

SPONTANEOUS REPRESSION OF IMPULSES AND
PSYCHOPATHOLOGY

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GREY R. LARISON

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ABSTRACT

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AND PSYCHOPATHOLOGY

By

Grey R. Larison

Reyher's (1967) procedure for posthypnotic activation of hypnotically induced conflicts has been used over recent years to study the relationships between the repression of aggressive and/or sexual impulses and the frequency of resulting symptomatology, autonomic arousal and drive representation. This hypnotic paradigm and its potential for the objectification of psychodynamic processes promises to become a salient method in clinical psychology's search for an understanding of human behavior. The present study represents an ongoing effort to make this paradigm as unambiguous and meaningful as possible to use.

Sixteen normal, female Ss were deeply hypnotized and a conflict which arouses anger toward an older, authority figure was implanted by hypnotic suggestion. Conditions were varied across four groups of Ss in a 2x2 completely randomized design involving the variables

amnesia and "pump-priming" (i.e., a posthypnotic suggestion to report everything the S feels after recognizing a conflict word). All groups of Ss experienced significantly more psychopathology and GSR activation during the experimental session than they had during a pre-test. Subjects also experienced many more symptoms and 2,000 ohm GSR deflections in response to conflict words than was true for neutral words which they were presented with for free-association. However, the only significant between-group differences that were observed was for amnesia Ss to score much higher on the Repression Index (i.e., to be more highly repressed) and to exhibit much less GSR activation. There was a statistically non-significant trend for amnesia Ss to experience more objective symptoms than those Ss who did not receive the amnesia suggestion.

The present study focused on an examination of those variables in the procedure that might be both necessary and sufficient for the activation of repression and the production of pathological disturbance. As indicated above, the role of hypnotic amnesia and pump-priming was examined and it was learned that neither variable is a necessary one for activating posthypnotic, intrapsychic conflict under controlled experimental conditions. However, while all sixteen Ss experienced psychopathology and GSR activation, the strong trend for amnesia Ss to experience more physiological symptoms and less GSR

activation suggests that posthypnotic amnesia in some way helps activate and/or intensifies the S's repression of the activated anger-aggression.

Considering the findings of this study in conjunction with those that have preceded it, it is suggested that the following variables are the necessary and sufficient ones to make Reyher's procedure function: During hypnosis (1. hypnosis) E tells S a made-up story (2. paramnesia) that arouses strong feelings within S (3. arousal of affect) which are directed toward an inappropriate person (4. affect directed at an inappropriate object). This affect's subsequential arousal is associated with a specific posthypnotic cue (5. affect associated with a posthypnotic cue) and is combined with a suggested impulse to act in an ego-alien way (6. ego-alien impulse). The affect and impulse are aroused suddenly (7. sudden activation of drive) in the posthypnotic session (8. posthypnotic arousal).

In our discussion, the central role that is played by the paramnesia used in such a study was discussed further. Any paramnesia that has been used or could be created for future use represents a complex interaction of aroused affects, impulses and super-ego reactions all of which combine in unknown ways to determine the limits of aroused drive strength and the force of repression that might inhibit that drive. The data from

this study and those of Veenstra, Karnilow and Wolfe suggest that the anger-aggression paramnesia used in these studies is only minimally pathogenic because it fails to incorporate reprehensible actions on S's part which could consistently be expected to arouse a super-ego reaction to the arousal of its associated drive.

Reyher's original Repression Index was modified slightly in order to clarify two conceptual difficulties and is thus defined as:

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

This definition is based on the assumption that a S's level of awareness of the induced anger-aggression conflict bears an inverse relationship to the strength of her inferred defense mechanism of repression. We discussed the concept of repression and how it relates to drive, psychopathology, GSR activation, and hypnotic amnesia. While amnesia clouds the conceptual picture somewhat, it appears that the strength of repression varies in a curvilinear fashion with frequency of symptoms, varies directly with the modal type of symptom experienced, and varies inversely with GSR activation. A post-hoc analysis of this study's data did not reveal any statistically significant correlations between R and frequency of symptoms, type of symptom or GSR frequency, but all comparisons were in the predicted direction. This lack of

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significant correlations may be due to the overall lower pathogenicity of the paramnesia used in this study compared to those used by Reyher, Perkins, Sommerschild, and Burns and the truncated range of drive arousal.

Approved: Joseph Reyher
Chairman

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INTRODUCTION

One of the primary reasons that Freud's psychoanalytic theory of personality has not been more widely accepted by American psychologists has been their inability to investigate his theoretical constructs under laboratory conditions. Great effort was expended in the first two decades of this century by the empirically-oriented psychologists of America in an attempt to demonstrate such salient Freudian concepts as repression, pre-conscious processes and unconscious processes. In the main, these laboratory efforts have failed to convince experimental psychology and clinicians have regarded the whole endeavor as being artificial and contrived. As a result, professional interest in the study of basic Freudian concepts waned while practising psychoanalytically-oriented clinicians continued to use an unverified theory as the basis of their psycho-diagnostic and treatment procedures.

For many investigators, clinical experience clearly demonstrated the relevance and efficacy of Freud's insights and theoretical concepts and his teachings became the substratum from which both modern psychotherapy and many alternative theoretical approaches would grow. However, with the majority of today's practising clinicians

recognizing the existence of such phenomena as unconscious processes, defense mechanisms and the motivating force of internal impulses; the value of demonstrating these Freudian concepts in a controlled, laboratory setting is obvious. It was in this spirit that the "New Look" movement in the study of perception was launched in the 1950's. However, once again, these efforts to demonstrate repression in perceptual responses were convincing neither to the clinical practitioner nor to most experimentalists. At the end of this decade of investigation, Reyher (1958) designed an investigation to test a number of hypotheses concerning perceptual defense and perceptual vigilance phenomena. Under hypnosis, Reyher implanted a paramnesia (a false memory) designed to arouse anger and motivate his subjects to destroy important property belonging to an authority figure. After being given an hypnotic amnesia for the paramnesia, the subjects were awakened and presented tachistoscopically with cue words designed to arouse this intense anger and the destructive impulse. Much to Reyher's surprise, none of his initial subjects carried out the posthypnotic impulse to destroy the property; instead, they spontaneously reported a wide variety of psychopathological symptoms. This appeared to be a laboratory demonstration of the spontaneous repression of an aggressive impulse.

Reyher had apparently stumbled upon the following chain of phenomena: he had induced aggressive impulses and anger by using a paramnesia under hypnosis, which was then made unconscious through the use of hypnotic amnesia. This unconscious impulse and its associated affect was then aroused by tachistoscopically presented words which were posthypnotic cues for S to be overwhelmed by anger and a destructive impulse. As these impulses neared the threshold of consciousness, they activated the defense mechanism of repression and the coincidental production of psychosomatic and other psychological symptoms. Reyher's method seemed to provide an avenue for investigating this inferred chain in the spontaneous production of repression and psychopathology under empirically controllable conditions.

According to Freud's psychoanalytic theory, repression as a psychodynamic process is divided into two different phases. Primal repression consists of a censoring mechanism which denies admission into the person's consciousness to those impulses and affects that would be painful to the ego. Thus, primal repression acts to prevent psychological conflict or pain from ever becoming conscious. This is the fate of many sexual and aggressive impulses which are denied conscious expression because they are directed toward improper objects, and which would otherwise produce strong conflict between the individual's id-impulses and his super-ego. The strength of this

repression, or the amount of psychological energy that a particular person will expend to keep a given impulse out of his conscious awareness, is a function of the strength of that impulse and its associated affect, and the inappropriateness of its object. Although repressed, these impulses continue to be endowed with considerable psychological energy which strives for some form of expression. One possible route for expression is through the use of previously neutral mental material, i.e., to let some of the built up psychic energy be released via alternative channels. This is where the second phase of repression comes into play. Repression proper, as Freud called it, involves the pushing from consciousness of mental material that has been acceptable to the ego in the past, but which has been subsequently endowed with so much energy from a primally repressed impulse that it too has become pain-producing. To summarize, Freud postulated two phases of repression that were closely related and had the same goal of keeping painful impulses and affects out of conscious awareness. These phases were the primal repression of developing impulses and affects, and the repression proper of mental derivatives onto which primally repressed impulses cathect their energy.

In the immediate context of Reyher's investigation, E has brought to an overwhelming intensity an emotion (hate toward an authority figure) which is unacceptable

to, or painful for, the subject's conscious ego. When this unconscious affect is suddenly activated by posthypnotic cue-word recognition, it acts as any other natural impulse. The activation of this aggressive impulse reactivates infantile experiences of anxiety and distress that were experienced under similar conditions of impulse expression. It also reactivates, by a negative feedback mechanism for handling such unacceptable impulses; i.e. intensified primal repression and the subsequent repression from consciousness of heavily cathected mental material. It is during this short interval between the sudden activation of the aggressive impulse and the intensification of repression that anxiety and the other symptoms of mental conflict are observed (such as muscular ticks, tremors, dizziness).

Reyher (1958, 1962, 1964, 1969a, and 1970) is very specific concerning his negative feedback model for understanding the phenomenon of repression. In the light of this theory, repression is not seen as an all-or-none mechanism, but as a physiological function which can take on a wide spectrum of values in strength. This leads to Reyher's postulation that the symptoms observed in this type of experiment, and in therapy as well, are a function of the strength of the repression that is acting, and not specific to the particular impulse that has been repressed. Thus we see the pathological symptom as lying on a continuum of repression strength. With strong repression (absolutely

no awareness of an underlying conflict) there are no symptoms. As repression weakens, symptoms innervated by the autonomic nervous system (feelings of nausea, headache, sweating, skin rashes, etc.), followed by somatic nervous system symptoms (pains, tremors, tics, etc.), and finally, as repression weakens considerably, conscious correlates of the unconscious impulse are experienced (feelings of frustration, annoyance, etc.). At some point, the impulses become strong enough that repression breaks down completely and the S acts upon his pain-producing impulses, thereby replacing his intra-psychic conflict between his impulses and his inhibition of them with the inter-personal conflict and the fear of loss of self-esteem. In the context of this line of research, the S tears up the authority figure's property.

Following the vivid and unexpected results of this first investigation, Reyher ran a separate investigation (1961) with five good hypnotic subjects simulating the hypnotic trance state. They subsequently failed to produce psychopathological symptoms when presented with the conflict words later in the experimental session. These results led to Reyher's paradigm for determining the clinical relevance of hypnotically produced psychopathology (Reyher, 1962):

First, the induced processes must in no way include cues of how E expects S to respond in terms of the dependent variables. Second, the induced process must produce other processes and behavior: that is, it must be response producing. Third, some of these responses must satisfy criteria for the identification of manifestations of psychopathology. Fourth, some of the Ss must be asked by a co-experimenter to simulate hypnosis, unknown to E, in order to determine the demand characteristics of the research. Fifth, E should phrase his suggestions in the passive voice to reduce the possibility that S will act out a role.

Reyher replicated his original investigation (1967) with essentially the same results being obtained. These included: significant correlations between his index of awareness and the frequency and type of symptoms observed; experimental Ss reported a wide range of pathology while simulators reported virtually none; and the greater GSR activation of experimental Ss (as compared to simulators) led to the conclusion that hypnotized Ss respond to the posthypnotic activation of implanted conflict as if it were a natural conflict.

Starting her work at about the same time as Reyher, Bobbit (1958) also found that hypnotically implanted paramnesias followed by an hypnotic amnesia can lead to verbal and motor disturbances to word association stimuli. She found that the degree of such disturbance was curvilinearly related to the degree of repression, where repression was defined as the inverse of S's awareness of the paramnesia. However, Bobbit's study did not conform to the paradigm that Reyher was to later propose, and her equation of

amnesia with the natural phenomenon of repression may not be justified.

Perkins (1965) and Sommershield (1969) conducted investigations following Reyher's paradigm and their results confirmed his basic findings. Perkins used TAT scores for hostility as a dependent variable and divided his ss into "good" versus "poor" repressors. He found that the good repressors (those who experienced no conscious awareness of their underlying posthypnotic conflict) rely on the autoplasmic defense mechanism of increased repression under increased impulse activation in contrast to poor repressors who tend to switch to alloplasmic conflict under the tension of high impulse activation. Continued investigation of such findings as these could lead us to a better understanding of repression in particular, and the use of defense mechanisms in general, by people under the stress of painful impulses pushing for conscious expression.

As already mentioned, Sommershield (1969) confirmed Reyher and Perkin's previous findings. He also introduced a second paramnesia condition designed to arouse sexual impulses upon recognition of conflict words. These sexual impulses were aimed at an older woman and were therefore assumed to touch upon previously repressed Oedipal material. Since his ss could not be given a posthypnotic suggestion to act upon the sexual impulses, they were told (in both the

anger-aggressive and sexual conditions) that they would be compelled to talk about their uncontrollable feelings whenever they recognized a conflict word. Sommerschild found that merely expressing one's hostile or sexual impulses to E was as pathogenic for his Ss as had been the destructive impulse in Reyher and Perkin's investigations. Again, simulators reported no symptoms under the experimental conditions.

Sheehan (1969) claimed that the psychopathology observed by Reyher was not due to repression but to the demand characteristics of the experiment. Reyher in direct rebuttal (Reyher, 1969c) questioned Sheehan's conclusions because the latter did not follow faithfully the design which had been associated with the production of psychopathology in previous research: he used a weak posthypnotic conflict, he gave specific posthypnotic suggestions to his Ss to feel "anxious," "terrible," "bad," etc.; and he discounted the pathological symptoms which he did find. A careful analysis of the paramnesias used by Reyher, Perkins and Sommerschild reveals no posthypnotic suggestions that would bias their Ss toward experiencing such distressing psychopathological symptoms, especially of the psychosomatic type. And yet all three of these investigators found pathological reactions among their hypnotic Ss with no concurrent reports of such symptoms from their simulating Ss. Therefore, as Sommerschild

says, "the psychopathology produced by this hypnotic method cannot be attributed to mere compliance with the demand characteristics of the research" (Sommerschild, 1969).

At this point, the work of Reyher (1958, 1961, 1962, 1964, 1967), Perkins (1965), and Sommerschild (1969) had clearly demonstrated the pathogenic properties of this type of posthypnotic conflict. For the first time, experimental psychology had a potentially fruitful technique for demonstrating and studying such clinical phenomena as repression, psychosomatic symptoms, and unconscious processes under controlled, laboratory conditions. In an effort to make this technique as unambiguous and simple as possible to use, Veenstra (1969) turned to the task of determining exactly which experimental variables were the necessary and sufficient ones for producing spontaneous psychopathology. Based on previous research, the following 12 variables seemed to be likely ones for consideration:

1. Subject experiences under hypnosis . . .
2. A paramnesia about his own past . . .
3. Strong affect is aroused in this paramnesia and . . .
4. Is associated with a series of conflict words.
5. This affect is directed toward an authority figure in the experimental situation.
6. The S is told that whenever he is presented these words after awakening, he will experience and overwhelming (loss of control) . . .

7. Rage (posthypnotic arousal of affect) . . .
8. And an intense urge to tear up some valuable papers belonging to the authority figure (destructive impulse).
9. The S is given an amnesia for the hypnotic session.
10. While awake, a series of words are presented tachistoscopically (sudden activation of drive) . . .
11. Which he is told to pronounce upon recognition (verbalization of conflict words).
12. Throughout the experiment, the experimenter maintains a warm, trusting relationship with the S and accepts his responses in an accepting manner.

At that time, Reyher (1969a) was of the opinion that the major necessary and theoretically significant variables of the procedure were:

- (a) a sudden surge of overwhelming rage toward an authority figure
- (b) coupled with an overwhelming impulse to destroy property belonging to said authority figure, and
- (c) activated suddenly by a posthypnotic cue.

Included within that statement are the above variables 5, 6, 7, 8, and 10. With variable 10 being modified to the more general form of "sudden activation," the procedure is freed from the confined of tachistoscopic experimentation and conflict word presentation. Reyher (1969a) also recognizes the probable importance of variables 1, 3, 9, 10 and 11.

As was mentioned above, Veenstra (1969) was the first investigator to formally examine Reyher's procedure for its critical variables. He recognized that a reduced

design would be more manageable in terms of experimenter effort and time in future investigations, and made the assertion that if a reduced design still produced spontaneous psychopathology, then all of the necessary variables must be present. Specifically, Veenstra hypothesized that the arousal of anger (#3) alone, without directing it toward an authority figure (#5) nor combining it with a destructive impulse (#8), would be sufficiently anxiety-producing to instigate the defense mechanism of repression and the production of psychopathology. Veenstra also eliminated variable 11 (verbalization of conflict words) as a necessary condition without any discussion about that action. To Reyher's list, Veenstra added the variable of associating a series of conflict words with the anger aroused by his paramnesias, as being a necessary one. Therefore, Veenstra's reduced design included the following variables: 1, 3, 4, 6, 7, 9, 10 and 12. The two formal hypotheses presented were (a) the reduced design would produce spontaneous pathology, and (b) the use of a paramnesia (#2) would be more effective than a direct suggestion technique for producing posthypnotic anger and conflict.

The primary result of Veenstra's research was that his reduced design did not produce psychopathology. He found no significant difference in the frequency of physical complaints expressed by his experimental group relative to his

control group. Therefore, anger aroused in the absence of a destructive impulse does not seem to be pathogenic. Galvanic skin response (GSR) readings were made as a measure of anxiety and physiological arousal, but showed no significant difference among Veenstra's groups. However, measures derived from the free-association material did demonstrate that his hypnotic Ss were experiencing genuine anger and hostility upon the presentation of conflict words. The measures of response latency, hostile associations, and hostile feelings all showed significant increases for conflict vs. neutral words in the post-hypnotic association task. Concerning Veenstra's second hypothesis given that he obtained only affect expression and no psychopathology, he found no significant differences between the anger-producing effectiveness of the paramnesia when compared to his direct suggestion technique. Furthermore, when all posthypnotic amnesias (but not his suggestions) were lifted and the person could achieve some insight into the reason for his anger, that anger was not dissipated. On the contrary, a statistically non-significant increase was observed under these conditions in the response latency and hostility measures.

While this investigation is pregnant with ideas for further exciting research, the conclusions which may be drawn are really quite limited. Veenstra eliminated too many, possibly pertinent, variables from his design to enable any solid conclusion to be drawn from his results.

Clearly, the reduced design was not pathogenic, but the question as to "why?" remains very much in doubt. Was it because Veenstra eliminated variable #5 (the directing of anger at an authority figure), #8 (the destructive impulse), #11 (verbalization of the conflict words), or was it because some heretofore unidentified variable was left out of his design? We simply do not know. Therefore, using Veenstra's research as a source of hypotheses it became imperative to test each of the recognized variables for its relevance to the paradigm in a very systematic way.

Wolfe and Karnilow were conducting the first of a series of investigations designed to do just this when the present investigator began his work in 1970. Their experiment was designed to investigate systematically the effect of amnesia and the destructive impulse on the observed incidence of spontaneous repression and psychopathology. Using a completely randomized 2x2 factorial design, these investigators expected to observe pathological symptoms in at least that quarter of their Ss who were given both the destructive impulse and a posthypnotic amnesia. It was believed that these Ss would be receiving the same experimental treatment that Reyher, Perkins and Sommershield imposed upon their Ss; and would, therefore, replicate the latter Es' findings. At the other extreme, if neither the destructive impulse nor an amnesia are necessary variables, then Wolfe and Karnilow were expecting

that all of their Ss would exhibit psychopathology. Their data have now been collected and it reveals no significant psychopathology under any of the experiment's four conditions (Karnilow, 1971; Wolfe, 1971).

That finding strongly suggests that our present list of twelve variables fails to include still another, heretofore unrecognized but necessary variable for spontaneous repression to occur in the laboratory along with concomitant psychopathology. If such a new variable is to be found, one would expect to find that it was incorporated in the experimental designs of Reyher (1958, 1967), Perkins (1965) and Sommershield (1969); but not in those of Wolfe (1971) or Karnilow (1971). It may or may not be incorporated in Veenstra's study depending upon the true significance of those other variables which he intentionally left out of his design, i.e., the destructive impulse and the directing of posthypnotic affect toward an authority figure.

Reyher (personal communication) opined that a hypnotic "pump-priming" procedure which he, Perkins and Sommershield had used in their investigations may prove to be this necessary, missing variable. If this should prove to be the case, then the absence of "pump-priming" could be invoked to explain the lack of psychopathology reported in both Wolfe and Karnilow's study and provide a further clue as to what may have happened in Veenstra's earlier

investigation. This "pump-priming" consists of giving the Ss a posthypnotic suggestion to report everything that they feel after recognizing (or reading) a stimulus word and to give an accurate and complete description of how they feel. Such a suggestion would focus S's attention onto those subjective feelings, sensations and thoughts which are not normally verbalized in daily social interaction and intensify the unconscious affect and impulse. On the other hand, we know from the earlier work of Reyher (1967), Perkins (1965) and Sommershield (1969) that instructions such as these do not bias experimental Ss toward the spurious reporting of symptoms. Their studies, which included hypnotically-susceptible simulating control Ss, demonstrated clearly that the observed psychopathology was not a result of any experimental demand characteristics.

The present study, then, represented a logical step in the effort to specify those variables that are both necessary and sufficient conditions for the spontaneous production of psychopathology in the laboratory. To this end, all of the originally recognized variables were put back into the technique. Variable #9 (amnesia) is to be varied in a counter-balanced design with the newly recognized "candidate variable" of "pump-priming." The rationale for including the "pump-priming" variable has already been discussed, and leads one to hypothesize that those Ss who

receive "pump-priming" will exhibit spontaneous psychopathology. On the other hand, those Ss who do not receive the "pump-priming" treatment should not exhibit those kinds of symptoms.

A consideration of amnesia's role in Reyher's paradigm is urgently needed in order to help explain some of the theoretical issues that are created by its inclusion. Bobbit (1958) equates hypnotically induced amnesia with the natural phenomenon of repression; i.e., amnesia is seen as the experimental analog of repression per se. She also suggests that a high correlation might exist between the degree of amnesia and the amount of observed verbal and motor disturbance on a free-association task that is performed posthypnotically.

Reyher, however, made it clear in his reply to Levitt (1963) that he does not equate hypnotically induced amnesia with repression. It is S's failure to become consciously angry and/or to destroy the authority figure's property that he sees as the operational definition of a repressive process having taken place. In a recent paper Sommershield and Reyher (1972) point this out again:

The inhibition of the posthypnotic execution of the posthypnotically activated drive and impulse appears to be the same process that Freud (1948) called "repression"; it is an inhibitory response produced by the posthypnotic drive and impulse (p. 24).

Elsewhere Reyher (1964, 1971) has lucidly detailed the negative feedback mechanism by which repression acts upon ascending impulses in such a way as to block conscious apprehension of those drives and impulses that stimulate anxiety. The sudden activation of intense anger-aggression or oedipal-sex produces anxiety which in turn signals the unconscious process of repression.

In the amnesia situation we have an artificially aroused impulse to destroy property belonging to an authority figure, which springs from an unknown or unconscious source due to the amnesia suggestion. In the test situation, this unconscious impulse is suddenly activated and clamors for expression. However, as the S becomes preconsciously aware of an intense, and yet unexplainable, impulse to destroy an authority figure's property and to express intense rage in a structured social situation, he is thrown into intense conflict between acting upon that impulse and his fear of social reprisal. This conflict stimulates anxiety which in turn results in a negative feedback activation or intensification of primal repression in order to reduce the "pain" of this conflict situation. Since there is a short response latency between the activation of the objectionable drive and the response of intensified primal repression, some anxiety and symptomatic disturbance may be observed until a resolution is achieved (either a greater inhibitory force is applied, or S acts on his impulses).

A no-amnesia condition would define a conflict situation which does not include repression at all. Instead, we'd see a conscious impulse activated by a conflict word which, in turn, activates the same desire to destroy an authority figure's property and/or to express an overwhelming rage. In order to prevent an open conflict in the social situation in which he is immersed, S would have to suppress this conscious impulse and affect. Such suppression might be expected to produce hostility, anger and conscious correlates of the conflict, but it would not produce the more physiological symptoms such as aches, organ dysfunctioning, nausea, etc. that were so vivid in Reyher's original work. An alternative course of events might also be predicted for the no-amnesia condition. The sudden activation of the anxiety producing impulses could produce a completely spontaneous repression. This "repression proper" would inhibit conscious impulse expression just as primal repression would do in the case where hypnotic amnesia is included in the procedure. To distinguish between these two alternatives, one would look closely at GSR data, the degree of apparent repression, and the types of psychopathology exhibited by Ss. If suppression is the most significant psychological process occurring during the posthypnotic period, GSR activity would be expected to increase in direct relationship with a greater awareness of the induced anger and destructive impulses.

The types of disturbances experienced would also be more psychological and subjective in nature rather than physiological and objective. Further clarification of this matter might be obtained if we looked at what happens to those Ss who have received a posthypnotic suggestion for amnesia when that amnesia is subsequently lifted and the impulses suddenly activated. If primal repression remains sufficiently effective, or the process of repression proper is activated, then we would expect little change in such S's GSR records, psychopathology or verbalized awareness.

Hypotheses

1. A posthypnotic suggestion (pump-priming) to report all feelings and thoughts accurately and completely while experiencing the sudden posthypnotic activation of anger-aggression is necessary for the spontaneous production of psychopathology.
2. An amnesia for the hypnotic session is a necessary condition for the spontaneous production of psychopathology.
3. Subjects that receive an amnesia will exhibit less GSR activity than Ss who receive no amnesia.
4. Subjects that have no-amnesia will produce more hostile associations during free-association than will Ss who have amnesia.
5. There will be more psychopathology, more hostile associations and greater GSR activity observed in response to conflict words than to neutral words.

METHOD

Subjects

Sixteen subjects (Ss) were selected from a volunteer female population on the basis of their ability to experience complete posthypnotic amnesia, to successfully execute posthypnotic suggestions, and the absence of any obvious emotional disturbance or psychopathology.¹ The experimenter (E) first conducted a group hypnosis session with between six and twelve potential Ss using a procedure similar with that of Weitzenhoffer and Hilgard (1959). Selection of the final 16 Ss resulted from subsequent individual sessions utilizing an eye fixation induction procedure and progressing through the hypnotic tasks detailed in Appendix A.

Subjects were randomly assigned to four treatment groups with amnesia and pump-priming varied across groups. Because of a clerical error, an unequal number of Ss were assigned to the various groups (see Table 1).

¹Precaution: "There is reason to believe that the hypnotic induction of conflict is potentially dangerous in the hands of improperly trained individuals. It may be possible to produce incapacitating symptoms if the conflict is made too severe for the individual's repressive defenses to handle. Moreover, it is not unlikely that this technique can be tailored to produce severe neuroses and even psychoses if the induced conflicts are constructed to dovetail with the emotional conflicts of an emotionally unstable individual" (Reyher, 1958).

TABLE 1.--Assignment of subjects to groups.

Pump-priming	Amnesia	
	Yes	No
Yes	4	4
No	3	5

Materials

A Grass #5 polygraph was used with electrodes manufactured by the Yellow Springs Equipment Company. These electrodes were attached to the palmar surface of the first and third fingers of the right hand. A Uher 2000 audio-recorder was used to tape record each free-association period and a random sample of complete hypnotic sessions. Each stimulus word was typed in capital letters in the center of a 3x5 index card for presentation to Ss.

Subjects were seated in a reclining chair beside the polygraph where E could both observe S and make notations as necessary on the polygraph write-out. On a table next to S, there was a manuscript with an attached note which read "Very Important, Do Not Touch!"

ProceduresFirst Experimental Session

A brief interview was held during each S's initial individual session in order to detect any obvious emotional disturbances or psychopathology that would disqualify them from participating in this study. S was hypnotized as deeply as possible to insure that she was capable of experiencing complete posthypnotic amnesia and of performing posthypnotic suggestions. After insuring that S could meet the above criteria, E gave the following instructions:

Now as you sit comfortably in the chair, I am going to show you some words, one at a time. I want you to read that word out loud and from then until I tell you to stop, I want you to tell me everything that comes to your mind; everything that comes to your attention, no matter what it is. I know that it is hard to report everything but do your best. I want you to report how you feel as you are associating and a complete description of how you are doing. Do you have any questions?

Twenty-two stimulus words, all of AA frequency on the Thorndike-Lorge word count (taken from Veenstra, 1969) were presented, one at a time, for free-association by S. "Chair" and "game" were used in the first session as practice words only and not in any subsequent examination of the data. Word order was determined by random selection with the one constraint being that no series of three consecutive conflict words (c-words) or neutral words (n-words) be allowed.

Word List:

- | | |
|---------------|----------------|
| 1. laugh (c) | 11. stand (c) |
| 2. wish (n) | 12. broken (n) |
| 3. walk (n) | 13. heavy (c) |
| 4. store (c) | 14. food (n) |
| 5. narrow (n) | 15. book (c) |
| 6. fellow (c) | 16. flower (n) |
| 7. drop (c) | 17. crowd (c) |
| 8. travel (n) | 18. tired (c) |
| 9. music (n) | 19. valley (n) |
| 10. line (c) | 20. glass (n) |

Second Experimental Session

In this session, Ss were again hypnotized to a deep trance using the eye fixation method of induction. Using an adaptation of Erickson's method (1944), the following paramnesia was related as convincingly as possible to each S, with frequent checks being made to insure that S was accepting the paramnesia as real and experiencing appropriate affect. The paramnesia was designed as a credible experience for the S and to allow a gradual development of intense anger. The experimenter recounted the experience for S as he would if it were true and he varied the tempo of his presentation so as to heighten realism and intensify the S's anger.

Paramnesia Introduction

Now as you continue to rest in a deep, sleep-like state, I'm going to recall to your mind an event which occurred not too long ago. As I recount this event to you, you will recall fully and completely everything that happened. As I recall this experience 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 remember the emotions which you had at this time, and you will feel as you did while this occurrence was taking place. Nod your head if you understand (After Erickson, 1944).

Paramnesia

Now the particular event of which I am going to tell you happened at the bookstore.

The bookstore was very busy, crowded with people. As soon as you see the bookstore crowded with people, let me know by nodding your head. Nod your head to let me know when you see the large number of people that were milling around. You had picked up a full armload of books and had your money (bills and coins) in your hand. On top you had a bag lunch and a hardbound book that you had really been looking forward to buying. Nod your head when you see that bag lunch and the special book. Having picked up all the books you needed, you walked to the end of the checkout line. Nod your head when you reach the end of the checkout line.

The line was long. It inched forward so slowly; so slowly that you wondered if it was moving at all. You grew tired of waiting; you were tired and impatient. Nod your head when you feel the impatience you felt then. The line moved so slowly that you grew tired of holding your books. The books became heavier and heavier. Your arms ached from holding them. Nod your head when you feel the aching in your arms. Other people had fallen in line behind you as you waited. You waited and waited and grew more and more impatient and tired; your arms ached more and more. The person behind you shoved into you; and boy, that irritated you. Nod your head when you recall the shove. It irritated you that people were so inconsiderate and rude. Out of the corner of your eye you saw two men walking towards you. One of them pushed his way through the line right in front of you, bumping you and almost making you drop that special book you had been looking forward to reading. Nod your head when you see that man cutting through the line and bumping you. That really made you angry. You were thinking that you'd had just about enough. It would take just one more thing like that to make you feel like boiling over with anger.

Just then someone tapped you on the shoulder. As you turned your head to see who it was you noticed that it was the instructor from one of the courses you had enrolled in. He asked you to step back. Nod your head when you recall hearing him ask you to step back. Assuming that he wanted to go through too, you stepped back, bumping into the person behind you, who snapped at you crossly, "Watch it!" To your astonishment, your instructor stepped into the line, taking your place. That did it! Anger surged up within you. You thought to yourself, "Who the hell does he think he is?"

Just then a friend of his started to step into line and you moved forward to close the gap, but "bang!" he bumped into you, spilling all your books, the money, and the contents of your lunch bag all over the floor. There were books, money, and the contents of your lunch bag all over the place. What a mess! Nod your head if you see it. As you had stooped to pick up the books, money and lunch, your instructor's friend stepped into your place. That made you furious! You picked up a book and saw that the binding was broken; the pages were crumpled and smudged with dirt. It was your favorite book, the special one you had been looking forward to reading. Nod your head if you see the broken book. You were just boiling with anger inside; you were fuming and seething with rage. As you knelt down to pick up your money, books and lunch bag, your instructor commented sarcastically, "You dropped something." Those words really burned you; you were infuriated!

As though that was not enough, he turned to his friend and snickered, "You want to see something funny, look." Then you heard them both laughing; laughing and laughing; really enjoying your predicament. With every laugh your anger surged up more uncontrollably. You were swept up in overwhelming feelings of anger and rage. You hated these men; and once again you find yourself feeling those powerful emotions. You feel them right now with your whole body.

Instructions for Conflict Words

Now as I mention the following words you are reminded of that incident, and your anger will become even more intense. With each word an intense rage will boil up inside you.

laugh, store, fellow, drop, line, stand,
heavy, book, crowd, tired.

Destructive Impulse Suggestions

Now listen carefully. After you are awakened, whenever these words come into your mind you will experience these same overwhelming feelings of rage. When these feelings of hate and anger boil up, you will realize that it is that instructor from the bookstore who wrote the manuscript on the table next to you, and you will have an overwhelming urge to tear them up (repeat). Nod your head if you understand!

Pump-priming Instructions

Just one more thing, whenever you read or hear these words--laugh, store, fellow, drop, line, stand, heavy, book, crowd, or tired--you will give me an accurate and complete description of how you feel. You will also give me a complete and accurate description of how you feel whenever I ask you either "How are you doing?" or "How do you feel?" Nod your head if you understand.

To bring the S back to a relaxed hypnotic state:

Now you can feel your anger slowly fading away with each breath. Your feelings of anger are draining away as you gradually feel more and more calm and relaxed. The bookstore and your angry feelings are fading away. Nod your head when your anger is gone.

After the S was again relaxed and resting in a deep trance, the following instructions were given to insure that no posthypnotic resistance would interfere with subsequent hypnosis:

Before I awaken you, there are a couple more things that I must tell you. After I awaken you and you free-associate to some words, I will have to hypnotize you once again. When I inform you that we have come to that point in the experiment at which I must hypnotize you again, you will want to be hypnotized. Do you understand? When that time comes, I will have you lean back in the chair as you are now and ask you to concentrate on an empty ring box. As you concentrate on the box it

will slowly close, and as it closes, your eyes will slowly close too and you will fall back into a deep hypnotic trance just like you are in right now. Nod your head if you understand.

Amnesia Instructions

OK, continue to listen carefully. After I awaken you everything that has happened during this session will fade out of your memory and into your unconscious mind. After you are awakened you will not be able to remember anything about your experience in the bookstore. It and everything that happened in this session will be just like a dream that you had while you were asleep and which you cannot remember after awakening, or just like a word on the tip of your tongue that you just cannot remember even if you should try. Nod your head if you understand.

You will not be able to remember anything at all about this session until I say "Ok, now you can remember everything." Then you will be able to remember everything that has happened in this session. Nod your head if you understand.

The S was then awakened slowly and allowed to adjust to the laboratory surroundings and lights. Following this readjustment period, each S was given the twenty-word free-association task just as it was administered in the first experimental session. Ss who received the amnesia treatment were given the posthypnotic cue for the return of memory, and were asked to free-associate once again to the first ten stimulus words on the above list. Finally, all Ss were re-hypnotized and all induced posthypnotic suggestions were canceled. They were told that the paramnesia was a false story invented by E and that they would be able to remember as much of it as they liked upon awakening. Finally, the experiment was explained in

both the hypnotic and waking states, and a thorough check was made to insure against any lingering disturbance in S.

To summarize the procedure:

Group Session:

- a. 15 minute discussion about hypnosis
- b. Eye-closure induction procedure
- c. Hypnotic tasks following Weitzenhoffer and Hilgard's Stanford Hypnotic Susceptibility Scale.

Experimental Session I:

- a. Discussion about previous group session and some history taking of Ss
- b. Hypnosis induced and the progression of tasks outlined under "Hypnotic Steps" (Appendix A) performed.
- c. Free-association (gathering of base-rate data).

Experimental Session IIa:

- a. Brief discussion to establish rapport
- b. Experimental procedure carried through as described above
- c. 15 minute rest period
- d. Free-association to 20 c- and n-words.

Experimental Session IIb:

- a. Posthypnotic cue ("Ok, now you can remember everything") given
- b. Free-association to first 10 c- and n-words.

Sessions IIa and IIb Continued:

- a. Ss rehypnotised
- b. Ss asked to recall paramnesia, and told that it was a false story
- c. Removal of all posthypnotic suggestions
- d. Ss thanked for participation
- e. Ss awakened, thanked for their participation and checked for any residual arousal to c-words.

Measures and Scoring Procedures

GSR Activation

A galvanic skin response (GSR) greater than a 2,000 ohm deflection was considered as being significant. The frequency of GSR responses were counted for all stimulus words for the 30 seconds following their presentation to S. This measure was used to compare differences in autonomic arousal between treatment groups, and between c- and n-words.

Symptomatic Reactions

The symptomatic reactions of S were classified according to the categories described by Reyher (1969b) and as detailed in Appendix B. Two different symptomatic scores were obtained for each S in each session. The first was obtained by two graduate students in Clinical Psychology independently scoring the typed protocols of S's sessions. Subjective, verbally reported symptomatology was detected by this means.

Objective, or overtly behavioral, symptoms were noted by E during each experimental session. This observational method was used to record symptoms that might lie entirely outside the awareness of S and therefore not be indicated by S while she was ego-involved in the free-association task. Again, the scoring period was for thirty seconds following word presentation with the exception that if E's question "How are you doing?" or "How do you feel?" was asked at the end of the 30 seconds, then S's first verbal response to the question was scored.

Hostility

A measure of S's hostility was obtained by scoring her typed protocol for hostile associations. These associations were assigned to one of three levels of socialization and directness (after Pine, 1960) and to one of two levels of psychological distance. This scoring measure was included to measure whether anger was being expressed, and if so, how directly. (See Appendix C for the classifications of these associations.)

Repression Index

Reyher (1967) developed an index of repression based upon the assumption that repression is the opposite of the S's awareness of his impulses and affect. When known impulses and their attendant affect are aroused

posthypnotically one might assume that the S who verbalizes less awareness of these impulses and affect has, in fact, repressed them more completely from consciousness than has the S who verbalizes his anger and/or his desire to destroy the authority figure's property. Revising Reyher's original index somewhat, we arrive at the following operational definition of repression:²

²Reyher's original index was revised in order to make the meaning of R clearer and its use somewhat more convenient. With the original index,

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

the stronger the S's repressive forces, the lower was his R index (e.g., a S with an R index of .2 is much more severely repressed than the S with an R index of 1.8). This has been somewhat confusing in the past because R was interpreted as representing "repression" and therefore one could easily assume that the greater a S's R index, the more repression he has exhibited. The revised index reported here reverses the distribution and meaning of the original R index scores so that they are now a direct reflection of S's use of repression, i.e., a large R score (e.g., .8) implies greater repression than does a low R score (e.g., -1.2).

A second problem with the original index concerned the term "CR." The absence of symptoms was part of CR's definition and therefore the index could not be justifiably correlated against frequency of symptoms because the two variables were not independent. There is also a problem when one uses the same concept or word that one is trying to define, on the one hand, within his subsequent definition, on the other. That is, "repression" (R) on one side of an equation cannot be defined if that same term is also included on the other side of the equation.

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

where:

NA represents a complete lack of verbalized awareness of either the destructive impulse or anger at c-word presentation.

FA represents S's full awareness of both the destructive impulse and anger at c-word presentation

PA represents an awareness of only one aspect of the anger-aggression conflict upon c-word presentation

CC represents conscious correlates of the unconscious anger-aggression that S becomes aware of upon c-word presentation (e.g., irritation, frustration).

Tc is the number of c-words presented to S during the session.

Because of the ever-present possibility that Ss would suppress reporting impulses (i.e., the destructive urge) and feelings (i.e., anger) that are generally felt to be improper or undesirable, the above formula gives a compensating weighting factor of 3 for any instance of reported full awareness of anger-aggression and 2 for a report of either one of these elements.

RESULTS

Inter-rater Reliability

The verbatim protocols of the 16 Ss' free-association sessions were independently rated by two judges and the inter-rater correlations are shown in Table 2. These reliabilities were sufficient ($p < .001$) and compare favorably with those previous investigations of Veenstra (1969), Sommershield (1969), and Perkins (1965).

TABLE 2.--Inter-rater correlations on Subjective Symptomatology and Hostility.

Measure	Larison	Veenstra	Sommershield	Perkins
Symptoms	.89*	--	.95**	.96*
Hostility	.60*	.65*	--	--

* Pearson r correlation

** Spearman rho correlation.

Pre-test Measures

There were thirty-two (32) verbalized or subjective symptoms scored for our 16 Ss on Session I for a mean of two symptoms per subject. While there were no significant differences in the distribution of these symptoms across groups, significantly more symptoms were

reported in response to c-words than to n-words ($p < .05$). Similarly, for the thirty-seven (37) hostile associations scored, there were no significant differences found between treatment groups, but significantly more hostile associations were made to c-words than to n-words ($p < .05$). Because of this pre-test bias in favor of c-words drawing more hostile associations and subjective reports of symptoms, all further comparisons between c- and n-words in Session II have been corrected for the individual S's pre-test scores.

Eight instances of objective behavior were scored as being indicative of intense anxiety or psychopathology during Session I. There were no significant differences in the distribution of these symptoms either between groups or between c- and n-words. Similarly there was no significant distribution of GSR activity between groups or between c- and n-words.

Session IIa

In Table 3 the comparisons between the various treatment groups and between c- and n-words on the major dependent variables are presented.

Psychopathology

Amnesia Ss experienced an average (mean) of 4.65 subjective symptoms in response to c-word presentations which was not significantly different from the 5.65

TABLE 3.--Comparisons between those Ss with amnesia (Amn) and those without amnesia ($\overline{\text{Amn}}$); those that received pump-priming instructions (P-P) and those who did not ($\overline{\text{P-P}}$); and between conflict words (c-words) and neutral words (n-words).

Variables	Comparisons			
	<u>Amn</u> > $\overline{\text{Amn}}$	<u>Amn</u> < $\overline{\text{Amn}}$	<u>P-P</u> > $\overline{\text{P-P}}$	c->n-words
Subjective Symptoms	NO	--	NO	YES**
Objective Symptoms	Trend	--	NO	YES***
GSR	--	YES***	--	YES***
Hostility	--	NO	--	NO
Repression Index	YES*	--	--	--

*
p < .02
**
p < .01

p < .005

symptoms experience by the no-amnesia Ss ($t = 0.47$).

Likewise the comparison between those Ss who received pump-priming instructions and those that did not reveals no significant differences in the incidence of subjective psychopathology ($t = .39$).

Looking at the less reliable indicator of psychopathology, that of objectively displayed symptoms, we find the same statistical results across these two comparisons. However, there was a strong trend in the predicted direction for the comparison Amn > $\overline{\text{Amn}}$ (means of 14.7 vs. 8.3 symptom scores).

Wilcoxon sign-tests for subjective symptoms and objective symptoms reveal highly significant differences between c-words and n-words, and those differences are in the predicted direction.

GSR

This indicator of autonomic arousal clearly differentiated between those Ss who received amnesia and those who did not. The amnesia group had an average of 6.84 reactions of 2,000 ohm deflection compared with 18.45 reactions for the no-amnesia group ($t = 3.83$). GSR was equally significant in the c-word vs. n-word comparison ($t = 3.17$).

Hostility

The hostility measure used in this study proved to be a very inadequate indicator of the underlying psychodynamic activity inferred to be activated within our Ss. None of the comparisons performed in this study using the hostile associations score proved significant; i.e., there were no significant differences between amnesia vs. no-amnesia, c-word vs. n-word, session IIa vs. session I, or session IIb vs. session IIa.

Repression Index

The repression index showed a very significant differentiation between amnesia and no-amnesia subjects

($t = 2.68, p < .02$). Based on the assumption that repression varies inversely with verbalized awareness of anger-aggression, amnesia Ss evidenced consistently greater repression than did no-amnesia Ss. There was no such difference between pump-priming groups.

Session IIb

For those seven subjects who received amnesia, posthypnotic removal of the amnesia did not lead to any significant variation in their scores on the dependent variables. However, in view of this study's small n , the trend that was observed for objective symptoms to decrease in frequency with the removal of amnesia is suggestive, and in the direction that one might predict.

Between Sessions

In Table 4 the comparisons between sessions are summarized for each dependent variable.

There were large increases in the reported frequencies of subjective symptoms, objective symptoms and GSRs in response to c-word presentation in Session IIa as compared to pretest conditions. This suggests that all four of our treatment procedures were effective in illiciting spontaneous psychopathology and autonomic arousal. An examination of what happened upon n-word presentation in Session IIa as compared with base-rate levels, reveals no significant differences in those

TABLE 4.--Comparisons between S's scores to c- and n-words in session I (pre-test) vs. those scores in session IIa; and for those seven amnesia Ss, a comparison between session IIa and IIb.

Variable	Session I vs. Session IIa	Session IIa vs. Session IIb
Subjective Symptoms		
c-words	increased**	n.s.d.
n-words	increased**	
Objective Symptoms		
c-words	increased**	n.s.d.
n-words	n.s.d.	
GSR		
c-words	increased*	n.s.d.
n-words	n.s.d.	
Hostility		
c-words	n.s.d.	n.s.d.
n-words	n.s.d.	
Repression Index	--	n.s.d.

*
p < .05
**
p < .005

measures that reflect involuntary responses (objective symptoms and GSR activation). However, there appears to have been significant generalization of subjectively experienced disturbance from c-words onto n-words. This is evidenced by the significantly increased frequency of subjective symptomatology from Session I to Session IIa for both c- and n-words, with the magnitude of this increase being much greater for c-words than for n-words.

There were no statistically significant changes in amnesic Ss' responses on any of our dependent variables when amnesia was lifted posthypnotically.

Summary and Conclusions

The results of this study clearly do not support the inclusion of posthypnotic amnesia nor pump-priming in a list of necessary variables for the spontaneous production of psychopathology and repression using Reyher's paradigm. Subjects who received neither the amnesia instructions nor pump-priming reported substantially the same frequency of psychopathology in response to c-word presentation as did those Ss who were given amnesia and/or pump-priming. The trend that was observed for Amnesia Ss to experience more objective symptoms suggests that while amnesia may not be a necessary variable, it may potentiate the effects of those, as yet unidentified, variables that are necessary and sufficient for the production of psychopathology. Amnesia also seems to intensify Ss' repressive mechanism (as measured by the R index) in response to sudden activation of ego-alien impulses. Hypotheses 1 and 2 are rejected, therefore, by the results of this study, although the inclusion of amnesia in future investigations may be worthwhile.

Hypothesis 3 was supported by our results: Ss who receive amnesia respond with less GSR activation than do Ss

for whom posthypnotic amnesia is not suggested. While no hypothesis was made concerning differences between treatment groups for their Repression Index scores, this may be an appropriate place to point out that amnesia Ss obtained significantly higher scores on that index than did no-amnesia Ss.

The data on Ss hostile associations were not very informative, but the absence of between-group differences seems to indicate that memory for the paramnesia does not substantially encourage the expression of the hostility that is presumably aroused by the paramnesia. Therefore, hypothesis 4 which predicted more hostile associations for the no-amnesia groups is rejected.

The increased pathogenicity of c-words in Session II compared to the same words in Session I, and the difference in pathogenicity between c- and n-words in Session II partially confirms hypothesis 5. The prediction for more symptomatology and GSR activity in response to c-words than to n-words was confirmed, but the expected increase in hostile associations to c-words was not found.

DISCUSSION

The Paradigm

The initial focus of this research was an attempt to clarify the paradigm that Reyher first enunciated in 1958 and to specify one or two variables that are necessary to that paradigm in order to produce spontaneous repression and psychopathology under controlled laboratory conditions. Previous descriptions of this procedure (Reyher, 1969a; Veenstra, 1969; Karnilow, 1971; Wolfe, 1971) identified at least twelve variables that might be of significance in reliably producing repression and the symptomatic reactions:

1. Subjects are told while under hypnosis . . .
2. a false story about themselves (paramnesia) . . .
3. which arouses a strong affect, such as rage, . . .
4. that is hypnotically associated with post-hypnotic cue-words (conflict words).
5. Further, this affect is directed toward an authority figure and . . .
6. combined with an overwhelming (loss of control) . . .
7. impulse to destroy that authority's property (destructive impulse).
8. An amnesia is given for the paramnesia but not for the associated rage and destructive impulse.
9. The affect is posthypnotically aroused . . .

10. and the drive suddenly activated . . .
11. by the S verbalizing the c-word.
12. It is also thought to be important that E respond to S and his behavior in an accepting, non-directive manner (E's relationship with S).

This study looked at variable 8 (amnesia) and a new proposed variable, called "pump-priming," to see if the elimination of either one or both of them would result in a lack of psychopathology, GSR activation and expressions of hostility. We found that neither variable is a necessary one for the production of those dependent responses, although a slight potentiating effect was observed for amnesia.

Bruce Burns in a recently completed doctoral dissertation (1972) used this paradigm for implanting conflict experimentally in his subjects, and observed significant psychopathology without explicitly suggesting a posthypnotic amnesia for his paramnesia. He also modified variables 4, 7, and 11. Instead of associating the hypnotically aroused affect with posthypnotic cue-words, he associated it with the S closing his eyes for free imagery (Reyher, 1969b) during the posthypnotic portion of the experimental sessions. Therefore, it appears that variable 4 could be generalized to "the hypnotically aroused affect is associated with specific posthypnotic cues." Burns modified variable 7 from hypnotically suggesting a destructive impulse, to S having an impulse to

talk about their destructive impulses and sexual feelings rather than acting on them in any objective way, with the resultant psychological disturbance being vividly demonstrated. These two studies clearly justify a modification of variable 7: "aroused affect is combined with an ego-alien impulse." Finally, Burns did not incorporate a list of conflict-words into his experimental design, and therefore, variable 11 appears to be unnecessary to the paradigm. Rather than verbalizing c-words, or even presenting c-words per se, any suitable posthypnotic cue that can be presented suddenly by E to S will serve the necessary purpose of stimulating S's hypnotically suggested affect and impulses.

The S's posthypnotically aroused affect does not have to be overwhelming in order to be effective in this procedure. Perkins and Reyher (1971), Reyher (1967) and Sommerschild (1969) varied the strength of Ss' affect from "mild" to "overwhelming" through three stages of drive intensity, and obtained significant psychopathology at every level. As a matter of fact, Sommerschild found a curvilinear relationship between drive intensity and resulting disturbance, suggesting that, at least for an anger paramnesia, a less-than-overwhelming level of arousal may be optimal for symptom formation.

Psychotherapeutic experience using uncovering procedures suggest that if E maintains an accepting, non-directive attitude toward S, the latter will be less likely to suppress his feelings and impulses, thereby sharpening the distinction in our data between repressed and suppressed material. While the maintenance of this attitude is probably not a necessary variable for this paradigm (beyond the implications of that relationship for the hypnotic process itself), future investigators may desire to maintain it so as to increase the effectiveness of the basic (necessary and sufficient) paradigm.

In summary, we are now of the opinion that the following variables are necessary and sufficient for the production of spontaneous repression and psychopathology:

1. During hypnosis, E tells S . . .
2. a paramnesia . . .
3. that arouses strong affect in S . . .
4. which is directed toward an inappropriate object (e.g., authority figure, oedipal figure, etc.).
5. This affect's subsequent arousal is associated with a specific posthypnotic cue(s) . . .
6. and is combined with an impulse to act in an ego-alien manner.
7. The affect and impulse are aroused suddenly (sudden activation of drive) . . .
8. in the posthypnotic session (posthypnotic arousal).

Perhaps the most critical, and as yet least understood, variable in this revised list is that of the paramnesia. In an attempt to explain their lack of results, Karnilow (1971) and Wolfe (1971) drew attention to the importance of the specific paramnesia used in this kind of research. These paramnesias represent a complex interaction of many different feelings and impulses in addition to the one or two that E is explicitly concerned with. For example, the Oedipal-sex paramnesia used by Burns (1972) and Sommerschild (1969) not only arouses sexual feelings but also feelings of guilt, inadequacy and fear. Looking at the content of the anger-aggression paramnesia used in their study and that of Veenstra's, Karnilow and Wolfe suggest that it is not pathogenic because it fails to arouse guilt within S for past behavior that is no longer under his control. That is, the paramnesia may not be pathogenic because no reprehensible act on S's part is included within the story, and S can avert arousing a superego reaction (which would stimulate anxiety, repression and pathology in that order) by merely choosing not to act upon the aroused impulse. Without the paramnesia arousing a superego component within S's psyche, Wolfe and Karnilow reason that the memory of the paramnesia and even the expression of anger are not repugnant to S and, therefore, are not pathogenic.

While Wolfe and Karnilow's argument sounds reasonable and probably has some validity, it appears too simplistic when the results of the present research are considered. The paramnesia used here is precisely the same one that was used by Karnilow, Wolfe, and Veenstra, but in contrast to their investigations, this study did produce significant psychopathology, GSR activation, and spontaneous repression. In comparison with Sommerschild's data, the subjects in this investigation reported subjective symptoms at about the same frequency as his Ss did at his lowest level of drive activation. GSR activation was also greater in this study than in Sommerschild's, which suggests that an overall lower level of repression (R index) was activated in the former. Together, these two subjective comparisons suggest that perhaps the paramnesia used both here, and by Veenstra, Karnilow, and Wolfe, is in fact not as pathogenic as those used by Reyher, Perkins, Sommerschild, and Burns.

If one concludes that the anger-aggression paramnesia used in this study is only marginally effective in producing spontaneous repression and its resultant symptomatic reactions, then one still needs to account for the fact that in this study pathology was observed, while it was not in Veenstra, Karnilow and Wolfe's studies. In the above discussion concerning the probably necessary variables for this paradigm, it was suggested that

directing the ego-alien impulse at an authority figure is very important. Veenstra eliminated this variable from his design and it's absence may account for his Ss' lack of pathology in response to posthypnotic stimulation of the impulse. It is considerably less clear as to why Wolfe and Karnilow did not observe symptomatology in their Ss. However, in reporting their findings, Wolfe and Karnilow did bring attention to possibly significant experimenter-subject interactions, such as sex differences. At this point there is no definitive explanation for the paradoxical results of this study and that of Wolfe and Karnilow. One possible explanation is that experimenter differences in their study were sufficient to mask any group differences between those Ss who received instructions for a destructive impulse and those who did not.

Improvements for Experimental Design

As noted above, the paramnesia used in this study has been inconsistent in its pathogenicity across several independent studies. It was suggested that this particular paradigm is only minimally effective because it includes no reprehensible act on S's part that would arouse a super-ego reaction in that S. While the paramnesia does arouse genuine anger in S, anger is more easily expressed in the academic sub-culture from which our Ss were drawn (and therefore less anxiety producing) than acting on an

impulse that would arouse intense anxiety. Therefore, it might be more useful to discard the paramnesia used in this study in favor of those more potent paramnesias used by Reyher (1958, 1967), Perkins and Reyher (1971), Sommerschild (1969), and Burns (1972).

We are of the opinion that another reason for this study's somewhat less vivid psychopathology, especially of the psychosomatic type, in comparison to that observed by Reyher, Perkins, Sommerschild, and Burns, is that our Ss were given a specific cognitive task to perform following the presentation of cue-words. This free association task, which was also incorporated in Veenstra, Wolfe and Karnilow's studies, may enable the S to bind much of the anxiety that is created by the conflict's posthypnotic stimulation. By giving the S a specific task to perform, we give him a way of filling that period of time between c-word presentation and the re-establishment of equilibrium between S's drive strength and his repressive forces (see below). The free-association task, then, helps S defend against becoming aware of the conflict going on within him, by mobilizing his conscious faculties in response to a specific external task. Therefore, it may be more productive to leave Ss without a specific task to complete following c-word presentation in future studies.

A third improvement for this type of research would be the perfection of an unobtrusive observational

method of detecting non-verbalized, objective symptoms that may in fact lie outside the S's awareness. This E used Reyher's symptom classification list as a way of categorizing observations that he made during each hypnotic session with Ss. As can be seen above under "Results," this measure seems to have great promise for helping to discover exactly what is happening to S when intrapsychic conflict is suddenly stimulated. It is our opinion that the use of Burns (1972) symptom list and independent observer-raters who are unaware of the study's purpose and its experimental hypotheses, would result in an unbiased and reliable instrument for this line of research.

The final improvement that we can suggest for future studies in this line of research involves the wording of the amnesia instructions and their temporal placement within the experimental procedure. As Perkins and Reyher (1971) have pointed out, it is important that the instructions for posthypnotic amnesia apply only to the paramnesia and not to those suggestions for posthypnotic arousal of anger and a destructive impulse. The amnesia instructions used in this study are somewhat confusing because they include the phrase: "It [the bookstore incident] and everything that happened in this session will be just like a dream that you had while you were asleep and which you cannot remember after awakening . . . even if you should try." This instruction could

conceivably be interpreted by S to mean that he is to forget about the suggestions for anger-aggression arousal as well as the paramnesia. By rewording the amnesia instructions to make them less ambiguous and placing them directly after the paramnesia (instead of following all other instructions) this confusion might be averted in future studies.

In summary, it is believed that the use of paramnesias that include instances of S acting in ways repugnant to his super-ego, the elimination of any artificial cognitive tasks during the posthypnotic period, the development of an unbiased and reliable observational method for detecting behavioral reactions to the stimulation of intrapsychic conflict, and the clarification of our amnesia instructions, will help make this research paradigm more productive and sensitive to underlying dynamic processes.

Relationship Between Drive and Repression

What is the relationship between the procedural steps of the paradigm discussed above and the inferred processes of drive and repression? The paramnesias used to date in this line of research have been designed to arouse intense affect within the hypnotic S which is associated with the suggestion of a reprehensible post-hypnotic behavior which is to be performed upon

posthypnotic arousal of the affect. Specifically in this study the paramnesia was designed to arouse anger in the S and to channel that anger, and a suggestion to destroy personal property, toward an authority figure. Upon awakening the S, these posthypnotic suggestions act as natural impulses upon the S's adult ego and clamor for expression. It is the stimulation of this affect and its associated impulse that produces the S's drive to satisfy those impulses.

Repression is an inhibitory feedback mechanism (Reyher, 1963, 1969a, b) which tends to block the expression of such aroused impulses. Freud pointed out that intrapsychic conflict was produced by aroused impulses because, in the person's past, acting on those impulses led to traumatic external conflict with significant others in that person's environment. The impulses become associated with painful trauma and therefore, are subsequently defended against--repression is the most basic, or "primitive," of these defenses. This repression may be activated against the expression of these repugnant impulses at any one of several places in the paradigm. If the particular paramnesia used in a study of this type ties into a particularly potent conflict already existing within a particular S, primal repression may inhibit the experiencing of the "induced affect" even within the hypnotic session. In such cases one would

observe little behavioral or autonomic arousal during the hypnosis session itself, and no awareness of anger or an objectionable impulse during the posthypnotic period. As far as E could discern, no S in this study failed to experience genuine anger during the hypnotic presentation of our paramnesia. Therefore, this theoretical source of repression, in its extreme form, can probably be eliminated from consideration as far as the present study is concerned.

Assuming that the S has had no past experience that was so traumatic as to activate complete primal repression, he will be able to experience the affect upon E's suggestion of it in the hypnotic session. A posthypnotic amnesia then serves only to make the suggested impulse and affect function as an unconscious drive upon posthypnotic activation. It also serves as an unconscious model to S for handling this particular impulse and its resulting conflict. Therefore, when the drive (suggested affect, impulse and S's need to complete the posthypnotic suggestion) is posthypnotically activated it leads to a momentary disequilibrium between the anxiety-producing impulses and any primal repressive forces which may be keeping them in check. During this brief time, several transitory outcomes may be observed (e.g., anxiety and symptoms) until a final resolution of the conflict is achieved; be that an autoplasmic strengthening of primal repression and/or activation of repression proper, or an

alloplastic resolution such as acting on the socially unacceptable impulses. If the aroused drive is relatively weak, increased repression is the most economical response for S in terms of psychological energy. On the other hand, if the aroused drive is very intense for S, the repressive force may give way to impulse expression and the conflict becomes an external one between S and his society.

It was concluded above and in several earlier reports (Reyher, 1967, 1969b, and Burns, 1972) that sudden activation of a repressed drive causes a temporary disequilibrium between that drive's anxiety-producing impulses and the repression which inhibits their expression. During this short period of time, a variety of transitory outcomes may be observed such as psychosomatic symptoms, autonomic arousal and anxiety. If the drive is relatively weak, the forces of repression soon dominate the interplay again and the S fails to achieve awareness into the nature of the anxiety-producing impulses. On the other hand, if the aroused drive complex is relatively intense, it will break through the repressive, or inhibitory, mechanism and enter into the S's consciousness. In either case, we are referring to the relative strengths of the drive complex which strives for S's attention and action, and the inhibitory feedback mechanism (repression) that tends to keep that drive unconscious. Repression and drive, then, can both take on a continuum of values in

terms of their strengths, and these two processes always oppose one another. The Repression Index used in this study is useful in objectifying this relative strength of repression only when that strength takes on a low relative value, and an awareness of the underlying drive complex starts breaking into consciousness. The free-imagery technique used by Burns clearly shows that the continuum of awareness (and, therefore, the range of our R index) is not equivalent to the continuum of repression. By focusing on the relative strength of the S's drive, as Burns did, one can see that this drive can increase (and therefore the relative strength of repression decrease) for a long time before it ever begins to be verbalized in awareness. Awareness of the drive only occurs near the weak end of the repression continuum. One difficulty with this type of research is that there is no independent method for measuring both repression and drive at the same time; we use a measure of the relative strength of repression, and Burns used a relative measure of drive. This current "state of the art," as it were, makes direct comparisons between studies that used different paramnesias or procedures somewhat tenuous.

The following energy flow diagrams (Figures 1-4) are presented to illustrate and summarize the foregoing discussion. Figures 1 and 2 depict two extreme relationships between drive and repression; i.e., where drive is

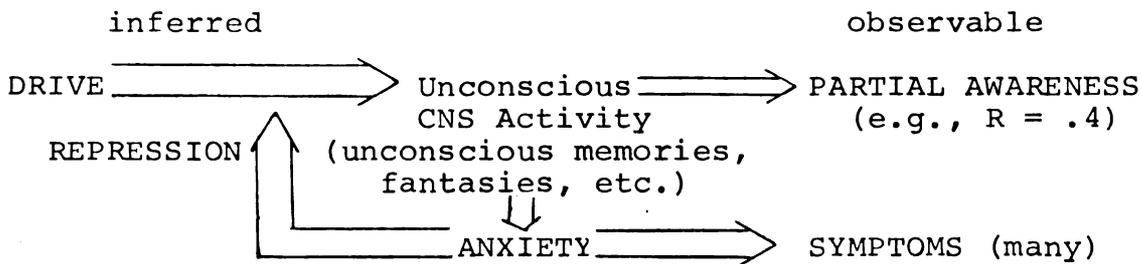


Figure 3.--Flow diagram for a high drive, high repression situation

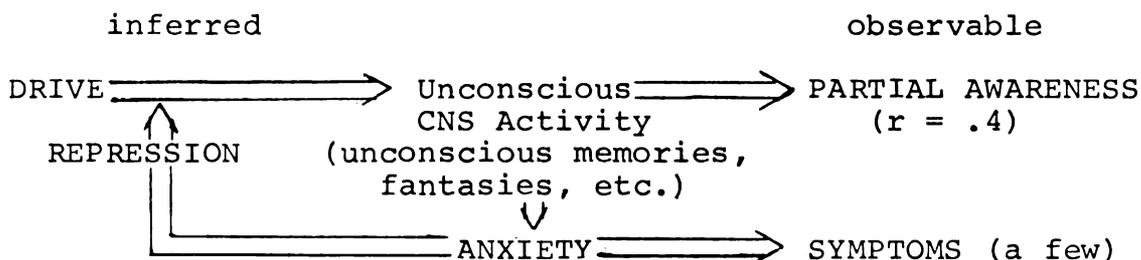


Figure 4.--Flow diagram for low drive-low repression situation.

verbalized little or no awareness of the induced conflict (high repression) reported few symptoms and those were concentrated within the psychosomatic categories of Reyher's symptom classification. S with lower repression index scores, however, tended to exhibit many more symptoms and they were much more varied in type. Sommerschild (1969) supported these earlier findings and also discovered that increasing the drive level in S increased their reports of symptomatic reactions. Burn's (1972) findings altered the

above picture somewhat. His Ss showed a greater range in their relative drive strength (and, presumably, their relative repression values) and their reports suggest that a curvilinear relationship between repression and symptom frequency may be a more valid picture. That is, when repression is very much greater than the S's activated drive, or the drive is very much stronger than the repression which tries to inhibit it, little intrapsychic conflict occurs and very few symptoms result. The more pathogenic situation is when the S's aroused drive intensity more nearly balances the strength of his repressive forces striving to keep the drive in check. Burns also found that the type of symptom experienced relates directly to drive strength.

Figures 5 and 6 summarize our current understanding of the relationship between repression and the frequency and type of symptoms reported by Ss in conflict.

A post-hoc correlational analysis of this study's data revealed no significant relationship between R and frequency of symptoms, although there was a trend in the direction of an inverse relationship. This trend and the fact that subjective symptoms were not significantly different between groups while objective symptoms were significantly more frequent in the amnesia group suggests that our Ss were experiencing an intermediate value of relative R. Because our Ss tended to experience fewer

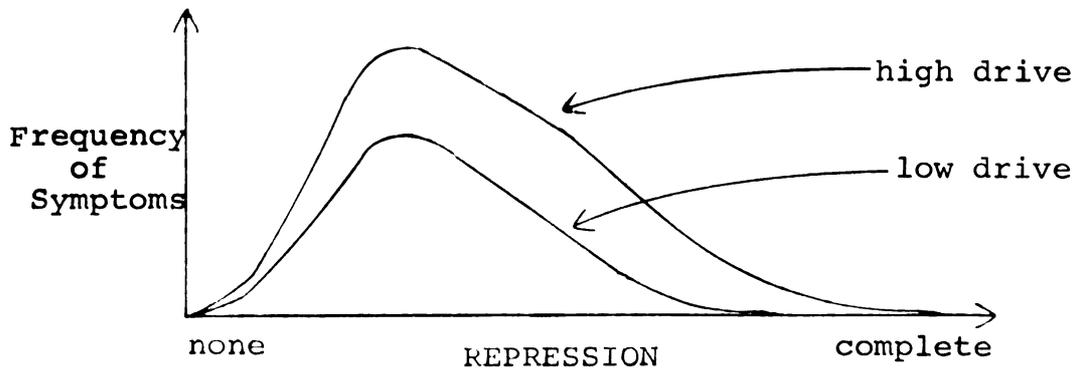


Figure 5.--The relationship between the relative strength of repression and frequency of symptoms.

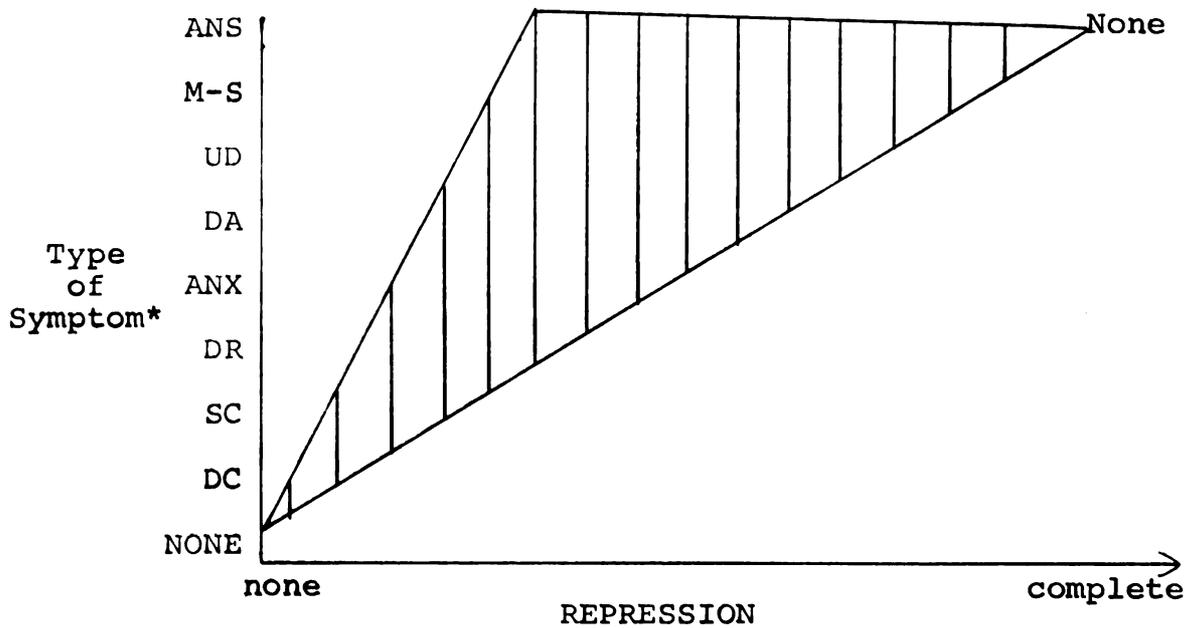


Figure 6.--The relationship between the relative strength of repression and the type of symptoms expressed.

*This sequence of symptom categories is based upon the empirical findings of Reyher (1958, 1967), Sommerschild (1969), and Burns (1972).

symptoms than did these in Sommershield and Burns studies, we would suggest that the paramnesia used in this study activated less drive in our Ss than was the case with those of Sommershield and Burns. Figure 7 combines elements of Figures 5 and 6 and presents how we think the present study fits into that conceptual diagram. It should be remembered that the absolute value of drive intensity would alter the "frequency of symptom" scale, toward a greater frequency of symptoms for any given R value, and may shift the "type of symptom" scale as well, although we have no evidence to support that conjecture.

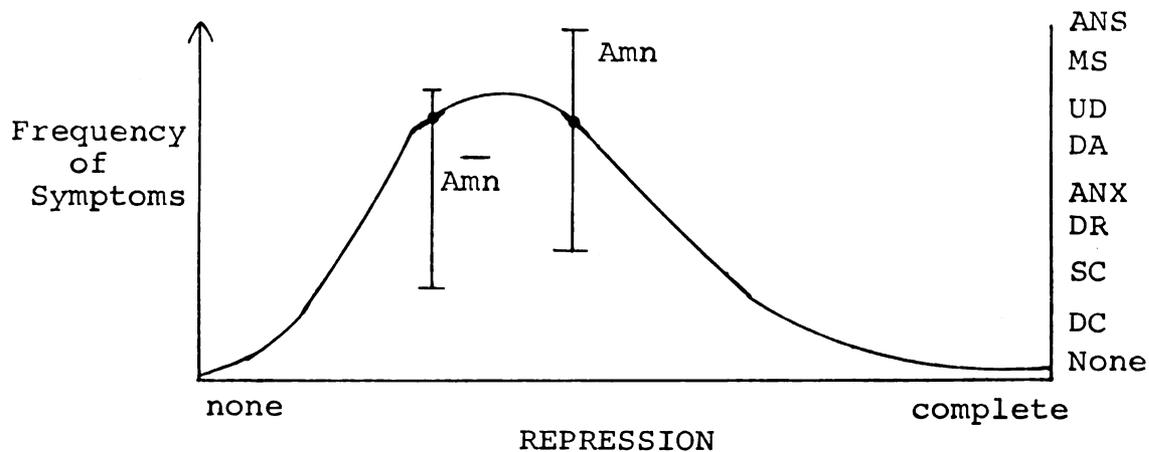


Figure 7.--The relationship between the relative strength of repression, the frequency of symptoms and the type of symptoms as related to the present study.

Repression and GSR

GSR activation seems to be caused by a S's drive becoming more intense and starting to break through the inhibitory forces of repression. It becomes more intense as that drive breaks through into consciousness and assumes the status of a consciously suppressed impulse. GSR activation, then, indicates a preconscious conflict that is pushing into awareness, or a conscious conflict that is being suppressed. The fact that our no-amnesia subjects responded with higher GSR frequencies indicated that the aroused posthypnotic conflict was closer to conscious representation than was the case for the amnesia Ss. The fact that these no-amnesia Ss also scored lower on the R index supports this interpretation.

If the Ss in this study had been merely suppressing their expression of anger-aggression, the professional literature on lie detection would have predicted a positive correlation between our R index and GSR. In the case of suppression, we would start with the assumption that Ss are fully aware of the anger-aggression and that our R index measures the degree to which they are willing to risk interpersonal rejection by verbalizing their awareness. A S who received a high R score would be viewed as more actively suppressing his impulses than would a S with a low R score. We would expect this active suppression to be combined with greater GSR activity than would be the

case for the S who verbalizes his awareness of the anger-aggression or actually acts upon that drive, i.e., a positive correlation between R and GSR. While our post-hoc correlation analysis did not prove statistically significant, it was in the negative direction ($r_s = -.197$). Furthermore, amnesia Ss scored significantly higher on the R index and lower on GSR activation than did no-amnesia Ss. Both of these observations tend to discredit the use of a suppression model for conceptualizing the processes involved in this study.

Using a repression model to explain the processes occurring in the present study, one starts from a different assumption concerning the interpretation of R and derives the prediction that R and GSR should be negatively correlated. With this model, R measures the degree in which the inhibitory feedback mechanism of repression has weakened upon drive activation and subsequently allowed S to become partially aware of her anger-aggression. As repression weakens, and S becomes more definitely aware of her anger and destructive impulses, her GSR activity should increase, i.e., GSR increases as R decreases.

The source of anxiety which stimulates repression is the arousal of objectionable drives and impulses intrapsychically. The source of anxiety for suppression, however, is the interpersonal need to ward-off rejection by E and the loss of self-esteem (Reyher, 1969b). We

infer that intrapsychic anxiety was explicitly programmed into S via the hypnotic procedure, and therefore assume that it was stimulating each S's defenses to one degree or another. Strong repression was indicated by a lack of verbalized awareness of anger or the destructive impulse; weaker repression was evidenced by those Ss who were aware of at least the anger component of the anger-aggression conflict. Interpersonal anxiety can also be assumed to have been activated implicitly within Ss because of the age, sex and status differences between E and these Ss. There is no theoretical prediction for objective, behavioral symptoms to be observed in a S if that S is merely suppressing information. Conscious suppression may be anxiety producing because of a perceived interpersonal conflict, but it is not pathogenic in terms of physiological disturbances. While both repression and suppression were probably occurring simultaneously, the fact that our Ss experienced significant physiological and psychological disturbance further supports the point of view that the process of primary importance occurring in this study was that of repression rather than suppression.

In summary, the data of this study indicates that the amnesia Ss were less aware of the anger-aggression conflict consciously, less aroused autonomically and less involved psychologically in the experiment. We surmise

that these findings are all due to the amnesia procedure having potentiated the S's use of repression as a defense against aroused anger-aggression. This enhanced strength of S's inhibitory response to anger-aggression arousal keeps that conflict more completely unconscious (i.e., higher R index scores) and requires a larger psychological commitment to that process than is true for no-amnesia Ss.

Repression and Amnesia

As pointed out above, there has been some controversy as to how the phenomenon of posthypnotic amnesia relates to the theoretical concept of repression. Bobbit (1958) seems to equate the two and Reyher explicitly states that posthypnotic amnesia is not the same thing as the inferred process of repression. The present study did not explicitly address itself to this issue, but the data we obtained do suggest that repression and amnesia are genotypically different dynamic processes. The lack of any significant change in amnesia Ss responses on our dependent variables when posthypnotic amnesia was lifted, suggests that an underlying force of repression had already been activated and that it remained effective even without amnesia being present any longer. However, while amnesia should not be equated with repression, the fact that amnesia Ss scored significantly higher on the R index suggests that it does in some way potentiate the use of, or effectiveness of, repressive forces.

We speculate that E suggesting an amnesia for an aroused conflict, when S is in a very passive-dependent role vis-a-vis E, serves as a recent and meaningful model for handling that conflict. One might use the analogy of a father telling his daughter that whenever these angry feelings and the urge to destroy come up, that she should just "put them out of your (conscious) mind" and everything will remain quiet and safe. This cannot, of course, be demonstrated empirically from our data, but one way or another amnesia seems to either potentiate the utilization of the defense mechanism of repression or to enhance its effectiveness once repression is activated. In either case, one would predict that as the pathogenicity of the implanted conflict increases, this differential effect in R between amnesia Ss and no-amnesia Ss will disappear, i.e., spontaneous primary repression should occur more frequently and more strongly upon c-word presentation whether or not S has previously experienced hypnotic amnesia.

Responses to C-words vs. N-words

In this study we looked at the response-producing properties of both c- and n-words during session II. As expected, c-words stimulated much more pathology and GSR activation in session II than during the base-rate session. Interestingly enough, however, n-words also stimulated significantly more subjectively experienced symptoms than their base-rate, although this was not the case for objectively observed symptoms nor for GSR. One could look to two learning theory concepts

in an attempt to explain these findings: habituation of a response over time, or generalization of the response to different stimuli. Figures 8 and 9 illustrate the case for generalization having taken place during the hypnotic session from identified c-words to some or all of the n-words. Figure 10 illustrates the case for the habituation of S's response over time during session II. Whatever the reality of the situation may be, it seems that unconscious, autonomically controlled responses such as GSR activation and observable physiological symptomatology either have sharper gradients of generalization or habituate more rapidly than do subjectively experienced responses which can be cognitively mediated over a longer period of time or greater range of stimuli. Because of the great specificity with which repression seems to function in keeping painful affects and their cathected derivatives unconscious (Freud, 1948), we hypothesize that our data is due to an habituation effect.

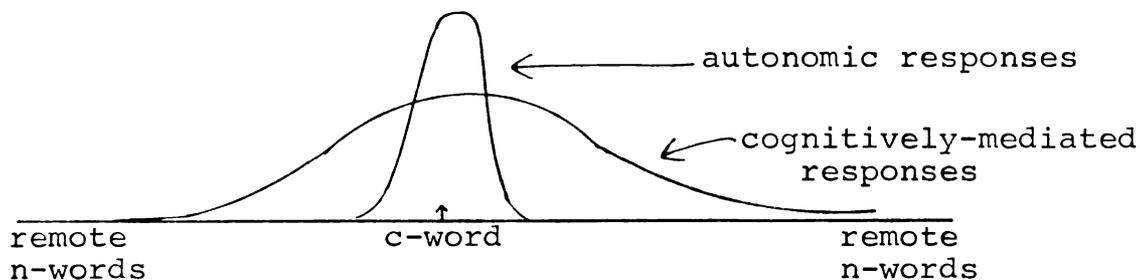


Figure 8.--Generalization gradients for E's instructions and the paramnesia's prior-arousal effect on c-words and a range of many n-words.

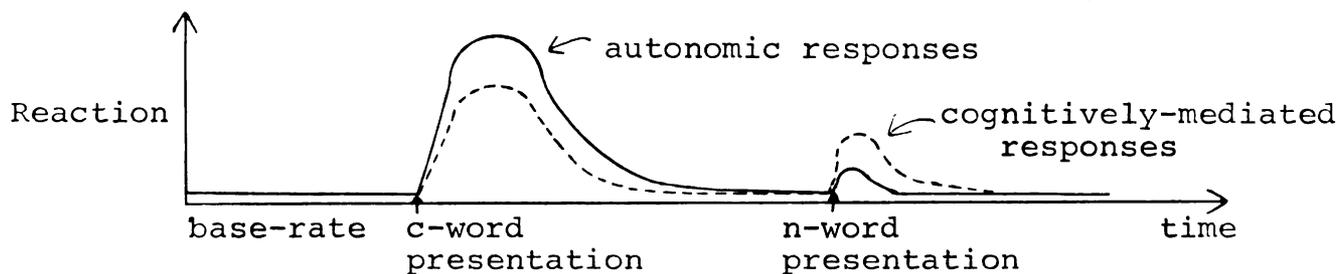


Figure 9.--Ss punitive responsiveness to c-words and n-words in the case of stimulus generalization.

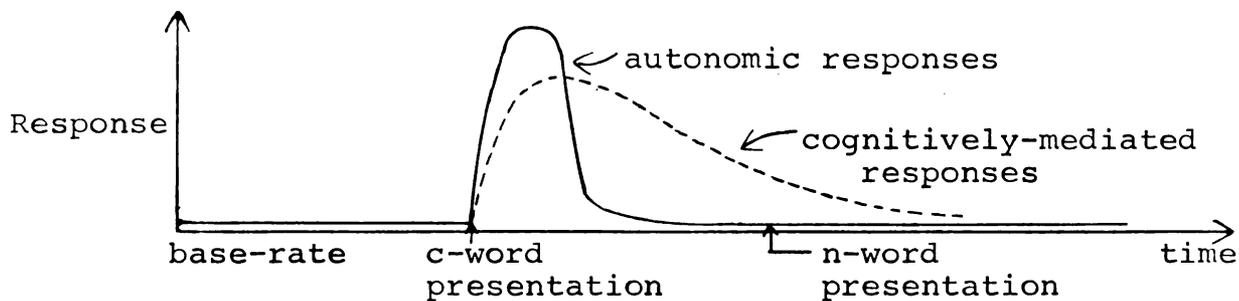


Figure 10.--Expected responsiveness over time in the case where response habituation is the major factor in operation.

SUMMARY AND CONCLUSIONS

Several studies (Veenstra, 1969; Karnilow, 1971; and Wolfe, 1971) have recently failed to produce spontaneous repression or psychopathology following Reyher's (1967) procedure for hypnotically implanting and posthypnotically activating implanted conflicts involving anger-aggression. The present study focused on an examination of those variables in the procedure that might be both necessary and sufficient for the activation of repression and the production of pathological disturbance. Specifically, the role of hypnotic amnesia and pump-priming was examined and it was learned that neither variable is a necessary one for activating posthypnotic, intrapsychic conflict under controlled experimental conditions. However, while all 16 normal, female Ss experienced psychopathology and GSR activation, there was a strong trend for amnesia Ss to experience more physiological symptoms (e.g., stuttering; muscle tics; feeling fatigued, depressed, upset) and less GSR activation than Ss not receiving amnesia. This suggests that posthypnotic amnesia in some way helps activate and/or intensifies the S's repression of the activated anger-aggression.

Considering the findings of this study in conjunction with those that have preceded it, it is suggested that the following variables are the necessary and sufficient ones to make Reyher's procedure function: During hypnosis (1. hypnosis), E tells S a made-up story (2. paramnesia) that arouses strong feelings within S (3. arousal of affect) which are directed toward an inappropriate person (4. affect directed at an inappropriate object). This affect's subsequent arousal is associated with a specific posthypnotic cue (5. affect associated with posthypnotic cue) and is combined with a suggested impulse to act in an ego-alien way (6. ego-alien impulse). The affect and impulse are aroused suddenly (7. sudden activation of drive) in a posthypnotic session (8. posthypnotic arousal).

One of the most important of these independent variables is that of the paramnesia used. Any paramnesia that has been used or could be created for future use represents a complex interaction of aroused affects, impulses and super-ego reactions all of which combine in unknown ways to determine the limits of aroused drive strength and the force of repression that might inhibit that drive. These absolute values of drive and repression strengths (which cannot be measured directly) can be said to determine the potential pathogenicity of the paramnesia in use. The data from this study and those of Veenstra,

Karnilow and Wolfe suggest that the anger-aggression paramnesia used in these studies is only minimally pathogenic because it fails to incorporate reprehensible actions on S's part which could consistently be expected to arouse a super-ego reaction to the arousal of its associated drive. That is, while our relative measures of repression (as used in this study) and drive (as used by Burns) may assume a wide range of values, the degree of pathogenicity depends upon the absolute values of the drive and repression forces, and the psychological importance of their resulting conflict.

Comparing the findings of this study with those of Sommerschild and Burns, we are of the opinion that the three paramnesias used in these studies can be ordered in terms of their potential pathogenicity (from low to high) in this way: the anger-aggression paramnesia used in this study involving an incident at the bookstore where S is unjustly taken advantage of, the anger-aggression paramnesia involving an incident between S and an older woman who severely castigates S for his behavior at a party (in Sommerschild) and an oedipal-sex paramnesia involving an apartment incident where S becomes sexually aroused by an older woman (in Sommerschild and Burns). This sequence also makes good theoretical sense for normal or mildly neurotic persons whose naturally occurring psychological

disturbances typically center around the issue of coping with one's sexual impulses and sexual development. One might surmise that if these paramnesias were tested with psychotic ss that the most pathogenic one would be that which involves anger-aggression toward a parental figure.

Modification of Reyher's original (1967a) R index seems to have cleared up two conceptual difficulties but was not explicitly investigated empirically in this study. One problem was that the R in the original index was constructed in such a way that low R values (e.g., $R = .2$) represented strong repression and high R values represented a greater break-down of repression (e.g., $R = 3.0$). By changing the algebraic sign of each term in the index, the modified index becomes a direct reflection of repression; i.e., if R_1 is greater than R_2 , then the inhibitory force of repression in case 1 is stronger than in case 2. The second issue concerning the original R index had to deal with its lack of independence from one dependent variable (namely, frequency of symptoms) with which it was frequently correlated. This problem was caused by the old "CR" term which was partially defined by the lack of verbalized symptoms in response to any given c-word. With that definition it was inadvisable to correlate R with frequency of symptomatology because they were not independent. Therefore, the modified index reported here replaces "CR" with "NA" which simply means "no verbalized

awareness of either anger or aggression in response to any given c-word." The modified R index is thus defined as:

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

We have discussed the concept of repression and how it relates to drive, psychopathology, GSR activation, and hypnotic amnesia. While amnesia clouds the conceptual picture somewhat, it appears that the inferred process of repression (and its objectively measured index, R) varies in a curvilinear fashion with frequency of symptoms, varies directly with the modal type of symptom experienced, and varies inversely with GSR activation. A post-hoc analysis of this study's data did not reveal any statistically significant correlations between R and frequency of symptoms, type of symptom or GSR frequency, but all comparisons were in the predicted direction. This lack of significant correlations may be due to the overall lower pathogenicity of the paramnesia used in this study compared to those used by Reyher, Perkins, Sommerschild, and Burns and the truncated range of drive arousal. Also the fact that our R index only begins to differentiate between S's response to c-words once repression has begun to weaken (i.e., our R index depends upon differential awareness of anger-aggression, and, therefore, is useful only in specifying the lower end of a full continuum

of repression values) artificially lumps all cases of complete repression into a single scale value and thereby truncates the range of R further. This lack of sufficient range in our Ss repression forces may have made the attainment of significant correlations prohibitively difficult given the between-subject variations one can expect with this type of research.

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APPENDICES

APPENDIX A

HYPNOTIC STEPS

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HYPNOTIC STEPS

The following hypnotic steps or tasks were performed by each S during her first individual, or pre-test, session. All tasks had to be performed satisfactorily before the S was selected to participate further in this study. Steps 1, 3, 4 and 6 were used during the second session to deepen the S's hypnosis prior to proceeding to the paramnesia, posthypnotic suggestions and amnesia instructions described above in the "Procedure."

1. Arm Heaviness: I would like you to hold your right arm out in front of you. Good. Now I am going to count from one to ten and, as I count, it will become heavier and heavier until by the time I reach ten it will be as heavy as a chunk of lead. (As the numbers were counted, the above instructions were re-emphasized, e.g., "...7...8...your arm is getting heavier and heavier.")

2. Arm Catalepsy: I would like you to hold your left arm out in front of you. I am going to count to ten, and as I count the muscles in your arm will tighten. By the count of ten, they will be so rigid that your arm will be like an iron bar. (Again, as the numbers were counted, the above instructions were reinforced.)

3. Hand Lock: Now I want you to hold both of your arms out in front of you so that your fingers interlock and your palms are facing each other. I am going to count from one to ten, and as I count your hands will be drawn together tighter and tighter as though they were the jaws of a vise. As I count it will be as though the screw of the vise is tightening, forcing your hands closer and closer together. (As in the first two steps, and all other steps that involve counting, the initial instructions were emphasized as E counted.) Even if you should want to pull your hands apart, the harder you try to pull them apart, the more tightly they are pulled together.

4. Automatic Movement: Now I am going to take your wrists and rotate your hands one around the other. I will now let go and you will find that you will be able to continue rotating them yourself. Now I am going to count to five and as I count your hands will rotate around one another, faster and faster, so that by the count of five it will seem as if your arms are independent of your body and have a life all of their own, rotating all by themselves, around and around.

5. Visualization: I want you to visualize what you last had to eat and when you have done so, signal me by raising your left hand.

6. Dream: Now when I count to three you will have and enjoy a dream or dream-like thoughts. When it begins, I want you to raise your left hand about six inches; you can lower your hand when the dream stops or reaches some kind of conclusion. I won't ask you anything about this dream or dream-like thoughts.

7. Hyperasthesia: I now want you to visualize yourself at one end of an empty corridor looking toward the other end. Raise your left hand when you see this. At the other end of the corridor you will see a pail on the floor; raise your left hand when you see this. I want you to walk down the corridor toward the pail. Tell me when you get there by raising your left hand. In the pail you will see some water. Nod your head when you see the water. You now are being overcome by an urge to plunge your right hand into the water--and you do, you plunge your hand into the water. You pull your hand back out and find that it is sore and tender, so that if I should touch it it will hurt (touch hand with a finger). (Important: see note below.)

8. Anesthesia: Nod your head if you have ever experienced your arm getting numb and tingly as it goes to sleep. I am now going to hold your right arm in such a way so that I partially close off the circulation in your arm, which is just what happens when your arm goes to sleep. When your arm and hand begin to feel tingly or

numb, let me know by nodding your head. (Continue talking quietly, asking the S to nod: when the arm becomes definitely numb; as numb as it has ever been before; number than it has been before.) It is now lifeless, like a piece of wood. I am going to take my hand away and the numbness will remain. Now I am going to press a pointed instrument on the back of your hand. The only thing you will feel, if anything at all, will be pressure. I will do the same to your other hand. Nod your head if you feel any difference.

Posthypnotic suggestion--Anytime, whether or not you are hypnotized, that I stroke your hand three times you will experience this same numb, lifeless feeling that you have in your hand right now. When I again stroke your hand three more times, the numbness will disappear and all normal feelings will return. Nod your head if you understand.

9. Amnesia: Nod your head if you ever have awakened with a start from a dream that you can't recall. After you awaken from this session, it will seem like a dream that you can't recall. You know you have dreamed, but you can't remember anything about it. Furthermore, the harder you try the more confused you become. Everyone has had something like this happen to them. Whenever I say, "O.K., now you can remember," you will be able to remember everything about it that you want to remember.

10. Posthypnotic Suggestion: If, after you awaken, I want to hypnotize you and you want to be hypnotized all I will have to do is have you lean back and by the time I count to ten you will be in an even deeper sleep-like state than you are now. Nod your head if you understand.

NOTE: After all steps which suggest an alteration in a particular sensory experience, a suggestion should be given for the return of all normal feelings and deeper hypnosis, e.g., after steps 1, 2, 7 and 8.

APPENDIX B

CLASSIFICATION OF SYMPTOMS

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CLASSIFICATION OF SYMPTOMS

This symptom classification is adapted from Reyher's (1969a) original work and is the basis on which both subjectively experienced and objectively demonstrated symptomatology was scored. All eight categories are useful in identifying and differentiating subjectively experienced symptoms that are verbally reported by Ss. Objectively demonstrated symptoms fall into only four of these categories: 1, 2, 4 and 7c.

1. Symptoms characterized by the dominance of autonomic system innervation such as feelings of nausea, gastric distress, headache, tiredness, sleepiness, tachycardia, pressure in head, sweating, skin disturbances, flushing, organ dysfunctions, heaviness, temperature alterations, and such feelings as "queasy" and "ansy."

2. Symptoms dominated by innervation of the somatic or muscular nervous system such as stiffness, aches, pains, tension, tics, tremors, specific physical discomfort, and so on.

3. Disturbance of affect.

- a. Flattening: lack of feeling, apathy, and the like upon pronunciation of a c-word (only after the S has previously responded to a c-word symptomatically).
- b. Superego reactions: feelings of being alone, abandoned, ashamed, depressed, disgusted, guilty, worried, and so on.
- c. Inversion: definite feelings of well-being upon confronting a c-word (only after the S has previously responded to a c-word symptomatically).
- d. Alienation: feelings that seem weird, strange, odd, unreal, unnatural, foreign, and so on.

4. Unspecified and nonspecific 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, and bothered.

5. States of emotional agitation and generalized anxiety that reflect the reaction of the ego to the threat of complete breakdown of repression, such feelings of anxiety, fear, apprehension and terror.

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, and so on.
- c. Compulsive destructive urge acted out in behavior without awareness of the relevant hostile or destructive impulse, such as hitting or picking at the papers without knowing why, including destructive acts not directed at the papers (such as, pounding the arm rest of the chair).

8. Derivatives of the induced conflict. These are symbols of the induced anger-aggression and/or the repressive forces themselves. (Memories of personal experiences that are congruent with, or similar to, the induced experience frequently are activated in some Ss.)

APPENDIX C

VEENSTRA'S CLASSIFICATION OF ASSOCIATIONS

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VEENSTRA'S CLASSIFICATION OF ASSOCIATIONS

"Associations expressing hostility are assigned to one of three levels of socialization and directness (after Pine, 1960) and to one of two levels of psychological distance, included to measure whether anger is being expressed and if so how directly" (Veenstra, 1969).

1. Levels of directness and socialization are:
 - a. Level 1. Direct-unsocialized.--Directly expressed hostility in a way contrary to social values, such as murder, robbery, rape and anger only if it involves physical expression of violence. E.g., pushing and bumping people, committing crimes, fighting, killing, and other anti-social acts.
 - b. Level 2. Direct-socialized.--Anger expressed without physical violence, such as arguments, swearing, and derogatory statements.
 - c. Level 3. Indirect-disguised and weak.--Associations connected with anger but where the underlying hostile impulse is neither explicitly thought nor acted upon, such as mentioning police, soldiers, illness, accidents, natural or accidental deaths. Also weak references to conflicts within society such as mentioning strikes, protest marches, war, and militant groups of any kind.

2. Levels of psychological distance are:
 - a. Personalized.--Hostile associations in which S explicitly mentions herself or reports her own feelings and opinions.
 - b. Nonpersonalized.--Associations which S reports in a detached objective manner with no indication of personal involvement.

APPENDIX D

RAW DATA

TABLE 1.--Sixteen Ss were assigned to four experimental groups.

	Amnesia		No Amnesia	
Pump-priming	I	1-4	III	8-11
No Pump-priming	II	5-7	IV	12-16

TABLE 5.--Raw data from Session I (pre-test) for both conflict words
(c-words) and neutral words (n-words).

Ss and Group	Symptoms				GSR				Hostile Associations	
	Subjective		Objective		c-words	n-words	c-words	n-words	c-words	n-words
	c-words	n-words	c-words	n-words						
<u>I</u>	3.5	1.0	0	0	10	8	2.5	.5		
2	2.5	1.0	0	0	7	7	2.0	0		
3	0	0	0	0	4	4	1.5	0		
4	2.0	1.0	0	0	3	3	.5	0		
<u>II</u>	2.5	4.0	0	0	8	9	3.0	3.5		
6	0	0	0	0	11	10	1.0	.5		
7	0	0	0	1	22	14	1.5	.5		
<u>III</u>	1.5	0	1	0	7	7	2.0	1.0		
9	1.5	0	0	2	8	13	2.0	0		
10	2.0	0	0	0	7	5	.5	0		
11	0	1.0	0	0	7	9	0	0		
<u>IV</u>	0	0	2	0	12	13	1.0	2.5		
13	4.0	.5	0	2	10	17	1.5	1.5		
14	2.0	1.0	0	0	13	13	1.0	1.0		
15	1.5	0	0	0	4	9	2.0	1.0		
16	0	0	0	0	12	14	3.5	0		

TABLE 6.--Raw data from Session IIa for both conflict words (c-words) and neutral words (n-words).

Ss and Group	Symptoms						Hostile Associations		R Index
	Subjective			Objective			GSR		
	c-words	n-words		c-words	n-words		c-words	n-words	
<u>I</u>	1	7.5	4.0	23**	0	1	1.0	1.0	1.0
	2	1.5	1.0	14**	2	3	4.5	1.0	.4
	3	1.5	.5	14*	0	4	1.0	1.5	.8
	4	8.0	2.5	13**	0	12	.5	0	.7
<u>II</u>	5	6.0	7.0	24	3	5	0	0	.4
	6	7.0	1.5	15	3	7	1.5	1.5	-.5
	7	1.0	0	0	0	14	2.5	1.0	1.0
<u>III</u>	8	13.0	0	19*	0	17	2.5	3.0	-.7
	9	7.5	5.0	6	0	10	4.5	1.5	-.4
	10	4.0	1.0	5	0	26	2.0	.5	-.4
	11	1.5	1.0	2	0	17	1.0	0	.8
<u>IV</u>	12	3.0	1.0	18*	3	25	2.5	2.5	.1
	13	.5	0	16*	0	18	1.5	2.5	-.2
	14	6.5	4.5	0	0	29	1.0	.5	.7
	15	12.5	3.0	11	1	15	2.0	.5	-.4
	16	1.5	1.5	3	1	10	4.0	0	-.7

* Displayed a common symptom to all c-words.

** Displayed a common symptom throughout the session.

TABLE 7.--Raw data for Session IIB (amnesia Ss only) for both conflict (c-words) and neutral words (n-words).

<u>Ss</u> and Group	Symptoms										R Index				
	Subjective					Objective						GSR		Hostile Associations	
	c-words	n-words	c-words	n-words	c-words	n-words	c-words	n-words	c-words	n-words		c-words	n-words	c-words	n-words
<u>I</u>	1	3.5	2.0	2.0	6**	0	0	0	1	1.5	0	1.0	0	1.0	
	2	1.0	1.0	1.0	5**	1	1	0	0	1.0	0	0	0	.4	
	3	0	0	0	6*	0	0	1	1	0	0	0	0	.4	
	4	2.0	2.0	2.0	11**	1	9	5	5	1.0	0	1.0	0	1.0	
<u>II</u>	5	1.5	2.0	2.0	8	4	4	4	4	3.0	.5	3.0	.5	-1.2	
	6	2.0	0	0	2	0	3	1	1	2.5	2.0	2.5	2.0	0	
	7	1.5	1.0	0	0	0	3	2	2	2.0	.5	2.0	.5	-.2	

* Displayed a common symptom to all c-words

** Displayed a common symptom throughout the session.

APPENDIX E

DOCUMENTATION OF PSYCHOPATHOLOGY

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DOCUMENTATION OF PSYCHOPATHOLOGY

The four transcripts which follow are included in order to illustrate the types of verbal responses that we obtained during Session IIa. Scores for subjective symptomatology, hostile associations and the repression index were obtained by scoring transcripts such as these. The transcripts included in this appendix were selected so as to include one case from each of our four experimental groups, i.e., Set #1 comes from experimental group I, Set #2 comes from experimental group II, etc. Each slash (/) marks the end of a 30 sec. free association period.

SET #1

S LAUGH (Whispered)...(sigh) Inconsiderate, rude,/ugly.

E How do you feel?

S Ahm, there ain't no words, depressed.

S WISH...(sigh)/Sorry, I don't have a word.

E Can you tell me what's in your mind?

S Just feel different. (long pause)

E OK.

S WALK...Silence, roam,/

E How do you feel, Yvonne?

S Depressed.

S STORE...(clears throat) Bookstore, books./

E How are you doing?

S Not very good. I think I feel a little worse.

S NARROW...Corridor, apartment space,/bed.

E What was the last one?

S Bed.

S FELLOW.../

E How do you feel?

S Angry.

E Can you tell me why?

S (long sigh) I don't want to talk about it.

S DROP...(sigh) Bulb(?) (long sigh)./

E How are you doing?

S Not very good.

S TRAVEL...Vacation, Bob, Niagara Falls, escape./

E OK.

S MUSIC...(snifle) Mood, feelings, poetry, goodness.

E How do you feel, Yvonne?/

S I don't feel very well.

E Can you tell me about it?

S No (long sigh)

E In what way don't you feel well?

S IDK, I feel, I feel cornered, like the ultimate
of unpleasant things ...

S LINE...(long sigh)/

E How do you feel now?

S Like falling in a well! You know how you dream about
you're falling in a well and there's no bottom,
and that sensation you feel while falling.

S STAND...

E What's going through your mind?/

S I can remember some things. And some things I can't
remember, and I'm not even sure if I want to
remember.

E What about?

S About an experience that I had one time.

E Can you tell me about your experience?

S No. I can't remember, it's probably not as bad as I
think it was, although I, I, you know, I feel bad
about it, but I'm not sure what it was. But
(snifle), my mother used to say I over-reacted to
things and maybe I'm over-reacting to whatever it
was. IDK, but, but if I can try not to think about
it but my mind is trying to remember.

S BROKEN.../

E How are you doing?

S I, not well, I...(sigh) I keep trying to forget and
remember at the same time.

S HEAVY.../

E How do you feel Yvonne?

S Ahm (sigh) I guess the best way to describe it now
would be "hurt." And I don't know why.

S FOOD...Celery, olives, strawberries, clams./

E OK.

S BOOK.../

E How are you doing?

S It still hurts.

E What's going on in your mind, as you feel this
emotion as you sit here?

S (long sigh) It's like my mind trying to remember and
I don't want to remember...because I'm afraid if I
remember it will hurt.

E OK.

S FLOWER (Whispered)...Daisies (snifle), roses, violets,
daffadils, soft (snifle), gentle, pretty./

E What's your favorite kind of flower?

S Carnations.

S CROWD.../

E OK.

S TIRED.../

E How do you feel, Yvonne?

S It still hurts.

E Can you describe what kind of hurt you're feeling?
S It's not sickness, it's not physically painful--IDK,
if something can be emotionally painful or not,
but that would be the way I would describe it...
like being disappointed in people.

S VALLEY (whispered)...Green grass, flowers, trees,
(sniffling), meandering stream, quiet, restful./

S GLASS...Crystal, window, slippery,/ I don't know why
I say that.

SET #2

S LAUGH...

E How do you feel?

S Confused./

E What are you thinking?

S IDK, something's going through my mind and I can't quite seem to grasp ahold of it.

E Try.

S OK.

S WISH...Wishful thinking. Wish I knew what was going to be on the test tomorrow so I wouldn't have to study./

E How do you feel?

S Disoriented.

E Can you put your finger on why?

S No.

E OK.

S WALK...Distance, shopping, night times.

E How do you feel?

S Like things are clearing up, or pulling together a little bit more./

E OK.

S STORE...

E How do you feel?

S Confused again./

E What are you thinking?

S Like trying to remember something that's just kind of there but just can't quite get ahold of it.

S NARROW...Hallways, like things are closing in on you.
Claustrophobis./

E How are you doing?
S Still feel kind of lost.
E Can you tell me in what way you feel lost?
S Well, like, like my thoughts are all kind of
scrambled around.

S FELLOW.../

E How are you feeling?
S Confused, frustrated.
E Just nothing there?
S Like something's there, can't quite...figure out
what it is.

S DROP.../

E Cheryl will you cough for me (etc.--about GSR)

S TRAVEL...Vacation, airplanes,/

E How are you doing?
S Still trying to pull things together. (Sigh)
E I don't quite know what you mean.
S Well, I mean like there's something on my mind and
I can't quite figure it out, it's just going on
in the back of my mind.

S MUSIC...Concerts, pop groups./

E How do you feel, now?
S Like things are starting to make a little more sense.
F What kind of sense can you make out of it?
S Oh well, like, I think of things and I'm...they stop,
you know.
E Before you can see what it is, or?
S Yah, kind of flashes in my mind, and then before I
can really figure out what it is it's gone (snicker--
large rise in GSR). Like it's in the back of my
mind but I can't quite grasp hold of it and bring
it out.

S LINE.../

E How are you doing?

S Confused.

E How does your hand feel? (Etc. about GSR)

S STAND.../

E How do you feel?

S Frustrated. Under narrow normal circumstances I'd be biting my nails, but I'm trying not to.

S BROKEN...When you drop something, you break it.
Or it falls.../

S HEAVY.../

E How do you feel?

S Tired, confused.

E You keep closing your eyes and squinting, is that for some specific reason?

S Try, trying to remember something. When you're taking a test or something and can't think of the answer, I try to get back into my mind.

E OK.

S FOOD...I've cooked the early (???) (snicker)./

E How do you feel?

S Confused, bewildered. It's like my thoughts, like there's a door and, somebody opens a small door, and an answer comes scurrying out, then close the door again. But sometimes it doesn't work that way.

S BOOK.../

E How are you feeling?

S Very very confused. Impatient.

E Impatient for what?

S IDK, like it's kind of frustrating to sit there and think of something and then it's gone. Just doesn't make sense.

S FLOWER...Flower-child./

E Now what's there?

S Well, it's kind of like, you're outside this room and the sun, you know, shines through for one second and then the cloud goes back in or something. You see it very clear and then it gets all cloudy again. Confused.

S CROWD.../

E How do you feel?

S Very, very confused.

S TIRED.../

E Tired of what?

S That's the way I feel.

S VALLEY...Trees, green grass, flowers, stuff like that.;

E What's going on?

S IDK.

E Well, how do you feel about the fact that you don't know?

S Frustrated.

E Any thoughts?

S Trying to figure out...why.

S GLASS...Broken glass on sidewalks./

E How do you feel?

S Tired, confused.

E What's going on?

S IDK.

SET #3

S LAUGH...Ah, something about that story in the book-store. And, ah, and I don't like to be laughed at. It makes me very embarrassed. And, ah, I can feel my stomach tightening up./

E How are you doing?

S I'm mad (sigh, laugh)

E Mad?

S Yes (laugh)...and a little embarrassed because I'm mad.

S WISH...Wishing wells and pennies, and hum, my father always used to call the Sears catalogue "the wish book." And a (laugh) re-, I'm remembering a dirty joke about a guy who got three wishes (laugh) ah, there I go falling off the paper again.

E How are you feeling?/

S OK.

S WALK...Hum, When its nice like today, I don't mind it. It's sort of nice to walk with the wind blowing through your hair and the sun shining and...and you can almost pretend that the trees are almost ready to bud, but you know they're not, you just pretend you think they are (laugh). And I like walking to someplace/ rather than just ambling. I sometimes concentrate on slowing down, I tend to hurry too much in order to get where I'm headed. That's all.

E How do you feel?

S OK.

S STORE...I'm mad again (laugh) ahm, that bookstore where the (laugh) I don't like to stand in line, it makes me nervous, especially, because most of the time when I'm waiting in line I have someplace/ I've got to be in ten minutes, and I know that I'm not going to get out in time and I don't like being late.

E How are you doing?
S OK.

S NARROW...I still don't have anything to say about narrow. I don't recollect anything about it at all. Except maybe walking the straight and narrow. (laugh) I hope I got that right.

E How are you feeling?/
S OK.

S FELLOW...I know it's silly, you told me that bit, you know, while I was under and I didn't think I'd react this way its just that when I get mad, my stomach starts knotting up and I clutch my hands. And, I used to grit my teeth when I was mad 'til I started chipping teeth/ so I have been trying to break that habit. I feel all the muscles going...you know, tensing up and, and, jerking. Sometimes it would be handy if we'd like guys, would have it kosher to swing. (Laugh) ETC.

S DROP...That doesn't help any (laugh). You know the story, I don't have to tell you what happened. It...(angry voice).

E Just tell me how you feel?
S Angry. Strange thing is that, is, a, when you were telling me the story I pictured one of my instructors, you know, when you said it was one of the instructors from one of my classes. And it isn't at all like this guy that I thought of,/ and now I don't know how I'm going to see him tomorrow feeling like hitting him (laugh). But, ah, I all the way through I kept on thinking "he wouldn't do that!" (laugh)

S TRAVEL...My Finnish sister is coming back for a visit next month. Ah, I still like to travel. I feel like you've heard all this before and I can't think of anything new (laugh). Ahm, sometimes I'd like to go overseas by boat, but I'm a chicken. All the time I'd be thinking, "Oh, it's going to sink, it's going to sink" (laugh)./ I don't know why I say that.

E Have you ever taken a boat trip?
S ETC.

S MUSIC...Went to see the 5th Dimension concert last night. Ahhh, the music! Makes your whole body want to jump up and down and (laughs). Ah, that's all.

E How are you doing?
S OK (laugh)./

S LINE...I feel like gritting my teeth (laugh). Ahm, I used to work at, in places where lines sometimes formed and I realized that sometimes they're unavoidable and they are irritating but it's not the fault of the person, necessarily, that's doing the job. But.../ MSU seems to be all you do is hurry up and wait, hurry up and wait. You go to registration and, and wait in line and when you get soething you you dash on to the next checkpoint and wait in line there, so you can go on and wait in another line. You wait in line for your card--class cards, and wait in line for this card and that card, and...

E You sound like you just pre-registered.
S (Laugh) Last Friday. Not preregister but pre-enrolled. That wasn't anything, that was an easy line. Only about two or three people in that easy line (laugh).

S STAND...Standing in line (laugh). Ahm, (sigh) I still don't like doing it (laugh) (Hitting arm rest).

E How do you feel?
S I'm feeling upset. I'm angry./ It isn't very often that I can say anything about, I usually just grit my teeth. When I occasionally do say something, I usually feel pretty proud of myself (laugh), but unfortunately it doesn't happen very often. Etc.

S
BROKEN...Scot hasn't broken anything lately. Broken.
All those windows in the riots, ah, darn fools!
I don't go for that: demonstrations, and petitions,
and marches, and sit-ins and, but not broken
windows/ or not clubbing over the head or anything.

E
S
How are you doing?
OK.

S
HEAVY...Those darn books again. I wish you hadn't
told me that story, because, I, I feel myself
starting to burn up inside again.

E
S
How are you feeling?
Like I'm nervous. Like I'm, I wish I had time to
come back and buy my books later, but I know I'll
get them today, as long as I've picked them out and
am standing in line, might as well wait, but I'm
sure getting tired of it./

S
FOOD...Ah (excited), last night this, this guy I
went to the 5th Dimension concert with--there it
goes! (needle) (Laugh). We a, we went out to eat
and a we sat right behind the 5th Dimension! They
were right there in the restaurant with us! And
we didn't know who they were, and after they left
the waitress said, "Hey, that was the 5th
Dimension." We said, "Oh, no" (laugh). Talk
about kicking yourself,/ that was terrible. We
just sat there saying "How did we do it?" "We're
going to see them in a half hour, and they were
sitting right there."

S
BOOK...(long sigh) I don't have anything more to say
about that, you know, how I'm supposed to be
reacting. And I am, I'm getting all upset inside,
but I don't have anything to say because, a, I
don't think in...in sentences, I just, you know,
I just...

E
S
How do you feel?/
Like I wish I could hit somebody (sigh).

S FLOWER...Sorta hoping that I'd get some for Valentine's Day, but I didn't. You know...I like the trees when they blossom. You, you must have been on this campus in the spring before, haven't you? No? Ah, all the bushes in the islands going down Shaw Lane,/ past, you know, Shaw on down towards Fee. Every single one of those bushes is a flowering bush. Pink and white and red and, this campus is unreal in the spring, it really is. Just blossoming trees and bushes, ah, all over the place, lilacs and the lilacs are the latest ones in bloom.

E Really nice, huh?
S It's great!

S CROWD...I'm just getting those same reactions that I get everytime you mention one of those words that has to do with that bookstore. It's just...ahm, one of those things that once you.../ after you're done being angry you say "Well, it wasn't so bad." But when you're living through it.

E How do you feel?
S I don't know. A little embarrassed from reacting to it. Because I don't, I don't usually carry anger, you know, once something has happened and it's over. When something's brought up, I remember it, but I don't start boiling up inside again. I guess I'm not reacting as hard to this one as I did to the first one you mentioned, but, ah, so I guess I've started to rationalize about the incident and say "well, it's over." But it still...people can be so nasty and inconsiderate. Well...if everyone in this world was as nice, as nice as me it would be perfect (laugh).

S TIRED...(?? too soft, can't make it out). It always seems as though something like that happens when you've just had it up to here to begin with! I mean, you don't go in and have, and be having a great day and have something like this happen. That never happens. It is always when the milk gets spilled at breakfast, and you just missed the bus and got to wait 15 minutes for the next one, and then your instructor pops a quiz on you. And then you just fall down/ or get splashed by a car going through a mud-puddle or something. But, it's always up to here in--that's when things like that happen it's never on good days.

E How are you doing?
S I wish you'd quit mentioning those words so I
could relax (laugh).

S VALLEY...Well, it's been awhile since I read
Christy so my reactions to valley aren't too
strong (laugh). Have you read it yet?

E No.
S It's not...a tremendous book but its OK. Ah, valley,
I don't know why, I'm thinking about a waipiti,
it's a North American animal that looks like an
antlerless reindeer/ I mean, I didn't realize it
was from North America. I saw a picture of one
this weekend. They just run around wild. I don't
know where in North America they live, but...I
don't know what that has to do with "valley"
(laughs).

S GLASS...I still don't have any reaction about glass.
You skipped "chair" this time through. Those were
those two test ones you used before, and I remember
I was sitting here before thinking, "I don't have
anything to say about chairs." (laugh) "If he
asks me that one I'm going to be stuck, because I
can't..." I still don't have anything to say
about glass either. (laugh).

E How do you feel?
S Those broken glasses/ at the, at the, you know, at
the riots ah, and all that damage they did over
there at Erickson. Have you been over there?
There's tons of glass over there. ETC.

SET #4

S LAUGH...That's fun, that's what I like to do a lot.
Playing games, ahm, psych experiments, ahm, dorm
life, all kinds of laughter all the time in the
dorm.

E How do you feel?
S Happy./

S WISH...Wishing well, throwing pennies, dreams,
hopes for the future. Hum, wishing I knew what I
was going to do...for a major. Ahm...frustration/
because I don't know, ahm...

E How are you doing?
S OK.

S WALK...Walking down by the river, taking a walk
across, ahm, across campus. Walking upstairs,
running up six flights of stairs to my room.
Ahm, getting really tired, almost missing class./

E How do you feel?
S OK, I can't get a lot on my mind, I mean, I mean...
E Can you tell me what you mean by that?
S I mean, I'm not, I'm not getting all kinds of images
or thinking of all kinds of things like I did last
time.

S STORE...Anger, ahm, somebody, ahm, standing in line
going, bookstore. Somebody pushing me, pushing me
out of line. Making me mad./ Professor, Dr. Wade,
I couldn't believe it.

E How do you feel?
S Upset!



S
NARROW...Narrow hallways, corridors, narrow street,
ahm, Spanish town, where the streets and sidewalks
are real narrow. I can't think of anything./

E
How do you feel?

S
Weird.

E
Weird?

S
Yah because, because I can't, IDK, I'm just not
getting...images or remembering things. Maybe I'm
just can't focus on the word.

S
FELLOW...Guys, ahm, standing in, some guy in the line
pushing me, making me drop a lot of stuff...making
me drop a lot of stuff, making me drop my books,
everything went all over./ Made me so mad.

E
How are you doing?

S
Upset again! (Voice sounds very upset and angry.)

E
Upset?

S
Yah, at this guy. At guys in general. It seems
like it was all guys.

S
DROP...Dropping my books. Drop, ahh, enrolling for
classes and, and going to get my books, and I had
a whole mess of books. And (sigh) and then I
picked up this one book and then I went to check
out and they they went all over the place./ And
it, and this one book was a really neat book, and
I wanted to read it and I couldn't read it because
I dropped it and everything went all to pieces.

E
How do you feel?

S
Strange. I, I, I don't usually get that upset. I,
but I really was.

S
TRAVEL...One of my ambitions is going, going to see
the world, visiting, visiting different countries.
Ahm...moving somewhere. Going to a new location.
Traveling across campus on the buses is so slow
(sigh)./ Ahm, good times traveling; going with
the family and having a lot of fun. Fighting in
the car (laugh). Ah, going swimming.

S MUSIC...Singing, weddings, ahm, standing around the piano singing, especially at holiday time. Singing a lot of old favorite songs, hum, happy times, going Christmas caroling. I think I'm getting in the Christmas mood (laugh)./

S LINE...Standing in line...all the time. Grocery lines, and, and standing in a line at the bookstore and getting, getting pushed out of line (sigh) (hitting the chair)./ Getting really upset I couldn't believe it, it...one of my favorite professors that I I really liked him, and he just, and he, and he just pushed me out of line and got the biggest laugh out of it. Made me so mad, I couldn't believe it. I could have understood if it had been somebody else, somebody that I didn't know, or some prof that I didn't like in the first place. (sigh)

E How do you feel?

S Really ticked (sigh) I just, I really couldn't believe it.

S STAND...Getting tired of standing in line, waiting so long. The lines in the bookstore are always so long and you stand and you wait, and you wait. And you get so tired of it. Then people get pushy./ So frustrated.

E How are you doing?

S IDK, I, I, I can't believe, I can't believe I felt that way. I mean I can't I can't believe I felt that strongly about it. That I've got so upset. It still makes me mad, but...

S BROKEN...The book that I got, it was, I got a, I found a, a new translation of the Bible that I wanted to read. And I was really excited about it, and, and then I dropped it./ And I was so upset because, because I looked for it for a long time and I was so mad that I couldn't find it and then I, I found it and, and I was all upset because I dropped it and it went all over the place.

S HEAVY...The books got so heavy, and I stood in line
 for so long. And...it wouldn't have been so bad if,
 if I had had somebody there with me, or somebody,
 if one of my girl-friends had been there/ or
 something. I may not have gotten so upset.

E How do you feel?

S IDK, I feel kind of confused.

E Confused?

S I, I can't understand all of this...because I...IDK,
 I, I'm usually a very patient person and I can't
 understand all, why I got this way and, I can't
 understand why I still feel upset about it.

S FOOD...IDK, I just don't feel any reaction, I...its
 getting near dinnertime, that's about the only
 thing I can think of./ I just...nothing.

E Nothing comes to your mind even about, you know,
 something other than food or just a blank?

S I just feel very upset and I don't understand it.
 Because usually if I get upset about something it
 doesn't last that long and I, and it, you know,
 after it happens it goes away.

S BOOK...This, this book that I wanted to read...well,
 well picking out all my books for school was, I
 mean, it was fun, you know, finding out what I
 was going to get and everything and buying new
 books and being scared of the prices. But then
 this one book that I found,/ I really wanted and
 it just meant so much, and it, and it broke and
 went all to pieces.

E How are you doing?

S IDK, I (sigh) I can't, I just can't understand being
 upset about it this long, I just, IDK.

E Kind of perplexed, huh?

S Yah.

S FLOWER...Flowers in the spring. Ahm, beauty in
 nature. Getting flowers for...like the prom.
 Carrying bouquets in the wedding./



S CROWD...I, I, I don't, I don't even want to think about it. It's just, its back to the same thing again, the, the bookstore and dropping my books and getting so mad at this professor./ I just feel really sick about the whole thing.

S TIRED...I, I just, I feel really tired of it, I... at this point you just feel ready to sit down and cry, you know.

E Hum hum.
S You get, you just get so upset about something and... (sigh). Just, I'm just really tired of it.' And, want to forget it.

S VALLEY...First thing that comes to my mind is "Yea though I walk through the valley of the shadow of death, I will fear no evil." But I feel better./ I, I have this really close relationship with this guy and this helps an awfully lot especially when I'm upset.

E So how do you feel now?
S Calmer.

S GLASS...Ahm, wearing glasses, especially when it gets so hot and sticky in the summer (chuckle). Ahm, washing glasses, window panes, bay windows, the big picture window in our living room. Changing windows/ in the spring and in the winter. Glad I'm not going to be home this winter so I won't have to do it (laugh), it just hit me that there aren't any windows in here (both laugh).

E How do you feel?
S OK.

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