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THE EFFECT OF REPRESSION ON VISUAL IMAGERY

Thesis for the Degree of M. A.
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THE EFFECT OF
REPRESSION ON VISUAL IMAGERY

By

Bruce Burns

AN ABSTRACT OF A THESIS

Submitted to
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ABSTRACT

THE EFFECT OF REPRESSION ON VISUAL IMAGERY

by Bruce Burns

One hundred male volunteer subjects of introductory psychology courses were given the Byrne S-R Scale. The twelve lowest scorers (Repressors) and the ten highest scorers (Sensitizers) were selected as the experimental groups.

These subjects participated in one-half hour of visual imagery and a variable period of story telling to projective type cards. The CSR was used to monitor each subject's reaction.

The experimental groups of twenty-two were evaluated again for degree of repression in terms of the projective stories. This was called the Projective Method.

It was hypothesized that the Repressors would show less primary process, less anxiety and greater defense during the period of visual imagery.

None of the hypotheses were supported using the Byrne Scale but the hypothesis concerning primary process was supported by the Projective Method of determining degree of repression.

The primary process variable, which is really another index of degree of repression, correlated significantly

with the Byrne Scale (.38), the Projective Method (.44), the GSR during projective stories (.48), and nearly reached significance with the GSR during visual imagery (.33), and was in the proper direction for the measure of defense (-.13). This finding was unexpected and suggests that the psychophysiological processes associated with primary process regulated visual imagery are quite powerful.

Approved:

Joseph Ruyter
Major Professor
11/16/67
Date

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To Mother

Whose strength and faith have been a source of inspiration.

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INTRODUCTION

Many investigators (Assagioli, 1965; Freud, 1950; Goldberger, 1957; Jellinek, 1949; Kubie, 1943; Warren, 1961) have noted that visual imagery may serve as a vehicle for the symbolic representation of unconscious processes. Reyher (1963) recently has described a method of utilizing visual imagery that has powerful uncovering properties. With this procedure, which is called free imagery, the patient is asked to close his eyes and to describe only visual images, feelings and bodily sensations that come to his attention. Eye closure prevents the patient from scanning the therapist's countenance for signs of approval or disapproval which support security operations and defenses against reductions in self-esteem. The patient becomes less engaged in an interpersonal relationship and is forced to become more involved in intra-psychic processes such as verbal associations or imagery, both of which produce derivatives of unconscious conflict.

Verbal or free associations involves the organization and communication of ideas (secondary process) whereas visual imagery is a more passive experience outside of voluntary organization and control and reflects the operation of unconscious process (primary process). Smeltzer (1966) compared verbal associations and visual imagery such as a response to stimulus words pertaining to sex, hostility and family relationships, and he reported that the imagery was characterized by significantly more primary process, more

blatant drive representation and less successful defenses against the drives. The significantly greater frequency of GSRs which was reported for the imagery condition was ascribed to these characteristics, all of which imply a potential for the arousal of anxiety.

Problem

One obvious variable influencing visual imagery which needs to be investigated is the degree of repression. The role of repression in regard to behavior is so well established in psychoanalytic literature and clinical lore that its significance does not need to be documented. This paper was designed to study the effect of repression upon visual imagery. The relationship between repression and visual imagery can be investigated in terms of the number of symbolic representations of unconscious drives, indications of successful or unsuccessful defenses against these drives and the consequent signs of anxiety aroused when good repressors are compared with poor repressors while participating in the visual imagery procedure.

Hypotheses

The hypotheses to be tested were:

- 1) Good repressors show fewer signs of primary process than poor repressors;

- 2) Good repressors report images representing defense more frequently than poor repressors;
- 3) Good repressors experience less anxiety than poor repressors.

Subjects

One hundred male students taking an introductory course in psychology were selected by means of the Byrne (1963) version of the Altrocchi (1960) questionnaire, for measuring degree of repression. Ten subjects from each extreme of the continuum were selected with scores ranging from 72 to 88 for sensitizers (poor repressors) and from 9 to 22 for good repressors. The final selection resulted in one group of good repressors ($N = 12$) and one group of poor repressors (sensitizers $N = 10$). These 22 subjects were later independently checked for their repressing tendencies by using a projective method (Reyher, 1962) which resulted in a redistribution of the subjects into 11 good repressors and 11 poor repressors (sensitizers).

Equipment and experimental setting

A model #5 Grass polygraph was used with electrodes manufactured by the Yellow Springs Equipment Company. The subject and experimenter were seated in a small sound-proofed, windowless room. The subject was facing away from the experimenter and the polygraph equipment, and was seated in a reclining chair.

The Reyher (Reyher and Varble, 1962) system for indexing each subjects response to or denial of the pull of the various projective cards was the instrument used for scoring a person's degree of repression (R_p).

1. The first part of the document is a list of the names of the persons who have been named in the proceedings.

The projective cards used were developed by Reyher and Varble (1962) and Reyher, Burns, and Castor (1966) and consisted of the following:

Sexual-oedipal: a small boy holds his genital area as he stands in the entrance of a bedroom observing two adults in suggestive embrace (see Appendix A);

Hostility: two adults are shown at the bottom of a staircase with the woman apparently resisting the man's hostile attack (see Appendix B).

Procedure

The Byrne repressor-sensitizer scale (1963) was given by psychology graduate assistants to their students with the following instructions (Weinstein, 1966):

You are participating in a survey that is being conducted by some members of the psychology department. We would like your cooperation in helping us to develop this questionnaire so that it may be of some usefulness in the years to come....

The subjects that qualified (see above, Subjects) were later contacted by telephone and asked to come in and participate in another phase of the research, in which they were seen separately in a session that lasted for about one hour.

While the electrodes were being attached to the subject (palmar surface of the left index and middle fingers) he was told to lie back in the reclining chair and to close his eyes. At this time he was asked to report what he saw in his mind's eye.

The experimenter maintained his silence except in the case of a silence of 2 minutes or more in which case he would say, "What is happening now?".

After 30 minutes of imagery the subject was presented with the projective cards for the purpose of developing a more clinically derived index of the degree of repression. These were presented as follows:

You will notice a pile of cards on the table in front of you, these cards are face down. Please turn over the top card and tell a story about the picture - What is going on, what led up to this scene, how it turns out (standard T.A.T. instructions). As soon as you have finished please proceed to the next card in a like manner and so on until you have gone through the cards.

After the subject completed the set of cards the experimenter took the same cards, returned them to the table in front of the subject (in the same order of presentation) again face down and asked the subject to repeat the previous performance, making up different stories. This procedure was followed three times.

If at the completion of these stories a theme appropriate to each card (sexual-oedipal, hostility) had not emerged in at least one of the stories for each card, the subject was told the following: (prodded fantasy)

Some people tell stories about sex to this card, could you make up a story like that now?
 Some people tell stories about the boy resenting the presence of his father, and wanting to get into bed with his mother himself. Could you make up a story like that now?
 Some people tell stories about anger or being angry to this card, could you make up a story like that now?

If the stories were in line with the "pull" of the cards, the subject was given the following instructions at the end of his story telling. Reyher and Varble, 1962 (ego syntonic versus ego alien fantasies):

When people make up stories about these cards they often are talking about themselves, could this be true for you for any or all of the stories?

The order in which the cards were presented were counterbalanced for each subject.

Measures and scoring

The GSR was the measure of anxiety used. To arrive at a criterion measure for scorable GSRs the following method was used. During the last 20 minutes of the 30 minute visual imagery period the three highest GSRs were recorded and their sum divided by three to get an average which in turn was divided by four. The resulting number was used to determine a scorable GSR: All GSRs of that magnitude or greater were counted during visual imagery and during the administration of the sexual-oedipal, and hostility projective cards.

To determine the number of symbolic representations (derivatives) of unconscious drives (primary process) and the blatancy of these derivatives, the Pine manual (1960) for scoring verbally reported content of visual imagery was used. Only aggressive and sexual themes were scored and these were not kept separate. Two points were scored for

each level I primary process derivative (direct unsocialized drive expression) and one point score for each level II primary process derivative (direct socialized drive expression). These were totalled to arrive at each subject's primary process score. Two graduate students in clinical psychology acted as the judges.

The Reyher (Reyher and Varble, 1962) method of indexing (Rp) a person's degree of repression by their response to the "pull" of the projective cards with the hostility theme and the sexual-oedipal themes (scored separately) was used by two graduate students in clinical psychology. These two "judges" independently scored each of the stories for the presence of sexual and/or oedipal and/or hostile fantasies. Each subject's stories were given a plus 1 if the relevant content (PF) was manifestly present, a zero if not. This part of the Rp score contributed from 0 to 9 points toward the total repression index of the subject. If no relevant fantasies were produced in an area but a prodded fantasy (PF) (see Procedure section) was elicited then a score of .5 was awarded for the area(s) (sexual-oedipal, hostile) instead of a 0 score. The final contribution toward the repression index score was secured through the ego syntonic-ego alien questioning (refer to Procedure section). If the subject accepted any of the stories wholeheartedly (AF) as his own (applying to himself) he received a score of 4 for each such ego syntonic story. For each story he accepted as ego syntonic in a dubious or ambivalent manner

(AF') he was awarded 3 points, thus a maximum contribution to the score from this part would be 36 points (for each story he denied as applying to himself he was given a 0 score). In symbolic form the Repression Index is:

$$R_p = RF + .5(PF) + 4(AF) + 3(AF')$$

The range of scores for the index could theoretically have been 0 to 45, in actuality they ranged from 2 through 13. High scores represented little repression, i.e., poor repressors (sensitizers) of the impulses investigated. Low scores indicated more repression (good repressors). The subject's R_p for the sexual theme, the oedipal theme, and the hostility theme were all combined to obtain a total repression index score (R_p).

For example a typical record could be rated as follows:

Subject gave 2 spontaneous stories of hostility to the hostility card	= 2 x 1 = 2RF
He gave 3 spontaneous stories of sex to sexual-oedipal card	= 3 x 1 = 3RF
No spontaneous stories appropriate to the pull of the oedipal theme but one was elicited by prodding	= 1 x .5 = .5PF
During the determination of ego alien or ego syntonic he gave unequivocal agreement to 1 hostility story only	= 1 x 4 = 4AF
He grudgingly accepted one sexual story as ego syntonic	= 1 x 3 = 3AF'
He denied any acceptance of the prodded oedipal theme as pertaining in any way to himself	= 1 x 0 = 0

Thus his R_p score would be:

$$R_p = 2 + 3 + .5 + 4 + 3 = 12.5$$

See appendices for all R_p scores of the experimental group. Appendix C - Breakdown of R_p scores and comparison with S-R scores.

Scorer reliability

Using the Pine system for scoring primary process, the two judges agreed 86% of the time which is more than adequate for research purposes. The mean score was used in cases of disagreement between the judges.

Two judges rated the index of repression for each subject by the projective method (see Procedure section). The Kendall tau (with ties) method was used to calculate interjudge reliability which was .896, .871, 1.0 and .836 for sexuality repression scores, hostility repression scores, oedipal repression scores, combined (sex, hostility and oedipal repression score) respectively.

Identifying information was deleted from the protocols which were randomly presented to the judges for scoring.

RESULTS

Hypothesis I:

The subjects were rank ordered on the basis of the number of primary process derivatives weighted for drive level (see Measures and Scoring section) each subject reported during visual imagery. The Mann-Whitney U test (corrected for ties) did not show a significant difference between repressors and sensitizers for the Byrne S-R scale.

The subjects were reevaluated and designated as good repressors (repressors) or poor repressors (sensitizers) in accordance with the projective method of repression. This resulted in a significant difference (.01 level) in primary process derivatives in the predicted direction between the two groups. That is, good repressors (repressors) showed fewer signs of primary process than did poor repressors (sensitizers). Hypothesis I was supported.

Hypothesis II:

The number of geometric patterns reported by each subject was used to rank order the subjects. The Mann-Whitney U test (corrected for ties) comparing the two groups (as designated by the Byrne S-R scale) during visual imagery, was not significant.

A comparable analysis was done with the projective scale and again, no statistically significant differences were found in the number of geometric patterns reported by the two groups. Hypothesis II was not supported.

Hypothesis III:

Anxiety was quantified by totaling the number of scorable GSRs obtained by each subject (as described under Measures and Scoring section). The subjects were then rank ordered and each was then identified as a Repressor (good repressor) or as a Sensitizer (poor repressor) depending how he had been designated by the Byrne S-R scale. Using the Mann-Whitney U test (corrected for ties) no significant differences were found between the two groups during the visual imagery period or during the period of story telling to the projective cards.

The subjects were reevaluated in accordance with the projective index of repression and no significant differences between the two groups was found for either experimental conditions when analyzed by means of the Mann-Whitney U test (corrected for ties). Hypothesis III was not supported.

Other findings

A more exhaustive analysis of the data was undertaken because the relationships among all of the variables were of intrinsic interest. Therefore, all possible combinations of variables were analyzed by means of a correlation matrix obtained by the Spearman Rho method (Table 1). It is of interest to note that both the Byrne and the Reyher groups of good repressors (repressors) and poor repressors (sensitizers) showed significant differences in terms of

primary process in the correlation matrix. Thus both supported Hypothesis I.

As would be expected, primary process phenomena was significantly correlated with GSR, during projective stories (.01 level).

The GSR during projective stories was of interest not only as it made sense with the primary process variable as already noted but because there was a significant negative relationship to geometric patterns. This was to be expected since we have often these forms in psychotherapy with free imagery as a defense against intrusion of primary process.

The significant correlation between GSR during projective stories and during visual imagery periods is in a sense a reliability measure between two stressful situations.

TABLE 1
Spearman Rho Correlation Matrix of Ranks
(corrected for ties)

	Byrne S-R	Projective Index	Primary Process	Geometric Patterns	GSR Imagery	GSR Story
Byrne S-R		.17	.38*	.01	.24	.08
Projective Index			.45*	.12	-.06	.29
Primary Process				-.13	.33	.48*
Geometric Patterns					-.24	-.39*
GSR Imagery						.61**
GSR Story						

*Significant beyond .05 level.

**Significant beyond .01 level.

DISCUSSION

A redistribution of the Byrne sensitizers and repressors into poor repressors and good repressors by means of the Reyher index of repression resulted in the support of one of the hypotheses, despite the fact that the original population was not dichotomized according to the Reyher instrument. Although the index of repression had a possible spread of zero to fifty-four there was only an actual spread of two to thirteen. This would seem to indicate either an overloading of the mid-range or the involvement of only the repression end of the continuum.

The meaningful relationships that were found between the GSR during the projective stories and all the other variables in the correlation matrix should provide an interesting and possibly fruitful basis for further study when used in conjunction with the projective instrument. It may prove to be a needed refinement that would make possible the separation of suppressors from repressors, that is, a "lie" detector test for repression.

The most important finding in the matrix was that primary process entered into so many meaningful relationships and significant correlations with the other variables. It seems that repression is not response-producing itself, but regulates primary process which is a powerful response-producing process.

When the GSR for the projective card was broken down into its component parts of sex and aggression, it was found

that the projective repression index did have a statistically significant (.05 level) correlation with sex but not with aggression. This would seem to indicate that the repression is area specific. That is, one who is a good repressor in the sexual area may not also be a good repressor in the aggressive area. This possibility should be investigated in a more detailed study where the areas of repression are investigated separately.

Appendix C reveals that a crossover or change in classification on the repressing-sensitizing dimension occurred for nine of the twenty-two subjects when the method of estimating this attribute was changed from the S-R self report Byrne scale to the Rp projective method.

That is, five subjects from the extreme repressing (repressors) end of the S-R scale were reevaluated as being at the sensitizing (poor repressors) end when measured by the Rp method. From the extreme sensitizing (sensitizers) end of the S-R scale four subjects were reclassified as repressors (good repressors) by the Rp method.

It would appear that something different is being measured by the two methods and further research seems warranted.

The most important finding of this study has been the realization that primary process is directly representative of the blatancy of drive expression and as such is a quantifiable correlate of repression. This was not our original view of primary process (vis a symbolic

representation of unconscious drives) and this was initially viewed as a dependent variable but has as a result of this experiment given evidence of being an independent variable. When viewed in this light more of our hypotheses are supported, i.e., the degree of repression as represented by primary process is significantly correlated with both measures (Hypothesis I) of the repression dimension (S-R scale and Rp method). Furthermore it is significantly correlated with GSR activity (Hypothesis III) during the projective stories and barely misses significance with GSR during visual imagery. It is in the correct direction for Hypothesis II concerning defenses.

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Appendix A



Appendix B



Appendix C

Breakdown of Rp Scores and Comparison With S-R Score

Byrne Proj	S-R	Ep	1(RF)	+	.5(PF)	+	4(AF)	+	3(AF')	Changes	in	Subj. #
Score	Score									Class		
5	5	=	5	+	0	+	0	+	0			9
9	6	=	6	+	0	+	0	+	0	R- PR		16
13	11	=	5	+	0	+	0	+	6	R- PR		8
14	3	=	3	+	0	+	0	+	0			12
14	4.5	=	4	+	.5	+	0	+	0			7
16	4	=	4	+	0	+	0	+	0			2
16	4	=	4	+	0	+	0	+	0			17
16	8	=	5	+	0	+	0	+	3	R- PR		19
17	4	=	4	+	0	+	0	+	0			10
17	10	=	6	+	0	+	4	+	0	R- PR		15
24	5	=	5	+	0	+	0	+	0			20
24	6	=	6	+	0	+	0	+	0	R- PR		21

Of the 12 above Repressors (R) per Byrne scale, 5 became poor repressors (PR) per projective method.

88	5.5	=	5	+	.5	+	0	+	0		5
82	7	=	3	+	0	+	4	+	0		4
79	5	=	5	+	0	+	0	+	0	S- GR	1
78	5	=	5	+	0	+	0	+	0	S- GR	18
75	6	=	6	+	0	+	0	+	0		3
73	13	=	5	+	0	+	8	+	0		11
72	7	=	3	+	0	+	4	+	0		14
72	11	=	5	+	0	+	0	+	6		22
70	2	=	2	+	0	+	0	+	0	S- GR	6
70	3	=	3	+	0	+	0	+	0	S- GR	13

Of the 10 above Sensitizers (S) per Byrne scale, 4 became good repressors (GR) per projective method.

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