexual, anger, and combined conflicts and comparisons were made with sexual, anger, and combined thematic material, respectively.

The symptoms produced during the experimental sessions were categorized according to Reyher's (1967) classification. At each level of intensity the frequency of symptoms, the frequency of symptom types, the types of psychosomatic symptoms, and the proportion of somatic symptoms to c-words were obtained. Appendix C contains Reyher's classification of symptomatic reactions.

A weighted frequency measure of the occurrence of symptoms within categories was used to test hypothesis III. For all the symptom categories, symptoms occurring at intensity levels 1, 2, and 3 were multiplied by 1, 2, 3, respectively, summed, and divided by the total number of symptoms within each category. Then the weighted means for each symptom category were ranked across Ss. Rankings were obtained for Ss who both showed and failed to show progressive decrement in repression over the three levels of impulse intensity.

Reyher's Index of Repression (R) was used to determine the degree of repression for each S. Repression is assumed to be the opposite of verbalized awareness. Repression was computed from the following formula:

$$R = \frac{3(FA) + 2(PA) + (CC) - (CR)}{Tc}$$

where: R = the average degree of repression over the experimental sessions
 FA = full awareness upon c-word presentation
 PA = partial awareness upon c-word presentation (awareness of either the impulse or compulsion to verbalize)
 CC = conscious correlates of the impulse upon c-word presentation
 CR = complete repression upon c-word presentation (no instances or awareness or symptoms)
 Tc = the total number of c-words presented

Wiseman's (1962) procedure was used to determine whether E biased the results by interacting in a different manner with hypnotic and simulating Ss. All of the E-S interactions were tape recorded. An equivalent number of

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taped sessions from the hypnotic and simulating Ss were edited to include on the E's comments. Then two judges² were asked to determine whether E's comments were in response to hypnotic or simulating Ss.

RESULTS

Introductory Analyses

Reliability

The TAT protocols for the 15 experimental Ss were scored by two judges.³ Reliability of drive content, level of socialization, and level of integration were sufficient and comparable with the reliabilities reported by Pine (1960) and Perkins (1965). Table 1 contains the percent of interjudgment agreement for all the TAT measures.

Table 1.--Percent of Interjudge Agreement on Drive Representation Measures

Measure	Sommerschield	Perkins	Pine
Drive Content	83	78	69
Level of Socialization:			
Level I	92	98	82
Level II	89	100	80
Level III	89	93	85
Total	90	96	82
Level of Integration:			
Thematic	97	98	95
Incidental	72	70	65
Non-Appropriate	78	75	89
Total	94	94	93

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The transcribed records of one experimental session per S were used to establish reliability for the repression index and symptomatic reactions to c-words. Product-moment correlations of .88 for repression and .95 for the symptomatic reactions were obtained between the two judges.⁴ These reliability coefficients are comparable with those reported by Perkins (1965) and indicate adequate reliability.

Experimenter Bias

Fifty percent of the transcribed records of the hypnotic and simulating Ss were correctly identified by both judges. This indicates that E did not communicate his biases and expectations through his verbal behavior to the Ss.

Pretest Measures

Differences in the frequency of GSR between c- and n-words for both paramnesias during the pretest condition were non-significant ($t = 1.11$).

Sexual and aggressive associations to c-words for both paramnesias were scored according to Pine's (1960) procedure for drive content. Means of .35 sexual associations and 1.35 aggressive associations to the aggressive c-words were not significantly different ($t = -2.03$). The same was true for the means of .45 sexual associations and .72 aggressive associations to the sexual c-words ($t = .81$).

Order Effects

The order of presentation of the two paramnesias was counter-balanced for all Ss and no significant order effects were found (Table 11 in Appendix E).

Summary of Introductory Comparisons

In Table 2 the differences between the various groups on the major measures are presented.

Table 2.--Comparisons between Hypnotic (H) and Simulating (S) Ss, Good Repressors (GR) and Poor Repressors (PR), PR and S Ss, and GR and S Ss in frequency of Symptomatic Reactions, in the frequency of GSR, and on the relative GSR frequency measures, and repression for both paramnesias

Paramnesias and Measures	H>S	PR>GR	PR>S	GR>S
Anger Paramnesia				
Symptomatic Reactions	yes**	yes**	yes**	yes
Frequency of GSR	yes	yes*	yes*	yes
Relative GSR Frequency	no	yes**	yes	no
Repression	yes	yes**	no*	yes
Sexual Paramnesia				
Symptomatic Reactions	yes**	yes**	yes**	yes**
Frequency of GSR	yes	yes	yes	yes
Relative GSR Frequency	yes	yes	yes	yes
Repression	yes	yes**	no	yes

* $p < .05$; ** $p < .01$

Hypnotic versus Simulating Subjects

Symptomatic Reactions

Hypnotic Ss developed significantly more symptomatic reactions than simulating Ss to both conflicts. Initially

two by three analyses of variances with repeated measures and unequal group sizes were analyzed (Winer, 1965, p. 375). Since these analyses (Tables 12 and 13 in Appendix E) indicated that the levels of intensity and groups x levels interactions were nonsignificant for the conflict involving anger and only the between groups analysis was significant for the sexual conflict, one way analyses of variance were completed (Table 3). Figure 1 shows that the hypnotic Ss reported the highest frequency of symptomatic reactions during the aggressive conflict at level 2, while the highest frequency of symptoms to the sexual conflict were reported at level 3 (Figure 2). The simulating Ss reported a slight increase of symptoms at level 3 of the aggressive conflict and a slight decrease in symptoms at level 3 of the sexual conflict.

Table 3.--Analyses of Variance of Frequency of Symptomatic Reactions to C-words between Hypnotic and Simulating Ss for both Paramnesias

Source	SS	df	MS	F
Anger Paramnesia				
Between Groups	343.60	1	343.60	11.07**
Ss within Groups	1520.71	49	31.04	
Sexual Paramnesia				
Between Groups	685.97	1	685.97	16.84**
Ss within Groups	1995.60	49	40.73	

** $p < .01$

NUMBER OF CUBES

Figure 1.

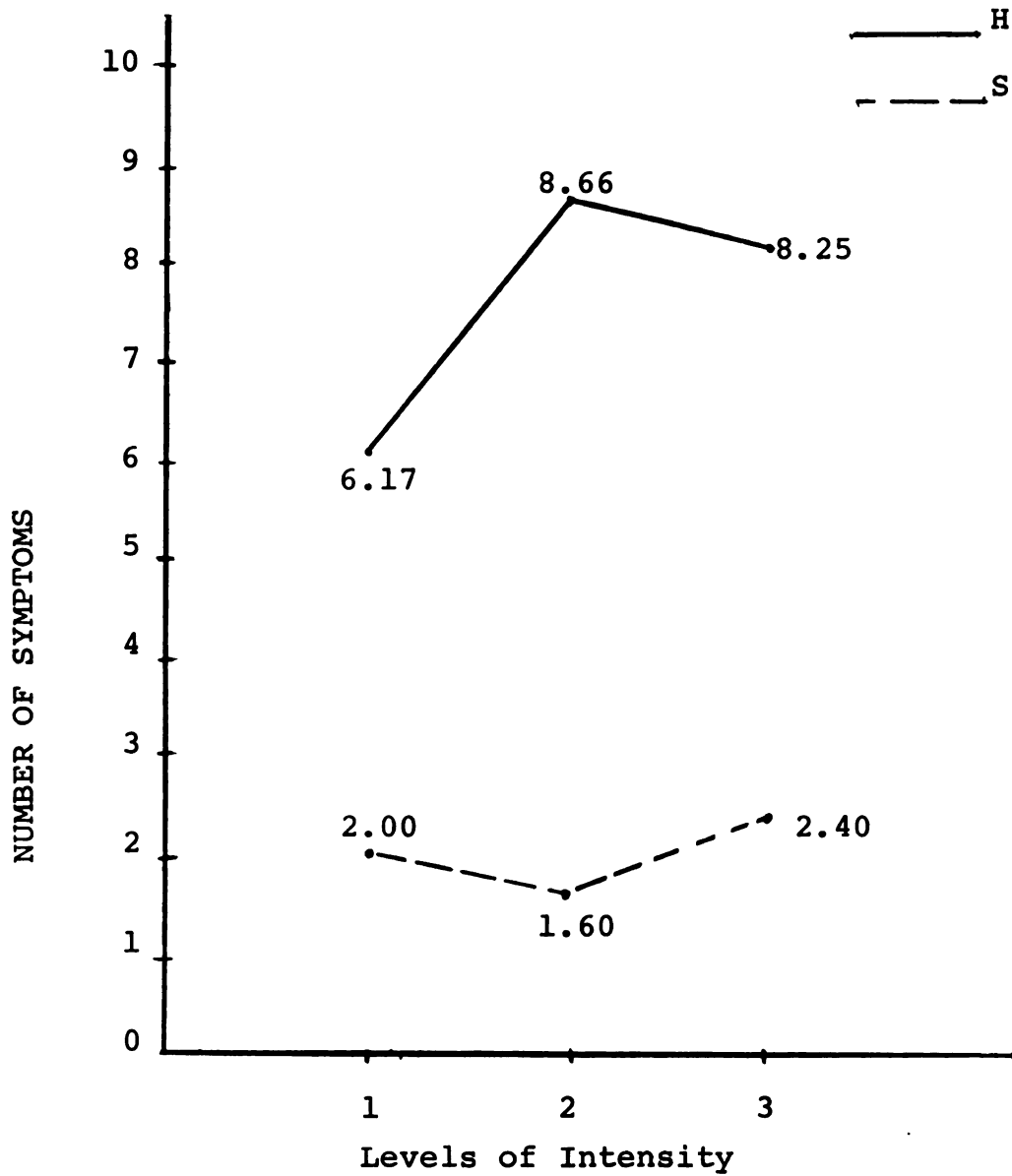


Figure 1.--Frequency of total symptom reactions to C-words over three levels of intensity of anger for Hypnotic (H) and Simulating (S) subjects

NUMBER OF SYMPTOMS

Figure

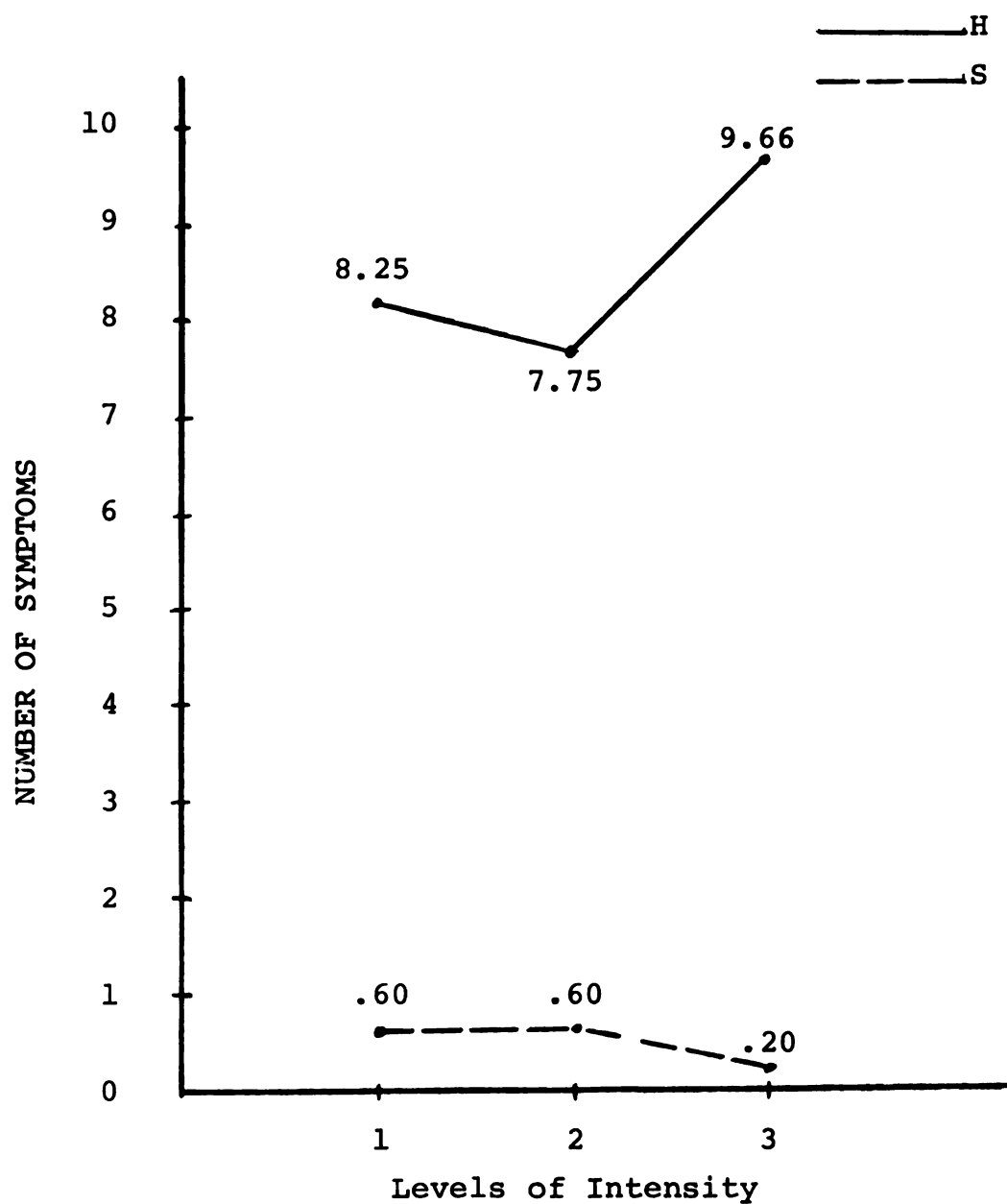
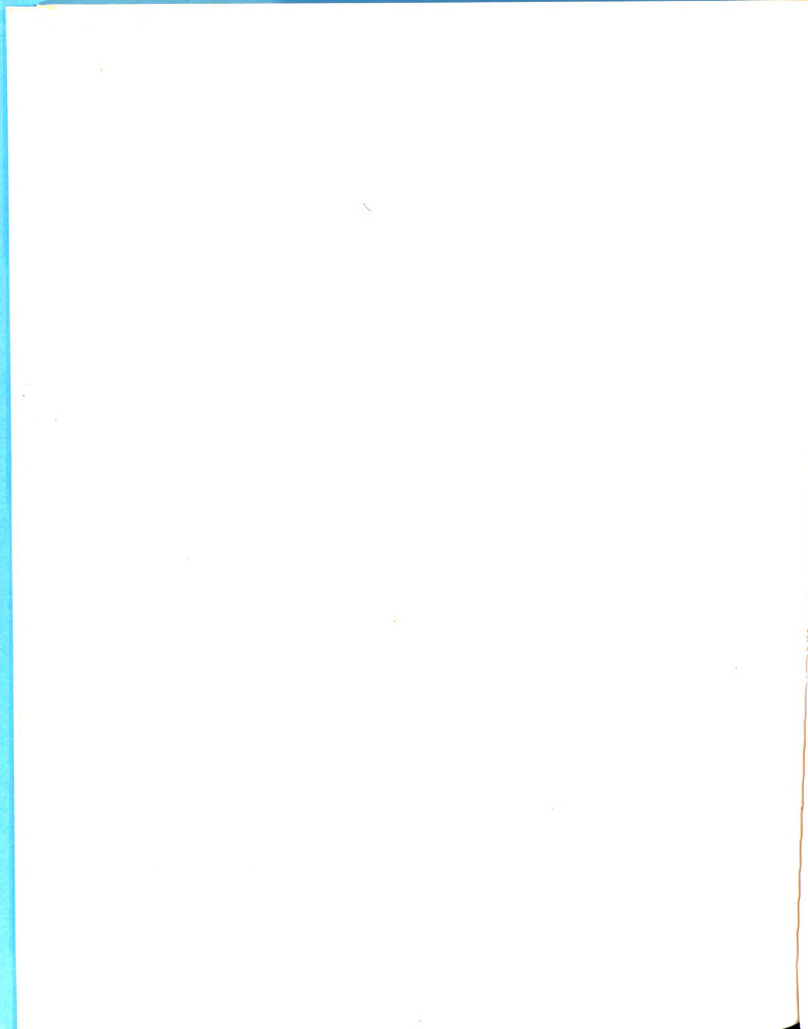


Figure 2.--Frequency of total symptom reactions to C-words over three levels of intensity of sexual drive for Hypnotic (H) and Simulating (S) subjects



GSR Frequency

Although the hypnotic Ss had greater GSR activity than the simulating Ss at each level of intensity of the conflict involving anger, the differences between groups were nonsignificant (Table 4). Both groups showed significant adaptation of GSR activity over levels and the adaptation was greater for the simulating Ss (Figure 3).

Table 4.--Analysis of Variance of Frequency of GSR Activation to C-words between Hypnotic and Simulating Subjects for the Paramnesia involving Anger

Source	SS	df	MS	F
Between Groups	39.60	1	39.60	.46
Error	1294.60	15	86.28	
Levels:	133.56	2	66.78	3.89*
Groups x Levels	13.69	2	6.85	.40
Levels x Ss gp.	515.47	30	17.18	

* $p < .05$

Likewise, the hypnotic Ss had greater GSR activity than the simulating Ss, but the differences were not significant (Table 14 in Appendix E). Whereas, the hypnotic Ss showed a decrement in GSR activity over levels, the simulating Ss showed a slight increase in GSR activity.

Relative GSR Frequency

Nonsignificant differences were found in relative GSR activity between hypnotic and simulating Ss for both

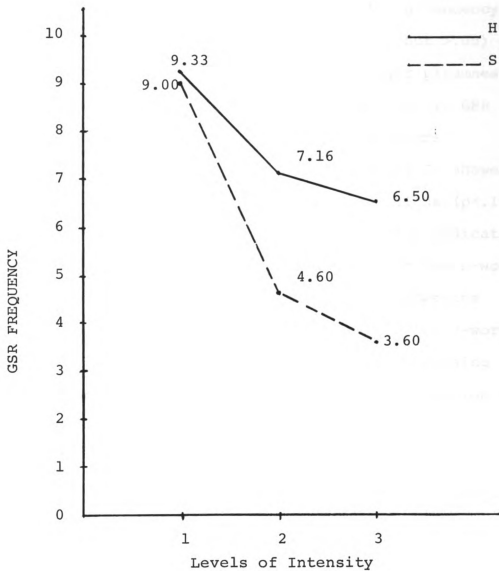
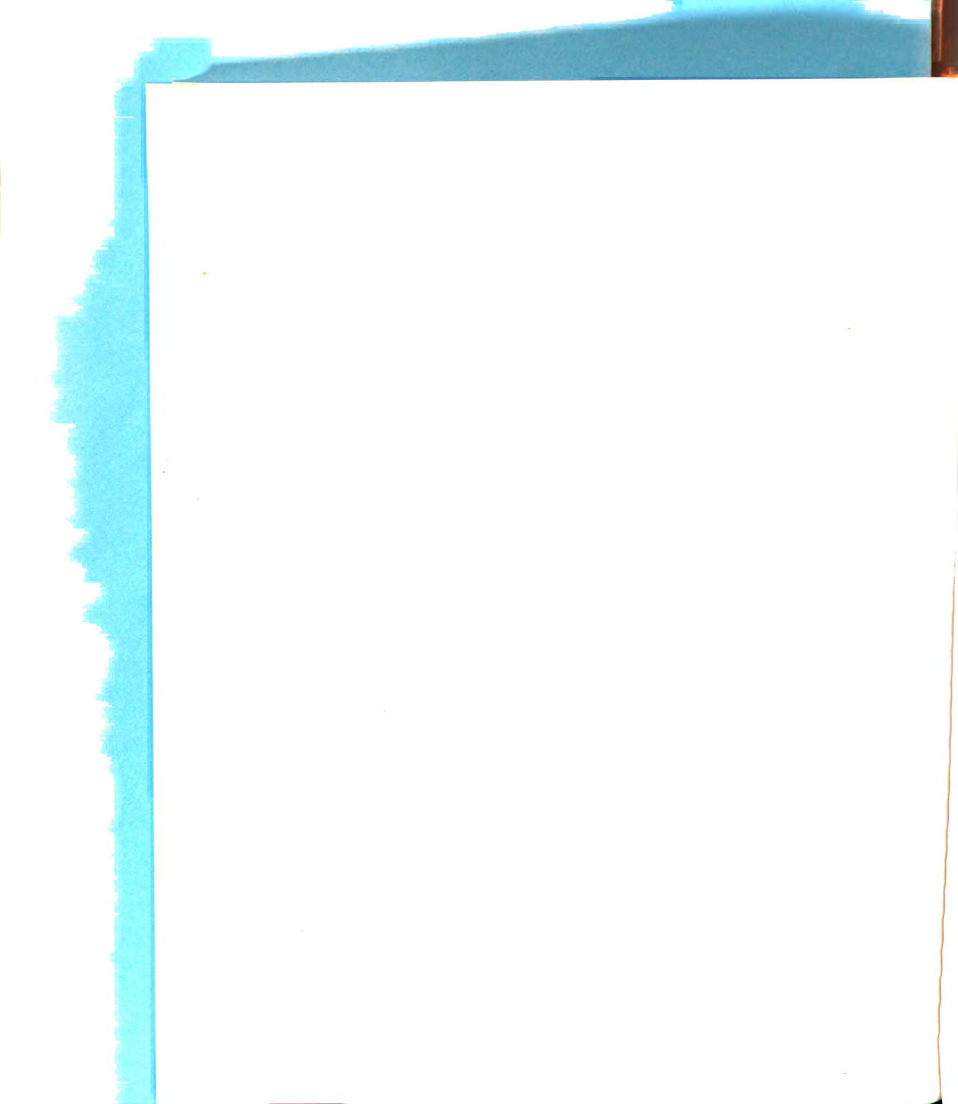


Figure 3.--Frequency of GSR activation to C-words over three levels of intensity of anger for Hypnotic (H) and Simulating (S) subjects



paramnesias (analyses of variances in Tables 15 and 16 in Appendix E). T-tests between pretest and paramnesia conditions revealed that for both paramnesias the hypnotic Ss showed a significant increase in GSR activity from the pretest rates to the c-words ($p < .005$) and also a tendency for the GSR to the n-words to increase ($p < .10$, but $> .05$) (Table 17 in Appendix E). Only during the anger paramnesia did the simulating Ss have a significant increase in GSR frequency between pretest and paramnesia conditions ($p < .05$). In response to n-words, the simulating Ss showed a reduction in GSR during the paramnesia conditions ($p < .10$, but $> .05$ for the sexual conflict). These results indicate that the anxiety generalized from the c-words to the n-words for the hypnotic Ss; thus reducing their GSR difference scores. The simulating Ss's decrement in anxiety to n-words under paramnesia conditions had the effect of increasing the GSR difference scores even though the GSR activation to c-words was only moderate.

Repression

Analyses of variances indicated that the hypnotic and simulating Ss did not differ significantly in their repression scores (Tables 18 and 19 in Appendix E). Although not significant, the hypnotic Ss had greater awareness on both paramnesia than the simulating Ss.

Good Repressors versus Poor Repressors

Symptomatic Reactions

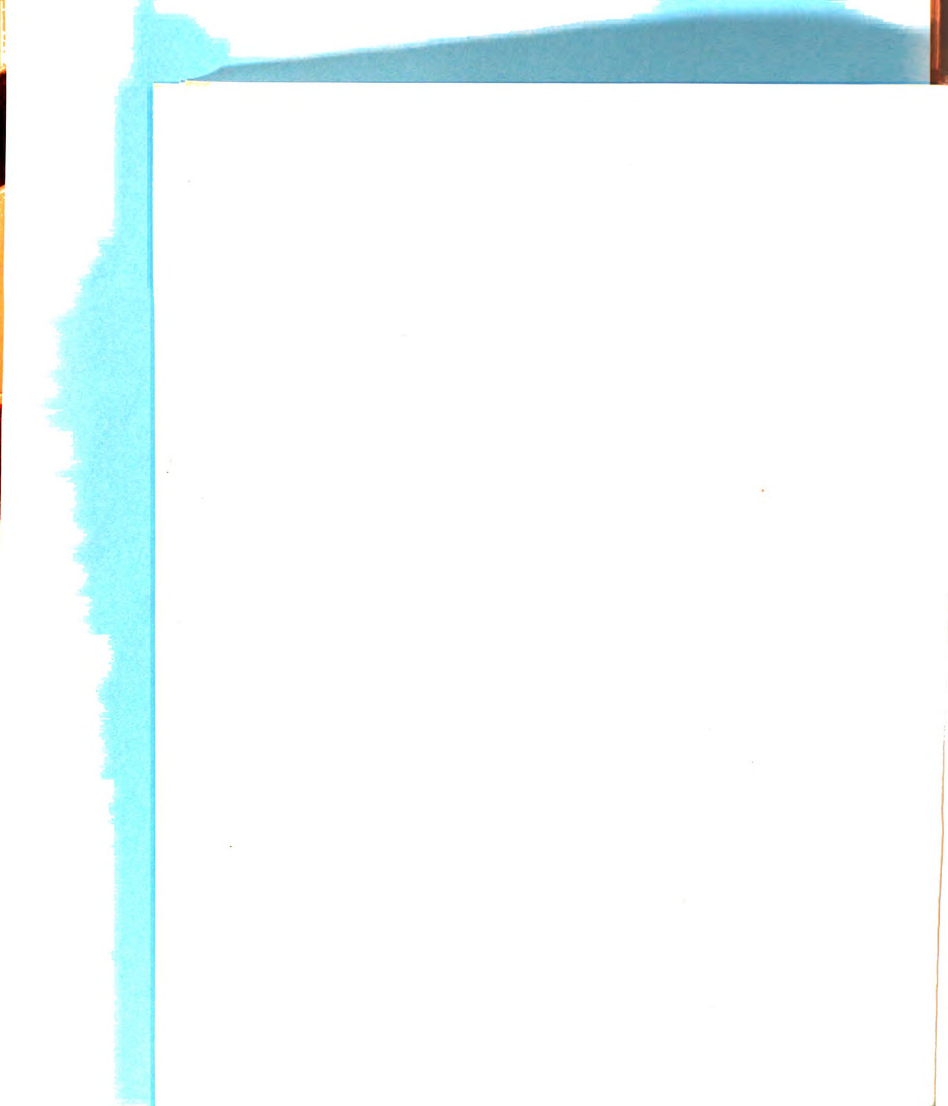
PRs developed significantly more symptoms than GRs to the c-words associated with the paramnesia involving anger (Table 5). The significant levels effect indicates that there was an increase in symptoms associated with an increase in the intensity of the impulse (Figure 4). There is a statistically significant increase in symptomatic reactions for the PRs between levels one and two ($t = 3.00$, $p < .05$), which is followed by a reduction in symptoms at level three.

Table 5.--Analysis of Variance of Frequency of Symptom Reactions to C-words between Good and Poor Repressors on the Paramnesia involving Anger

Source	SS	df	MS	F
Between Groups	1016.28	1	1016.28	77.26**
Error	171.01	13	13.15	
Levels:	319.42	2	159.71	4.23*
Groups x Levels	168.10	2	84.05	2.23
Levels x Ss gp.	981.86	26	37.76	

* $p < .05$; ** $p < .01$

T-tests between the simulating Ss and repression groups revealed that the PRs developed significantly more symptoms than the simulating Ss ($t = 3.75$, $p < .01$) while a



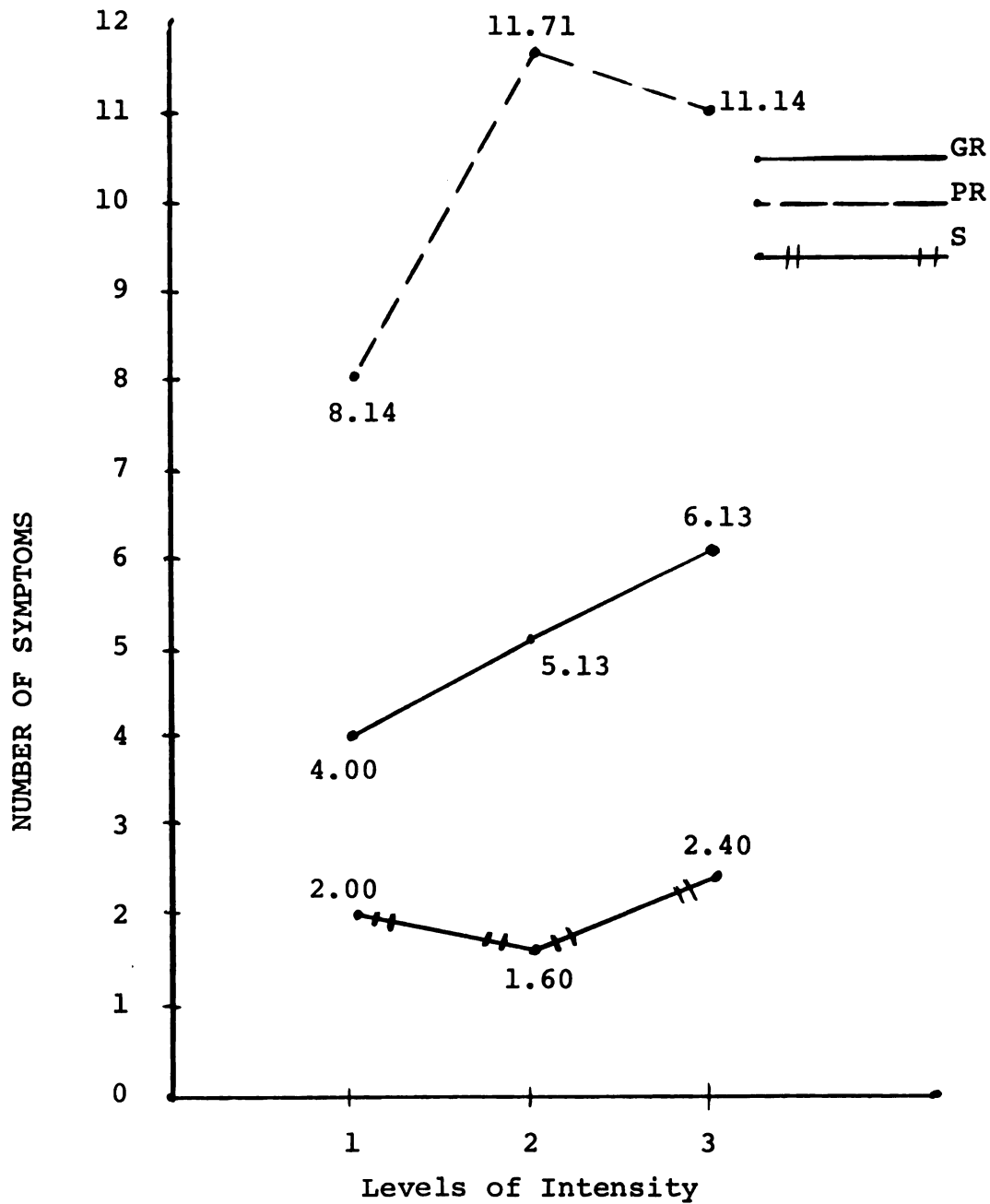


Figure 4.--Frequency of Symptom Reactions to C-words over three levels of intensity of anger for Good Repressors (GR), Poor Repressors (PR), and Control Ss (C)⁵

similar trend between the GRs and simulating Ss did not reach significance ($t = 1.62$, $p < .10$).

The PRs also reported significantly more symptoms than the GRs to the c-words related to the sexual conflict (Table 6). A one way analysis of variance is presented in Table 6 since the levels effect and interactions were not significant in the two way analysis of variance (Table 20 in Appendix E). For both PRs and GRs there was an increment in symptomatic reactions between levels two and three (Figure 5).

Table 6.--Analysis of Variance of Frequency of Symptom Reactions to C-words between Good and Poor Repressors on the Sexual Paramnesia

Source	SS	df	MS	F
Between Groups:	648.94	1	648.94	16.61**
Ss within Groups	1680.05	43	39.07	

** $p < .01$

Both the GRs ($t = 3.48$, $p < .01$) and the PRs ($t = 4.67$, $p < .01$) developed significantly more symptoms than the simulating Ss.

GSR Frequency

The GSR frequency was significantly greater for the PRs than the GRs to the c-words associated with the conflict involving anger (Table 7). In contrast to the adaptation



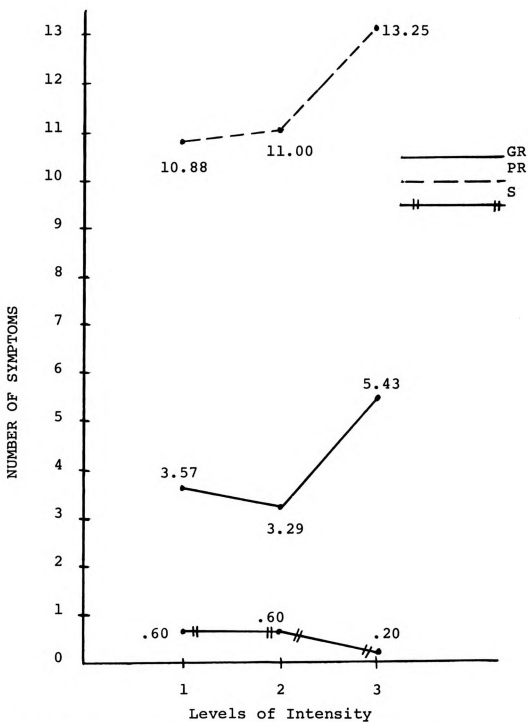
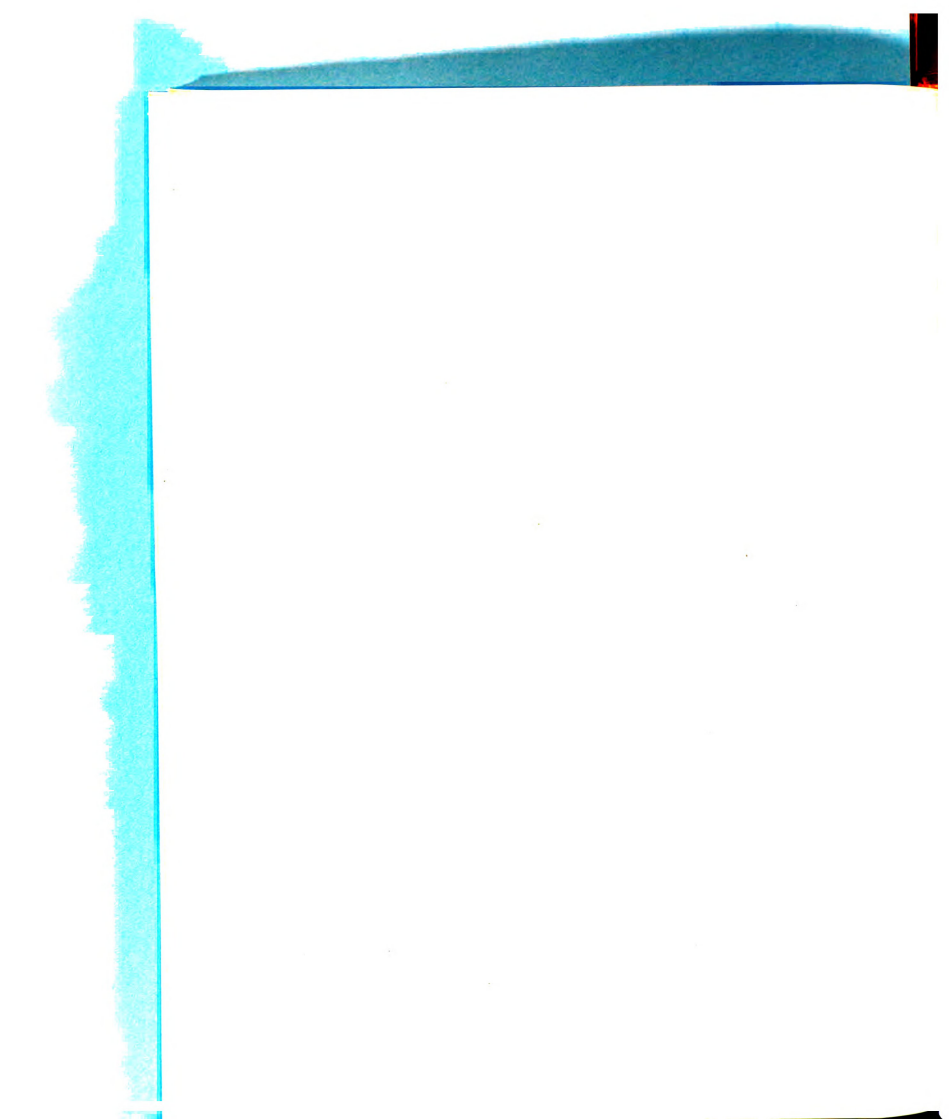


Figure 5.--Frequency of Symptom Reactions to C-words over three levels of intensity of sexual drive for Good Repressors (GR), Poor Repressors (PR), and Control Subjects (C)



of GSR over levels by the PRs and simulating Ss, the GSR frequency increased for the GRs between levels 2 and 3 (Figure 6).

Table 7.--Analysis of Variance of Frequency of GSR Activity to C-words between Good and Poor Repressors on the Paramnesia involving Anger

Source	SS	df	MS	F
Between Groups:	129.13	1	129.13	4.30*
Ss within Groups	1292.12	43	30.05	

* $p < .05$

The PRs had a greater frequency of GSR than the GRs to the c-words associated with the sexual paramnesia, but the differences were not significant (Table 21 in Appendix E). At level one the GRs responded with over twice the frequency of GSR activity than the PRs. Then the GRs's anxiety decreased to below the frequency of the PRs at levels two and three. In contrast to the adaptation of GSR during the anger conflict the PRs and simulating Ss showed an increase of GSR activity over levels during the sexual conflict.

Relative GSR Frequency

The PRs had significantly higher GSR difference scores than the GRs on the anger paramnesia (Table 8). The PRs increased in GSR difference scores between levels one and two and then decreased between levels two and three, while the GRs had exactly the opposite pattern (Figure 7).



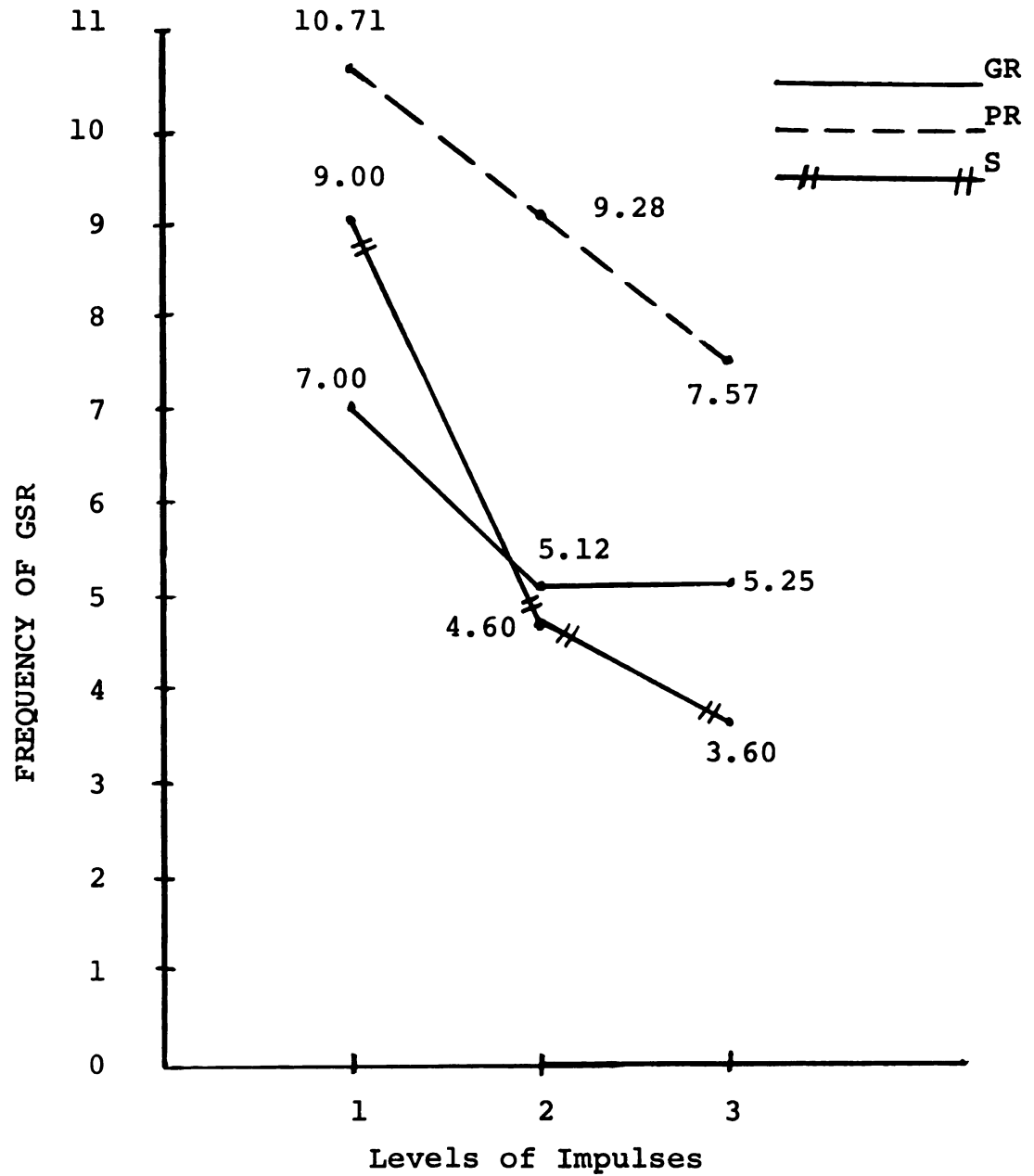
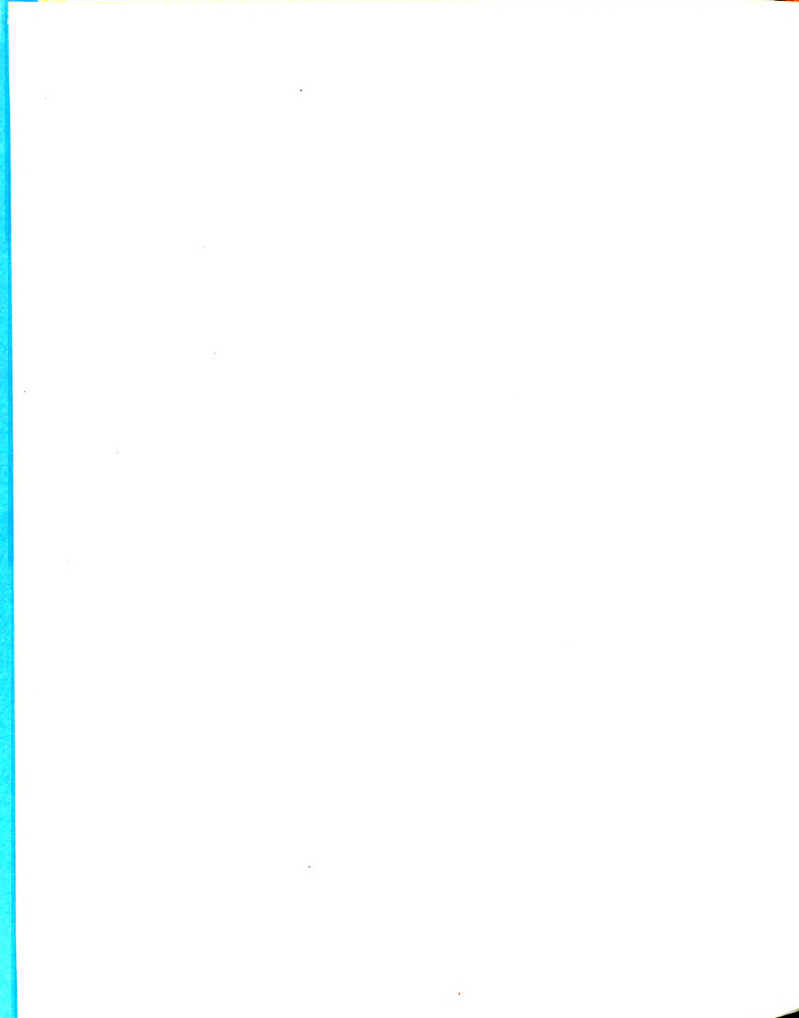


Figure 6.--Frequency of GSRs to C-words over three levels of intensity of anger for Good Repressors (GR) and Poor Repressors (PR)



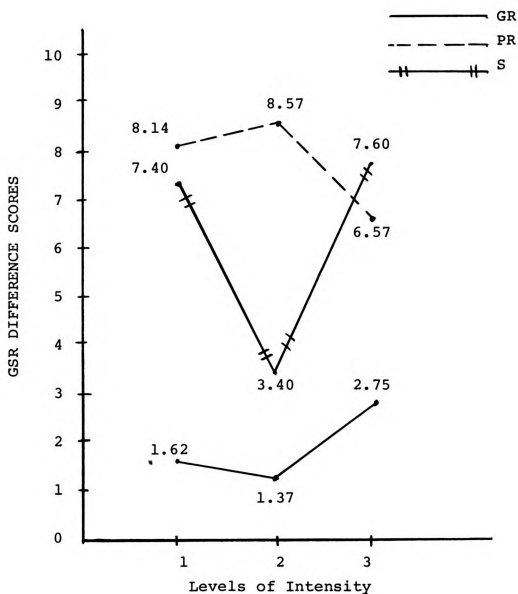


Figure 7.--GSR Difference Scores to C-words over three levels of intensity of anger for Good Repressors (GR) and Poor Repressors (PR)

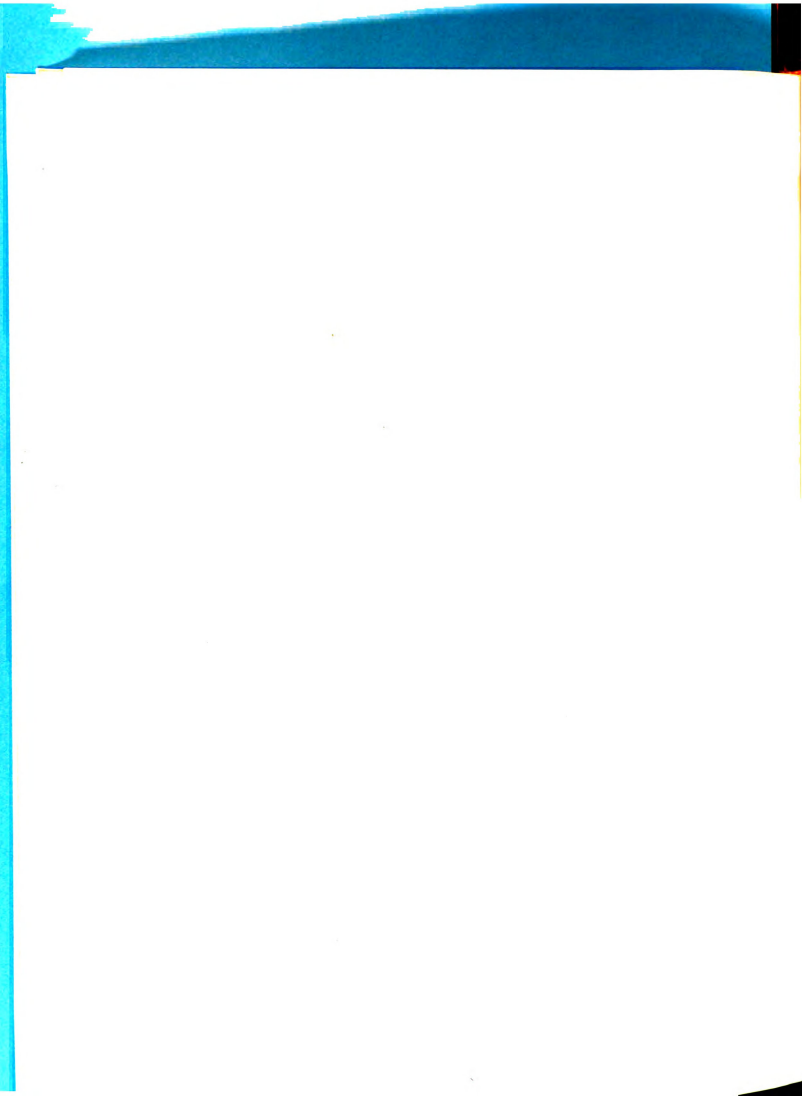


Table 8.--Analysis of Variance of GSR Difference Scores to C-words between Good and Poor Repressors on the Paramnesia Involving Anger

Source	SS	df	MS	F
Between Groups	381.76	1	381.76	27.03**
Error	183.64	13	14.13	
Levels	.76	2	.38	.00
Groups x Levels	23.52	2	11.76	.38
Levels x Ss gp.	811.89	26	31.23	

** $p < .01$

Analysis of Figure 7 indicates that the GRs had smaller GSR difference scores than the simulating Ss, although the differences between groups only approaches significance ($t = 1.84$, $p < .10$). Since the GRs had slightly higher GSR activity to c-words than the simulating Ss, the lowered GSR difference score of the GRs must be due to greater GSR activation to n-words. Although the PRs only experienced slightly more GSR activation than the simulating Ss, the pattern of GSR activity over levels of impulse intensity was quite different.

Although the PRs's larger GSR difference scores are not significantly greater than scores of the GRs to the c-words associated with the sexual paramnesia, there is a significant interaction between groups and levels (Table 9). The interactions between the two repression groups and the

levels of impulse intensity are similar to the patterns that emerged to the conflict involving anger (Figure 8).

Table 9.--Analysis of Variance of GSR Difference Scores to C-words between Good and Poor Repressors on the Paramnesia involving Sex

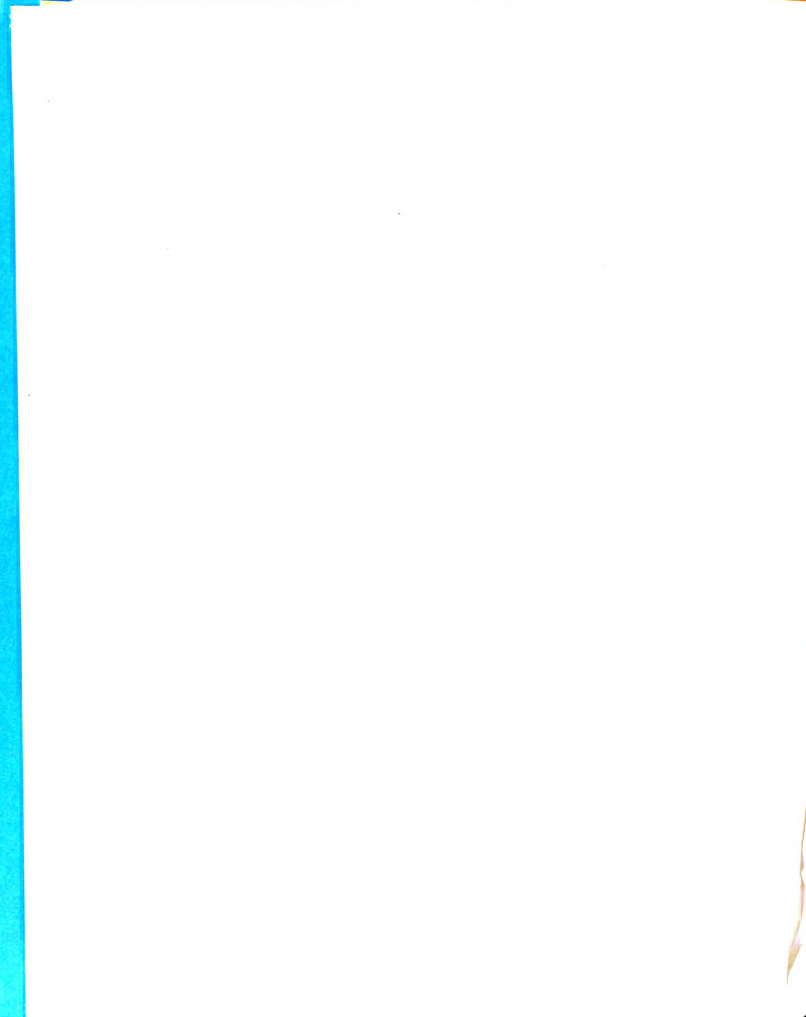
Source	SS	df	MS	F
Between Groups	5.12	1	5.12	.06
Error	1172.31	13	90.18	
Levels	8.18	2	4.09	1.89
Groups x Levels	34.48	2	17.24	7.96**
Levels x Ss gp.	56.32	26	2.17	

** $p < .01$

Repression

The PRs showed a significant decrease in repression over the three levels of impulse intensity. In response to the anger conflict the significant breakdown in repression occurred between levels one and two ($t = 2.06$, $p < .05$) and was associated with a nonsignificant increase in symptoms and a reduction in anxiety ($t = 2.06$, $p < .05$). The breakdown in repression to the sexual conflict occurred later between levels two and three ($t = 3.45$, $p < .01$) and was associated with an increase in symptoms ($t = 3.00$, $p < .01$) and a non-significant increase in GSR frequency.

PRs had significantly less repression than the simulating Ss on the anger paramnesia ($t = 2.52$, $p < .05$)



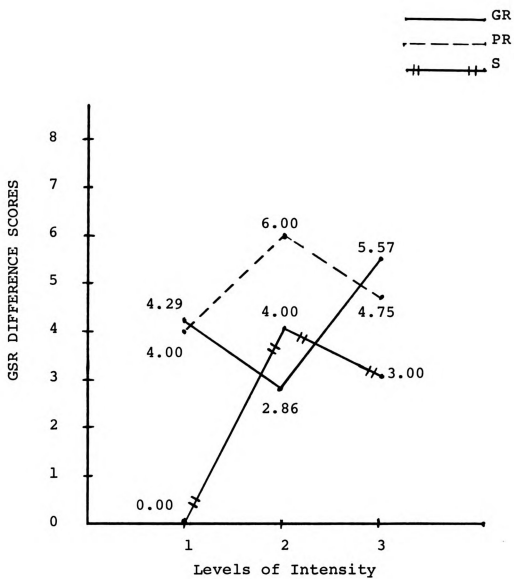


Figure 8.--GSR Difference Scores to C-words over three levels of intensity of sexual drive for Good Repressors (GR) and Poor Repressors (PR)



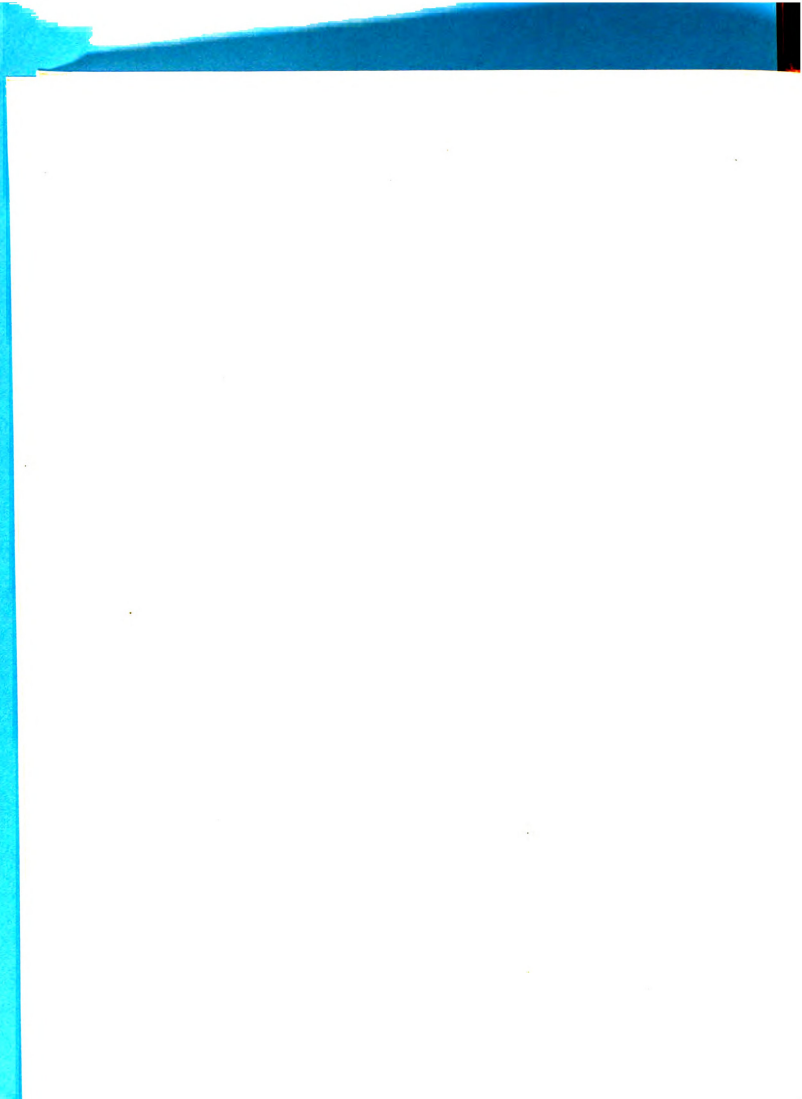
and also less repression on the sexual paramnesia. On both paramnesias the GRs had greater, but not significantly more repression than the simulating Ss.

Comparisons between Paramnesias

The relative pathogenicity of the two paramnesias was analyzed by using an analysis of variance which took into account the replication of experimental procedures over Ss (Walker and Lev, 1953, p. 363). Neither paramnesia was more pathogenic in terms of symptomatic reactions, GSR activation, or repression (Tables 22, 23, and 24 in Appendix E), although a trend toward greater repression for the sexual conflict was present ($t = 21.66$, $p < .10$, but $> .05$). However, when only the PRs are considered, the PRs had significantly greater repression during the sexual conflict ($t = 2.71$, $p < .05$). Likewise, neither paramnesia was more pathogenic for the simulating Ss (t-tests in Table 25 in Appendix E).

Experimental Hypotheses

Hypothesis I was confirmed as rank order correlations of $-.60$ and $-.53$ were obtained between the degree of repression and the frequency of symptoms for the paramnesias involving anger and sex, respectively. Both correlations are significant at the $.05$ level.



Hypothesis II was partially supported as a rank order correlation of $-.80$ ($p < .01$) was obtained between the degree of repression and the number of symptom types for the conflict involving anger. For the sexual conflict the correlation of $-.38$ was in the predicted direction, but failed to reach statistical significance.

Hypothesis III also was confirmed as rank order correlations of $.74$ and $.73$ were obtained between Reyher's (1967) putative order and the occurrence of symptoms to the conflicts involving anger and sex, respectively, for Ss who show a progressive decrease in repression over levels of impulse intensity. Both correlations are significant at the $.05$ level. Also a rank order correlation of $.81$ between the sequence of symptoms for the two drives was significant at the $.05$ level. Nonsignificant correlations were obtained for Ss who did not show a progressive decrease in repression over the levels of impulse intensity.

By summing and re-ranking the ranks of the symptom categories elicited during the anger and sexual paramnesias and Reyher's (1967) combined experimental order (EO) for Ss who showed a progressive decrement in repression, an experimental order of categories was established (EC) (Table 10).

Hypothesis IV was devised to obtain information regarding the three types of psychosomatic theories. The stimulus specificity theory was supported by one S, who developed gastro-intestinal symptoms during the anger



conflict and respiratory symptoms during the sexual conflict. Two Ss developed the same symptoms to both conflicts and thus supported the response specificity hypothesis. The remaining five Ss, who developed psychosomatic symptoms to both conflicts, partially conform to the expectations of the response specificity theory. Three of these Ss developed the same psychosomatic symptom to both conflicts plus an additional psychosomatic symptom to one conflict. The remaining two Ss also developed the same psychosomatic symptom for both conflicts, but, in addition, developed additional, different psychosomatic symptoms specific to each conflict. The degree of repression theory was supported by the results of hypothesis one and three.

Table 10.--Ranks of symptom Categories by sequence for Paramnesias involving Anger (A) and Sex (S), Reyher's Putative Order (PO) and combined Experimental Data (EO) and an Experimental Combined Order (EC) for Ss whose Repression decreased over Levels of Impulse Intensity

Category	A	S	PO	EO	EC
Autonomic Nervous System	1	2	1	1	1
Somatic & Muscular	2	1	2	4	2
Disturbance of Affect	5	5	3	2	4
Unspecified Distress	3	3	4	3	3
Emotional Agitation	6	4	5	6	5
States of Confusion	8	6.5	6	8	8
Dissociative Reactions	4	6.5	7	5	6
Derivatives of Conflict	7	8	8	7	7



Hypothesis V predicted that the symptoms experienced by the Ss during the hypnotic session are also experienced by the Ss in everyday living. Sixty-five percent of the symptoms developed during the hypnotic procedures were also reported by the Ss on the symptom questionnaires.

Hypothesis VI was not confirmed as none of the *t*-tests were significant between PRs and GRs on the three TAT indices of drive representation (Tables 26, 27, and 28 in Appendix E).

Additional Analyses

Reyher (1967) and Perkins (1965) have reported that GRs develop a greater percentage of somatic symptoms than PRs. Similar results were obtained for the anger paramnesia ($t = 2.02, p < .05$); however, the PRs developed a slightly higher percentage of somatic symptoms than the GRs on the sexual paramnesia.

Previously it was reported that the degree of repression and frequency of symptomatic reactions were negatively correlated regardless of the drive. There is additional evidence, however, that suggests that this relationship is curvilinear. For the PRs the rank order correlations were .86 ($p < .05$) and .31 for the sexual and anger paramnesias, respectively. For the GRs the rank order correlations were $-.79$ ($p < .05$) and $-.93$ ($p < .01$) for the sexual and anger paramnesias, respectively.

Finally, a significant negative correlation of $-.47$ ($p < .05$) was found between the degree of repression and the GSR amplitude difference score for the anger conflict. The correlation ($-.41$) was in the same direction, but not significant for the sexual conflict.

DISCUSSION

Once again, the hypnotic implantation and posthypnotic activation of artificial conflicts has proved to be a reliable and effective method for studying intrapsychic conflict and psychopathology. The results of this study are consistent with the findings reported by Reyher (1967) and Perkins (1965) even though a different procedure was used to activate the conflicts and the posthypnotic suggestion specified a verbal rather than motor expression of the impulse. In contrast to the previous studies, the conflicts were activated by a non-tachistoscopic presentation of c- and n-words. In Reyher's and Perkin's research Ss were given instructions to express the impulse by destroying some important papers, while in this study Ss were asked to verbalize their intentions for expressing the impulses.

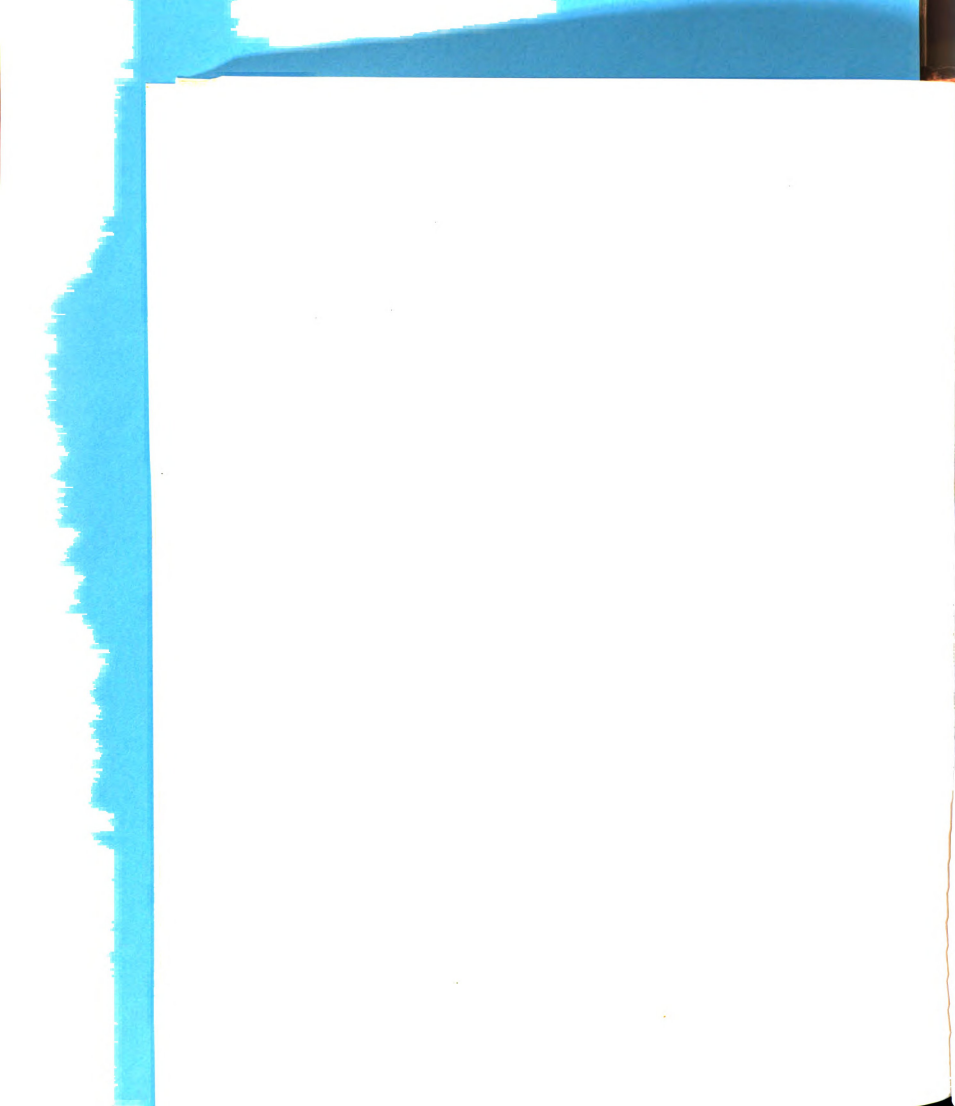
For the first time, this hypnotic procedure was used to study sexual as well as aggressive impulses. Regardless of the impulse the experimental results are in substantial agreement with previous research. That is, the degree of repression is negatively correlated with the frequency of symptoms, number of symptom types, and GSR activity. As repression weakens, there is a sequence of



symptom occurrence with somatic symptoms appearing first. Consistently, hypnotic Ss develop more symptoms than simulating Ss and PRs report more symptoms than GRs.

In general, the findings between GRs and PRs were not as strong or as consistent on the sexual conflict. For example, significant GSR differences were not found in response to the sexual conflict, but were obtained on the anger conflict as was also found by Reyher (1967) and Perkins (1965). Likewise, GRs did not have a significantly greater proportion of somatic symptoms on the sexual conflict, but did so on the anger conflict. In order to interpret these differences between paramnesias, it must be remembered that the range of repression was more constricted for the sexual conflict. In fact, the sexual PRs had significantly greater repression than the anger PRs. Thus the smaller differences in repression between GRs and PRs on the sexual paramnesia in contrast to the anger paramnesia appears to be a critical factor in accounting for the differences between paramnesias.

Is the greater repression experienced by sexual PRs an indication that the sexual conflict was potentially more pathogenic than the anger conflict? According to psychoanalytic theory, the most pathogenic and potentially devastating impulses elicit the strongest defenses with repression serving as the keystone of the defensive organization. Cameron has pointed out that a "massive repression occurs



normally during the resolution of the oedipal complex" (1963, p. 238). If stronger repressions are directed against oedipal-sexual impulses rather than anger impulses in the process of resolving natural conflicts, then one would expect the same repressive emphasis towards artificially implanted impulses. Therefore, the greater repression of the sexual impulse during the hypnotic activation of the impulses supports the psychoanalytic contention that oedipal-sexual impulses are more pathogenic than anger impulses, which also were directed toward an oedipal figure of the opposite sex.

Demand Characteristics

In the studies of Reyher and Perkins as well as in this study simulating Ss were used to determine the demand characteristics of the research. In all three studies the hypnotic Ss have consistently experienced a wide variety of symptoms while the simulating Ss have not. In this study the demand characteristics were different than in previous studies; which further supports the conclusion that the psychopathology produced by this hypnotic method cannot be attributed to mere compliance with the demand characteristics of the research. Replicated differences between GRs and PRs also cannot be explained by appealing to the demand characteristics hypothesis; unless one postulates that the demand characteristics require each S to respond according



to his own needs and personality organization. This, however, is the very interpretation that this hypothesis opposes. Thus Sheehan's (1969) contention that the psychopathology is the result of compliance with demand characteristics is strongly refuted.

In the studies of Reyher and Perkins none of the simulating Ss carried out the posthypnotic suggestions regarding the impulses. Both Es concluded that the demand characteristics encouraged noncompliance with the posthypnotic suggestions. In this study the posthypnotic suggestions were followed by 2 of 5 simulating Ss during the sexual paramnesia and by 3 of 5 Ss during the anger paramnesia. This leads to the conclusion, that the demand characteristics encouraged neither compliance nor noncompliance with the posthypnotic suggestions.

In the studies of Reyher and Perkins hypnotic Ss had greater GSR activation than the simulating Ss; which led to the conclusion that the hypnotic Ss were responding to the activation of the implanted conflict as if it were a natural conflict, while the simulating Ss were not. In this study the significant increase in GSR activity to c-words and the generalization of anxiety to n-words coupled with the symptomatic reactions suggests that the hypnotic Ss were also reacting to the implanted conflict as if it were a natural conflict. However, the simulating Ss, during the anger conflict in particular, also reacted with

the same time, the *Journal of the American Medical Association* (JAMA) published a letter to the editor from a physician in the United States who had been asked to review the book for the JAMA Book Review Series. The letter stated:

It is a pleasure to read a book that is so clearly written and so carefully documented. It is a pleasure to read a book that is so clearly written and so carefully documented.

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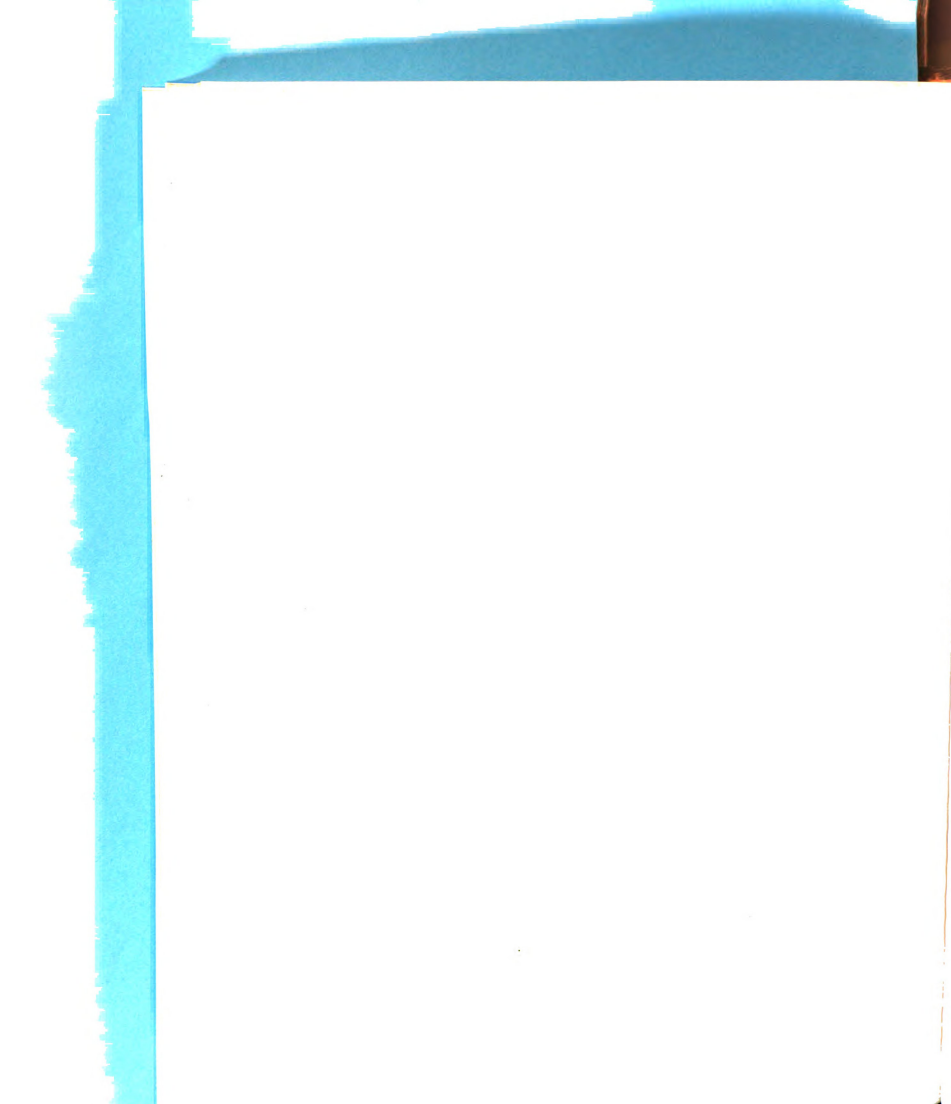
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increased GSR activity so that significant differences were not found between groups. Thus the experimental procedures were more anxiety-arousing for the simulating Ss than in previous studies. Since the simulating Ss did not react with frequent symptomatic reactions, their anxiety probably was not generated by their psychodynamic involvement with the implanted conflict, but probably was in reaction to anxiety arousing conditions inherent in the experimental design.

Previously it was stated that the experimental design encouraged neither compliance nor noncompliance with the posthypnotic suggestions. As a result, it is maintained, that the experimental design encouraged each S to simulate his reactions to the posthypnotic suggestions in a manner congruent with his characteristic manner of coping with these impulses which would be especially anxiety arousing for the simulating Ss in the context of a psychological experiment. Thus either compliance or noncompliance with the posthypnotic suggestions would be anxiety-arousing even for the simulating Ss. This conclusion is supported by two simulating Ss who complied with the posthypnotic suggestions and reported that they simulated by reporting what their behavior would have been in the waking state.

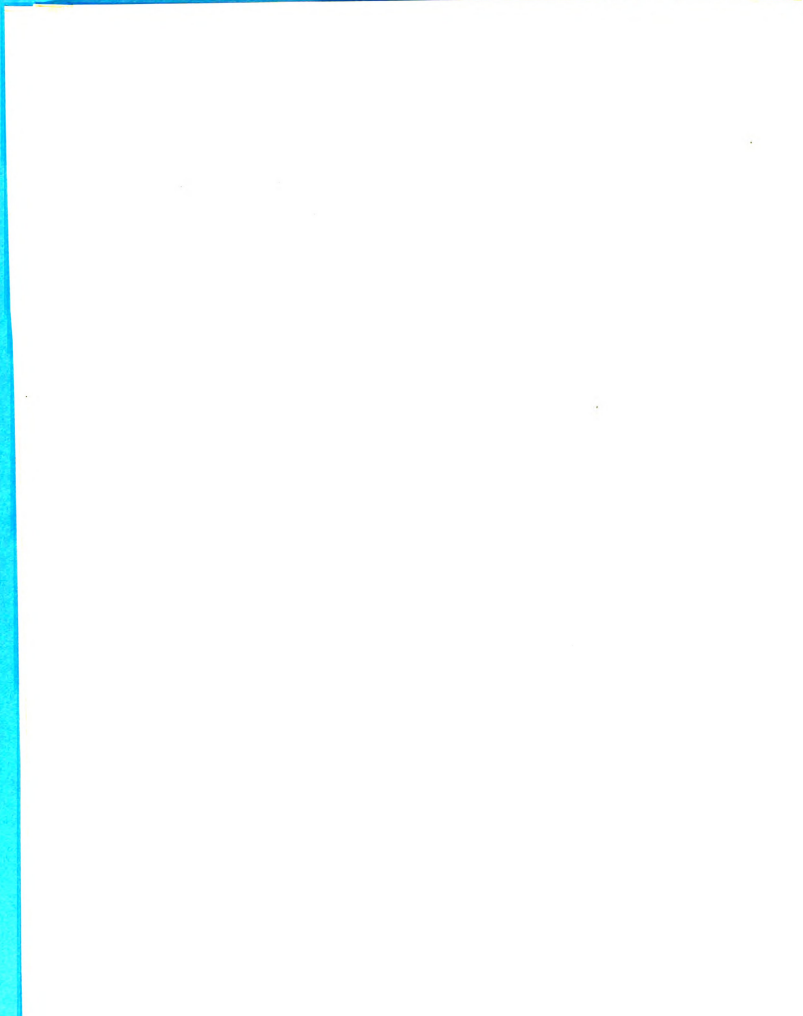


Repression

It is the major contention of this study that the concept of repression can best account for the experimental results. This study was designed to simulate the actual process of natural conflict formation and activation by implanting and then increasing the intensity of potentially conflicting drives directed towards oedipal figures, by introducing c-words during the paramnesia to act as avenues for derivatives of the conflict, and then by providing environmental stimulation of the conflict by presenting the c-words. It was theorized that the hypnotic Ss would master the anxiety aroused by the presenting of c-words by either experiencing repression of the impulse or various symptomatic reactions. Fenichel has provided a theoretical basis for this method of conflict activation. Fenichel stated that:

Conflicts arise when new experiences occur that are connected with what had previously been repressed. Then there is a tendency on the part of the repressed to use the new event as an opportunity for an outlet; it tends to displace its energies to it. A tendency then develops to repress any event associatively connected with the originally repressed materials, in short, a tendency to repress the derivatives just as previously the original demand was repressed (1945, p. 148).

As noted by both Reyher and Perkins the hypnotic Ss reacted to the artificial conflicts as if they were natural or real conflicts. Ss frequently hallucinated real past events and people in response to the paramnesia, thus



reliving past conflicts. Others thought the paramnesias were dreams. At the termination of the experimental procedures some Ss were unable to recall anything about the conflicts, which was consistent with their repressive behavior throughout the experiment.

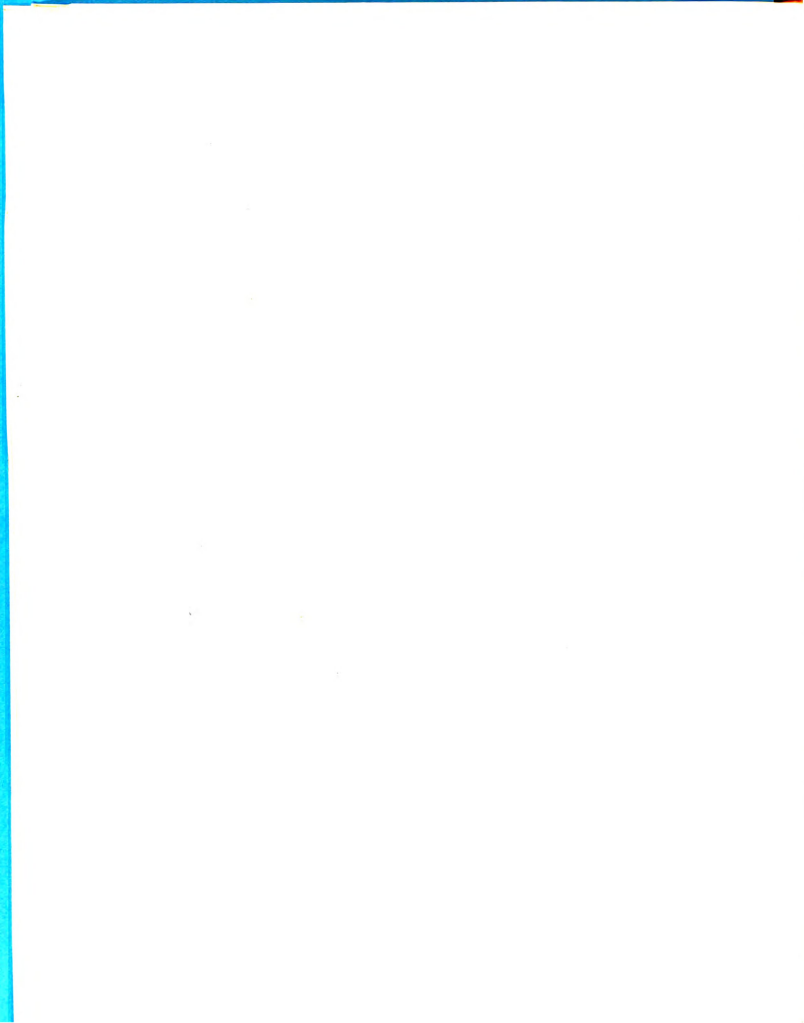
The failure of hypnotic Ss to carry out the posthypnotic suggestions and the resulting psychopathology closely resembles clinical reports regarding the relationships between repression and psychopathology.

Reyher ascribed the failure of hypnotic Ss to comply with posthypnotic suggestions to repression in the following passage:

In view of the fact that most posthypnotic suggestions are carried out immediately, why were these failed or only partially carried out? Clinicians experienced with hypnoanalytic techniques will probably recognize their old adversary, repression. In hypnoanalytic psychotherapy, suggestions that fail are usually those that activate anxiety-arousing affect or behavior. Anxiety and/or symptoms generally result. The behavior of the experimental Ss is strikingly similar to the corresponding clinical phenomena (1967, p. 127).

Dollard and Miller also have described the process of recovering repressed material as seen in clinical settings:

Such patients can often be observed struggling to remember and produce a logical account for themselves. Often they report that this struggle makes them anxious, produces headaches or dizziness so that they have to stop. When an interviewer motivates them to try harder, they report symptoms of distress, especially when they seem on the verge of remembering (1950, p. 202).



Finally, the GSR data supports the conclusion that the differences between PRs and GRs are due to repression rather than suppression of the posthypnotic suggestions. Consistently the PRs had more GSR activity than the GRs. However, if the GRs were really suppressing the posthypnotic suggestions, then they would have had heightened GSR activity since consciously withheld information is detected by increased GSR activity.

Repression and GSR Activity

The negative correlations between the degree of repression and the GSR amplitude measure suggests that there is a dampening of central nervous system activity associated with repression. As the intensity of repression of impulses increases, there is an associated increase in the degree of physiological inhibition.

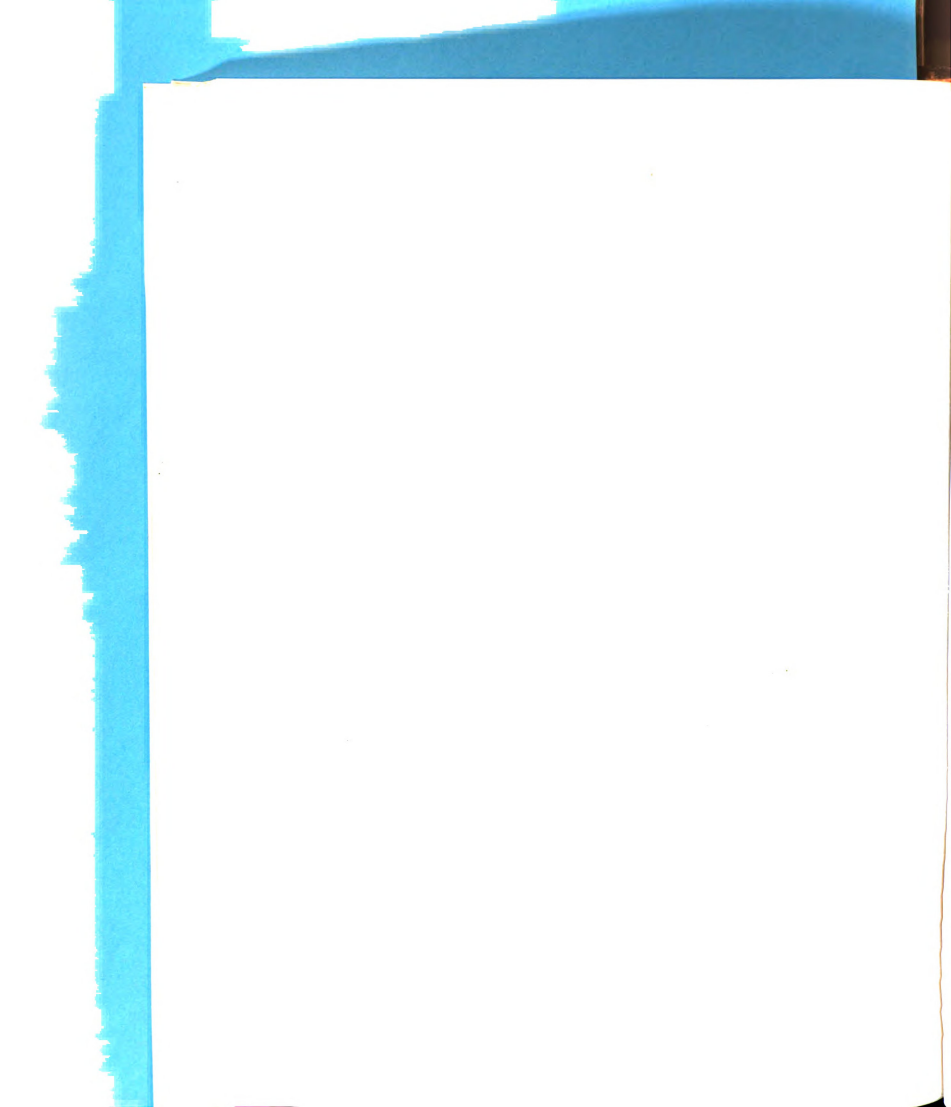
White (1964) also described defensive inhibition or repression as being an "intense, indiscriminate, inhibitory response called forth by serious threat" (p. 213). Analysis of the relative GSR frequency scores of the GRs and PRs to the anger conflict suggests that the degree of indiscriminate inhibition is also a function of the degree of repression. GRs had greater GSR inhibition and less differentiation of GSR activity between c- and n-words. Not only did the GSR inhibition decrease for the poor repressors, but the GSR activity also became more discriminate (greater GSR activity to c-words than to n-words).



Repression and Symptomatic Reactions

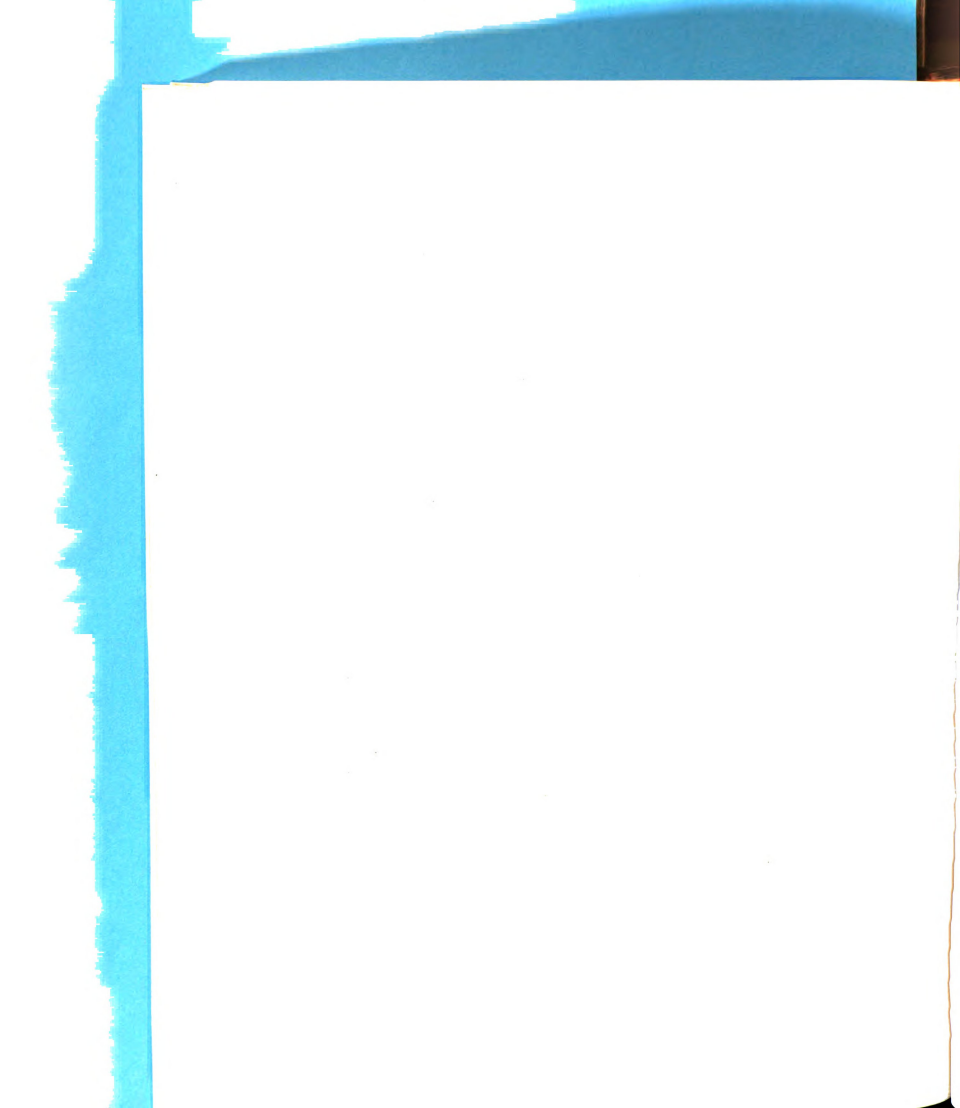
Between levels one and two, during the anger conflict the PRs's degree of repression decreased significantly and was associated with a significant decrease in anxiety and a slight increase in symptoms. At level three both anxiety and symptomatic reactions decreased. As Perkins also reported, conflict resolution resulted in a decrement of both symptomatic reactions and physiological activation. Both groups of GRs and the sexual PRs did not develop a sufficient degree of awareness of the conflict to prevent both symptoms and GSR activity from increasing as the conflicts were intensified.

This investigation as well as Reyher's showed that the degree of repression is critically related to the frequency of symptoms and the number of symptom categories used. Significant negative relationships were obtained in this study and also reported by Reyher. Separate correlations, however, between GRs and PRs and the frequency of symptoms suggest that the relationship between repression and frequency of symptomatic reactions is curvilinear. Perkins also noted a similar curvilinear relationship. A curvilinear rather than negative relationship between these two variables is more consistent with the prior conclusion that with conflict resolution there is a reduction of symptomatic reactions.



As repression decreases there was a general sequence in the occurrence of symptom types. The sequences of symptoms in this study are in agreement with Reyher's putative order. Although the sequence of symptom categories was not fixed as some categories appeared to be alternative or equivalent categories, there was a general sequence beginning with somatic and muscular, and finally followed by affective and cognitive symptoms.

One of the most unexpected and significant findings was the production of symbolic, conversion symptoms. In his evaluation of hypnotic methods for producing psychopathology, Reyher (1967) said that the symptomatology produced by artificial conflicts seemed to lack the symbolic nature of many naturally occurring symptoms. Often times it was possible to observe the formation of symbolic symptoms as in the following S's reactions to the sexual conflict. S reported: generalized body tenseness, leg tremor and twitches, violent leg jerks, knee jerks, a muscle in the back of the leg jumping, and finally "a long straight muscle on the top of my thigh jerking." This same S reported a generalized feeling of coldness, which finally became localized in a feeling of either warmth or coldness, about which he was somewhat confused, in the area of his genitals. This latter reaction is suggestive of a symbolic autonomic nervous system reaction. This would clearly be an exception to the commonly held view of the non-symbolic



nature of autonomic nervous system symptoms. Caution, however, is warranted as the evidence is based entirely on the S's introspection without physiological confirmation.

It should also be noted that 65% of the induced symptoms were experienced by the Ss in their daily lives. This indicates that this technique is quite effective in producing idiosyncratic psychopathological reactions, which are not specific to the experimental situation, but are similar to naturally occurring reactions.

Repression and Cognitive Behavior

PRs did not produce TAT stories with greater drive content, great drive integration, and less drive socialization than the GRs as predicted and reported by Perkins (1965). The failure to replicate Perkins' results may be attributed to three factors. First of all, the TAT cards were selected to maximize impulsive themes, which may have had the effect of decreasing the expected differences between groups. Murstein (1963) concluded that "cards with low or medium stimulus-pull for hostility tend to differentiate between persons high and low on overt aggression more readily than highly hostile cards" (p. 319). Secondly, Perkins' Ss may have been divided into more distinct groups of PRs and GRs. All of his PRs complied with the posthypnotic suggestions for destroying papers, while only three sexual PRs and four aggressive PRs followed the posthypnotic suggestions in this study. Finally it is possible that

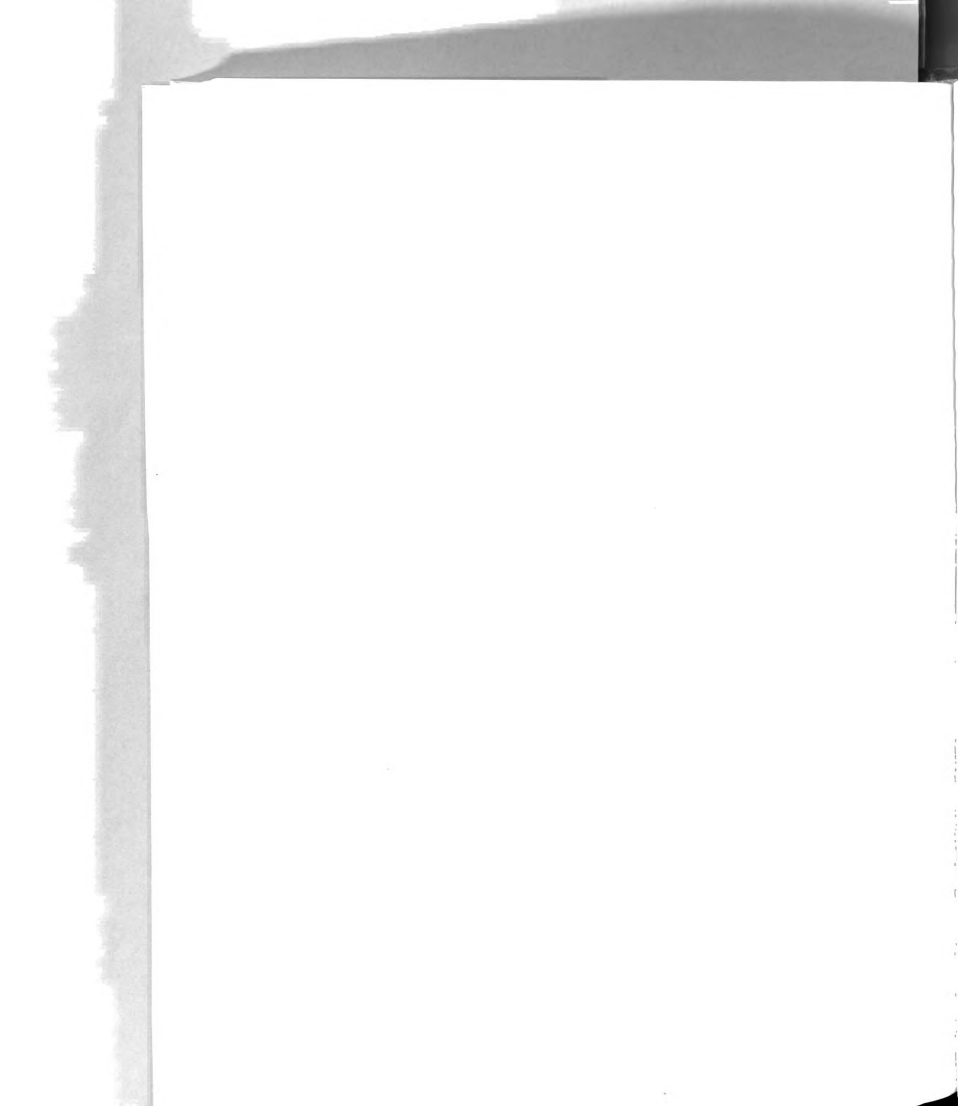


highly motivating instructions plus highly impulsive thematic cards may have resulted in less repressive stories by the GRs. The TAT instructions were highly motivating for college males as the TAT cards were presented as a measure of creative, cognitive ability.

Psychosomatics

The hypnotic introduction and posthypnotic activation of artificial conflicts appears to be a very effective and practical technique to study psychosomatic reactions. Eight of fifteen hypnotic Ss reported psychosomatic symptoms to both conflicts; thus indicating that normal Ss can practically serve as Ss as well as patients with psychosomatic disorders. In this exploratory study physiological measurements were not obtained and thus the conclusions are only based on each S's introspective reports. Thus the conclusions regarding the three theories are quite tentative, but still tantalizing. In future research, the measurement of both introspective reactions and physiological activation may very well lead to more definitive conclusions.

As White (1964) observed, the degree of repression is a critical variable in the occurrence of psychosomatic reactions. As repression decreases in highly repressed individuals the initial symptoms are psychosomatic. This relationship has also been reported by Reyher (1967) and Perkins (1965).



All but one S developed the same, idiosyncratic symptom to both conflicts, which supports the response specificity theory. Two of these Ss also reported symptoms specific to each conflict, which suggests that the pattern of autonomic response specificity may be modified by the pattern of physiological activation associated with different drives. Thus the formation of specific psychosomatic reactions appears to be a function of the individual's characteristic pattern of autonomic activity to stress and also of the physiological activity associated with particular drives.



SUMMARY AND CONCLUSIONS

Reyher's (1967) procedure for hypnotically implanting and posthypnotically activating implanted conflicts was used to study the relationships between repression of both sexual and aggressive impulses and frequency of symptomatology, types of psychopathology, anxiety, and cognitive behavior. Three types of psychosomatic theories were evaluated in terms of the psychosomatic symptomatology produced by this procedure for simulating and experimentally studying intra-psychic conflict and psychopathology.

While deeply hypnotized 12 normal, male Ss were given two paramnesias (hallucinatory experiences), which were associated with the arousal of sexual and aggressive feelings towards an older, attractive woman. The two paramnesias or conflicts were implanted in two different sessions and were counterbalanced across Ss. Posthypnotic suggestions were given for conflict words (c-words) to activate the impulses. These c-words were intimately associated and mentioned during the paramnesia implantation. Neutral words (n-words) and c-words were reversed for the two paramnesias. The conflicts were posthypnotically activated by presenting the c-words at three levels of impulse

intensity. A posthypnotically implanted counting procedure increased the intensity of the impulse from mild to intense to overwhelming and uncontrollable. At each level of impulse intensity 9 c-words and 9 n-words were consecutively and randomly presented. Each S was requested to pronounce the word and report "how he was doing." Five Ss, who were good hypnotic Ss, were given instructions to simulate the behavior of hypnotic Ss by a co-experimenter. Three potential simulating Ss became hypnotized during the brief induction of hypnosis prior to the implanting of the paramnesias and thus were removed from the simulating group. For comparisons between the hypnotic Ss these three Ss were added to the original twelve hypnotic Ss. The fifteen hypnotic Ss were divided into a good repressor (GR) and poor repressor (PR) group on the basis of their Index of Repression Score (Reyher, 1967).

In addition, to the implanting of the artificial conflicts each S responded to seven TAT cards prior to the conflicts and completed two symptom questionnaires following the hypnotic procedures.

Analysis of the results indicated that psychopathology can be produced and studied through the hypnotic implanting and posthypnotic activating of artificial conflicts. Comparisons between the hypnotic Ss and simulating Ss refuted the hypothesis that the hypnotic Ss's

psychopathology was elicited by the demand characteristics of the experimental design.

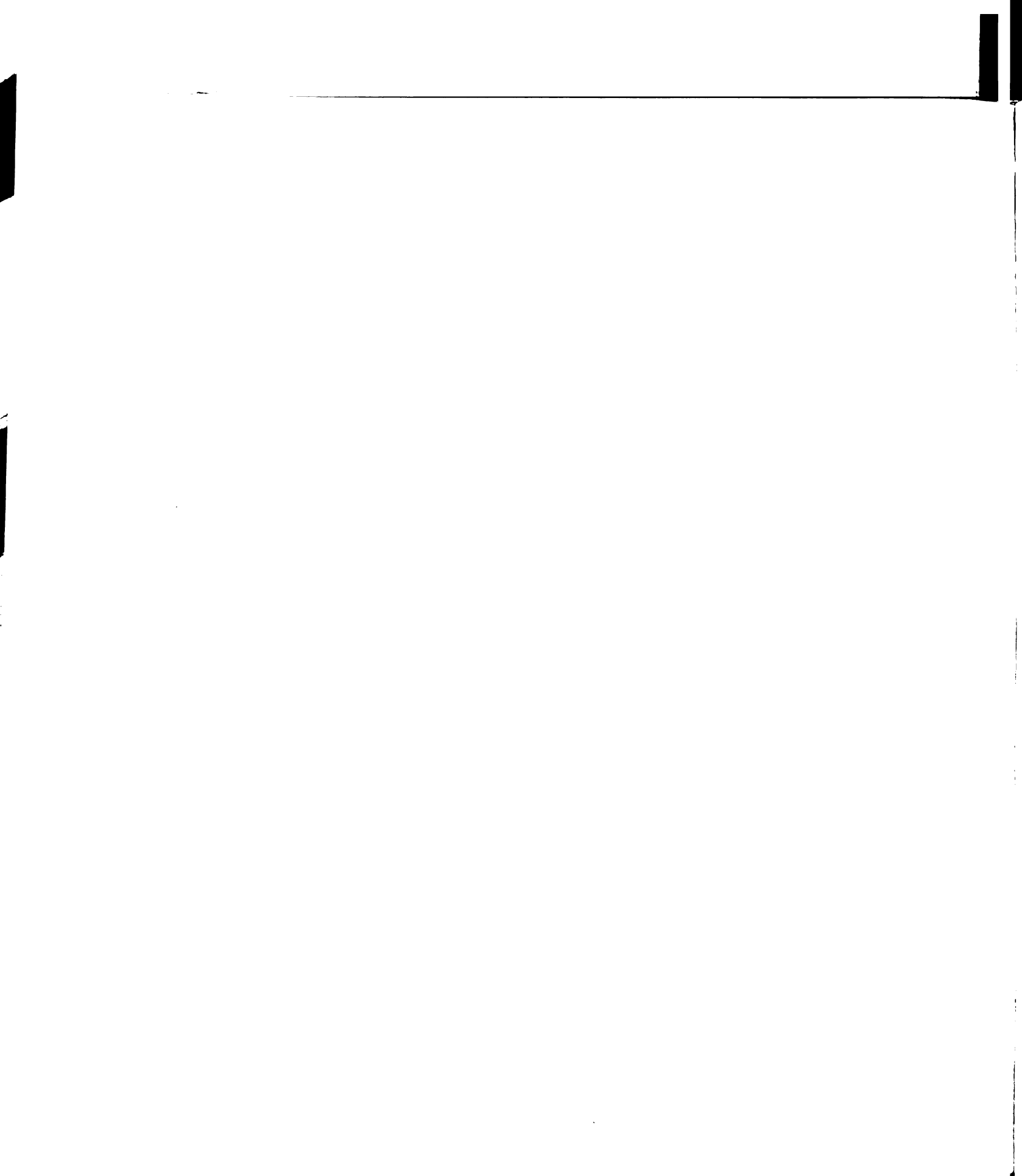
Rather, the symptomatology produced was consistently and significantly related to the degree of repression. Support for the repression hypothesis was provided by the GSR analyses and the Ss's reports after the experimental procedures had been completed. The frequency of symptomatic reactions and symptom categories were curvilinearly related to the degree of repression. Initially as repression decreased, both anxiety and symptomatic reactions increased. With the resolution of the conflicts both anxiety and symptomatic complaints decreased.

As repression decreased, there also was an orderly sequence in the occurrence of symptom categories. Autonomic nervous system and somatic and muscular symptoms occurred first followed by affective and cognitive symptoms. This sequence in symptoms was not inflexible as some of the types of symptoms seemed to be equivalent or alternative categories.

Some support was found for the three types of psychosomatic theories: the symptom specificity theory, the response specificity theory, and the degree of repression theory. When only the psychosomatic reactions were analyzed, the response specificity theory was supported by most of the Ss, who developed the same psychosomatic symptoms to both conflicts plus additional symptoms to one of

the conflicts. When the entire range of psychopathology was considered, the degree of repression theory was supported.

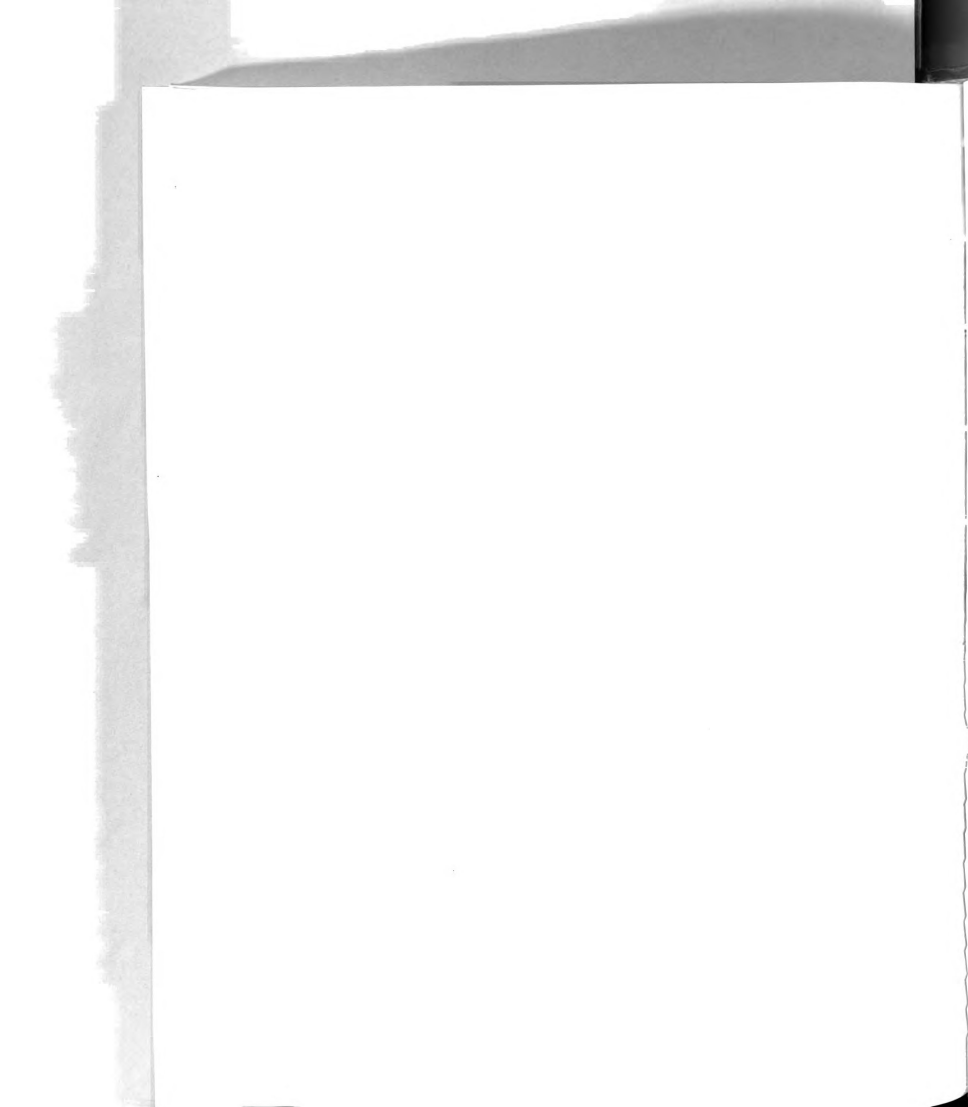
The predicted differences were not found between hypnotic GRs and PRs on the thematic measures of drive representation. It was hypothesized that Perkins' (1965) findings were not replicated because (1) the poor repressive group contained some Ss who may have been misplaced (they didn't comply with the posthypnotic suggestions) and (2) the selection of TAT cards maximized impulsive themes, which may have reduced the differences between GRs and PRs (Murstein, 1961).



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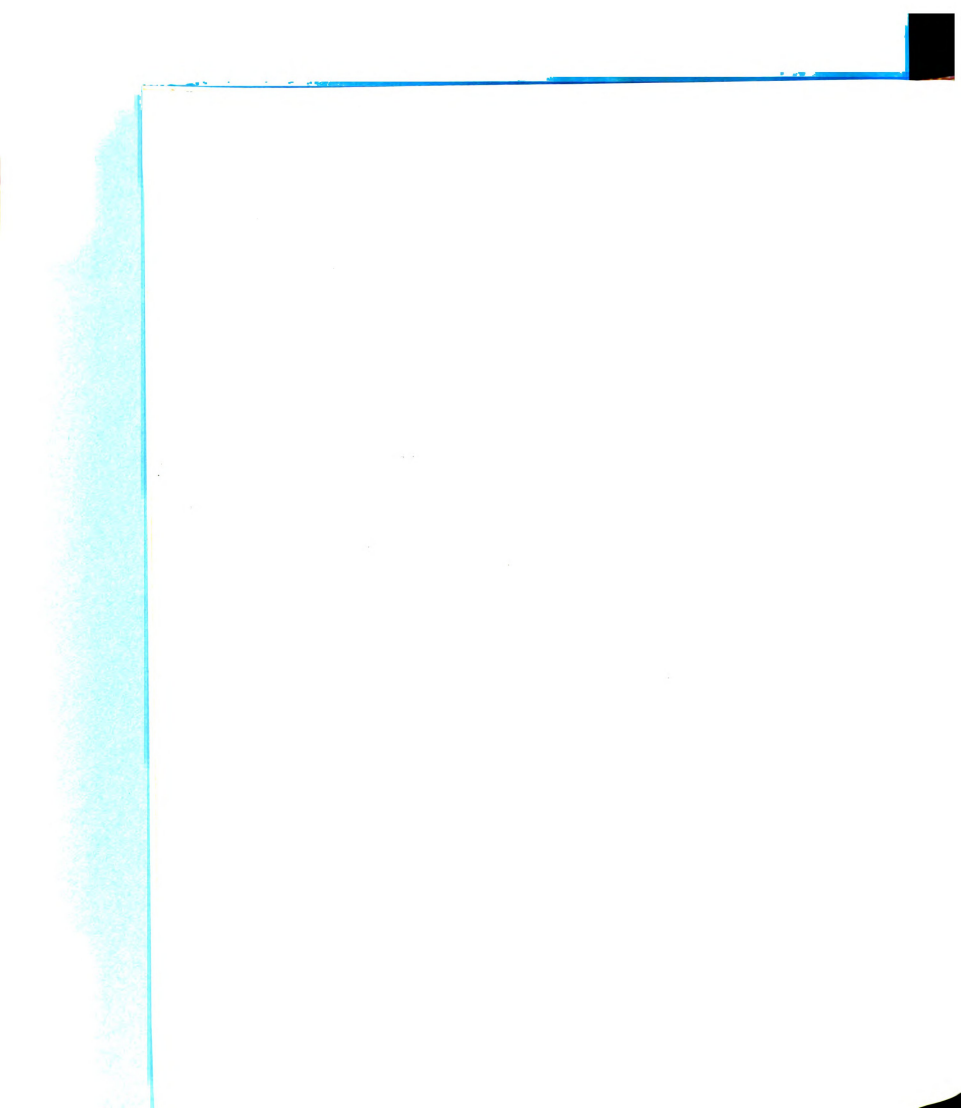
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FOOTNOTES

1. Not all of the data, which was collected in the process of meeting the requirements for a doctoral dissertation, will be reported in this paper.
2. Two undergraduates at Michigan State University. Both judges had prior experience in psychological research.
3. E and a second advanced graduate student in clinical psychology.
4. E and two advanced graduate students in clinical psychology.
5. Simulating Ss's data was included in Figures 7-12 to facilitate comparisons between simulating Ss and the hypnotic groups. The data pertaining to simulating Ss was discussed in Figures 1-6.

APPENDICES

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APPENDIX A

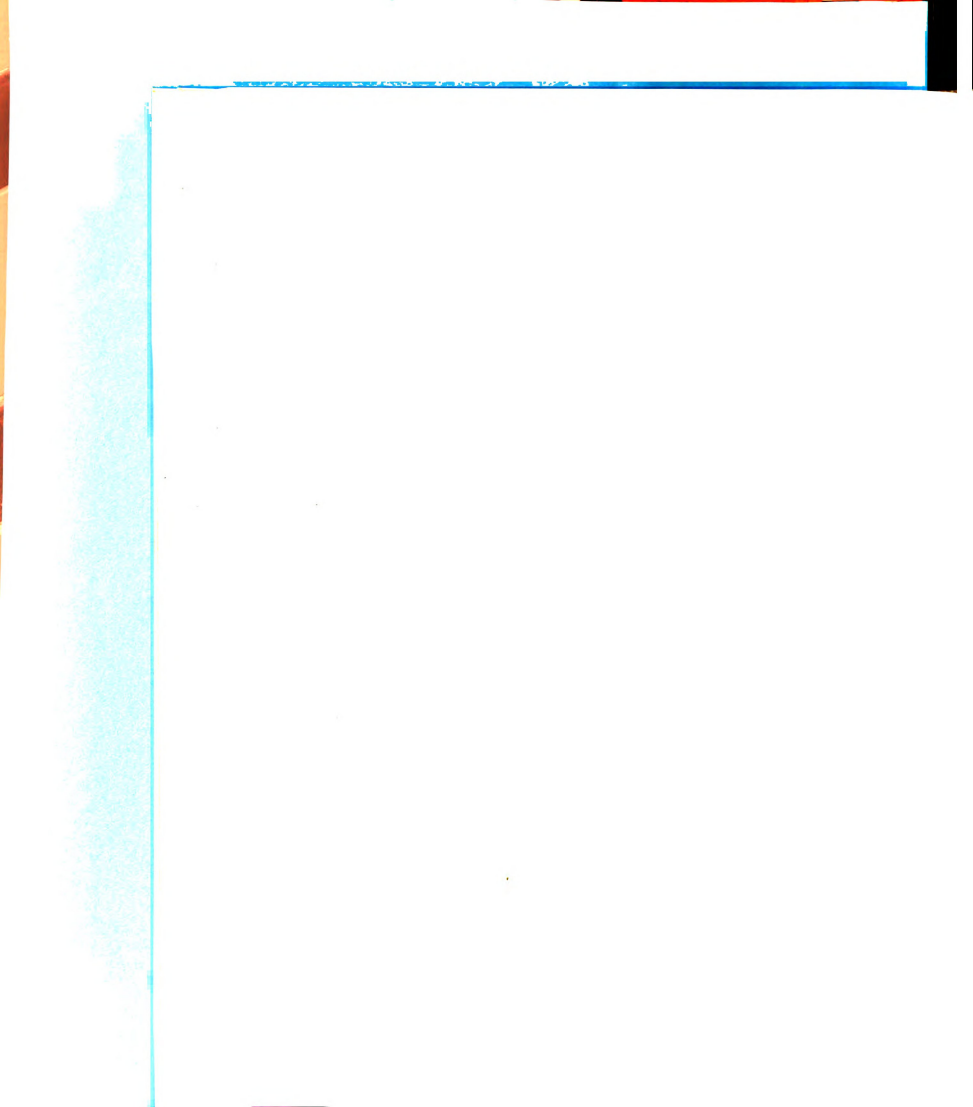
REVIEW OF THE LITERATURE

Psychosomatic Theories

Alexander and Flagg (1965) have defined a psychosomatic disorder as a "physiological adaptive response of the vegetative organs to constant or periodically recurring emotional states" (p. 859). In contrast conversion symptoms occur in the voluntary neuromuscular or sensory perceptive systems. Although both types of symptoms are psychogenic, only the conversion symptoms are symbolic of repressed conflicts.

Many theories have been proposed to account for the development of psychosomatic symptoms by some individuals and to account for the selection of different organ systems. Historically, one of the earliest theories proposed that all psychophysiological disorders were symbolic or conversion phenomena. Most theorists have rejected this theory.

A second group of theories has been titled, "Personality Profiles" by Mendelson, Hirsch, and Webber (1956) in their review. For example, Dunbar (1935) proposed that certain specific personality types have a high correlation

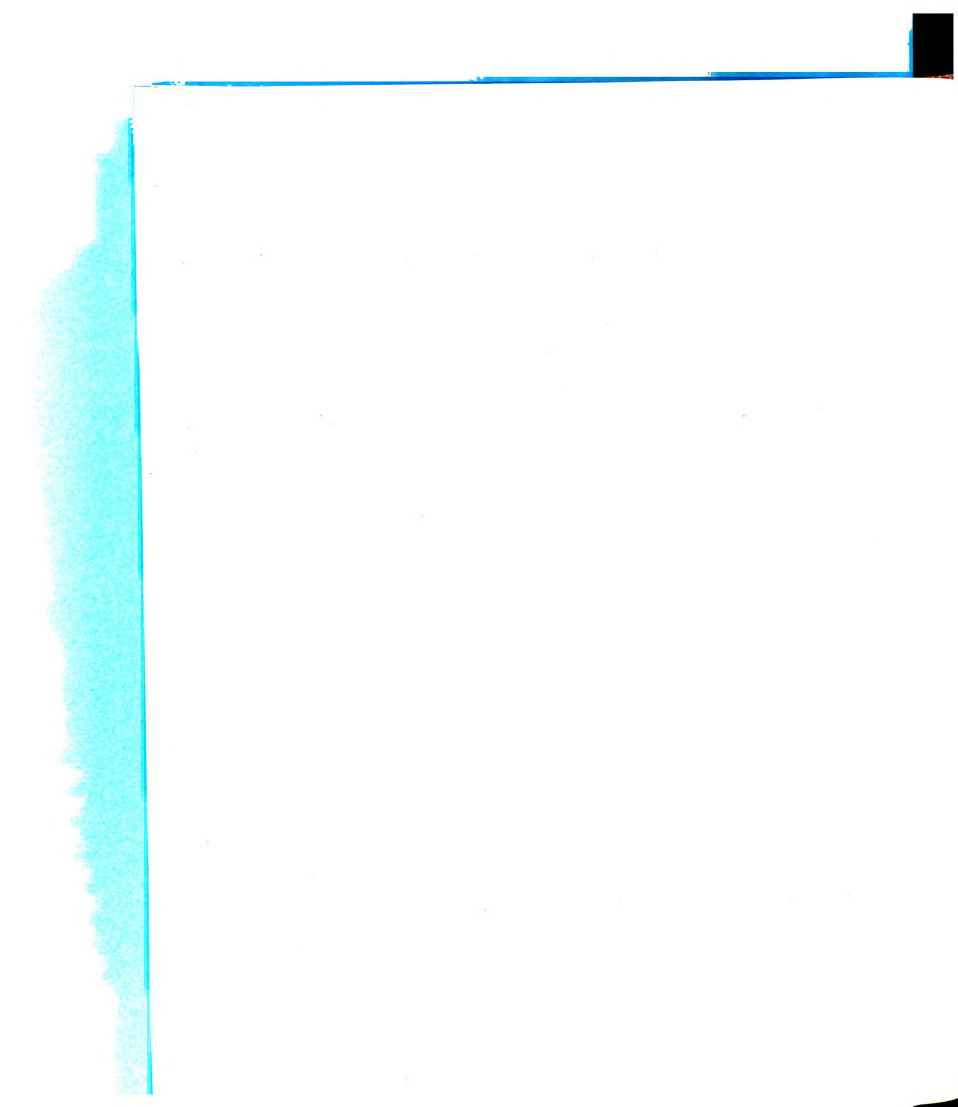


with certain specific diseases. More recently, Gerard (1953) reported her data, which suggests that certain psychosomatic reactions in children are related to maternal patterns of behavior.

In 1950 Alexander proposed that personality types were not the critical factor in the formation of psychosomatic symptoms. Rather, he concluded that there is a specific conflict situation which is associated with each disorder. In addition, each conflict has a specific physiological accompaniment. Alexander's theory has been called a specificity theory because he proposed that a specific constellation of impulses and defenses results in a specific psychosomatic disorder.

Many physiological theories have also been proposed. Wolff (1950) postulated that individuals react to stress and conflicts in a consistent, idiosyncratic, but hereditarily determined manner. Wolff also stressed that altered feelings, attitudes, and bodily adjustments all occur at the same time.

A theory of physiological regression has been proposed by Michaels (1944) and defended by Margolin (1953). In fact, Margolin believes that there is a positive correlation between the degree of regression in psychological and physiological functioning. Thus under stress regression to infantile physiological levels occurs.



The theory of physiological regression has been refined and called the principle of physiologic infantilism. Hendrick (1953) postulated the tendency to discharge conflict in the organs where physiologic lability of normal immaturity has been retained or can be established.

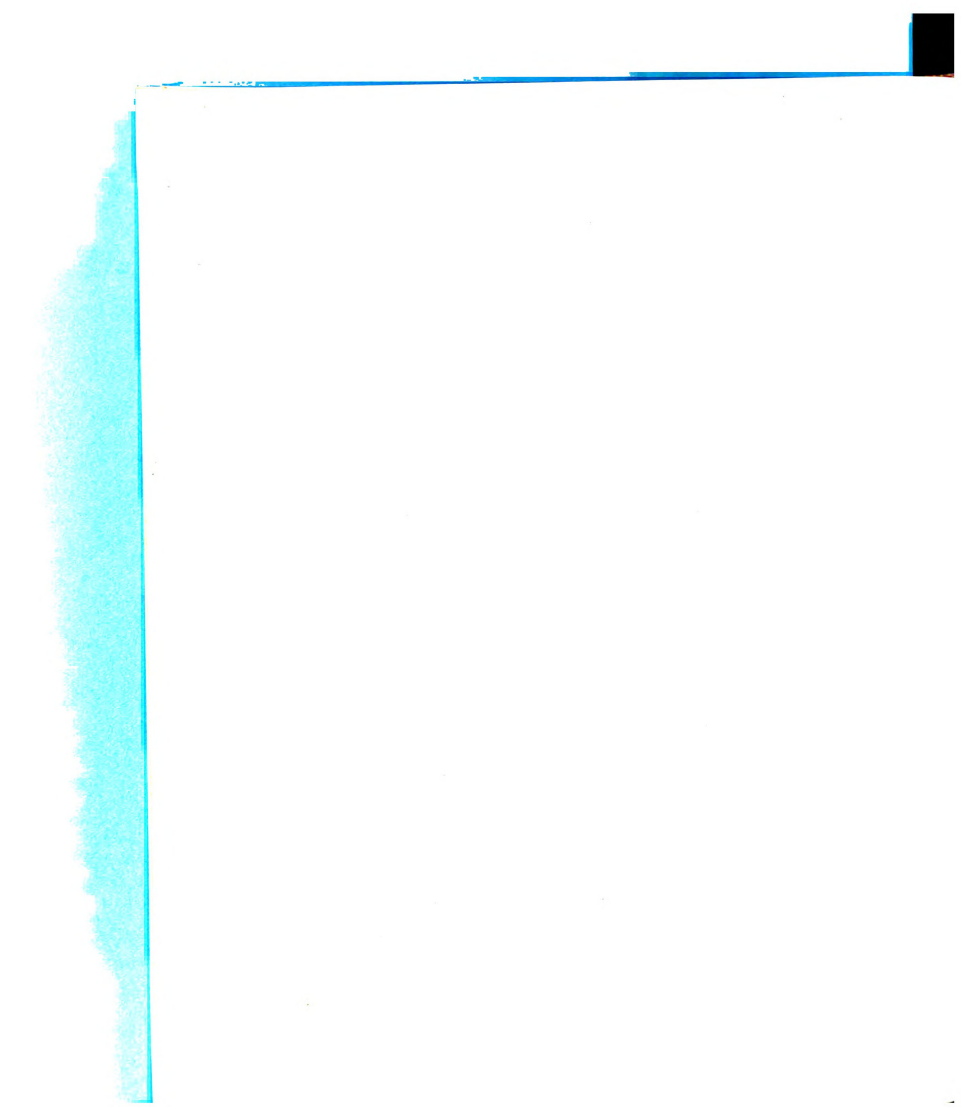
Attempting to unite the emotional conflict and physiologic infantilism theories, Deutsch (1953) offered fourteen steps, which are necessary to understand the choice of the organ system. The two major factors are the occurrence of an organic dysfunction which is coincidentally associated with instinctual conflicts during the neonatal or early infancy period.

Lacey, Bateman, and Van Lehn (1953) proposed the response specificity theory, which states that individuals tend to react with the same pattern of autonomic activation, in which the maximum activation will be shown by the same physiological functions whatever the stress. Similar conclusions were made by Wenger, Clemens, Coleman, Cullens and Engel (1961); although they cautioned that the stability in the autonomic patterns may have reflected the similarity in the stimuli and the proximity of the stimuli in time. In addition, the stimuli presented were not of an emotional nature.

Unfortunately, all of the previous theories fall short of explaining and integrating the vast amount of clinical and experimental data relating to psychosomatic

disorders. Kubie (1953) pointed out that often times patients have completely different psychosomatic symptoms during different phases of treatment. As an example, he presented a patient, who had ulcerative colitis, severe dermatitis, migraine, and finally a psychotic break. Seitz (1951) reported similar substitutions of psychosomatic symptoms when an original symptom was removed by hypnotic suggestion. Even when replacement of the original symptom was not suggested, spontaneous symptom substitutions occurred. As a partial explanation of his results, Seitz hypothesized that symptoms could only be replaced by symptoms with "psychodynamic equivalence." Replacement symptoms varied in "regressive depth," but had similar symbolic characteristics such as masochism or exhibitionism.

Another major weakness of the previously presented theories of psychosomatic disorders is their exclusive concern with physiological symptoms to the neglect of more psychological symptoms. As a result, the study of psychosomatics has tended to remain isolated from the rest of psychopathology. Reyher (1967) has proposed a degree of repression theory in an attempt to integrate the study of Psychosomatics with the entire range of psychopathology. Briefly stated, Reyher's theory postulates that the choice of symptom is a function of the degree of repression. The experimental and theoretical basis for this theory will be presented when the studies involving hypnotically induced Psychopathology are reviewed.



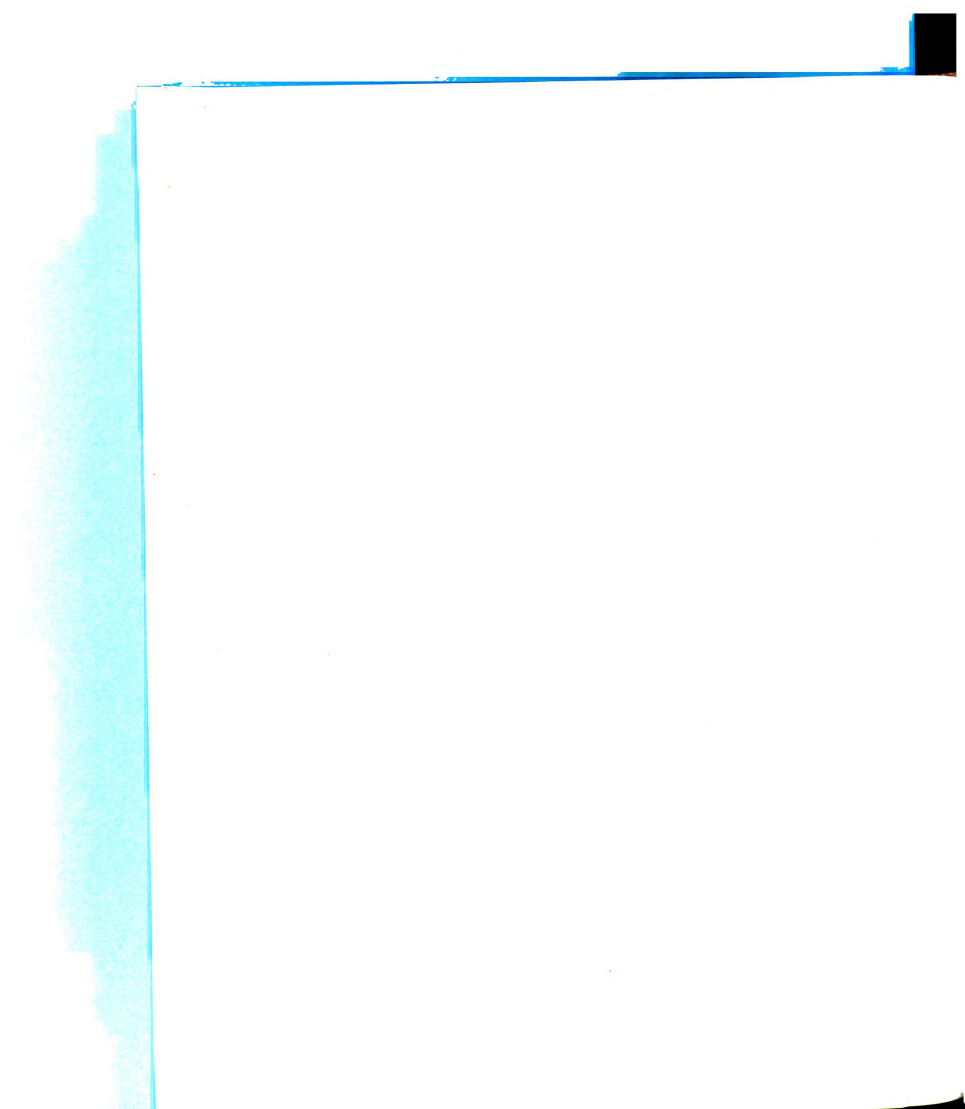
Hypnotically Induced Psychopathology

Using hypnotic activated conflicts, psychosomatic as well as psychological symptoms resembling naturally occurring psychopathology have been reported by Eisenbud (1937), Wolberg (1947), Reyher (1958, 1967), and Perkins (1965). The usual procedure has been to implant alien impulses, which then operate as instinctual drives. Psychopathology is produced when the implanted impulses conflict with the ego's defenses.

In order to assure that the psychopathology is the result of pathogenic psychodynamics and not merely compliance with hypnotic suggestions, Reyher (1967) formulated the following paradigm:

- a. the hypnotically induced process must in no way include cues as to how E expects S to respond in terms of the dependent variables,
- b. the induced process must produce other processes and behavior,
- c. some of the responses must satisfy the criteria of psychopathology,
- d. some of the Ss must be asked by a co-experimenter to fake hypnosis, and
- e. hypnotic instructions should be presented in the passive voice.

It is extremely important that instructions are not given to the Ss to react to the implanted impulse in terms of conscience or by producing symptoms. Considerable debate between Reyher (1962, 1963) and Levitt (1962) resulted over Reyher's classification of experimental



procedures as genotypical or phenotypical. Levitt's studies (1960, 1960) are classified as phenotypical because the Ss overt behavior is specified in the instructions given to the Ss. Likewise, Graham, Kabler, and Graham's (1962) research is phenotypical since the Ss were given particular attitudes for hypertension and hives. Although this type of experiment provides very interesting and informative information regarding psychopathology, the use of direct suggestions bypasses the process of psychodynamic interaction and resulting psychopathology. The preferred genotypical design involves giving instructions capable of producing pathological psychodynamics (genotype) and thus the behavioral outcome (phenotype) results from the psychodynamic interaction rather than from the E's instructions.

A. R. Luria (1932) first used hypnosis to induce a process resulting in posthypnotic disturbance. Luria implanted paramnesias relating to antisocial acts such as beating a child and found disturbances in breathing, motor responses, and verbal associations. Luria's research stimulated considerable research using hypnotically induced conflicts to study psychopathology even though his work lacked control groups and statistical analyses.

Using Luria's experimental procedure Huston, Shakow, and Erickson (1934) replicated Luria's findings. To explain their results, they proposed the "levels of discharge hypothesis." According to this hypothesis, if affective

excitation created by a conflict is not discharged completely at one level, it then appears at another level. For example, when verbal responses were inhibited, motor disturbances occurred. They also described a shock effect: the amount of motor disturbance declined rapidly with repeated trials.

Bobbitt (1958) proposed that the amount of disturbance was correlated with the degree of "repression." Using a paramnesia involving a hit and run accident, Bobbitt measured verbal and motor disturbances to word association stimuli. The conditions of repression were phenotypically rather than genotypically elicited. These conditions were: prehypnotic control, posthypnotic amnesia, partial awareness, full awareness, and after removal of the paramnesia. Although thought disturbances occurred during most of the stages of repression, the maximum disturbance occurred in the partial awareness condition.

Eisenbud (1937) published an interesting case study involving a hospitalized patient who had severe headaches. In the course of hypnotic treatment paramnesias involving anger and sex were implanted. Amnesias for the implanted conflicts were suggested. The effects of the paramnesias were gathered from the patient's diary. It was also reported that the onset of the headaches often began when the patient met the "target" person in the paramnesia. This patient had the most severe and prolonged headaches



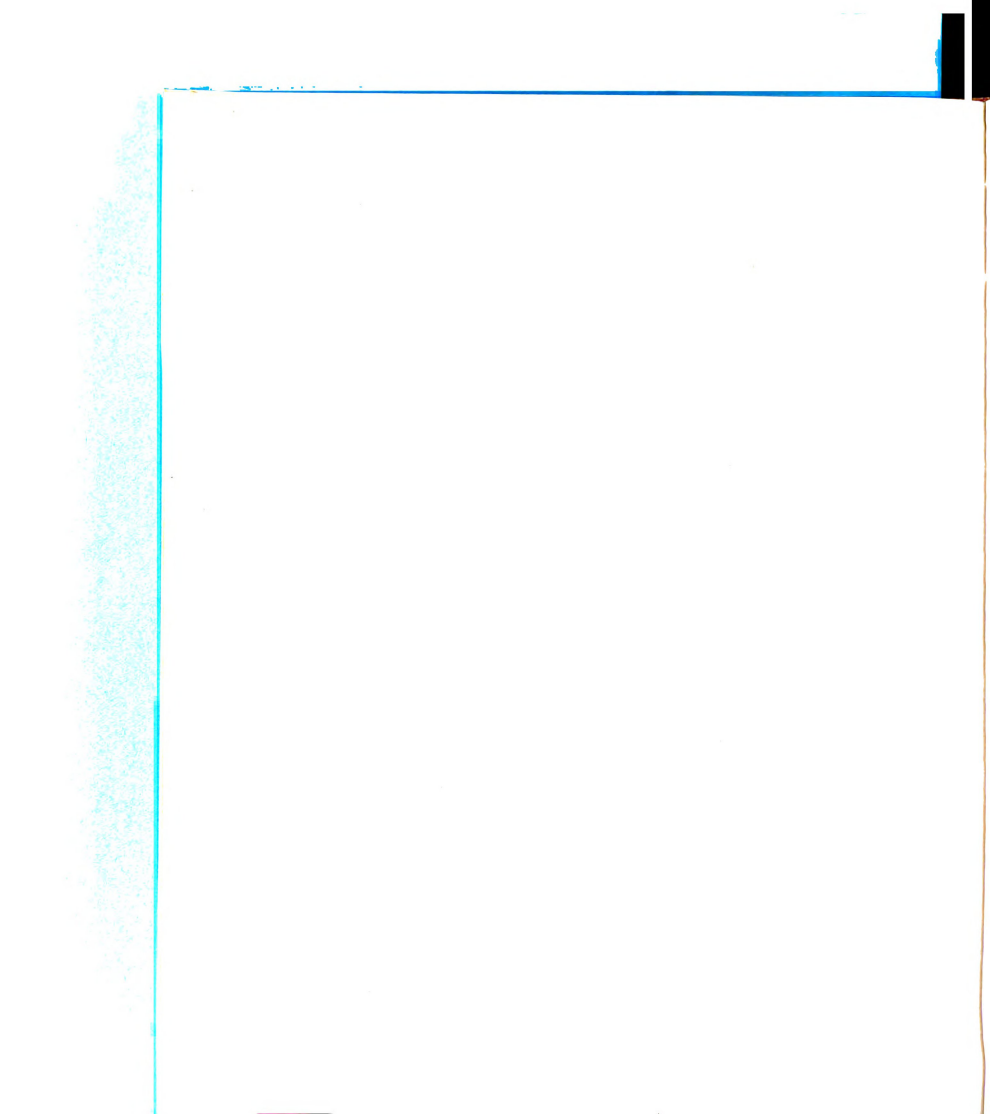
following the paramnesia involving anger. The implanted sexual impulse also resulted in brief headaches; which led to Eisenbud's questioning of the stimulus specificity theory of Alexander (1965).

Erickson (1944) and McDowell (1948) also reported implanting artificial conflicts which closely resembled the neurotic conflicts of their patients. McDowell reported that the resolution of the artificial conflict greatly reduced the neurotic conflict of his patient. He interpreted the therapeutic result as due to desensitization of the emotional situation, which resulted in his patient's symptoms.

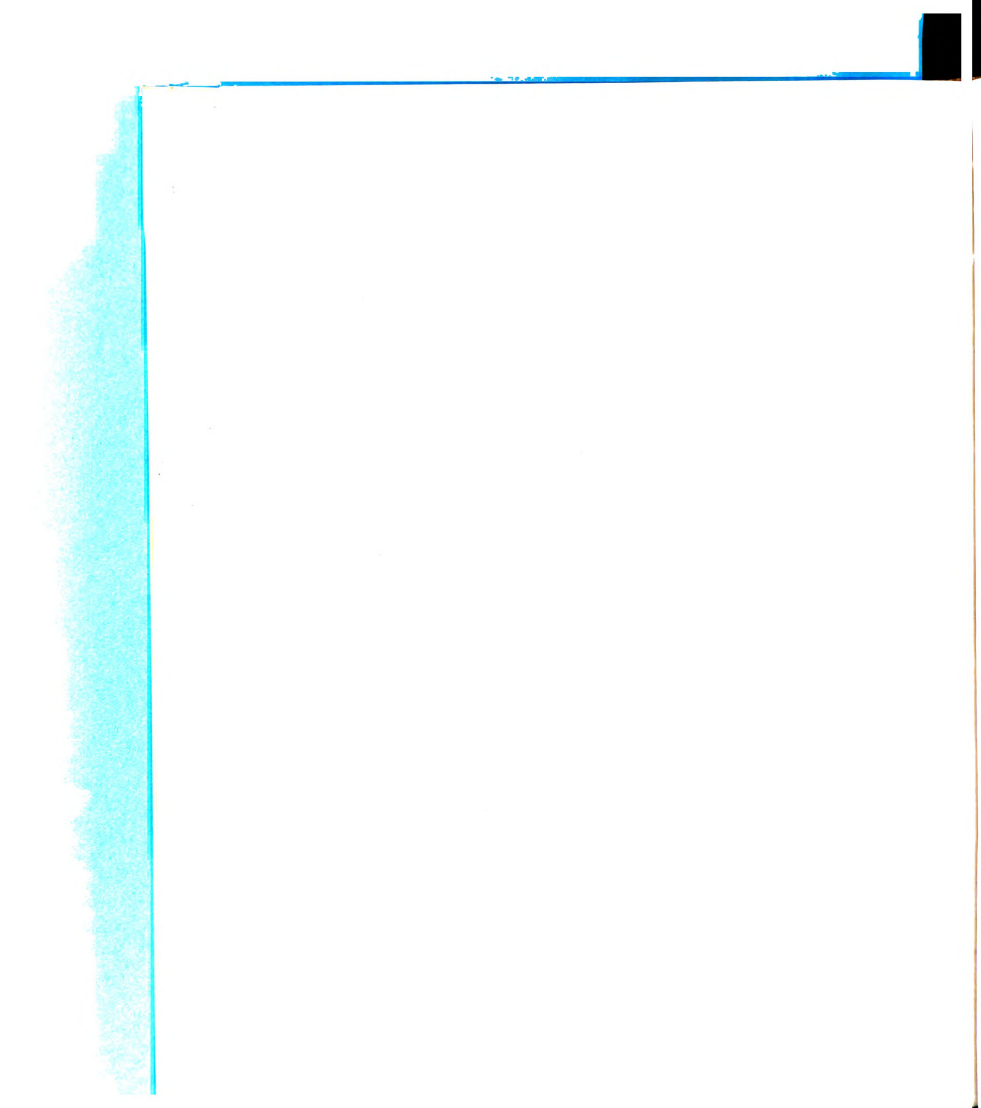
Wolberg (1947) did not use artificial conflicts, but did give posthypnotic suggestions regarding impulses that were conflict-producing in the waking state. Illustrative of his suggestions is the following:

When you awaken, you will find next to you a bar of chocolate. You will have a desire to eat the chocolate that will be so intense that it will be impossible to resist the craving. At the same time you will feel that the chocolate does not belong to you and that to eat it would be very wrong and very bad. You will have no memory of these suggestions when you awaken, but you will, nevertheless, react to them (p. 337)

To suggestions such as this, Wolberg reported that his Ss developed a wide variety of psychosomatic and conversion symptoms. If control Ss would have been used and if Wolberg had not appealed to the conscience of his Ss, a more definite statement could be made about the psychopathology produced by this method.



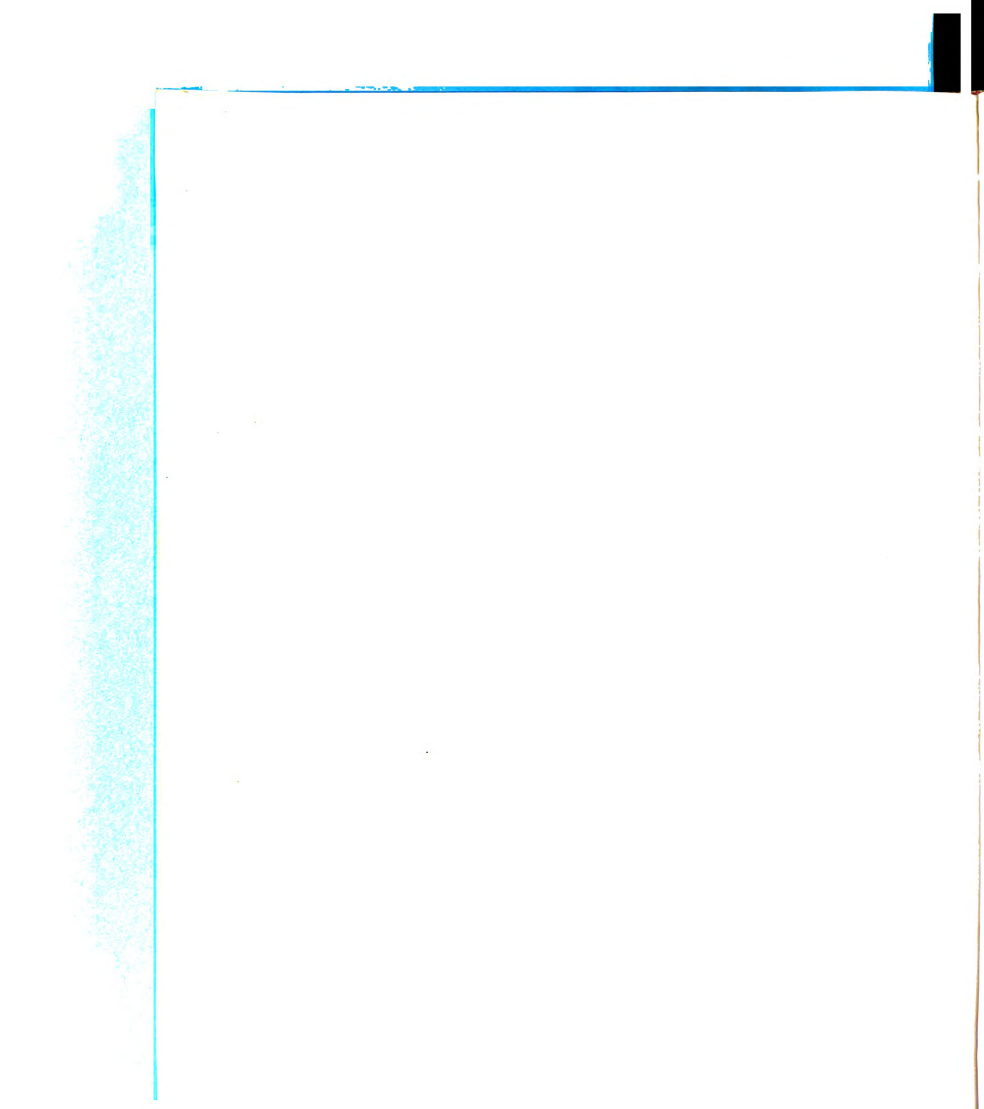
Reyher (1958, 1961, and 1967) reported a wide variety of somatic and psychological symptoms were produced in both an original and replication study. In addition, to implanting paramnesias involving anger, Reyher made numerous modifications with the technique of implanting artificial conflicts. These modifications were: (1) a procedure for intensifying the degree of repression, (2) the association of the impulse and conflict words, which were used to elicit the data, within the paramnesia, (3) focusing the anger towards an authority figure, (4) coupling the anger with a destructive act against the authority figure, and (5) activating the conflict by a posthypnotic cue (conflict words). For the first time control Ss were also used to determine the demand characteristics of the research. The control Ss did not "act out" the impulse and destructive act and did not develop symptoms. Likewise, the majority of experimental Ss did not carry out the posthypnotic suggestions, but instead, developed a wide range of symptomatology. Analysis of the GSR data supported Reyher's contention that a spontaneous repression had occurred for the experimental Ss. Additional analyses indicated that repression was positively correlated with the proportion of somatic reactions and negatively correlated with the frequency of symptomatic reactions and types of symptom categories. Reyher also obtained some data suggestive of a sequence in the occurrence of symptoms as repression weakens.



Utilizing Reyher's paradigm Perkins (1965) replicated the results of Reyher. Eight of eighteen hypnotic Ss carried out the suggestion for the destructive act. These poor repressors experienced a remission of symptoms and a decrease in physiological activation following their resolution of the conflict by expressing the impulse. On the other hand the good repressors had increasing symptoms and physiological activation as the intensity of the conflict increased. Perkins also administered the TAT to his subjects and scored the protocols for drive content, drive integration, and drive socialization. As predicted the poor repressors based on their expressing the destructive act in the hypnotic situation were found to have significantly greater drive content, greater drive integration, and lower drive socialization than the good repressors.

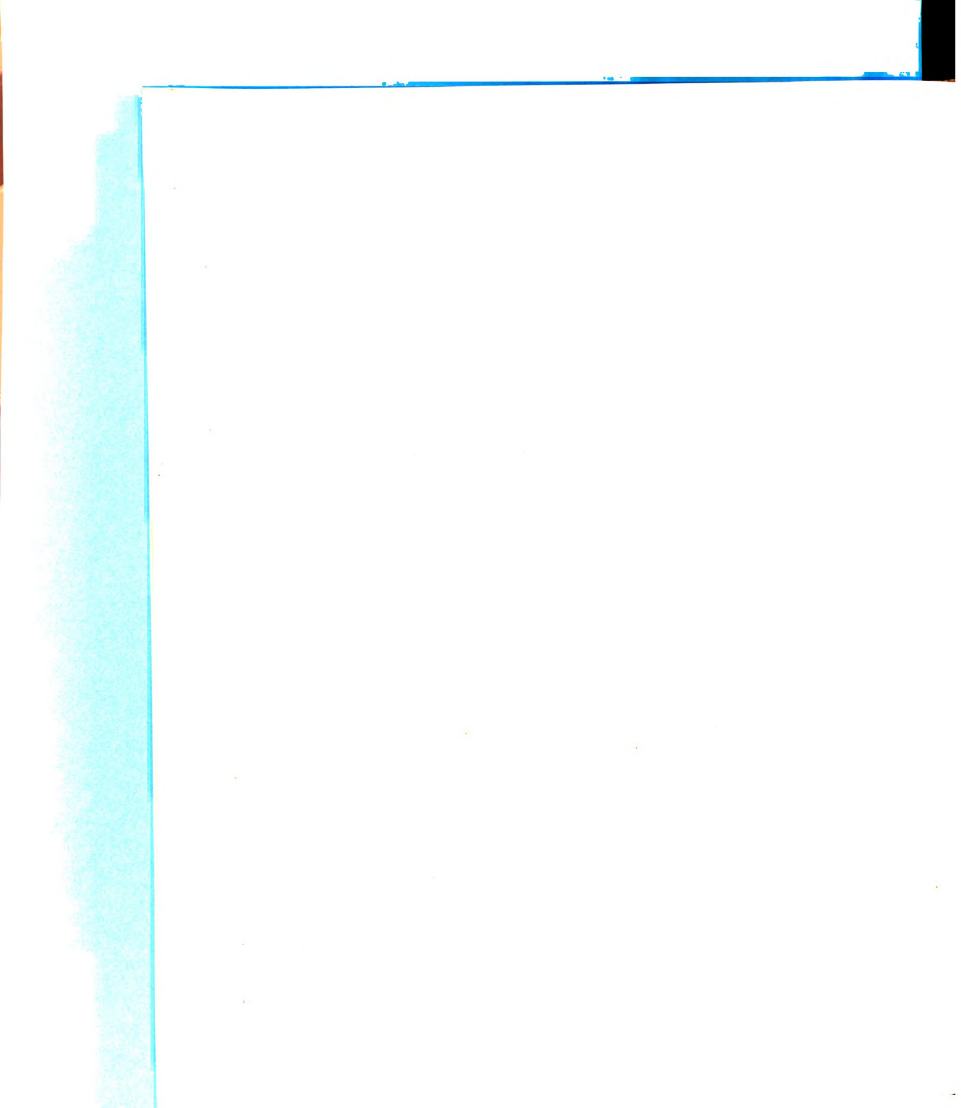
Moore (1964) utilized a paramnesia, in which the intensity of anger was reduced and still found that some of his Ss developed symptoms. As hypothesized he found that low n-achievers were relatively poor repressors and high n-achievers were relatively good repressors.

Veenstra (1969) showed that a paramnesia involving anger without the destructive act results in less repression and psychopathology when compared with the results of the studies of Reyher (1967) and Perkins (1965). Pruesse (1967) reported similar findings. In this study an absence of psychopathology was reported. His Ss were given a partial



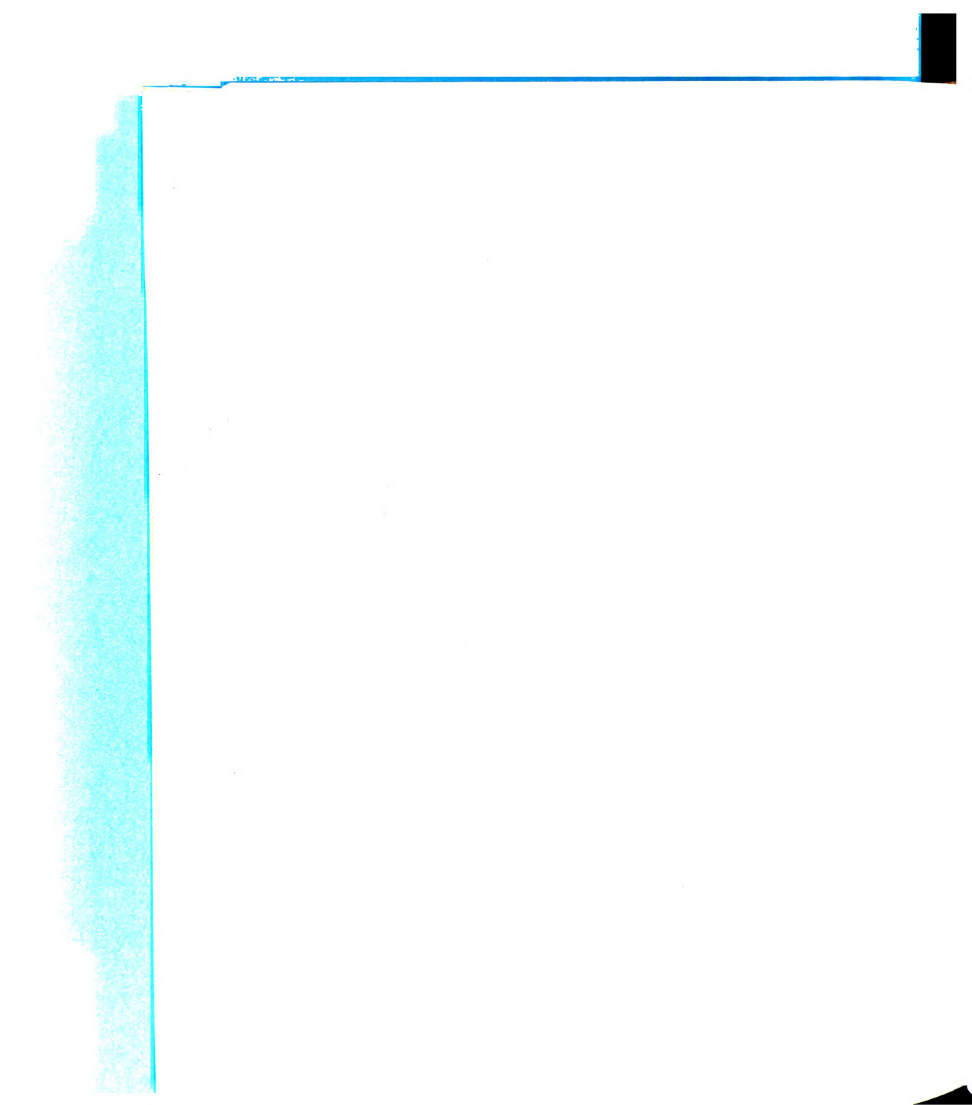
amnesia for a paramnesia involving anger, which was not of overwhelming intensity, directed toward an authority figure, and associated with a destructive act.

Sheehan (1969) also implanted an artificial conflict and used both simulating and hypnotic Ss to evaluate the psychopathological reactions which occurred on a battery of tests. Sheehan found that the simulators responded with similar test scores as the hypnotic Ss, although the latter were described as less spontaneous. Hypnotic Ss also expressed "considerable subjective involvement," which referred to their greater involvement under the induced conflict and resulting psychopathological reactions, which were not in response to the tests. In concluding that "many of the signs of maladjustment and emotional disturbances as inferred from Ss' behavior after the induction of conflict can be equally well explained by the expectation hypnotic Ss bring to the task," Sheehan based his conclusions entirely upon the null findings between simulating and hypnotic groups (p. 24). In the next sentence the differences between groups were interpreted as evidence for the repressive hypothesis. In response to Sheehan's article, one of Reyher's (1969) most poignant criticisms was that the reactions of simulating Ss's might have been in response to posthypnotic suggestions, which unwittingly specified pathological reactions, rather than due to the expectations which are brought to the task by simulating Ss.



One additional study by Basch (1968) is relevant to this study. Basch used self-report inventories, which were scored for repression and psychosomatic symptoms. A significant relationship between repression and the number of somatic symptoms was obtained. It was concluded that the results supported the degree of repression theory.

In conclusion, the review of the literature indicates that posthypnotic activation of artificial conflicts involving anger has led to spontaneous repression and a wide range of psychopathology. The most pathological conflicts involve the coupling of an intense impulse with a suggestion for expression of the impulse towards an authority figure. All of the experimental studies have utilized paramnesias involving anger. With the theoretical and historical importance of the sexual drive within psychoanalytic theories, it is mandatory that the relationships between repression of sexual impulses and psychopathology be studied in the laboratory.



APPENDIX B

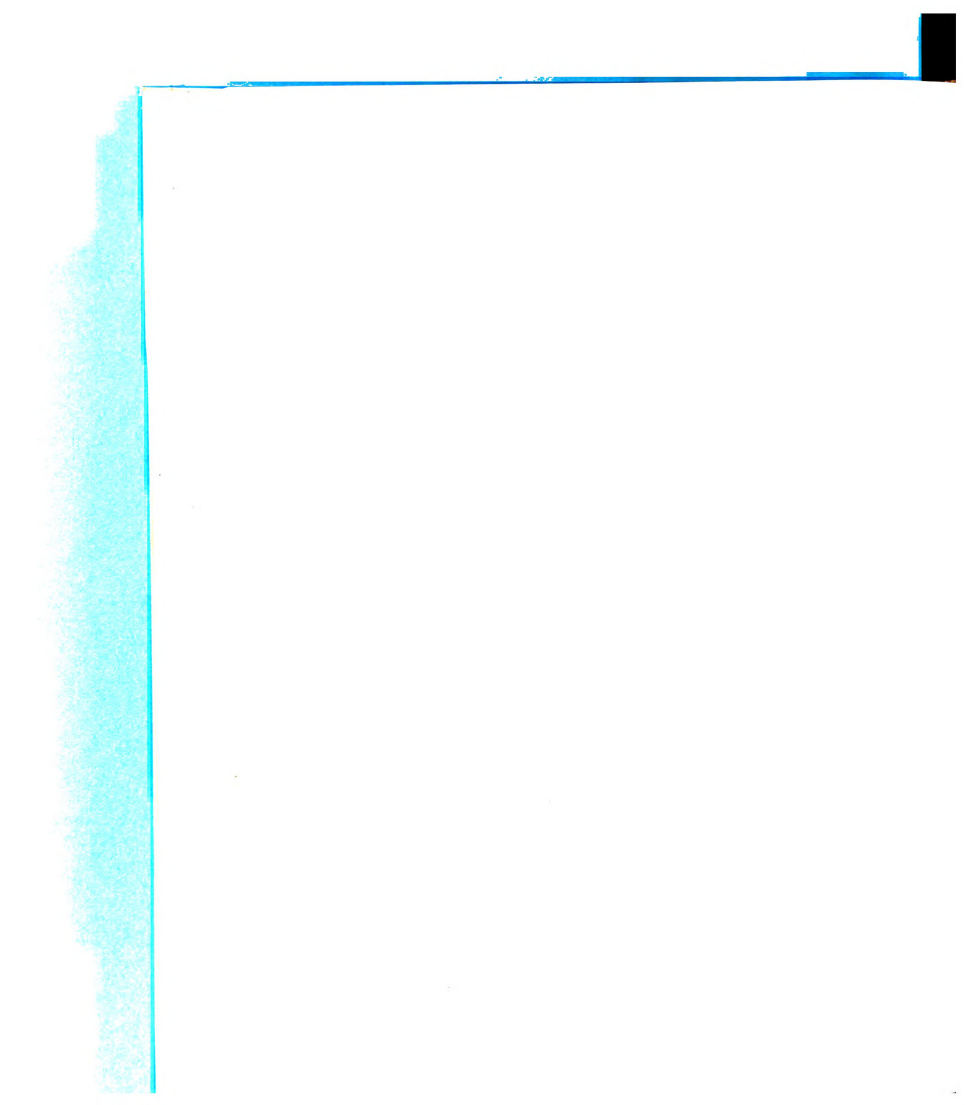
PINE SCORING SYSTEM FOR TAT

A. Drive Content scores (DC)

1. Each scored unit of DC was assigned a quantitative value of 1.
2. DC was rated only if it was stated explicitly in the story.
3. DC was rated if it appeared at any point in S's response to a TAT card except in response to a direct inquiry question.
4. DC was rated without any regard to its extent (i.e., both a passing mention or full thematic development of drive material).
5. Affective experiences which were directly linked to particular drives (anger, love) were rated although affective states in general were not (shame, guilt, sadness, elation, etc.).

B. Drive Integration scores (DI)

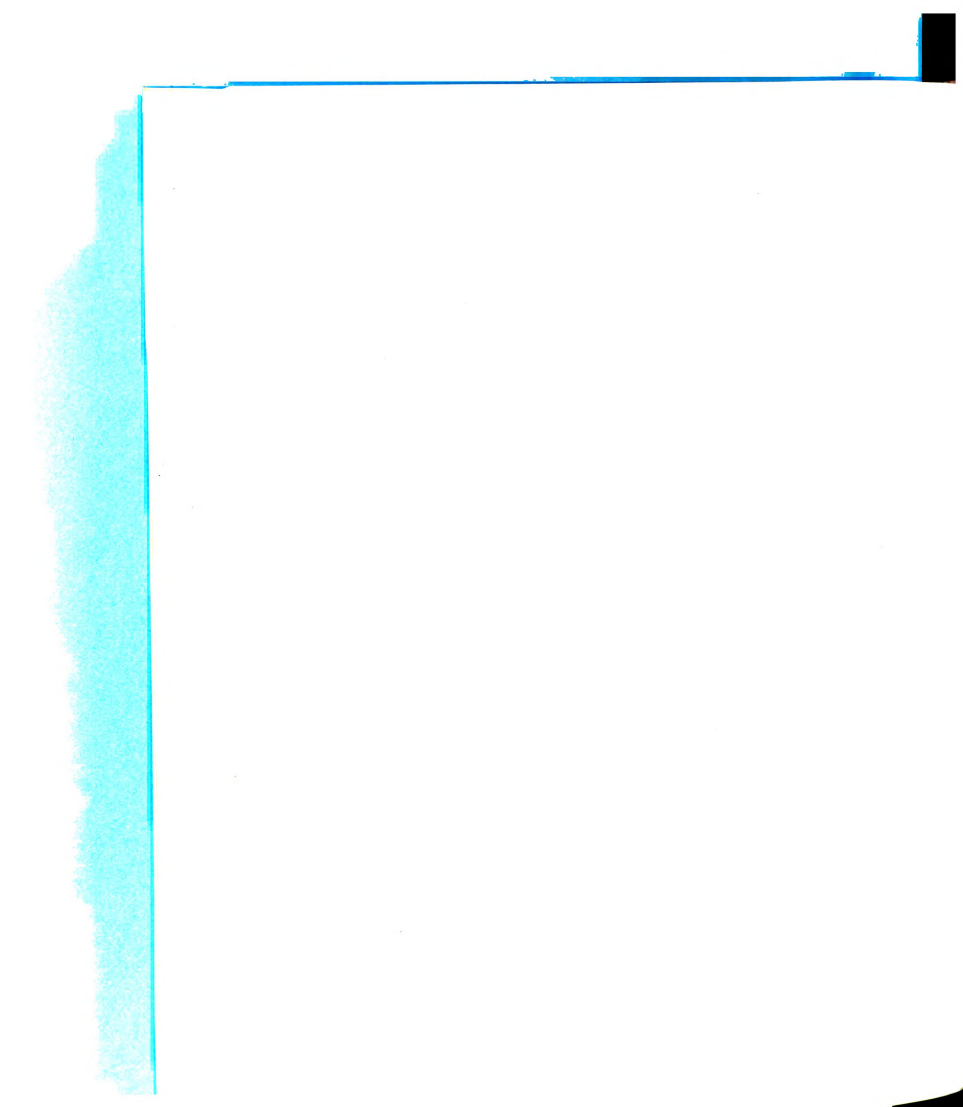
1. Thematic (T) = drive content which was part of the central theme of character portrayal of the story.
2. Incidental (I) = drive content which was integrated into the story but which was generally expendable (i.e., if the rater felt that a story could get along without an item of drive content; such as an analogy given tangentially to enrich a story).
3. Non-Appropriate (NA) = those expressions of drive which were not in accord with the TAT task or which were not intended by S.
 - a. exclamations and side comments before, during, or after the story (e.g., "Wow, this is a sexy one").



- b. drive content given in card descriptions when it did not then get included in the story (e.g., mention of the gun on card 3BM followed by a story about fatigue rather than, say, suicide).
- c. misperceptions of doubts about the identity of persons or objects when drive content was involved (e.g., calling violon on card I, a machine gun).
- d. verbal slips where drive content was evident in the slip itself (e.g., "he" instead of "she").

C. Drive Socialization scores (DS)

- 1. Level I (direct-unsocialized) = expressions of drive content where libidinal or aggressive impulses are directly expressed in a way contrary to conventional social values (e.g., murder, robbery, rape, prostitution, etc.) and where physical expression was included (e.g., anger was rated level I only when it involved physical violence).
- 2. Level II (direct-socialized) = expressions of drive content where libidinal or aggressive impulses are expressed directly but in socialized ways (e.g., anger expressed without violence, arguments among family members, intercourse between marriage partners).
- 3. Level III (indirect-disguised; weak)
 - a. indirect-disguised = instances that were associated with drive, but where the underlying impulse was neither explicitly thought nor acted upon in the story (e.g., mention of police, soldiers, illness).
 - (1) these all permit the inference that a particular drive was an issue for S in that some reflection of the drive appeared in the manifest story, but the drive itself was not expressed.
 - b. weak = drive expressions that were weak and highly derived (e.g., social expressions of aggression derivatives such as strikes and militant unions).



D. Seven summary scores were derived for every S:

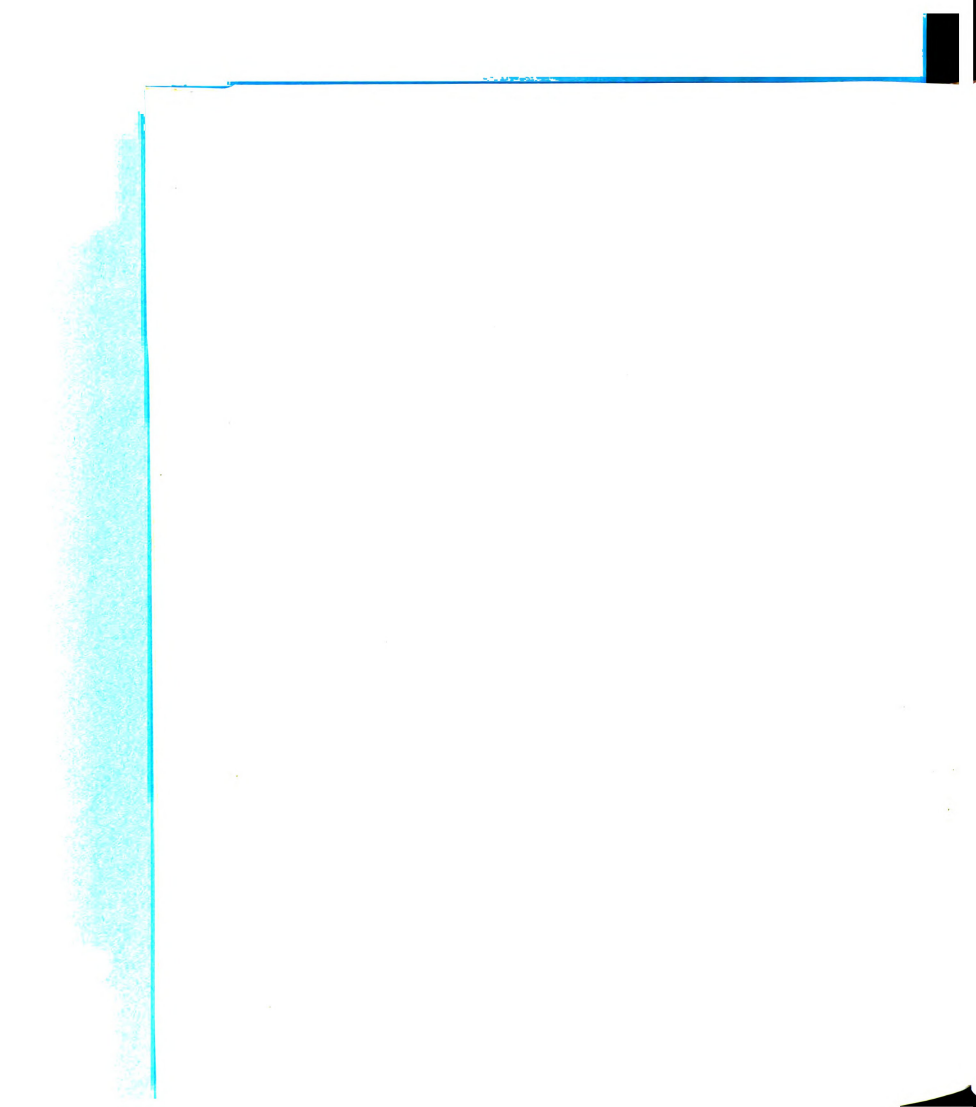
1. one score each for the number of Thematic, Incidental, and Non-Appropriate ratings;
2. one score each for the number of level I, level II, and level III ratings;
3. a total Drive Content score equaling the sum of the three scores in either D-1 or D-2.

E. A Drive Integration Index was derived by weighting the instances of Drive Integration (i.e., 3 times the number of Thematic ratings plus 2 times the number of Incidental ratings plus the number of Non-Appropriate ratings) and dividing by the total number of ratings (DC):

$$LI = \frac{3T + 2I + NA}{DC}$$

1. this index identifies a continuum from well-integrated drive content at one extreme to poorly integrated drive content at the other.

F. A Drive Socialization Index was derived by determining the proportion of each S's responses that were level I and the proportion of level III and subtracting I from III. This gives a continuum of drive socialization ranging from highly modulated at one extreme (low level I and high level III) to relatively unmodulated drive content at the other extreme (high level I and low level III).



APPENDIX C

REYHER'S CLASSIFICATION OF SYMPTOMS

- (1) Symptoms characterized by the dominance of autonomic systems innervation, such as feelings of nausea, gastric distress, headache, tiredness, sleepiness, tachycardia, pressure in head, sweating, flushing, skin disturbances, organ dysfunctions, heaviness, temperature alterations, and such feelings as "queasy" and "antsy."
- (2) Symptoms dominated by innervation of the somatic or musculature nervous system, such as stiffness, aches, pains, tension, tics, tremors, physical discomfort, etc.
- (3) Disturbances of affect:
 - (a) Flattening: lack of feeling, apathy, etc., upon recognition of a c-word when symptoms usually attend c-word recognition.
 - (b) Superego reactions: feelings of being alone, abandoned, ashamed, depressed, disgusted, guilty, worried, etc.
 - (c) Inversion: definite feeling of well-being upon the recognition of a c-word.
 - (d) Alienation: feelings that seem weird, strange, odd, unreal, unnatural, foreign, etc.
- (4) Unspecified distress that cannot be clearly categorized as either physical or emotional in nature, in S's frame of reference, and are expressed in such conventional terms as being upset, fidgety, jittery, nervous, on edge, restless, bothered, etc.
- (5) States of emotional agitation that reflect the reaction of the ego to the threat of complete breakdown of repression such as feelings of anxiety, fear, apprehension, terror, etc.

- (6) States of confusion, doubt, and disorientation that include statements that one's thoughts are being pushed or pulled and that the content of thought cannot be specified.
- (7) Dissociative reactions:
 - (a) Somatic and ideational delusions, such as limbs feeling detached, "crazy" thoughts and intruding paranoid ideas.
 - (b) Strong compulsive urges not carried out in behavior, such as wanting to move hands around, scratch at something, etc.
 - (c) Recognition light response (LR).
- (8) Disturbance or distortion in perception of the tachistosopic stimulus.
- (9) Derivatives of the induced conflict. (These are symbols of the induced experience and/or the repressive forces themselves. Memories of personal experiences that are congruent with, or similar to, the induced experience are frequently activated in some Ss.)
- (10) Conscious correlates of one or both aspects of the conflict or immediate awareness of one aspect of the conflict.
- (11) Delayed awareness of one or both aspects of the conflict.
- (12) Immediate awareness of one aspect of the conflict.
- (13) Immediate awareness of both aspects of the conflict.

In this study categories 7c and 8 will be omitted due to a different experimental procedure. Also 7d will be enlarged to include both compulsive destructive and sexual urges acted out in behavior without awareness.



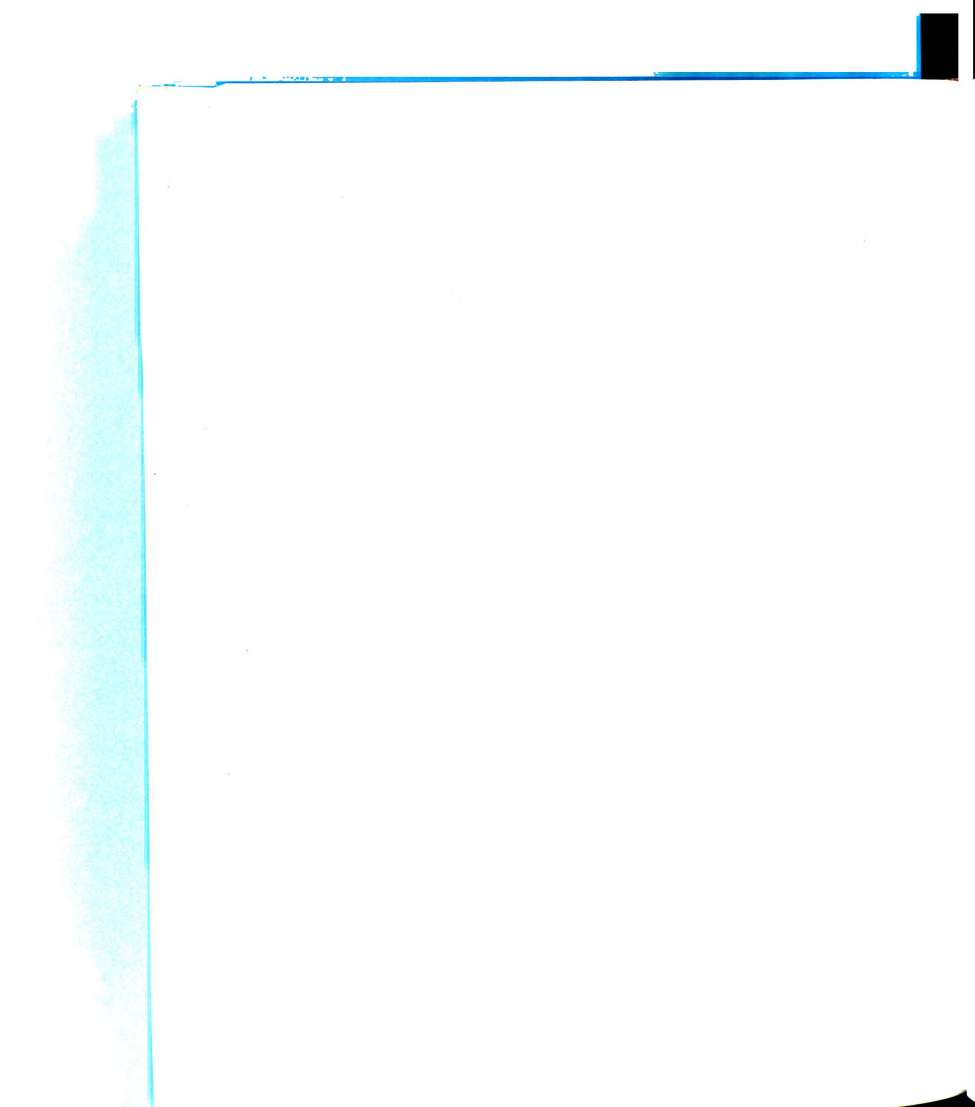
APPENDIX D

SYMPTOM QUESTIONNAIRE

This questionnaire consists of some numbered statements. Read each statement carefully. If it is true as applied to you, mark T on the answer sheet and if false mark F. Please answer all statements as accurately as you can.

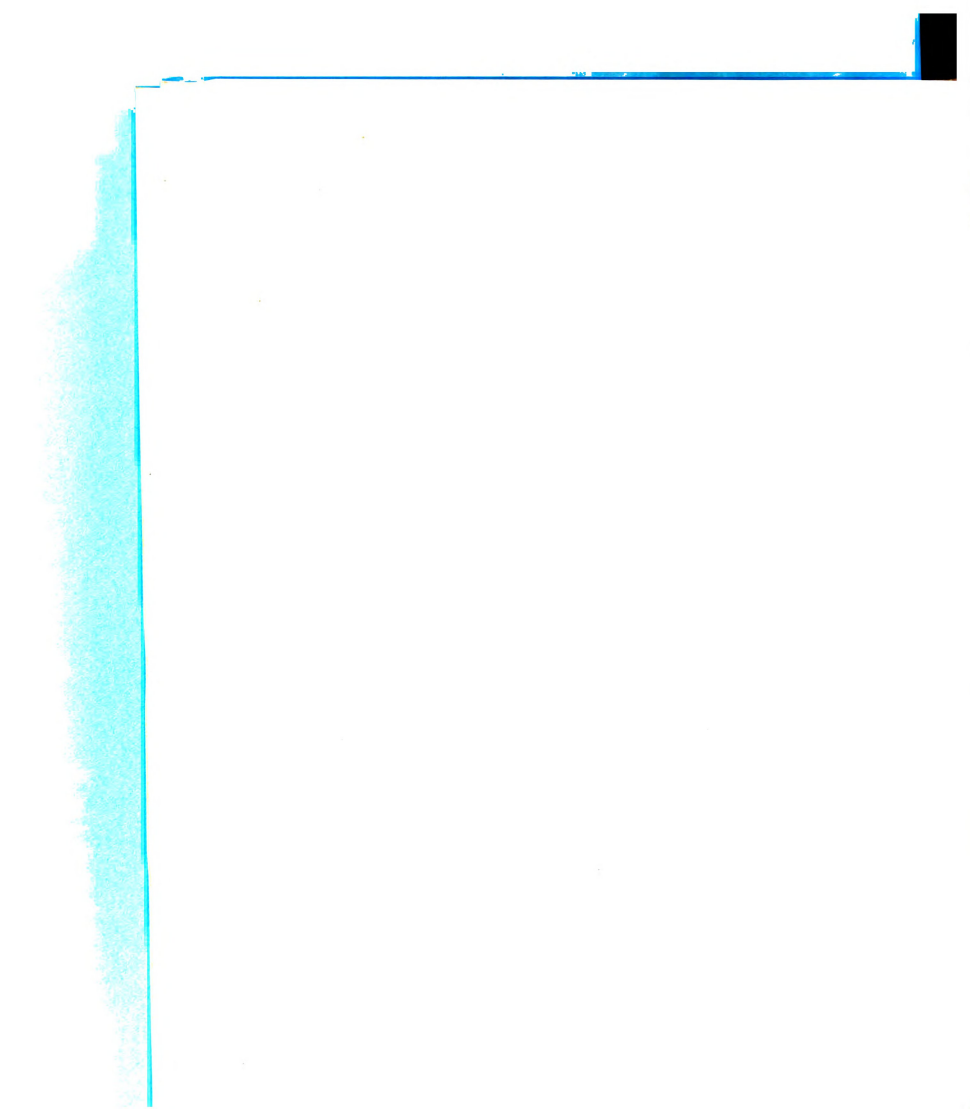
1. I do not often feel bothered.
2. I have never been paralyzed or had any unusual weakness of any muscle.
3. I have never had asthma.
4. I go to sleep without thoughts or ideas that make me feel guilty.
5. I frequently notice my hand shakes when I try to do something.
6. At times I am on the brink of having a feeling or impulse but am at a loss to know what it is.
7. I hardly ever feel pain in the back of my neck.
8. I have pains in the heart or chest.
9. When something goes wrong, I generally feel that I am the blame.
10. I never wake up at night frightened.
11. Sometimes I feel as if I must injure either myself or someone else.
12. I am never ashamed of my thoughts and of the things that I do.
13. I am bothered by a persistent cough.
14. Parts of my body often have feelings like burning, tingling, or crawling.

15. I often notice that my body is tense and I have difficulty in relaxing.
16. Once a week or oftener I feel hot suddenly all over without apparent cause.
17. There have been times when I felt like jumping off when on a high place.
18. I often feel as if things were not real.
19. At times I feel as if something dreadful is about to happen.
20. I am often sick to my stomach.
21. I am not usually afraid of things or people which I know cannot hurt me.
22. I practically never blush.
23. Sometimes I have strange, unnatural feelings which are hard to describe.
24. At times I have a strong urge to do something harmful or shocking.
25. At times when things are going particularly well for me, I become suddenly depressed.
26. Often, even though everything is going fine for me, I feel that I don't care about anything.
27. Has a doctor ever said that you had stomach ulcers?
28. There are very few periods when I am on edge.
29. There are persons who envy my thoughts and ideas and would like to call them their own.
30. I have never had attacks in which I could not control my movements or speech but in which I knew what was going on around me.
31. I hardly ever notice my heart pounding.
32. There are some people who seem to have it in for me.
33. Sometimes without any reason or even when things are going wrong, I feel excitedly happy, "on top of the world."

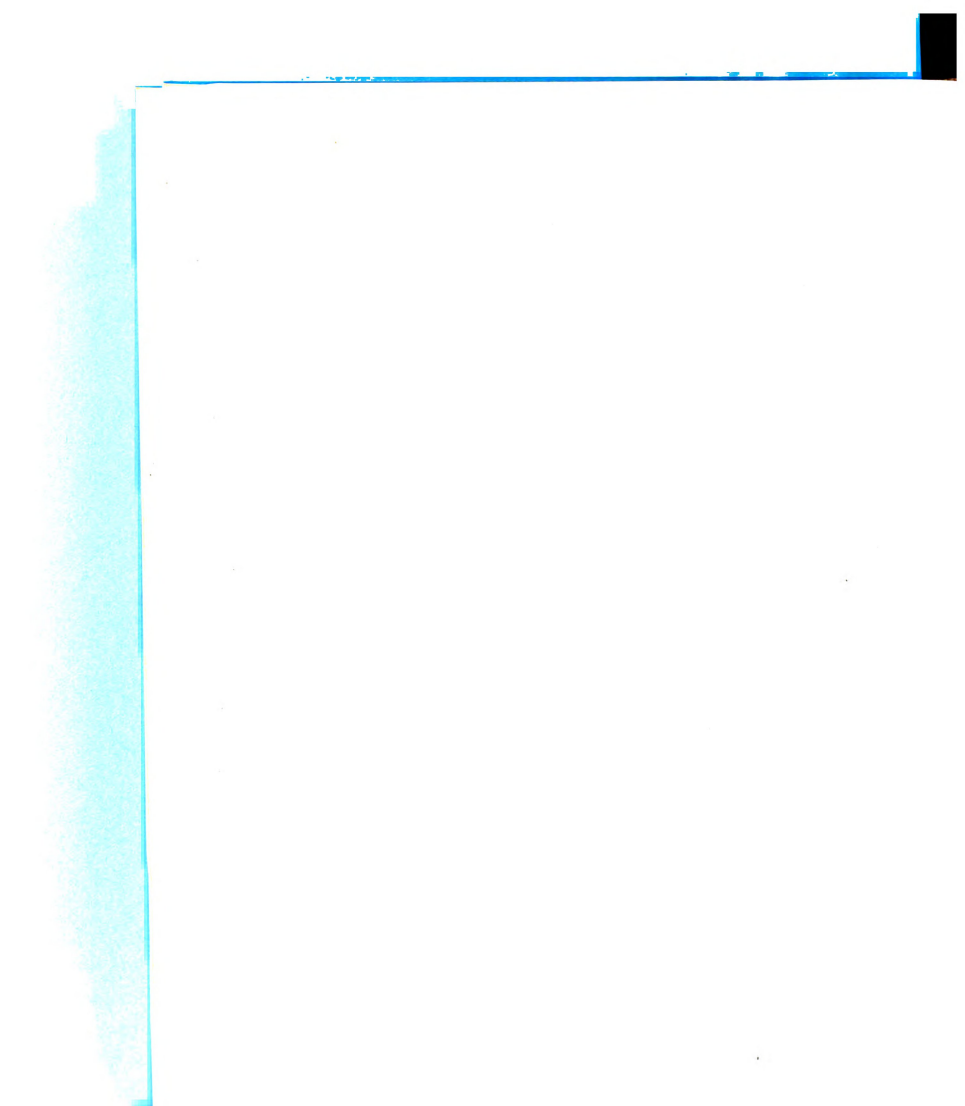


34. Even though I know I do not have arthritis or rheumatism, I often have soreness in some of my joints.
35. I deserve severe punishment for my sins.
36. There are never times when I lose my bearings and am at a loss to know where I am.
37. At times my eyelid twitches for no accountable reason.
38. I feel weak all over much of the time.
39. My thoughts have raced ahead faster than I could speak them.
40. My mind seems to be divided into two parts which appear to be struggling with one another.
41. Sometimes I have a loss of feeling of numbness in a part of my body.
42. Sometimes I break out in a sweat even though it is not hot.
43. There have been times in my life when I felt panic or terror without any accountable reason.
44. I never had a fainting spell.
45. My sleep is fitful and disturbed.
46. I sometimes develop hives or rash for no apparent reason.
47. I love my parents dearly and wish that I could live up to their expectations.
48. I am seldom short of breath.
49. I do not suffer from frequent, severe headaches.
50. I seldom or never have dizzy spells.
51. In the presence of friends and familiar surroundings, I sometimes feel as if the people around me were strangers and the setting unfamiliar.
52. My mouth feels dry much of the time.
53. I have noticed on occasion that parts of my body have felt detached as if they were not a part of me.

54. There are periods during which I have abdominal cramps for no apparent reason.
55. I often feel irritated or annoyed without any particular reason for it.
56. At times I have problems with either constipation or diarrhea.
57. I feel anxious almost all the time.
58. I never feel that all my friends and loved ones will abandon me.
59. I have periods of great restlessness.
60. I am bothered by acid stomach several times a week.
61. I have never had strange and peculiar thoughts.
62. At times I become depressed and think that I am no good at all.
63. I have little or no trouble with my muscles twitching or jumping.
64. I hardly ever feel like smashing things.
65. I am easily frightened.
66. Are you bothered by severe itching?
67. I hardly ever become upset without knowing why.
68. There are times that I suddenly become aware that I have been gritting my teeth.
69. At times I feel I lose control over my mind.
70. Has a doctor ever said your blood pressure was too high or too low?
71. I never have had blackouts.
72. I feel frustrated much of the time.
73. I often notice that I am fidgety.
74. During sad moments, I never find myself laughing out loud or having the urge to do so.



- 75. I never get the jitters.
- 76. I sometimes feel that I am about to go to pieces.
- 77. Are you often troubled with bad spells of sneezing?
- 78. There are times when I don't have any emotions or feelings at all, even though I wish I had.
- 79. I am aware of the presence of certain thoughts or ideas which I am unable to grasp.
- 80. I am not bothered by people outside, on buses, in stores, etc., watching me.



APPENDIX E

ADDITIONAL STATISTICS

Table 11.--Means, T-tests, and Significance of Order Effects
regarding Presentation of Paramnesias

Measure	Means		T-test	Significance
	1st	2nd		
Total Symptoms	23.87	23.13	.17	NS
Percent of Psycho-somatic Symptoms	37.40	43.20	-.85	NS
Symptom Categories	3.88	3.88	0	NS
GSR Difference Score	11.07	15.27	-1.39	NS

Table 12.--Analysis of Variance of Frequency of Total
Symptom Reactions to C-words for Hypnotic and
Simulating Ss on Paramnesia involving Anger

Source	SS	df	MS	F
Between Groups:	343.60	1	343.60	4.39
Error	1174.31	15	78.29	
Levels:	12.65	2	6.33	.60
Groups x Levels	15.09	2	7.54	.71
Levels x Ss gps.	318.67	30	10.62	

Table 13.--Analysis of Variance of Frequency of Total
Symptom Reactions to C-words for Hypnotic and
Simulating Ss on Paramnesia involving Sex

Source	SS	df	MS	F
Between Groups:	685.97	1	685.97	5.57*
Error	1847.96	15	123.20	
Levels	4.18	2	2.09	
Groups x Levels	15.05	2	7.53	.49
Levels x Ss gps.	128.41	30	4.28	1.76

* $p < .05$

Table 14.--Analysis of Variance of Frequency of GSR Activa-
tion to C-words between Hypnotic and Simulating
Ss for the Paramnesia involving Sex

Source	SS	df	MS	F
Between Groups	248.59	1	248.59	4.03
Ss within Groups	3017.62	49	61.58	

Table 15.--Analysis of Variance of Relative GSR Difference
Scores between Hypnotic and Simulating Ss on the
Paramnesia involving Anger

Source	SS	df	MS	F
Between Groups	12.26	1	12.26	.23
Error	814.96	15	54.33	
Levels	38.87	2	19.44	.57
Groups x Levels	40.47	2	20.24	.59
Levels x Ss gps.	1022.15	30	34.07	

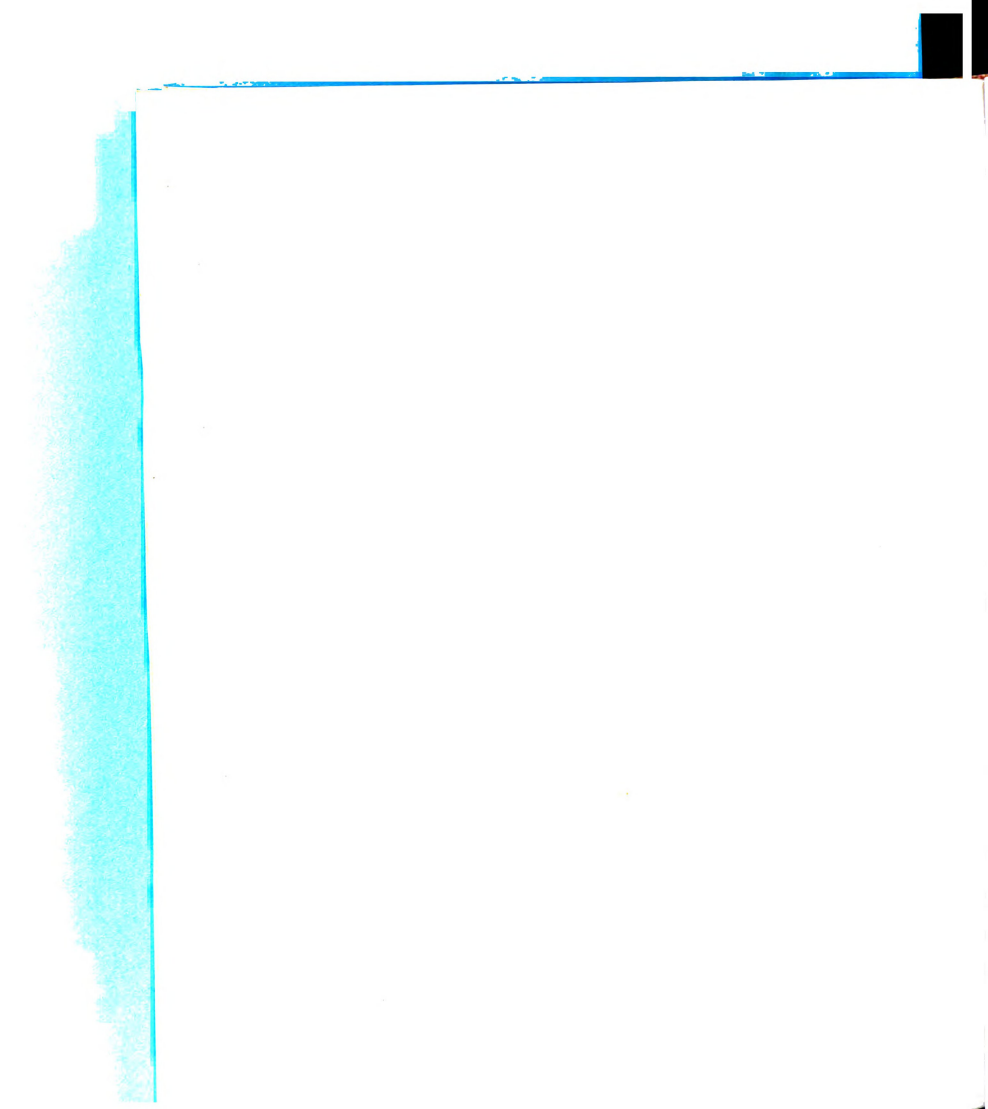


Table 16.--Analysis of Variance of Relative GSR Difference Scores between Hypnotic and Simulating Ss on the Paramnesia involving Sex

Source	SS	df	MS	F
Between Groups	72.25	1	72.25	1.88
Error	1067.89	15	71.19	
Levels	18.76	2	9.38	.43
Groups x Levels	47.41	2	23.71	1.08
Levels x Ss gps.	657.61	30	21.92	

Table 17.--T-tests of increased GSR Activity between Pretest and Paramnesia Conditions to both C- and N-words for Hypnotic and Simulating Ss

Conditions	Hypnotic Ss		Simulating Ss	
	T-test	p	T-test	p
Anger c-words	4.34	<.005	2.25	<.05
Anger n-words	1.39	<.100	-.53	NS
Sexual c-words	3.25	.005	.31	NS
Sexual n-words	1.56	.100	-1.62	.10*

* decrease in GSR activity

Table 18.--Analysis of Variance of Repression Scores between Hypnotic and Simulating Ss to the Paramnesia involving Anger

Source	SS	df	MS	F
Between Groups	2.42	1	2.42	2.44
Within Groups	48.22	49	.98	

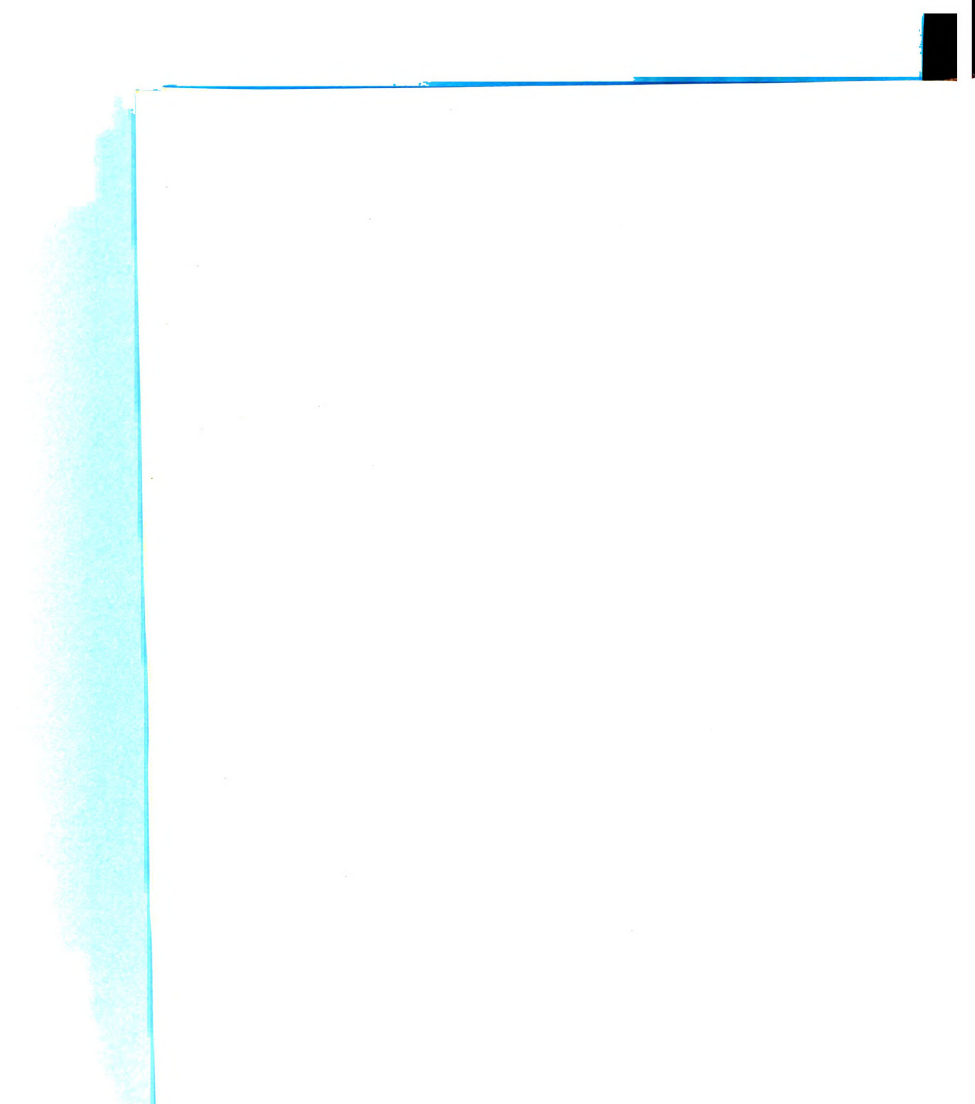


Table 19.--Analysis of Variance of Repression Scores between Hypnotic and Simulating Ss to the Paramnesia involving Sex

Source	SS	df	MS	F
Between Groups	3.34	1	3.34	1.70
Error	29.33	15	1.96	
Between Levels	.064	2	.032	2.28
Groups x Levels	1.65	2	.83	58.86**
Levels x Ss gps.	.430	30	.014	

** $p < .01$

Table 20.--Analysis of Variance of Frequency of Symptom Reactions to C-words between Good and Poor Repressors on the Sexual Paramnesia

Source	SS	df	MS	F
Between Groups	648.86	1	648.86	4.57
Error	1435.23	13	141.15	
Levels	46.26	2	23.13	3.03
Groups x Levels	.54	2	.27	.04
Levels x Ss gps.	198.46	26	7.63	

Table 21.--Analysis of Variance of Frequency of GSRs to C-words between Good and Poor Repressors on the Paramnesia involving Sex

Source	SS	df	MS	F
Between Groups	.08	1	.08	.00
Error	2084.57	13	160.35	
Levels	130.08	2	65.04	1.85
Groups x Levels	152.32	2	76.16	2.16
Levels x Ss gps.	916.47	26	35.25	

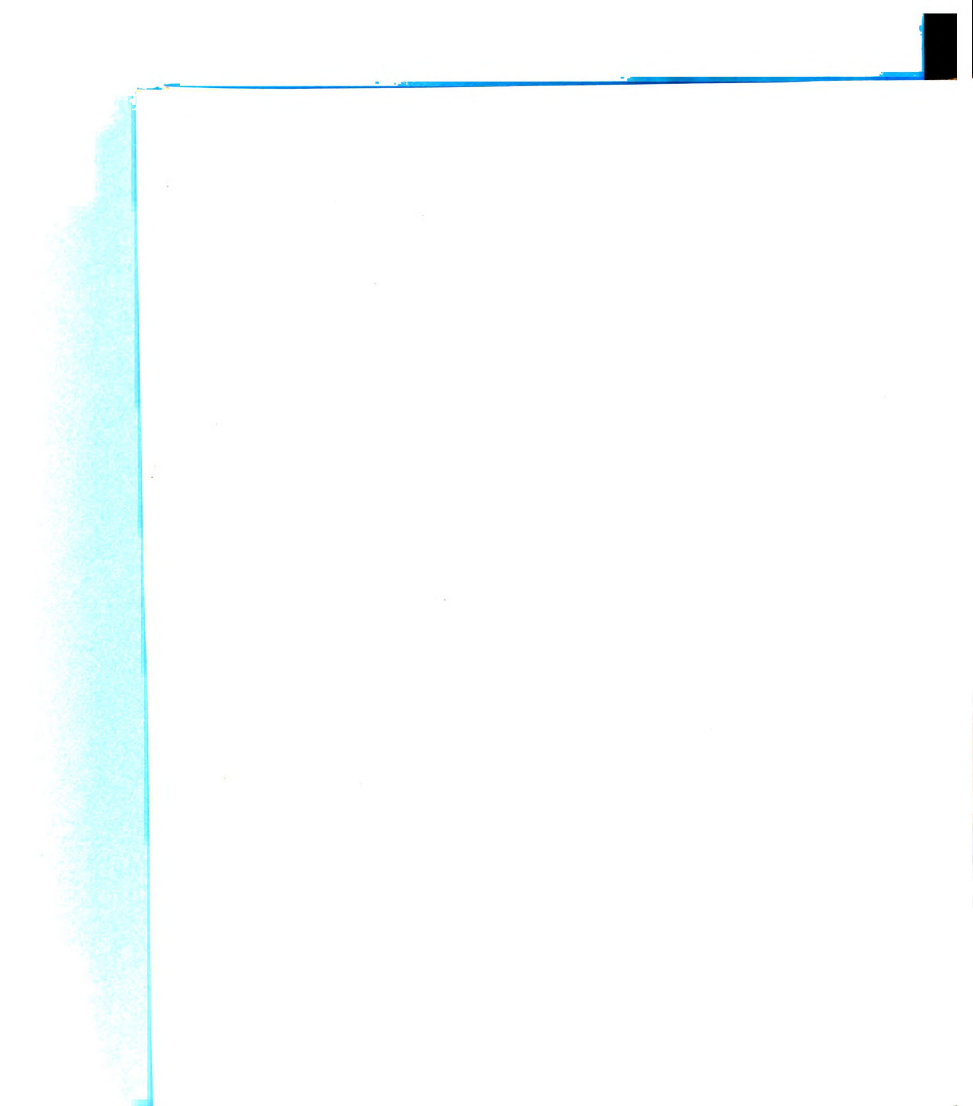


Table 22.--Analysis of Variance of Frequency of Symptoms to C-words for Hypnotic Ss on Paramnesias involving Anger and Sex

Source	SS	df	MS	F
Between Paramnesias	13.35	1	13.35	.32
Error	453.15	11	41.20	
Between Levels	37.00	2	18.50	1.86
Error	435.89	44	9.91	
Between Ss	2476.71	11	225.16	5.46**
Error	453.15	11	41.20	
Paramnesia x Levels	29.78	2	14.89	1.54
Paramnesia x Ss	453.15	11	41.20	4.27*
Levels x Ss	223.67	22	10.17	1.05
Levels x Ss x Paramnesias	212.22	22	9.65	

* $p < .05$; ** $p < .01$

Table 23.--Analysis of Variance of GSR Difference Scores to C-words for Hypnotic Ss on Paramnesias involving Anger and Sex

Source	SS	df	MS	F
Between Paramnesias	6.72	1	6.72	.37
Between Levels	31.86	2	15.43	.85
Between Ss	1551.94	11	141.09	7.77**
Error	1034.08	57	18.14	
Paramnesia x Levels	2.53	2	1.26	.07
Paramnesia x Ss	313.95	11	28.54	1.56
Levels x Ss	313.81	22	14.27	.78
Levels x Ss x Paramnesias	403.81	22	18.35	

** $p < .01$

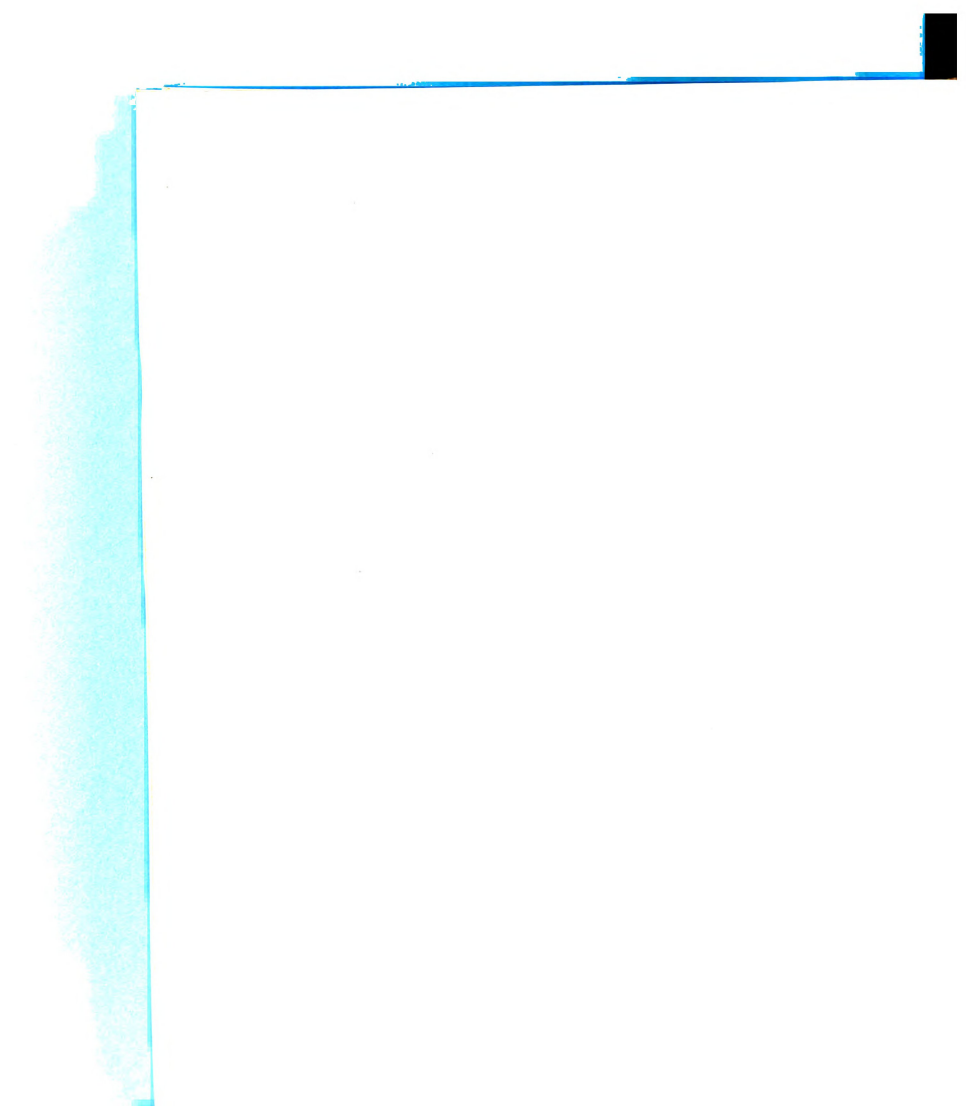


Table 24.--T-test of differences in Repression to C-words for Hypnotic Ss on Paramnesias involving Anger and Sex

Paramnesia	Means	T-test	p
Anger	.244	1.66	.10
Sex	-.064		

Table 25.--T-test of differences in Symptomatic Reactions, GSR activity, and Repression to C-words for Simulating Ss on Paramnesia involving Anger and Sex

Measures	Means for Anger	Means for Sex	T-test	p
Symptom Reactions	6.0	1.4	1.324	NS
GSR difference	18.40	7.00	1.114	NS
Repression	-.66	-2.89	.549	NS

Table 26.--Mean Scores and T-tests for Drive Content for sexual repression and themes, aggressive repression and themes, and combined repression scores and combined sexual and aggressive themes

Repression Index	Good Repressors	Poor Repressors	t
Sex	19.00	18.00	-.44
Anger	17.00	17.42	.16
Combined	36.50	34.86	-.38

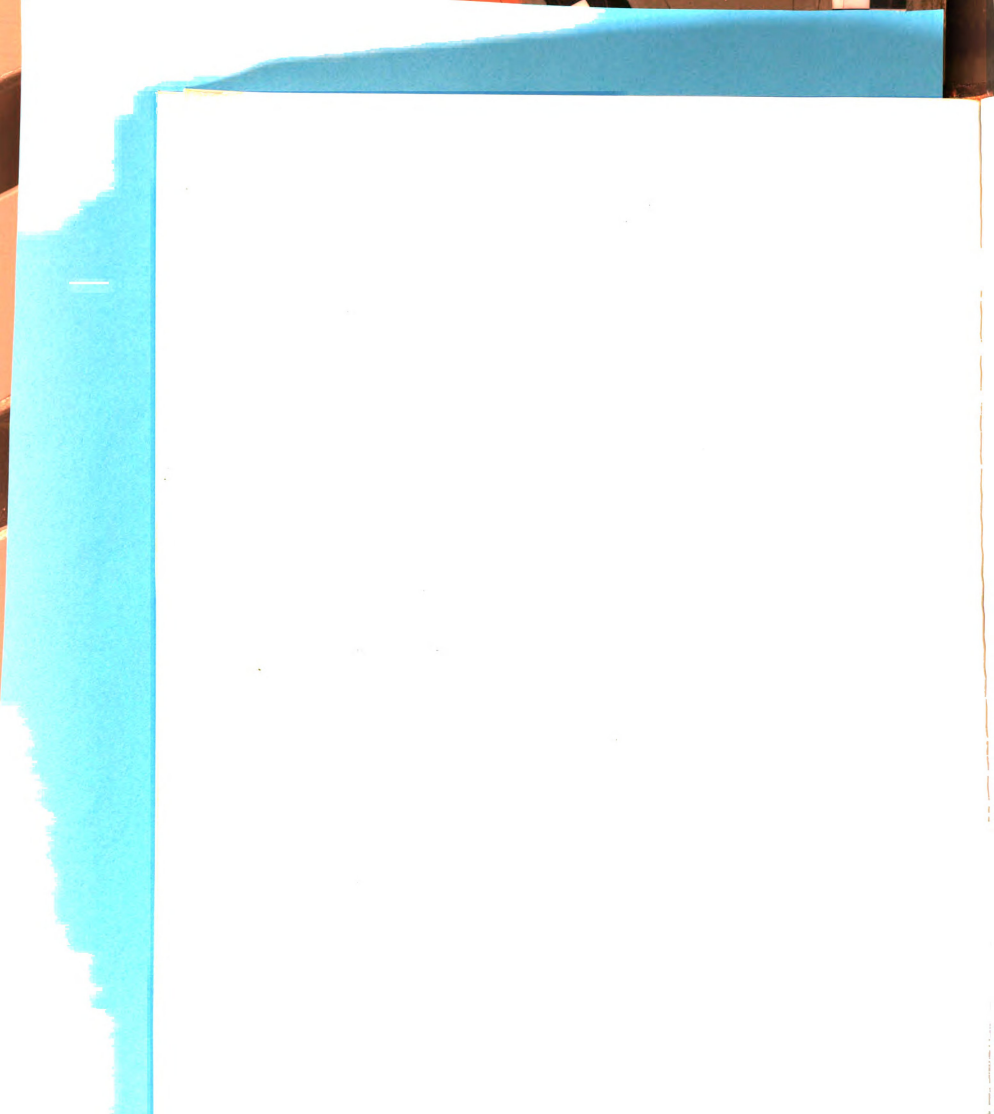


Table 27.--Mean Scores and T-tests for Drive Integration for Sexual Repression and Themes, Aggressive Repression and Themes and Combined Repression Score and Combined Thematic Score

Repression Index	Good Repressors	Poor Repressors	t
Sex	2.69	2.66	-.37
Anger	2.63	2.70	.78
Combined	2.64	2.71	.88

Table 28.--Mean Scores and T-tests for Drive Socialization for Sexual Repression and Themes, Aggressive Repression and Themes, and Combined Repression and Combined Thematic Scores

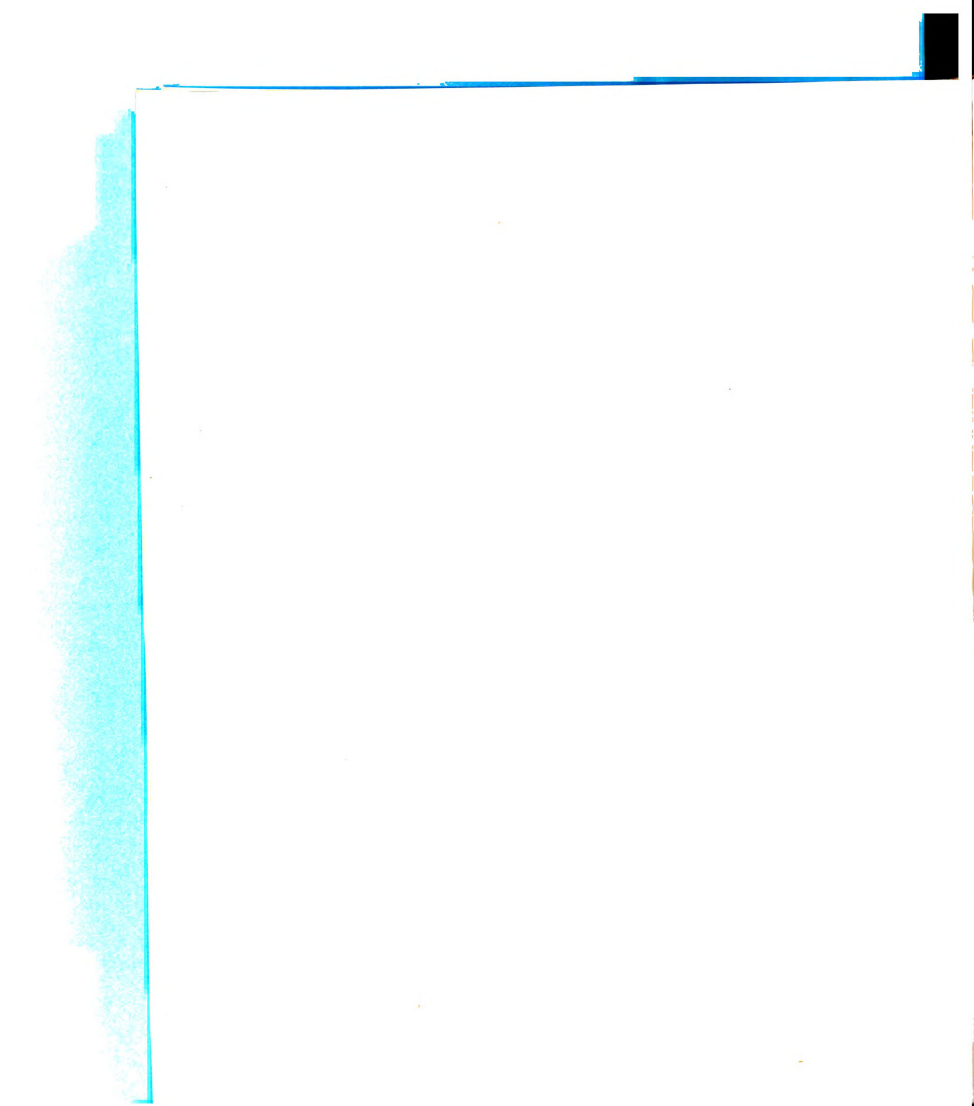
Repression Index	Good Repressors	Poor Repressors	t
Sex	-.09	.09	-2.02
Anger	-.18	-.04	-.20
Combined	-.09	-.01	-.83



APPENDIX F

Table 29.--Anger Raw Data: Autonomic Nervous System Symptoms (ANS), Somatic and Muscular Symptoms (SM), Disturbance of Affect (DA), Unspecified Distress (UD), Emotional Agitation (EA), States of Confusion (SC), Dissociative Reactions (DR), and Derivatives of Conflict (DC), Conscious Correlates (CC), Immediate Awareness of one aspect of Conflict (IA) and Complete Awareness of Conflict (AC) for Hypnotic (H) and Simulating (S) Ss

Measures	ANS	SM	DA	UD	EA	SC	DR	DC	CC	IA	CA
H Ss											
1	16	1	0	0	0	2	0	0	0	0	0
2	0	0	3	5	16	14	5	18	2	3	6
3	0	2	1	3	1	0	1	2	0	25	1
4	13	20	1	1	7	1	8	0	3	15	0
5	1	9	10	7	0	0	0	1	0	17	0
6	1	11	6	18	3	0	2	1	5	3	0
7	2	1	7	2	1	1	15	22	12	4	1
8	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0
10	2	4	4	2	3	0	4	4	5	4	7
11	1	0	0	0	0	5	0	0	1	0	0
12	5	11	2	8	9	0	0	0	7	0	0
13	4	16	0	0	0	0	0	0	0	0	0
14	9	0	8	4	4	0	0	2	3	5	0
15	5	5	0	7	0	0	0	0	0	0	0
S Ss											
1	0	0	6	0	8	0	1	0	0	6	8
2	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	2	0	8	0
5	1	0	4	3	1	0	6	0	5	2	4



Following is a representative protocol to the anger
paramnesia for a hypnotic S: (1-n-word): My hands feel
like they're asleep (1-c-word): I feel hungry (1-c-word):
My arm's twitching, my hand's twitching (1-n-word): I'm
not twitching anymore. Am I supposed to be twitching?
(1-c-word): my stomach just growled (1-c-word): I'm
twitching again (1-c-word): my arm is now twitching again
and so is my foot (1-c-word), same twitch, still hungry
and stomach is still growling (2-c-word): for some reason
I just feel a little aggravated with what's going on.
(2-c-word): Still feel upset about something. I just feel
aggravated. Is that all right? (2-c-word): still feel
anxious to be done with this and to forget about it (2-n-
word) feel irritated and nervous and twitching. I think
I ought to take one of my pills (3-c-word): How much
longer is this going to take. I'm just getting too anxious
(3-c-word): I just can't see any point in this. I don't
think I'm being a good S tonight. I feel ridiculous . . .
I feel silly like an idiot (3-n-word): same thing. I feel
uncomfortable, nervous, my muscles feel tense, I just feel
irritated at what's going on and I don't know why.

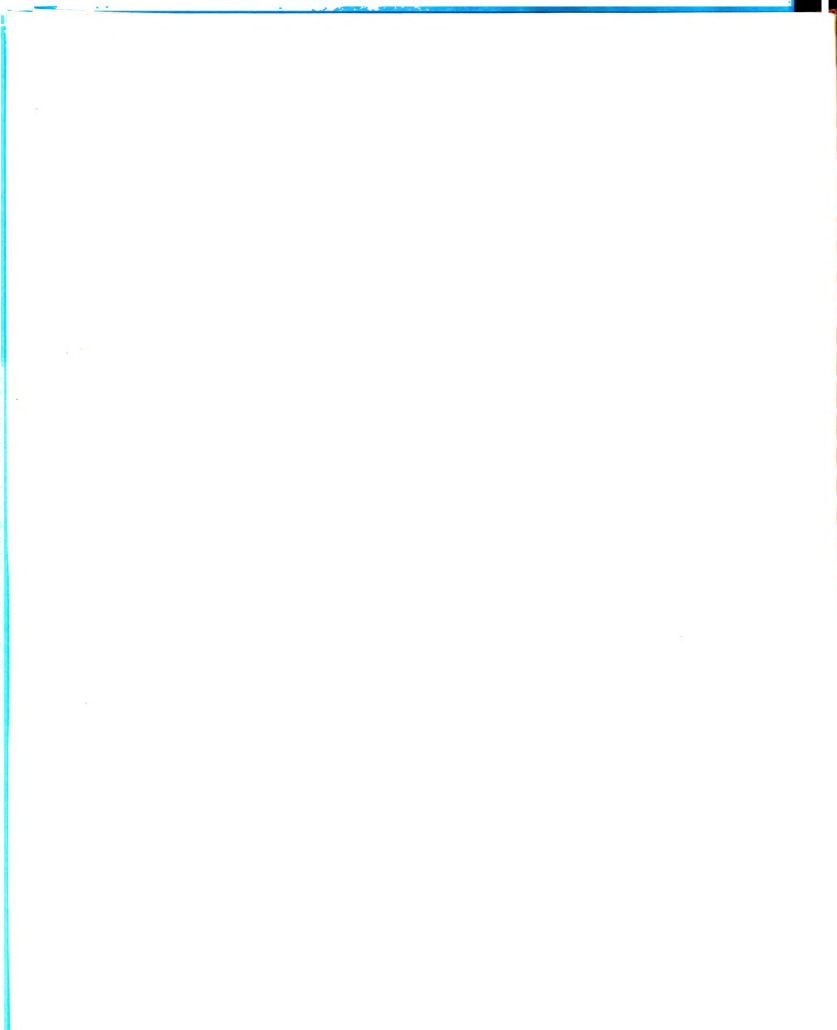
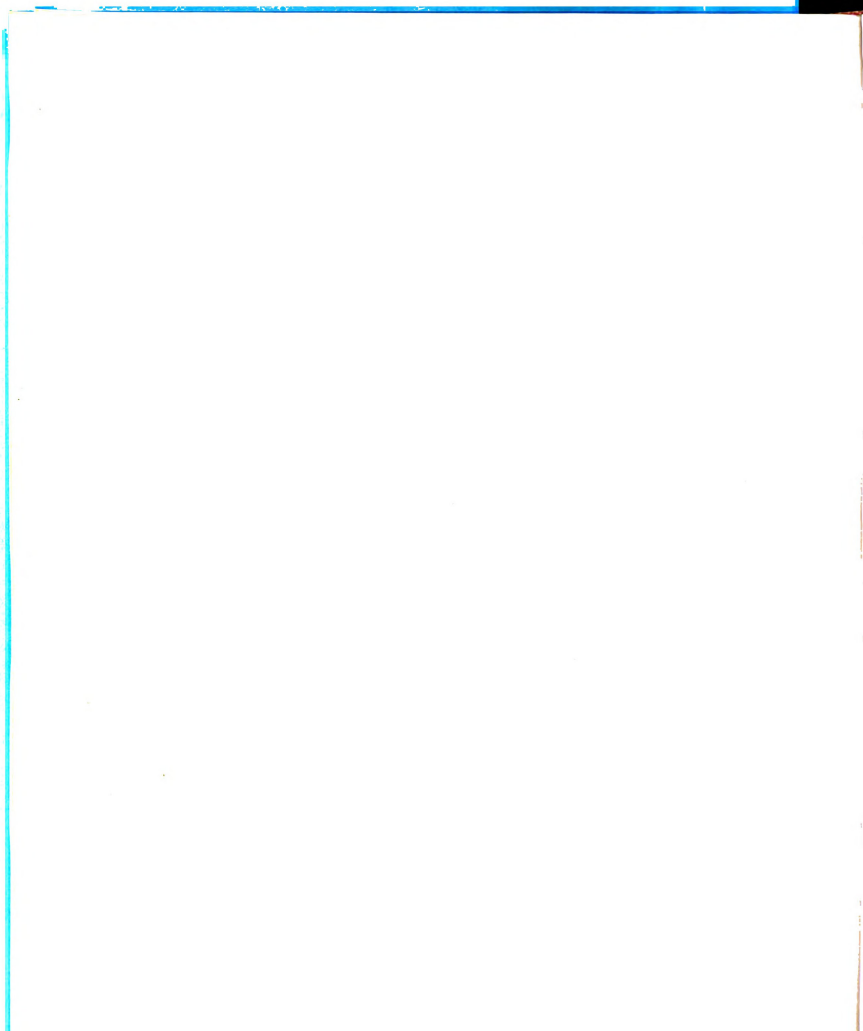


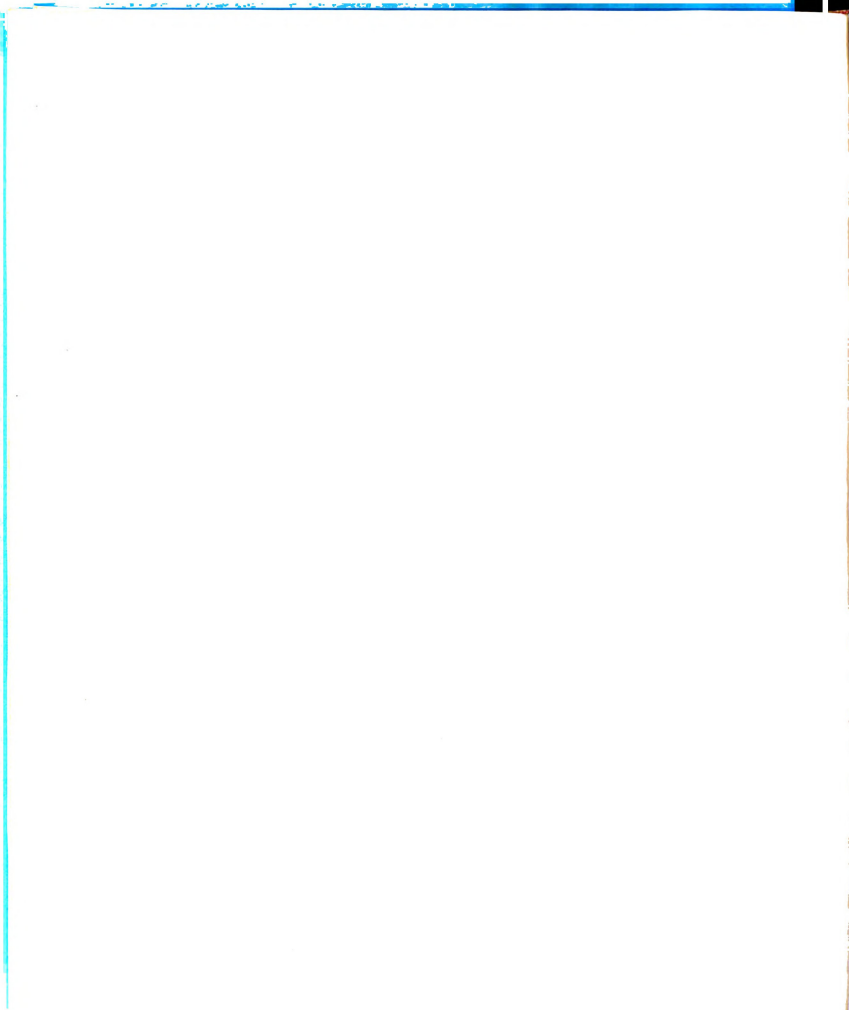
Table 30.--Sexual Raw Data: Autonomic Nervous System Symptoms (ANS), Somatic and Muscular Symptoms (SM), Disturbance of Affect (DA), Unspecified Distress (UD), Emotional Agitation (EA), States of Confusion (SC), Dissociative Reactions (DR), and Derivatives of Conflict (DC), Conscious Correlates (CC), Immediate Awareness of one aspect of Conflict (IA) and Complete Awareness of Conflict (AC) for Hypnotic (H) and Simulating (S) Ss

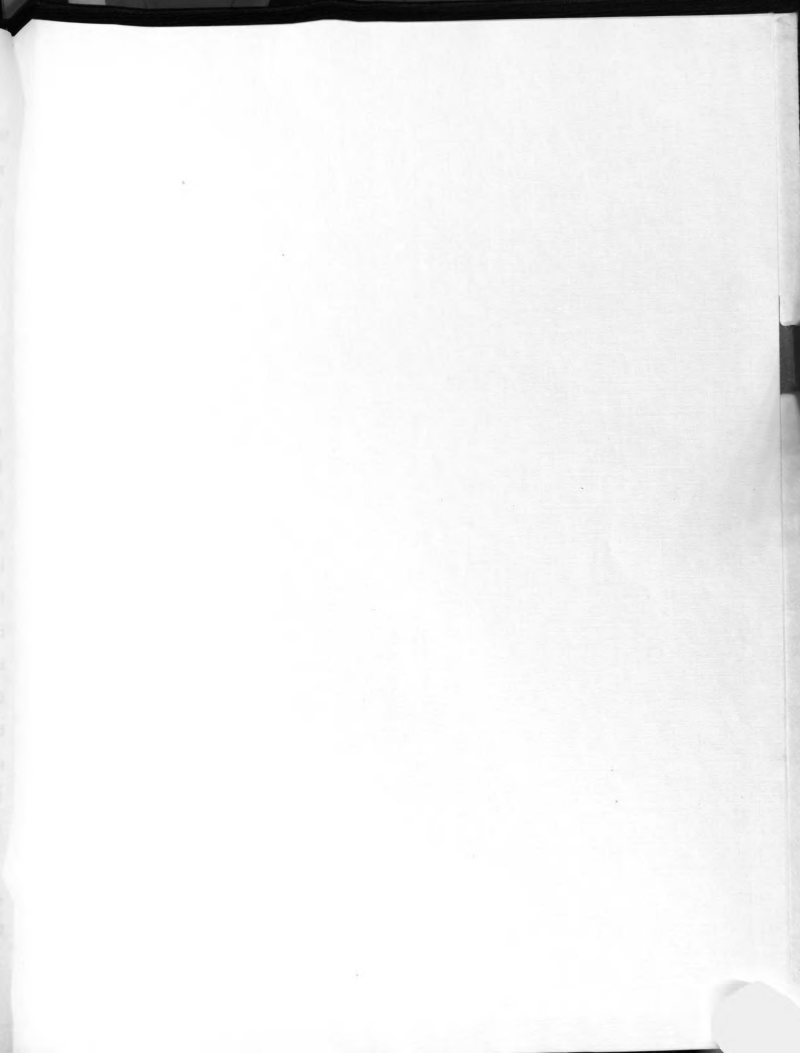
Measures	ANS	SM	DA	UD	EA	SC	DR	DC	CC	IA	CA
H Ss											
1	2	0	0	0	0	0	0	0	0	0	0
2	4	9	5	3	16	7	1	0	0	0	0
3	1	4	1	10	4	0	0	0	3	0	0
4	17	31	0	3	0	2	6	1	1	0	0
5	0	0	0	4	0	0	0	0	23	1	1
6	0	2	1	19	2	0	5	6	10	0	0
7	0	4	8	3	12	2	0	10	1	5	7
8	0	0	0	0	0	0	0	0	0	0	0
9	0	0	1	0	0	1	0	2	2	0	0
10	13	0	0	3	0	0	5	17	0	7	3
11	18	10	0	1	0	1	0	0	4	0	0
12	5	35	0	15	6	6	0	0	0	0	0
13	22	15	0	2	0	0	2	0	2	0	0
14	1	1	0	2	0	0	0	2	1	4	0
15	5	3	0	4	0	0	0	0	1	0	0
S Ss											
1	1	0	0	1	0	0	0	1	0	13	0
2	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	2	0	0	0
4	0	0	1	0	1	0	0	1	0	0	0
5	1	0	0	0	0	2	0	0	18	6	0

Following is another representative protocol. A hypnotic S during the sexual conflict: (l-n-word): nothing in particular (l-c-word): I feel a bit nervous, starting to tighten up, heart thumping a little bit more, and my legs are starting to jerk a little bit more, I feel colder



too (1-c-word): I can feel myself trying not to shake so much (1-c-word): My jaw's a little shaky too, and my legs are now twitching, the upper part of my legs, under the back of the legs it feels kind of tense (1-c-word): I'm starting to feel nervous again, kind of the same feeling I have after a date (1-c-word): I notice cold again, I feel my leg shaking (1-c-word): breathing seems to be, I'm more aware of it, its kind of jerking, not even (2-c-word): I can feel a different muscle jerking in this area (top of thigh). I noticed it started before some of the others. It seems I could visualize a kind of long straight muscle (2-c-word): I noticed my jaw is tense again and in the area of the temples, I think it is either warmer or colder in the area of my genitals, it could be both, I don't know (2-c-word): tense again, and now I can notice the muscles in my stomach (3-c-word): fairly relaxed, I feel like I might have to go to the bathroom or something like that, that may have something to do with the feeling I had in that area before, about either being warm or cold (3-c-words): I can still feel coldness in my fingers and hands (3-c-word): I noticed that I took part of a breath and then didn't let it out, sort of like shortness of breath (3-c-word): Tightness again, I can notice it in my left hand, a gripping feeling in the little finger and then in the second to the last.







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