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Maria Della Corte

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Joseph Reyher
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THE EFFECT OF PRECEDING STIMULUS CONDITIONS ON SPONTANEOUS VISUAL IMAGERY

By

Maria Della Corte

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ABSTRACT

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ON SPONTANEOUS VISUAL IMAGERY

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Maria Della Corte

Fifteen male subjects were administered three stimulus conditions--revisualization of a recurrent dream, an Oedipal-tinged stimulus narrative and the recall of a pleasant experience--to determine if the subsequent spontaneous visual imagery could be influenced. The imagery was analyzed for drive activation, distortion, GSR and symptom production. Implicit sex was the most frequently scored drive, followed by explicit anger-aggression which was scored about half as much. Both implicit and explicit expression of love, guilt, and dystonia were infrequently scored, and the story line of the stimulus conditions was not continued. A variety of nonparametric tests showed that total drive activation for the Dream condition was high, but the GSR was low. The GSR for the subsequent imagery was also low as was drive activation. In addition, the Dream condition was high in non-veridical imagery. Unexpectedly, this configuration of results was consistent with Freud's conception of dreaming, i.e., dreams represent disguised wish-fulfillment.

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INTRODUCTION

Reyher (1978) has reported a method of analyzing client dreams using spontaneous visual imagery (free imagery) wherein the revisualization of the dream seems to activate whatever mechanisms caused the dream to occur in the first place. The psychotherapist asks clients to revisualize their dreams with the additional instruction of reporting whatever spontaneous visual images come into their mind's eye. Often, seemingly trivial images are accompanied by symptoms and/or resistance (contingency reactions). Images that elicit contingency reactions are called "hot" images. Repeated requests to revisualize these images generally produce more severe contingency reactions as the client's imagery becomes depictive of anxiety-producing strivings currently subject to repression. Reyher (Morishige and Reyher, 1975; Reyher, 1977a, 1978) calls the progressively more blatant depiction of anxiety-producing strivings emergent uncovering psychotherapy.

In an effort to observe more closely the relationship between degree of repression and type of symptom, Burns and Reyher (1976) attempted to activate Oedipal strivings in volunteer subjects. Using hypnosis, an Oedipal-tinged paramnesia (made-up story which the subject believes is real) was implanted in subjects with a posthypnotic suggestion which would activate these strivings and thereby produce

conflict. As expected, hypnotized subjects experienced more symptoms and resistance during a one-half hour period of free imagery than did simulating subjects.

An investigation by Ira Moses (1974) appeared to indicate that activating repressed strivings could be done quite effectively in the absence of hypnosis using an Oedipal-tinged stimulus narrative. Moses asked subjects to sit down, close their eyes and visualize themselves in the scenes of the narrative he would read to them. This was followed by a five minute period of free imagery. The result was even greater pathogenicity (the appearance of contingency reactions). Stern's (1974, 1975) investigations, however, have demonstrated that the tasks of free association and free imagery are inherently anxiety-producing and therefore, may be a confounding factor in the production of symptoms. When subjects are asked to close their eyes and to describe their images and physical sensations without omitting a thing, to an enigmatic stranger, such self-disclosure most often becomes anxiety-producing and they seek reassurance. Increased pressure for self-disclosure increases the likelihood of rejection (negative appraisals) by the experimenter. However, subjects cannot observe verbal as well as nonverbal signs of approval from the experimenter who sits quietly while they describe images, sensations and feelings with their eyes closed. In addition, since subjects have little or no criteria for determining whether they are responding

correctly, they are apt to feel insufficient and, therefore, to anticipate negative appraisals by the experimenter. The anticipation of negative appraisals by the experimenter is coincidental with a lowering of self-esteem, and the manifestation of resistance, anxiety and/or symptoms. Unfortunately, these sources of anxiety may have confounded whatever anxiety may have been associated with the Oedipal narrative in Moses' investigation.

Hayes (1977) separated these two sources of anxiety in a fixed design two-way analysis of variance and found that the stimulus narrative was not an influencing variable. The four stimulus narratives systematically varied high and low sexual strivings and feelings of personal insufficiency. Since Hayes found no significant differences in symptom production among the four manipulations, he reasoned that for student-subjects in the laboratory, in contrast to clients undergoing emergent uncovering psychotherapy, symptoms were produced solely as a result of the interpersonal situation between them and the experimenter rather than the activation of intrapsychic conflict. As Hayes points out, the clinical situation differs from that of the laboratory in that the interpersonal relationship is one in which the individual is motivated to self-disclose. Therefore, in this case, it is more possible for repressed strivings to influence imagery. His conclusion is consistent with an investigation by Morishige and Reyher (1975) in which client-subjects

manifested a higher degree of drive representation and primary process during a period of emergent uncovering than did student-subjects.

The purpose of the present investigation was to examine the free imagery of student-subjects with respect to the drive-activating and anxiety-producing properties of several kinds of stimulus materials (antecedent conditions). It was expected that (1) dream revisualization and free imagery per se would be most effective in stimulating anxiety-producing strivings (ego-dystonic); (2) the recall of a pleasant experience would be most effective in stimulating ego-syntonic strivings and affects (syntonia[1]) associated with elevated self-esteem; (3) that an Oedipal stimulus narrative would activate the sexual drive and aversive affects (dystonia[2]) associated with reprehensible sexual behavior.

METHOD

Subjects

Fifteen male, undergraduate students who were enrolled in an Introductory Psychology class at Michigan State University volunteered to participate in an experiment entitled "Visual Imagination." They received extra course credit for their participation.

Materials and Experimental Setting

Three measuring instruments were used to assess whether a five minute period of free imagery was influenced by its antecedent condition. They were: (1) a revised version (Burns and Reyher, 1976) of Reyher's Drive Activation Scale; (2) an Analogic-Synthetic Scale developed by Reyher and Della Corte; and (3) Reyher's Symptomatic Reaction Scale.

The Drive Activation Scale measures the degree of drive representation of each visual episode, which is defined as a change in persons or objects and/or a change in setting. The scale takes into account whether a drive is implicitly or explicitly expressed, remoteness of derivatives, motility and interactions between persons and/or objects. Since the implicit subscales are based on criteria for inferring the existence of a particular drive, the validity of these scales only can be established by its ability to differentiate systematically among conditions differing in type of drive activation and to predict the outcome of

research. These were included to serve as indicators of drive activation lacking representation in awareness as a means of increasing the sensitivity of the Drive Activation Scale over its immediate precursor (Burns and Reyher, 1976) which used only explicit scales.

The Analogic-Synthetic Scale was used to assess the degree of distortion of each episode of visual imagery. This is measured in terms of (1) clarity (degree to which the episode can be understood and course of events be ascertained); (2) plausibility; (3) functional deviations (violation of natural laws or biological principles); (4) formal deviations from reality (illogical, unrealistic imagery).

The Symptomatic Reaction Scale consists of nineteen categories of spontaneous, verbalized symptoms ranging from the somatic to the affective domain.

A Grass #5 Model polygraph from the Yellow Springs Equipment Company was used to monitor Galvanic Skin Response (GSR). Subjects were seated upright in a recliner chair located in a soundproof room. The GSR electrodes were attached to the index and forefinger of the left hand. A straightback chair for the experimenter, a swivel chair, a cot, a table and two Uher tape recorders were also in the room.

Procedure

When the subject was seated in a recliner, the experimenter proceeded to attach the electrodes. During this time, the experimenter made incidental conversation with the subject in an attempt to put him at ease. When the electrodes had been attached, the subject was told that the experiment could begin. He was asked to lean back, close his eyes and the following instructions were given.

Free Imagery Baseline (FI_b) "Keeping your eyes closed, I'd like you to describe, in detail, any images or pictures you see in your mind's eye and also, any feelings or bodily sensations that come to your attention."[3]

The experimenter did not interact with the subject during the five minute period of free imagery unless the following situations occurred: (1) If the subject was silent for one minute, the experimenter said "What's happening?"; (2) If the subject was not reporting any feelings, then he was asked at one minute intervals "How are you feeling?"; (3) If the subject was free associating instead of free imaging he was asked "Are you seeing that in your mind's eye?"; (4) If the subject said he couldn't get any images he was told "Just wait for images to come and describe them for me."; (5) If the subject asked questions he was told that all questions would be answered at the conclusion of the experiment.

Following this period of free imagery, the subject underwent three additional stimulus conditions which were counter-balanced to eliminate order effects. Each condition was followed by a five minute period of free imagery identical to the one described above. The instructions for the three conditions were as follows.

Dream Revisualization. (D) "Keeping your eyes closed, I'd like you to recall a recurrent[4] dream, a dream you've had more than once. Try to revisualize the dream and describe it for me." (If the subject couldn't recall a recurrent dream, he was asked to describe a disturbing dream. If he was not able to recall a disturbing dream, he was asked to describe any recent dream. If the subject could not recall any dream, the experimenter proceeded to the next condition.)

Stimulus Narrative. (SN) "Now, I'm going to play a tape of a story that is well within the realm of possibility for most people. As I play the tape, I'd like you to visualize yourself as the person in the story."

Pleasant Experience. (PE) "Keeping your eyes closed, I'd like you to revisualize a pleasant experience that you've had and describe it for me."

RESULTS

General Considerations

The number of subjects receiving scores for the implicit and explicit subscales distributed across the component drives of the Drive Activation Scale is presented in Table 1.

Table 1

Summary of Scores (Frequency) of the Implicit and Explicit Component Scales of the Drive Activation Scale For Each Condition

n = 9

	FIb	D	FId	PE	FIpe	FIsn
Sex						
implicit	7	8	6	4	6	8
explicit	0	0	0	0	0	1
Anger-Aggression						
implicit	3	3	2	2	2	3
explicit	0	3	1	1	1	0
Love						
implicit	1	0	0	1	0	1
explicit	0	0	1	1	2	1
Dystonia						
implicit	1	0	1	0	1	0
explicit	0	0	0	0	1	0
Guilt						
implicit	0	0	0	0	0	0
explicit	0	0	0	0	0	0
Syntonia						
implicit	0	0	0	0	0	0
explicit	0	0	0	4	2	0

Note: FIb = Free Imagery baseline; D = Dream; FId = Free Imagery following the dream; PE = Pleasant Experience; FIpe = Free Imagery following the pleasant experience; FIsn = Free Imagery following the stimulus narrative.

This was done to obtain some estimate of the relative incidence of their activation by the three stimulus conditions. Therefore, only the subjects who described visual imagery in all conditions were included for this purpose. The number of subjects actually used in the comparisons below varied according to the particular comparison and the dependent variable involved.

Implicit sex was the most commonly received score across both stimulus conditions and their associated periods of free imagery. Only one of the nine subjects received a score for explicit sex; this was in the free imagery period following the revisualization of a pleasant experience. Next most common was anger-aggression which was about half as frequent as implicit sex. Half of these (3) were received under D. Love and syntonia only received a few scores, and these were concentrated appropriately under PE in the explicit subscale. The relatively high incidence of anger-aggression in PE is appropriate since the consumation of these strivings is intrinsically satisfying. However, the veritable absence of scores for dystonia and guilt was surprising in view of the ubiquity of these feelings in performance situations (Reyher, 1978). Could it be that these are the most difficult affects of all for subjects to admit under the circumstances of the research? If this were the case, then the explicit scores index the degree to which subjects are able to self-disclose various drive-related

affects. In terms of this criterion, syntonia and anger are the easiest to disclose followed closely by love. Sex, dystonia and guilt are substantially more difficult to disclose. These conclusions, however, must remain tentative until it can be shown that the scoring criteria for the component drives are equally sensitive.

Statistical Considerations

Nonparametric methods were used for all comparisons rather than parametric ones for several reasons. First of all, the drive activation scores had an extremely skewed distribution. Second, the Drive Activation Scale does not possess equal intervals. Third, there were a large number of zero values in the GSR data. Fourth, not all the subjects could be used in all analyses because of failures to recall a dream or to image upon request. Finally, two-tailed rather than one-tailed levels of probability were used in order to err conservatively.

Comparisons Involving Stimulus Conditions

Table 2 presents the comparisons involving the drive activation scores[5] for the two spontaneous, idiosyncratic stimulus conditions (D and PE) and the FI_b. Since the SN was not a spontaneous production of the subjects--it was previously fabricated and invariant--it could not be included in this comparison. The drive activation score of the SN was calculated, anyhow, as a means of gauging the

Table 2

Summary of Comparisons Using the Friedman Two-way Analysis of Variance Across the Dependent Variables. Entries in the Body of the Table are p Levels of .05 or Less.

Comparison	Dependent Variable				
	Drive Activation	Analogic-Synthetic	Symptoms	GSR	Implicit Sex
FIb, FId, FIpe, FIsn	.02	NS	NS	.02	NS
FId, FIpe, FIsn	.02	NS	NS	.02	NS
FIb, D, PE	.01	.001	--	NS	.05

degree of drive activation in the foregoing spontaneous productions. It was 13, 591. The medians for D, PE and FI_b were 624, 1442.67 and 156.83, respectively, (Table 3) and the Friedman two-way analysis of variance (ANOVA) was significant, $x_r^2(2) = 12.18$, $p < .01$ (Table 2). This significant outcome obviously is related to the high component of syntonia in the PE drive activation scores. When syntonia was excluded, making PE more equivalent to the other conditions which contained little or no syntonia, the median drive activation score for PE dropped to 520[6]. The Friedman two-way ANOVA was still significant, $x_r^2(2) = 8.91$, $p < .02$. Since the initial free imagery period was intended to be a baseline, D and PE were separately compared with it with respect to drive activation using the Wilcoxon matched-pairs signed ranks test. Each were significantly

Table 3

Median Scores on the Dependent Variables Across Stimulus Conditions and Their Subsequent Free Imagery Periods, Only for Those Subjects Reporting Visual Imagery in All Conditions

n = 9

Condition	Dependent Variable				
	DA[a]	A-S[a]	GSR[b]	Symp[a]	Imp Sex[a]
FIb	156.83	2.00	.18 (.04-.42)	2.00	.41
D	624.00	3.00	.12 (.00-.31)	--	.67
FId	92.65	2.00	.12 (.00-.23)	2.00	.21
PE	1442.67[c] (520)	1.00	.18 (.00-.45)	--	.00
FIpe	344.81[c] (343)	1.75	.17 (.02-.26)	2.00	.31
SN	--	--	.12 (.02-.29)	--	--
FIsn	377.70	2	.15 (.01-.38)	2.00	.57

[a]DA = Drive Activation; A-S = Analogic-Synthetic; Symp = Symptom; Imp Sex = Implicit Sex.

[b]The GSR medians are misleading because of the large number of zero scores. This renders the median as an insensitive index of central tendency as it does not represent the disparate shapes of the distributions produced by those subjects who did not score zero. Since these scores enter into a number of statistically significant comparisons, the range also is presented in the parentheses to provide more useful information about the shape of these distributions.

[c]The parentheses contain the drive activation scores exclusive of syntonia.

larger than FI_b (Tables 4 and 5) presumably due to their distinctive drive-related affects (Table 1). This means that D and PE were more drive activating than the FI_b.

Table 4

Summary of Comparisons Between the Free Imagery Baseline Period and the Dream Condition Using the Wilcoxon Matched-Pairs Signed-Ranks Test on the Dependent Variables

Dependent Variable	Conditions	N	Significance
	FIb vs D		
Drive Activation	<	11	.01
Analogic-Synthetic	<	8	NS
GSR	>	11	NS
Implicit Sex	<	11	NS

Table 5

Summary of Comparisons Between the Free Imagery Baseline Period and the Pleasant Experience Condition Using the Wilcoxon Matched-Pairs Signed-Ranks Test on the Dependent Variables

Dependent Variable	Conditions	N	Significance
	FIb vs PE		
Drive Activation	<	15	.01
Analogic-Synthetic	>	13	.05
GSR	>	13	NS
Implicit Sex	>	12	NS

Component Drives

Explicit subscale. In an attempt to better understand the factors involved in the significant difference in drive activation scores for the three spontaneous productions, the component drives of the Drive Activation Scale were examined (Table 2). Since explicit syntonia and anger-aggression were relatively infrequent (Table 1), they were scored as being either present or absent in each subject's protocols across conditions and were separately evaluated by Cochran's Q test. Q was significant only for syntonia, $x^2(2) = 8$, $p < .02$. As Table 1 shows, the component drives of love, dystonia, and guilt were scored too infrequently to be evaluated.

Implicit subscale. The contribution of unconscious or nonconscious factors to drive activation was assessed first with respect to implicit sex. The FI_b, D and PE conditions were compared with respect to the proportion of episodes scored for implicit sex. The Friedman two-way ANOVA was significant, $x_r^2(2) = 6.55$, $p < .05$ (Table 2). This is an important finding because it means that unconscious (implicit) sexual factors also contributed to the significant drive activation scores. The only other implicit drive with significant data for application of the Cochran Q test was anger-aggression. It was not significant.

Effect of Stimulus Conditions on Spontaneous Visual Imagery

An inspection of the protocols revealed that seven subjects reproduced items of content from the stimulus condition in the subsequent FI period. These tended to be few in number, but it was apparent that this occurred most frequently after the SN. Only two of the subjects verbalized curiosity about how the SN turned out, but the story line was not continued in the subsequent FI period. This lack of continuity also was true for D and PE. The Cochran Q test was applied in order to determine whether content from each stimulus condition was reproduced in the subsequent FI period. These frequencies were 3, 3 and 6 for the free imagery following the dream (FI_d), the free imagery following the pleasant experience (FI_{pe}), and the free imagery following the stimulus narrative (FI_{sn}), respectively. The resulting Q was significant, $x^2(2) = 6.85$, $p < .05$.

To assess if the drive activation scores in the FI periods were influenced proportionately by the preceding stimulus material, the Friedman two-way ANOVA was applied to the drive activation scores of all FI periods (Table 2). The median values were 156.83 (FI_b), 92.65 (FI_d), 344.81 (FI_{pe}) and 377.7 (FI_{sn}) (Table 3). Although the outcome was significant, $x_r^2(3) = 9.93$, $p < .02$, there might have been an adaptation to the experimental situation favoring the FI_b period. This possible confounding source of variance

was eliminated by dropping FI_b from the analysis and reapplying the Friedman test. Again, it was significant, $x_r^2(2) = 8.82$, $p < .02$, but contrary to expectations, the median drive activation score for FI_d was lower than FI_{sn} and FI_{pe}.

The implicit subscales were examined to determine if they could account for the significant effect of the stimulus conditions on the drive activation scores. Although the incidence of implicit sex of the FI_{sn} was higher than the other FI periods, FI_{sn} (.57), FI_{pe} (.31), FI_d (.21), a Friedman two-way ANOVA was not significant (Table 2). Neither were any of the Wilcoxon matched-pairs signed-ranks tests significant when each of the FI periods associated with the stimulus conditions were compared with the FI_b (Tables 6, 7 and 8). Thus, the disparity in drive activation scores for the FI periods could not be accounted for on the basis of the implicit subscale scores.

Illustrative Dreams

The puzzling low drive activation scores for FI_d stands in contrast to many of the dreams which were of high drive level. At times, their revisualization was accompanied by verbalized affects. In fact, seven of these dreams were of sufficient, intrinsic interest that they are reproduced below:

Table 6

Summary of Comparisons Between the Free Imagery Baseline Period and the Free Imagery Following the Dream Using the Wilcoxon Matched-Pairs Signed-Ranks Test on the Dependent Variables

Dependent Variable	Conditions	N	Significance
	FI_b vs FI_d		
Drive Activation	=	10	NS
Analogic-Synthetic	=	6	NS
GSR	>	6	.05
Symptoms	>	11	NS
Implicit Sex	>	8	NS

Table 7

Summary of Comparisons Between the Free Imagery Baseline Period and the Free Imagery Following the Pleasant Experience Using the Wilcoxon Matched-Pairs Signed Ranks Test on the Dependent Variables

Dependent Variable	Conditions	N	Significance
	FI_b vs FI_{pe}		
Drive Activation	<	14	.01
Analogic-Synthetic	>	11	NS
GSR	>	13	.05
Symptoms	<	10	NS
Implicit Sex	<	13	NS

Table 8

Summary of Comparisons Between the Free Imagery Baseline Period and the Free Imagery Following the Stimulus Narrative Using the Wilcoxon Matched-Pairs Signed Ranks Test on the Dependent Variables

Dependent Variable	Conditions	N	Significance
	FI_b vs FI_{sn}		
Drive Activation	<	14	NS
Analogic-Synthetic	=	6	NS
GSR	>	13	NS
Symptoms	<	12	NS
Implicit Sex	<	12	NS

It was at my grandparents house and I was six years old. No one was in the house. I was sitting on the floor in this small, narrow kitchen. There was a door leading from the basement at the end of the kitchen. I was sitting doing nothing and I heard someone come up the stairs. I was scared but I couldn't move. The footsteps got louder and someone turned the doorknob but it was locked. I was really scared and I couldn't move. Then the door opens up and there's a weird looking figure. It was big compared to me and it had a dark, ugly face.

I was a kid again and it was a windy, overcast day--warm outside. I was playing with friends. It seems like it's going to storm but not rain. All of a sudden there's a tornado. I don't know where it came from. It was bigger than myself but smaller than the house. It seems to have a personality all its own. It's chasing us around and we're running in different directions. Everytime we turn a corner it's always there, chasing us around the house. We're trying to get in the house but it's locked. It chases us off the porch into the bushes. We all fall in and then it goes away.

I was about six years old. It was the year before my parents got divorced. There was my real father and me and my brother. My father and me were at a grocery store. I asked if I could go in and he said no. This witch flew up and said I'm going to put you in the garbage can. My brother ran away but the witch put me in the garbage can.

I'm falling and I go faster and faster. I know I'm going to hit and I can stop myself, slow myself down and stop. I jump and I go up quite a ways. I take a long step and can hold myself up there, about 50 or 60 feet off the ground. Then I come down and get myself down. Then it goes to a country road and there's a big brick house on the left after you turn the corner. A driveway comes from the black-top road and goes to a gravel road. There's always a bunch of kids out there. The kids are not that well-dressed. We go for a ride in an old pick-up truck and back down the gravel road to the pasture and these cranes are flying at you. They come by a building across a fence, back on the road. Then it seems like the road's got to go the opposite way then it is to go back to the house.

It was when I was little. Our house is on a hill. I was seven or eight and I was on tall stilts as high as our house. And in the backyard, in the same spot, I would fall. And I would try to fight to fly and stay up.

It was a dream I had when I was young. I used to deliver papers. It was the biggest route and I got sick of it. I was in a large room with no doors and no windows and one trap door at the top. I was standing there and all of a sudden the guy that delivers the papers would laugh and said I should do my paper route. I said I did and he said no, I'm going to punish you. Papers filled up the room. The guy was going to kill me by drowning me in newspapers. They were all neatly rolled. I tried to climb out but they would hit me and I would lose my glasses and couldn't see. I would wake up in cold sweats breathing rapidly.

A monster stole my flag and he's walking around waving it. He hit the teacher with it and disrupted the class. Everyone walked out.

Electrodermal Activation

The GSR data was congruent with the drive activation scores. GSR rate was computed by counting all GSRs 500 ohms or larger and dividing by the duration of the condition. The Friedman two-way ANOVA was significant, $x_r^2(3) = 11$, $p < .02$ when it was applied to all FI periods and also when FI_b was dropped, $x_r^2(2) = 8.39$, $p < .02$. Once again, the

FI_d was low. This means that the sympathetic nervous system was least activated during FI_d. Although the Wilcoxon matched-pairs signed-ranks test showed that FI_d and FI_{pe} were associated with significantly lower GSR rate (Tables 6 and 7) than FI_b, this was attributed to adaptation since FI_b was not counterbalanced.

Dreaming and Drive Activation

Additional comparisons were made between FI_d and FI_{pe} and their preceding stimulus conditions in an effort to identify the factors involved in the low drive activation score for FI_d. Tables 9 and 10 show that the drive activation score for FI_d and FI_{pe} were significantly lower, $T\ (n = 9) = 1$, $p < .01$ and $T\ (n = 14) = 15$, $p < .02$, respectively, than their preceding stimulus conditions. Once again, implicit sex and the GSR were significantly lower, $T\ (n = 9) = 5$, $p < .05$ and $T\ (n = 9) = 1$, $p < .05$ only for D vs FI_d. Although FI_{sn} and SN could not be included in comparisons involving the other dependent variables, they could be compared in terms of GSR. This comparison was not significant. Thus, both drive level and GSR were distinctively lower for FI_d when compared to the D condition.

Implausibility and Bizarreness of Imagery

The D condition had higher analogic-synthetic scores[7] than PE (Table 11) as did FI_b (Table 7) and FI_{pe} (Table 10).

Table 9

Summary of Comparisons Between the Dream Condition and Its Subsequent Free Imagery Period Using the Wilcoxon Matched-Pairs Signed-Ranks Test on the Dependent Variables

Dependent Variable	Conditions	N	Significance
	FI_d vs D		
Drive Activation	<	9	.01
Analogic-Synthetic	<	6	NS
GSR	<	7	.05
Implicit Sex	<	9	.05

Table 10

Summary of Comparisons Between the Pleasant Experience Condition and Its Subsequent Free Imagery Period Using the Wilcoxon Matched-Pairs Signed-Ranks Test on the Dependent Variables

Dependent Variable	Conditions	N	Significance
	FI_{pe} vs PE		
Drive Activation	<	14	.02
Analogic-Synthetic	>	12	.01
GSR	<	13	NS
Implicit Sex	>	12	NS

Table 11

Summary of Comparisons Between the Dream and Pleasant Experience Conditions Using the Wilcoxon Matched-Pairs Signed-Ranks Test on the Dependent Variables

Dependent Variable	Conditions	N	Significance
	D vs PE		
Drive Activation	<	11	NS
Analogic-Synthetic	>	11	.01
GSR	=	10	NS
Implicit Sex	>	9	.01

PE, of course, is the recall of real events whereas the imagery of both dreams and free imagery is not under the same constraint to be veridical.

Integration of Findings

Reyher (1978) has presented evidence opposed to Freud's conception that dreams involve sexual drive gratification discharge due to their wish fulfilling functions. Reyher's position requires an increase in GSR rate during the D condition and its associated period of spontaneous visual imagery in addition to high drive activation, high implicit sex, and high analogic-synthetic scores. The low GSR rate in both D and FI_d was discrepant from Reyher's position as was the low drive activation score in FI_d. Surprisingly, this pattern of results is congruent with Freud's conception of dreaming, namely, recalled dreams represent repressed

sexual wishes (high implicit sex and high drive activation) that are subject to primary process distortion (high analogic-synthetic score). The resulting implausible and bizarre imagery is the means whereby gratification of repressed wishes is achieved. Dreams thereby reduce drive intensity (low drive activation and low GSR rate in FI_d) for the purpose of preserving sleep. The reduction in drive level is a "safety valve" effect.

Initial Expectations

With respect to initial expectations, the findings do not support the use of dreams with student-subjects as an effective means of activating anxiety-producing, ego-dystonic strivings. As expected, the recall of a pleasant experience was associated with elevated ego-syntonic strivings; however, this only had a slight effect on the subsequent FI period. Finally, the use of a stimulus narrative was ineffective as a means of activating conflict-inducing Oedipal strivings. However, it did have some minimal but significant effect on the content and drive level of a subsequent period of free imagery.

DISCUSSION

The failure to substantially modify spontaneous visual imagery suggests that imagery is governed by parameters outside of awareness. In clients undergoing the objectifying procedures of emergent uncovering psychotherapy (Reyher, 1978), these parameters have been identified as repressed strivings. This also is considered to be true for student-subjects because their visual imagery is at times quite bizarre (Morishige and Reyher, 1975) and accompanied by contingency reactions. However, unlike the progressively more blatant depiction of repressed strivings by clients, the imagery of student-subjects remains highly distorted (remove derivatives). If the implicit sex subscale of the Drive Activation Scale is sensitive to unverbalized drives, then it can be concluded that the repressed strivings represented in the dreams and imagery of the subjects in the present investigation was of a sexual nature. However, this conclusion must be qualified by the nature of the scoring criteria because the scoring criteria for implicit sex is more general than the other drives (e.g., any long, slim object can be interpreted as phallic). Consequently, a higher proportion of objects will be scored for implicit sex whether or not they are actually functioning as sexual symbols.

The results obtained from the FI_d bears discussion since the incidence of implicit sex, GSR rate and drive activation scores were lower than any other FI period. Experimenter bias would have to be discounted since the experimenter's expectations were contrary to the results obtained. Subject bias could also be eliminated since the subjects did not know that they would be asked to recall a dream when they volunteered to participate in the experiment. No formal attempt was made to create demand characteristics and none of the subjects knew the purpose of the experiment. Finally, the conditions were counterbalanced in order to eliminate any systematic or progressive, temporal effects and, in fact, none were in evidence. In light of the above, it is unlikely that the results were due to any of the sources of artifact mentioned.

Perhaps, the dream's influence on the subsequent FI period was attenuated because the recalled dream had undergone secondary revision and, therefore, was benign. This argument must be discounted since the dreams were, in fact, associated with high drive activation. Then again, perhaps, dreams are different in the sense that they originally occurred as images during REM sleep whereas the other stimulus materials did not. This, however, does not explain why GSR, drive activation and the incidence of implicit sex were lowest for FI_d.

Contrary to the data from emergent uncovering with clients who become more distressed during dream revisualization (Reyher, 1977a, 1978), the data in the present investigation support Freud's conceptualization that dreams are disguised wish-fulfillments. Since the subject is unaware of the drives (latent content) being depicted by the remote derivatives constituting the manifest content, there is little GSR activation during dream recall. Freud also considered dreams to provide a safety valve function. Consistent with this, both drive activation and GSR activity were attenuated during the FI_d. The investigations of Cartwright and Monroe (1968) and Cohen, McGrath, Bell, Hanlon and Simon (1978) also can be viewed in this way. Fantasy during REM awakenings reduces the level of repressed drives (latent content). However, such tension reduction is contrary to what is evidenced when clients revisualize dreams during emergent uncovering psychotherapy and which led Reyher (1978) to question Freud's conceptualization of dreams as vehicles of drive gratification discharge. The revisualization of "hot" images typically intensifies repressed strivings and increases distress. To resolve this conflict in findings, one could posit that dream revisualization serves the function of disguised wish-fulfillment for subjects but leads to drive intensification for clients. Dream revisualization intensifies drives for clients because of their commitment to self-disclosure

and their striving to be regarded by the psychotherapist as good clients. This striving puts pressure on the client to self-disclose bizarre and/or blatant imagery (Reyher, 1978) which subjects will not do even when given license and encouragement to do so (Schofield and Platoni, 1976). Subjects lack this motivation and, therefore, resist self-disclosure because this piques an anticipation of rejection and disapproval by the experimenter. In accordance with this line of reasoning, dream revisualization serves a drive gratification function for these subjects.

Nevertheless, it is still necessary to account for the difference in reactions to dream recall between clients undergoing emergent uncovering psychotherapy and those observed by Freud. Both groups are clients, yet the former experience the intensification of drives when revisualizing a dream whereas the latter apparently do not because of the procedural differences. In his method of dream analysis, Freud (1959) had his analysands free associate to the elements in the dream. At times, he would pose certain questions to which the analysand would respond and at other times he would make interpretations. The analysands' task was to convey their own thoughts as well as understand Freud's interpretations. This meant that they had to select certain words and arrange them syntactically in order to convey their message and, in addition, determine

the meaning of the interpretations being posed by him. Reyher (1977b, 1978) has labelled the mode of information processing which enables us to produce and comprehend speech the semantic-syntactic mode. This is an active, interpersonal, communicative process. In contrast, clients in emergent uncovering psychotherapy are simply describing images that are being synthesized effortlessly from the person's perceptual history. The only intervention by the therapist is to draw the client's attention to the imagery and any contingency reactions. This passive, spontaneous process of image formation has been designated the analogic-synthetic mode of information processing. Since direct imagoic depiction of the aims and objects of repressed drives is anxiety-producing, percepts are activated which vary along gradients of similarity (physical, functional, qualitative). Consequently, some of the images of clients following dream revisualization may elicit contingency reactions even though their drive-related referents may be unknown (remote derivatives) to the client. Furthermore, Reyher's clients free associate and free image with eyes closed whereas Freud's analysands free associated with eyes open. By keeping their eyes open, clients are able to fixate on objects in the room, thereby occupying their attention externally and inhibiting drive-related thoughts. The mere act of closing one's eyes while free associating can undermine the client's ability to ward off drive-related

thoughts (Reyher, 1963). Hence, the fact that Reyher's clients experience drive intensification and contingency reactions during dream revisualization while Freud's analysands did not, appears to result from the particular mode of information processing being utilized.

Despite the voluminous psychoanalytic literature on drives and their affects, an empirical body of relevant facts does not exist to validate the Drive Activation Scale. Although it was constructed to postdict electrophysiological activation (Morishige and Reyher, 1975), its predictive validity has yet to be established. More germane to the present investigation is the content or face validity of the subscales. Although the scoring criteria of the explicit subscales are based on objective behavior, security operations[8] interfere with the verbalization of ego-dystonic affects and, of course, the assessment of its face validity. This should not be true for syntonia, and indeed, it was not. Syntonia was distinctively associated with the recall of a pleasant experience. To adequately demonstrate the face validity of the affects named by the several subscales, the subjects need to be asked to recall pertinent experiences over a number of occasions. The proportion of these affects disclosed should increase over time as the rapport (ease of self-disclosure) between the experimenter and subject increases.

The implicit subscales pose the most difficult validational problem because they are designed to index the unconscious operation of the processes underlying the conscious experience of affect. By definition, they have no content or face validity. They only can possess construct validity; that is, do these scores vary in a manner consistent with theory and the experimental manipulations? Hence, according to Freud, only sex and aggression, owing to their instinctual origins, should have an unconscious existence. Affects and emotions only can be experienced consciously; they are drive representations (Rapaport, 1967). Consonant with this view, only sex and anger-aggression were scored on their implicit subscales. The results of the experimental manipulation also were uniformly consistent with Freud's theory of drives. Both the implicit sex subscale and the GSR behaved in accord with Freud's conception of dreams as vehicles for wish-fulfillment. These findings constitute an auspicious beginning for the Drive Activation Scale.

The Analogic-Synthetic Scale performed well as a dependent variable, although security operations may interfere with the verbalization of weird imagery (Reyher, 1978; Schofield and Platoni, 1976). It successfully differentiated between dreams and free imagery on the one hand and from veridical recall (pleasant experience) on the other.

The Symptomatic Reaction Scale revealed that very little distress was verbalized by the subjects and, unlike the GSR, it did not differentiate among conditions. Although it is tempting to explain this outcome in terms of a reluctance (a security operation) of subjects to verbalize symptoms, particularly severe or unusual ones, it has proven to be a reasonably sensitive dependent variable in other investigations (Burns and Reyher, 1976; Sommerschield and Reyher, 1973). The few mild symptomatic reactions manifested in the present investigation most probably indicate that the experimental procedures were not pathogenic.

Overall, the results of the present investigation show that the experimental investigation of psychodynamic processes is possible.

FOOTNOTES

[1]The term syntonia represents those pleasant affects (e.g., joy, elation, happiness, etc.) and positive self-conceptualizations which are generated by an increase in self-esteem. (Reyher, 1978)

[2]The term dystonia represents those aversive affects (e.g., depression, sadness, dysphoria, etc.) and negative self-conceptualizations generated by a lowering of self-esteem. (Reyher, 1978)

[3]The subject was given two minutes of practice imagery to adapt him to the task. If the subjects did not see any images, then the experimenter asked him to try and get an image of what he last had to eat or his room. After the subject was describing spontaneous images for two minutes, the experimenter began timing the five minute period of free imagery. This was done just for the free imagery baseline period.

[4]Recurrent dreams were chosen as stimulus materials because, in terms of psychodynamic theory, they are indicators of highly pathogenic nuclear conflicts.

[5]The investigator's reliability with the Drive Activation Scale and the Analogic-Synthetic Scale was established in a previous investigation (Davé, 1976). The interrater correlations for the two scales were .85 and .75, respectively.

[6]The original Drive Activation Scale (Burns and Reyher, 1976) did not include syntonia because only drives which had potentially aversive affects were considered on the initial validation studies which were guided by the ability of the several components of the scale to predict the average electro-physiological activation of imagery episodes.

[7]The investigator's reliability with the Drive Activation Scale and the Analogic-Synthetic Scale was established in a previous investigation (Davé, 1976). The interrater correlations for the two scales were .85 and .75, respectively.

[8]The term "security operation" denotes interpersonal behaviors intended to enhance self-esteem or to offset a lowering of self-esteem. The term was coined by Sullivan (1953) and conceptually refined and extended by Reyher (1978).

APPENDIX

APPENDIX

STIMULUS NARRATIVE

It's a warm, summery day and you're walking leisurely to a bus stop. As you approach the stop, your attention is drawn to a very sophisticated, attractive older woman who seems to be rummaging through her purse. Concerned and without a moment's hesitation you say, "Anything I can do to help?" She looks directly into your eyes for a long moment and says, with a faint smile, "As a matter of fact, you can. Tell me that you found my change purse and are returning it or, if that's not the case, make me invisible so I can get on the bus unnoticed." A glint in her eye along with a faint smile reveals that she is not freaked by her plight and that she welcomes your offer of help. There's a good feeling between the two of you, right away, right off, and before you know it, you are both walking around in overlapping and widening circles looking for her change purse and exclaiming your good fortune each time you see an empty beer can, an empty package of cigarettes or a gum wrapper and so forth, thinking of some ridiculuous way you could use each one of them. You are really having a good time. She is a fun person. It is all the more delightful because of her sophisticated appearance and good looks. You both give up the search for her lost change purse at the same moment, standing facing each other, she with a forlorn look, while you express your disappointment

with a sigh. Although she is approaching middle age, she looks like a helpless, lost girl. Her girlish features, crested by a contemporary hairstyle, slightly tinged with gray is a study in contrasts. Not knowing what else to do, her obviously well proportioned body is immobilized. Without any inward hesitation whatsoever, you hear yourself say, "If you turn around and step into that approaching bus, I'll pay your fare." The forlorn look vanishes from her face. She looks directly into your eyes, her lips part slightly as if she is about to speak but instead she takes your hand, turns around and gracefully steps up into the bus. The next thing you know is that you are standing next to her placing the exact fare in the receptacle. She's still holding your hand and says, "I found a friend." Her wedding band presses into your hand but this does not seem to be important. Neither is the fact that she could have children your own age. She asks you about yourself and it seems that you tell her your whole life's history without any self-consciousness whatsoever. And at times she adds one thing or another about herself. Suddenly she says, "Let's go to my place," then rises, holding your hand, in a warm, gentle clasp, which you find extremely pleasant, and leads you down the aisle to the exit of the bus. As you step from the bus, it seems like you go directly to the apartment building where she lives. Still holding your hand, she ushers you into a beautifully furnished apartment where

you nestle into a large soft sofa while she pours you a glass of wine and turns on the stereo. She sits down next to you, raises her glass and offers a toast to a beautiful day and a long friendship. You clink glasses looking directly into each other's eyes as you take the first sip. In the ensuing conversation, you talk about the quality of the wine, the unusual sofa on which you're sitting, the statues, pictures and other art objects around her apartment. But most of all, you find yourself preoccupied with your feelings that this warm, accepting, sensual woman is producing in you. Once again, you are impressed with the special attractiveness that maturity adds. She sets aside her drink, touches your hand, rises, which is a signal for you to get up too. As you do, you take her in your arms, draw her close and begin dancing with the soft music from the stereo. It is the right thing to do at the right time. Everything about her is appealing--her height, her graceful movements, her perfume. All your senses are pleasantly stimulated and you can tell from her breathing and the way she brushes her lips against the side of your neck that she is sexually stimulated and you realize that you are too. There's the ring of the telephone from the next room. She groans with dismay, then whispers in your ear, "Stay right where you are. I'll be back in a moment." You watch her feline, graceful movements as she walks and disappears into

the adjoining room, closing the door, but just standing there won't do. You pick up your glass of wine, then nestle into the velvety softness of the sofa. It gives way, almost enveloping you as you stretch out your body. You now concentrate on the smell of the wine, the sensations it produces on your lips and tongue as you sip and of course, revel in its delicious taste. You eagerly wait for her return.

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