

SEX DIFFERENCES IN THE DIFFERENTIAL RECALL OF  
TABOO AND NEUTRAL WORDS\*<sup>1</sup>

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A. INTRODUCTION

Attempts have been made to demonstrate Freudian "repression" by measuring the relative retention of pleasant and unpleasant words. If fewer unpleasant than pleasant words are recalled, repression is said to be defined (8, p. 67). Such "repression of recall" experiments were prevalent in the 1930s and 1940s: *viz.*, Meltzer (2, pp. 673-674), Rosenzweig and Mason (2, pp. 674-675), Rosenzweig (4), and Shaw and Spooner (5).

More recently, the protective function of repression has been emphasized, as in the "perceptual defense" experiments, the first of which was by McGinnies in 1949 (2, p. 714). Sexually taboo words were used by McGinnies as the equivalent of the "unpleasant" words that had been the experimental condition in the earlier research, while neutral words were used as his control. Unfortunately, the interpretation of positive results in experiments on perceptual defense has proved to be clouded, due to possible confounding with such other factors as word frequency, set, and response suppression (2, pp. 712-726).

The present experiment combines the older research technique of testing for recall with the modern contribution of using a set of "taboo" words as the experimental condition and a set of neutral words as the control condition; further, male subjects and female subjects were to be compared, since sexually taboo words seem to be more threatening to females than to males (1, 3). It was hypothesized that neutral words would be better recalled than taboo words, but that differential would be more pronounced for female than for male subjects.

B. METHOD

1. *Subjects*

Thirty-four male and 33 female subjects were chosen from the American International College summer-school population. No matching procedure was

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used other than equal representation of the sexes. The mean age of the males was 20.47 with the oldest subject being 35 years and the youngest being 17 years of age. The mean age of the females was 20.03 years with the oldest female reporting 27 and the youngest 17 years of age. The overall mean age of the sample, males and females combined, was 20.25 years of age.

### 2. Apparatus

Twenty 3- by 4-inch glass-enclosed slides were utilized. A tachistoscope was set up to present the stimulus words at a standard one-second flash. A blackboard was used to screen the subject from the experimenter and the words were flashed on a white bulletin board. Ten neutral and 10 sexually taboo words were selected from the list compiled by Thorndike and Lorge (7) (see Table 1).

TABLE 1  
WORDS UTILIZED IN ORDER OF PRESENTATION  
(Numbers correspond to graph code)

1 complete	11 logical
2 helpful	12 vagina
3 douche	13 masturbation
4 sperm	14 wealthy
5 religion	15 economic
6 penis	16 homosexual
7 intercourse	17 erection
8 graceful	18 friendly
9 research	19 pervert
10 analysis	20 prostitute

### 3. Procedure

Both male and female groups were exposed to the same experimental conditions. Each subject was tested individually. The subjects were seated beside the portable blackboard that screened their view of the slides and projector. They were told what they were required to do: i.e., "You are going to be shown a list of words. Study each word carefully and at the end of the presentation of the words I would like you to repeat as many of the words that you can remember." The words were printed on 3- by 4-inch Radio-Mat slide sheets and presented tachistoscopically for a duration of one second. The full test session took approximately four minutes. All the subjects were tested within a continuous six-hour period so as to prevent any confounding due to the spread of information among the campus populace.

### C. RESULTS

Two  $2 \times 10$  chi squares (see Tables 2 and 3) were done: one each on the neutral and the sexually taboo recall frequencies for individual words of males and females. The null hypothesis was accepted in both cases indicating that

TABLE 2  
CHI SQUARE\* TEST OF MALE-FEMALE DIFFERENCES IN RECALL SCORES ON EACH OF THE 10 NEUTRAL WORDS

Cell frequencies	Word code**										Total
	10	9	8	14	11	2	18	1	5	15	
Male fo***	19	14	16	12	10	23	18	22	18	15	167
Male fe†	17.24	16.34	15.43	13.16	11.35	22.24	18.15	21.33	16.79	14.98	
Female fo	19	22	18	17	15	26	22	25	19	18	201
Female fe	20.76	19.66	18.57	15.84	13.65	26.76	21.85	25.67	20.21	18.02	
Total	38	36	34	29	25	49	40	47	37	33	368

\*  $X^2_{.05} = 16.92$ ,  $df = 9$ . Obtained  $X^2 = 1.72$  (not significant).

\*\* See Table 1.

\*\*\* fo = frequency observed, each frequency observed in the collection of data.

† fe = frequency expected, that frequency one would expect if every observed frequency equaled every other observed frequency.

TABLE 3  
CHI SQUARE\* TEST OF MALE-FEMALE DIFFERENCES IN RECALL SCORES ON EACH OF THE 10 SEXUALLY TABOO WORDS

Cell frequencies	Word code**										Total
	20	4	16	19	3	7	17	12	6	13	
Male fo***	17	15	22	25	25	24	25	28	29	23	233
Male fe†	16.11	16.68	23.01	27.61	23.01	27.61	21.86	31.07	25.31	20.71	
Female fo	11	14	18	23	15	24	13	26	15	13	172
Female fe	11.89	12.32	16.99	20.39	16.99	20.39	16.14	22.93	18.69	15.29	
Total	28	29	40	48	40	48	38	54	44	36	405

\*  $X^2_{.05} = 16.92$ ,  $df = 9$ . Obtained  $X^2 = 6.34$  (not significant).

\*\* See Table 1.

\*\*\* fo = frequency observed, each frequency observed in the collection of data.

† fe = frequency expected, that frequency one would expect if every observed frequency equaled every other observed frequency.

the order of presentation had no linear effect on recall. The frequencies of recall for all the words were about equal.

Figure 1 shows that the females consistently had higher recall scores than the males on nine of the 10 neutral words and the groups were tied on one word (analysis).

Figure 2 shows that the males consistently had higher recall scores than the females on nine of the 10 taboo words and the two groups were tied on one word (intercourse).

A Wilcoxon *T* test, done on all *Ss* on differences in recall between the sexually taboo and the neutral words, did not reveal a significant difference. For Wilcoxon *Ts* done *separately* on male *Ss* and female *Ss*, the results are different. Males recall significantly more sexually taboo words than neutral words, while females recall significantly more neutral words than sexually taboo words (see Table 4).

TABLE 4  
WILCOXON *T* TESTS ON DIFFERENCES IN RECALL BETWEEN WORD TYPES

Description	<i>N</i>	<i>T</i>	<i>M<sub>T</sub></i>	<i>SD<sub>T</sub></i>	<i>z</i>
All <i>Ss</i>	61	— 727.5	945.5	139.22	1.57*
Male <i>Ss</i>	32	— 38.0	264.0	53.48	4.15**
Female <i>Ss</i>	29	+ 109.0	217.5	46.25	2.35**

\* *p* = .06.  
\*\* *p* < .01.

A Mann-Whitney *U* test done on the difference between the male and female *Ss* in ability to recall *all* the words (taboo and neutral) was found not to be statistically significant. The male and female groups did not differ in ability to remember the words shown them.

For Mann-Whitney *Us* done separately on neutral words and on taboo words, the results are different. On neutral words, the female group outscored the males significantly. The male group, however, recalled significantly more taboo words than the females (see Table 5).

TABLE 5  
MANN-WHITNEY *U* TESTS CORRECTED FOR TIES  
(*N* = 67)

Description	<i>U</i>	$\frac{n_1 n_2}{2}$	<i>SD<sub>U</sub></i>	<i>z</i>
All words	654.5	561	78.08	1.20*
Neutral words	275.0	561	77.17	3.71**
Sexually taboo words	863.0	561	78.72	3.84**

\* *p* = .12.  
\*\* *p* < .01.

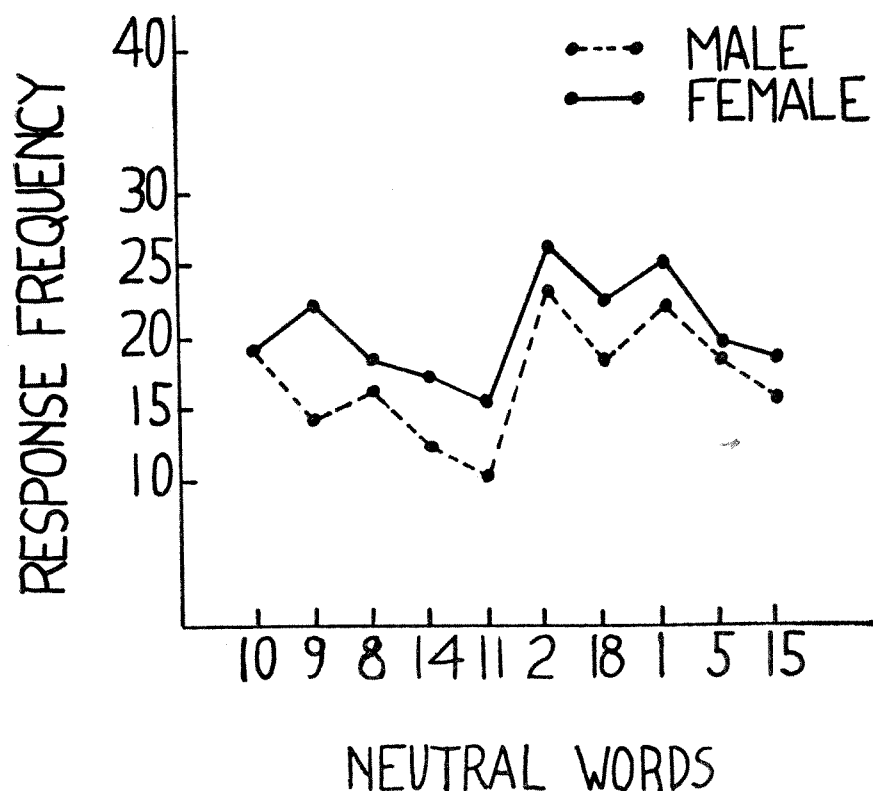


FIGURE 1  
MALE AND FEMALE SUBJECTS COMPARED ON RECALL SCORES  
FOR THE NEUTRAL WORDS

Note that females outscore males on nine of these 10 words. For word code, see Table 1.

#### D. DISCUSSION

Grosser and Laczek found that, for sexually taboo words, the utterance latencies of 14 male and 10 female *Ss* go up in all cases. In the present study, immediate recall tests on 34 males show that the scores are higher for sexually taboo than for neutral words in 28 cases (or 82.34 per cent of the male *Ss*). Recall scores for 33 females were found to be lower for sexually taboo than for neutral words in 18 cases (or 54.55 per cent of the female *Ss*). Reversals for males (i.e., males scoring higher for neutral words than for sexually taboo words) involved four cases (or only 11.76 per cent of the cases). Reversals for females (i.e., females scoring higher for sexually taboo

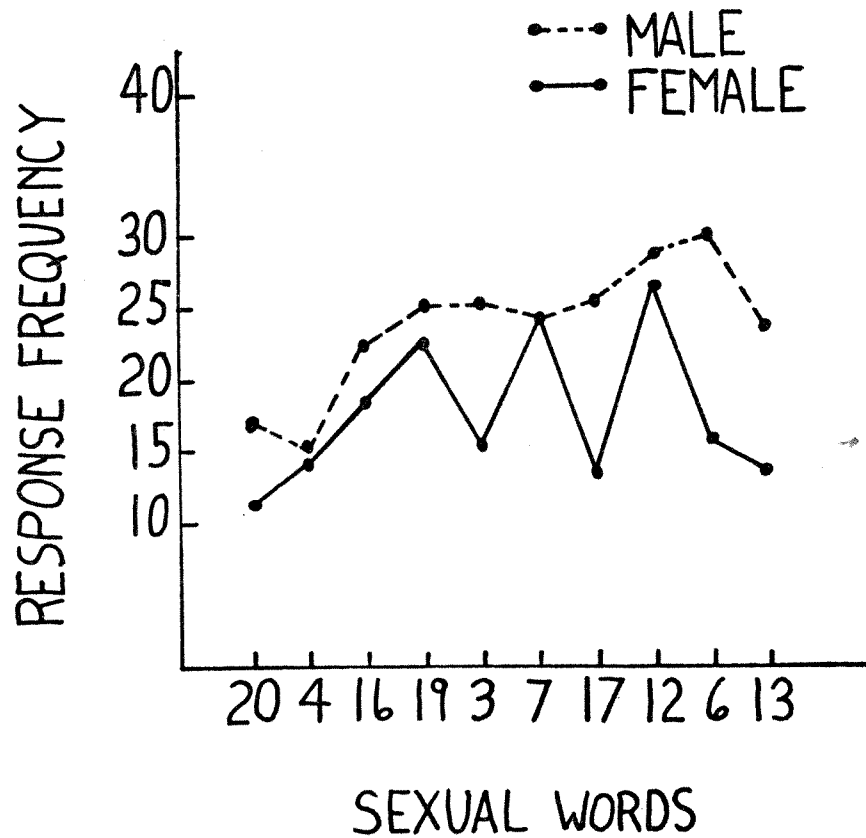


FIGURE 2  
 MALE AND FEMALE SUBJECTS COMPARED ON RECALL SCORES  
 FOR THE SEXUALLY TABOO WORDS

Note that males outscore females on nine of these 10 words. For word code, see Table 1.

words than for neutral words) involved 11 cases (or 33.33 per cent of the cases). Two males and four females recalled equal amounts of sexually taboo and of neutral words.

The two  $2 \times 10$  chi squares (done on the neutral and sexual words comparing the performance of males and females) were done to ascertain whether or not unidimensionality was reached for the two criterion lists: i.e., whether the sexually taboo words were interrelated on one factor and the neutral words on another factor. While this would be more thoroughly ascertained through a factor analysis than through the chi squares, indications are that two sep-