LENGTH OF DREAM REPORTS AS A FUNCTION OF POSITION IN A DREAM SERIES

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LENGTH OF DREAM REPORTS AS A FUNCTION OF POSITION IN A DREAM SERIES

by

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ABSTRACT

Length of dream reports as a function of position in a dream series

by Audrey Recht

The object of this study was to determine in what way the length of dream reports vary with their position in a dream series. Since it seems a priori that content varies directly with dream report length, then, the amount of content may vary with the position in the dream series. This is an important consideration with dream selection procedure for investigations of types and frequency of content in dreams.

It was hypothesized that the dream report length would, over group data, either decrease, as the result of defensive repression, or increase due to a learning effect, as the dream series progressed.

Dream reports in the form of a dream series were collected from 339 students (124 males and 215 females) as term paper assignments for a psychology course.

A word count was used to determine the dream report length, and the mean length at each position was calculated for males and females separately. Because of the possibility that those individuals who continued to certain positions were a homogeneous group with par-

ticular characteristics of their own, the male and female dream series were divided into subgroups and the mean length of dream reports was determined for each separate subgroup.

The females showed a trend to report more dreams. From the statistical procedure of rank correlation on the separate subgroups, results showed a trend to an increase in length of dream report as the dream series progressed.

Approved Irwin Kremen

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INTRODUCTION

Dreams have been and still are of great interest to man. Dreams play an important role in the work of the psychoanalysts, and the phenomenon of dreaming is now being subjected to empirical research. Calvin S. Hall (2,4) initiated studies using the dream series as a research tool. A dream series is a collection of recalled dreams of an individual over a period of time.

Within the last several years, Hall has been extending dream series studies attempting to categorize and to quantify the manifest content of the dream reports. The establishment of normative data of dreams necessitates content analysis and frequency counts of the manifest dream content. He developed an empirical classification system for the content analysis by listing content mentioned in a large sample of dream reports in dream series form and then by devising classes, such as settings and objects, and subclasses, such as buildings and furniture, for the content. Hall (3) first presented data from the analyses of dream reports in terms of percent of occurrence. In his more recent manuals (5), he presents rates per 1000 dreams for each of his subclasses of content and rates within each major

subclass. For example, in his classification of settings, Hall states that buildings were the setting at the rate of 406 times per 1000 dreams and that office buildings were the setting at the rate of 11 per 406 times. These rates were based on the analyses of 3032 dream narratives collected from male and female college students. This same procedure and presentation was followed with each rate.

However, concerning the sampling technique in selection of dream narratives, there are three major, related questions to consider. First, one must ask whether the length of the dream report varies systematically with its position in the dream series. Dream productivity may be greatest at the start of a dream series rather than at the middle or at the end, yielding the longer dream narratives at the beginning. Secondly, it seems a priori that content should vary directly with the length of the dream report. It is only reasonable to expect that the longer the dream report the more opportunity there is for more and varied content. The third consideration logically follows from the first two, that being whether the amount of content varies with the dream report's position in the dream series. If the majority of dream reports used for a frequency

count are the more productive dream reports, the possibility of bias, such that the longer dream reports contribute more material to the frequency counts, is introduced if one does not control for position in the series.

If this then is the case, that dream report length varies systematically with its position in the dream series, there is reason to be skeptical about Hall's base rate data for one cannot determine whether he conducted the counts with every available dream, with randomly selected dreams at different positions in the dream series, or with a control for dream reports of approximately equal length.

With respect to the question of dream report length varying with the position in the dream series, Kremen* reports the impressionistic observation that, in collecting a series of dream diaries, many students, after having started their dream diaries, stated that they no longer could recall their dreams. Due to increased attention to their dreams and attempts at interpretation (or misinterpretation), conflicts and/or socially unacceptable emotions may have been brought to the surface. It would then be necessary to utilize defensive measures and so

* personal communication

this phenomenon could be hypothesized as a consequence of defensive repression. If this is indeed the cause of the students' inability to remember their dreams, then, over group data, one would expect a decrease in length of dream reports as the dream series progresses.

On the other hand, it could be that as one becomes concerned with and is attentive to his dreams, recall would be greater. This raises the question as to whether a practice and learning effect applies to dream series collection. In this case, one would expect, over group data, an increase in length of the dream report as the dream series progresses.

The objective of this study is to determine, therefore, in what way length of dream reports vary as a function of position in a dream series collection.

PROCEDURE

Subjects

All students enrolled in an introductory psychology of personality course at Michigan State University over four terms, from September, 1961 through December, 1962, were required to undertake a term paper. These 1121 students had three options for their term paper topic; a fourth option was added for the third and fourth semesters. The first option was autobiographical in nature including such possibilities as discussion of one's family background or the evolution of one's values and opinions. The second option was the writing of one's private personality theory. The third was keeping a dream diary over a nine week period. The fourth was the construction of a fake dream diary. The specific instructions for the latter two assignments are presented in the Appendix. Of these 1121 students, 416 choose to do a dream diary.

Those dream series that contained less than ten dream reports were excluded, for so small a number seemed inadequate for obtaining a good perspective of the relationship of dream report length to position in the dream series. Of the collected 416 dream series a total of 339 (124 male and 215 female) dream series

contained at least ten or more dream reports. Table I (see page 17) presents a breakdown of the total number and according to semester of the number of dream series collected, the number and percent of the dream series containing less than ten dreams (and therefore not used), and the number and percent of dream series used in this study. Discussion of Table I will be reserved for the Result section (see page 11).

Method

The dependent variable in this study being dream report length, the words in each dream report were counted by use of the following seven point counting procedure:

> 1. When two or more dream reports are given for the same night enter (a) the total number of words combined for the two or more dreams and (b) the number of words for each dream, ie. 100 (45 and 55).

It was decided to regard two or more dream reports a night as one position in the series. It was possible that a subject would consider, upon awakening, one dream of two portions, as a change in setting, as two separate dreams. Thus it was decided to consider the entire night's dream productivity as being one position.

2. Begin counting the number of words at the point where the subject states "I dreamed..." and end the count where the subject states "I awoke." ("I dreamed" and "I awoke" are included in the count.)

Since most dream reports begin with "I dreamed" and end with "I awoke," this will be more or less a constant factor throughout.

3. Include in the word count such statements as "something else happened, but I can't remember it."

4. All statements preceding, included in, and following the dream report that identify people or places are to be counted as part of the dream report. Count the exact words used by the subject; do not rewrite.

5. Count as two words contractions, ie. didn't.

6. Count as one word: cities (Grand Rapids), numbers (one hundred and three), schools (MSU), holidays (New Year's), and time (four o'clock). All hyphenated words, ie. broken-hearted, are to be counted as one word. The words "Lake Superior" would be given a two word count.

7. Do not count any extra explanatory statements nor any associations that are used in addition to what is necessary for a statement of the dream.

This point allows subjective judgment to enter the counting procedure, and, therefore, it was decided to determine reliability of word count. An assistant counted the dream reports of thirteen dream series. Five dream reports from each of these thirteen dream series were selected at random (65 dream reports) and counted again by the writer. The product-moment correlation was .99976, indeed a high reliability.

After the number of words in each dream report of the 339 dream series was counted, with each of the four semesters, the dream series were combined for the males and for the females and a mean number of words for each position in the dream series was plotted. Each graph was viewed for any great deviations (ie. a plot extending sharply upward with others extending sharply downward) according to semester (especially important because of the variation of three or four options of term paper topics in procedure). No large deviations were observed, and the mean number of words was then calculated combining all the dream series of the four semesters into the two main groups of males and females.

It was noted that those few writing long dream diaries reported shorter dream reports than those

writing shorter dream diaries. A decrease toward the end then could be due to those few writing consistently shorter dream reports. Therefore because of this possibility that those who continued to certain positions were a homogeneous group with particular characteristics of their own contributing unduly to the graph, the dream series' of the male and those of the female were separated into subgroups at certain positions in terms of the number of subjects reporting a specific number of dreams.

Data Analysis

Rank correlations were made for each subgroup and t-tests of significance were made for each correlation coefficient in order to determine if there was any systematic relationship between dream report length and the dream's position in the dream series. For the rank correlations, the rank of one was assigned to the lowest mean length of dream reports and the ranking of position followed position number.

The length of dream reports from forty subjects selected at random from 108 (29 males and 79 females) possible subjects (with the exception that twenty had to be males and twenty had to be females) were compared (the males and females separately) over a span

of twenty positions. The method of allowances (6) and Friedman's two-way analysis of variance by ranks (8) were calculated in order to determine the significance, if any, of any differences in length of dream report from one position to any other position in the dream series.

RESULTS

In order to determine whether males or females wrote dream diaries more often, the following chi square test was performed:

Table A.

	Males	Females	Total
Number doing dream diaries	173	243	416
Number not doing dream diaries	379	326	705
Total	552	569	1121

$\chi^2 = 15.6594$, 1df, $p < .01$

It can then be concluded that females wrote dream diaries more often than males. A second chi square test was done to determine who reported fewer dreams of those who did dream diaries. From Table I it can be seen that a total of 77 dream series contained less than ten dream reports, and, of these 77, 49 male and 28 female dream series contained less than ten dream reports. The following chi square test was performed:

Table B.

	Males	Females	Total
Number with less than 10 reports	49	28	77
Number with more than 10 reports	124	215	339
Total	173	243	416

$\chi^2 = 18.9625$, 1 df, $p < .01$

It can then be concluded that females wrote significantly more dream diaries containing more than ten dream reports.

A further chi square analysis was performed to determine if the above finding held with those male and female subjects reporting thirty or more dreams to those reporting less than thirty dreams.

Table C.

	Males	Females	Total
Number with 30 or more dream reports	9	18	27
Number with less than 30 dream reports	115	197	312
Total	124	215	339

$\chi^2 = .14035$, 1 df, $p < .80$

The results are not significant in this analysis.

The male dream series extends to 47 positions, as can be seen in Figure I, with three-fourths of the males (N 93) extending to position 13, approximately one-half (N 58) to position 17, and about one-fourth (N 29) to position 20; less than 10 N extend beyond position 30. The female dream series extends to 50 positions, as can be seen in Figure II, with about three-fourths of the females (N 163) to position 15, one-half (N 107) to position 18, and one-fourth (N 54) to position 23; less than 10 N extend beyond position 34. There appears to be a trend for the females to report more dreams. This is in agreement with the above finding that females handed in a significantly greater number of dream series containing more than ten dream reports.

The male and female subgroups are represented by Table II and by Figures III through XV. The subgroups were determined by the number of subjects continuing to certain positions. Thus, for the males, 124 subjects went to position 10, 105 subjects to position 12, 58 subjects to position 17, and so on. The mean length of dream report for each position was determined for each separate subgroup. This means, for example, that for Figure IV, the mean length of dream reports was determined from those 105 subjects going

to position 12, while for Figure V, it was determined from those 58 subjects going to 17, and so on.

The results of the rank correlations between position number and shortest to longest mean dream report length on each subgroup and the t-tests of significance for each correlation coefficient are presented in Table III. The correlation coefficient for the male subgroup 1, that group that went to position 10, and that for the female subgroup 8, that group that went to position 15, are significant at the 1% level. The correlation coefficient for the male subgroup 6, that group that went to position 29, and that for the female subgroup 9, that group that went to position 18, are significant at the 5% level. For the females as a whole, there appears to be a trend (statistically significant for subgroups 8 and 9) for the length of dream reports (in terms of the mean number of words) to increase somewhat as the dream series progresses. For the males, there appears to be a trend (statistically significant for subgroup 1) for the length of dream reports to increase as the dream series progresses. However, it is to be noted that with each successive male subgroup, extending to more positions, this tendency progressively decreases until for subgroups 5 and 6 (statistically significant for subgroup

6) the situation is reversed--the tendency is now for the length of dream reports to decrease as the dream series progresses.

The results of the method of allowances and the Friedman two-way analysis of variance by ranks were not significant. It is then suggested that dream report length is independent of the position at which it occurs, that is, that short and long dream reports appear at different positions in the series.

From Figures III to XV there appears to be an oscillation phenomenon, that is if the number of words goes up on one dream, a tendency to go down is observed on the next, and vice versa. However, it seems that such an apparent oscillation will occur by chance given random sampling from a fixed distribution. To assess whether there is a real oscillation effect, one would have to derive the exact probabilities of oscillation by chance, and compare our empirical findings. This is somewhat complicated, and it does not seem likely to yield significance (Karen*).

The results show a trend for females to report more dreams, a trend for dream reports to increase in length as the dream series progresses (with the exception of the two male subgroups), and a trend for

* personal communication

dream report lengths to be independent of the particular positions at which they occur.

Table I. Breakdown of Dream Series Collected and Used

	Total Number Collected	Number with Less than 10 Reports	Number Used	Percent Not Used	Percent Used
Fall 1961					
Male	31	12	19	38.7	61.3
Female	29	2	27	6.9	93.1
Winter 1962					
Male	46	15	31	32.6	67.4
Female	66	7	59	10.6	89.4
Spring 1962					
Male	50	9	41	18.0	82.0
Female	77	9	68	11.7	88.3
Fall 1962					
Male	46	13	33	28.3	71.7
Female	71	10	61	14.1	85.9
Total	416	77	339	18.5	81.5
Male	173	49	124	28.3	71.7
Female	243	28	215	11.5	88.5

Table II. Male and Female Subgroups.

	Subgroup Number	Number of Positions	N
Male	1	10	124
	2	12	105
	3	17	51
	4	20	29
	5	24	17
	6	29	10
Female	7	10	215
	8	15	163
	9	18	107
	10	23	54
	11	27	29
	12	31	16
	13	33	11

Table III. Rank Correlation and t-Test Results for the Male and Female Subgroups.

	Subgroup Number	Correlation	t-Test
Male	1	.35758	4.21944**
	2	.11888	1.21258
	3	.09804	.73530
	4	.07369	.38319
	5	-.24435	-.95297
	6	-.65419	-2.42050*
Female	7	.12727	1.87087
	8	.24286	3.18147**
	9	.24871	2.61146*
	10	.08498	.61611
	11	.03175	.16510
	12	.15202	.57768
	13	.22995	.71285

*Significant at the 5% level.

**Significant at the 1% level.

Figure I. Male Dream Series (N = 124)

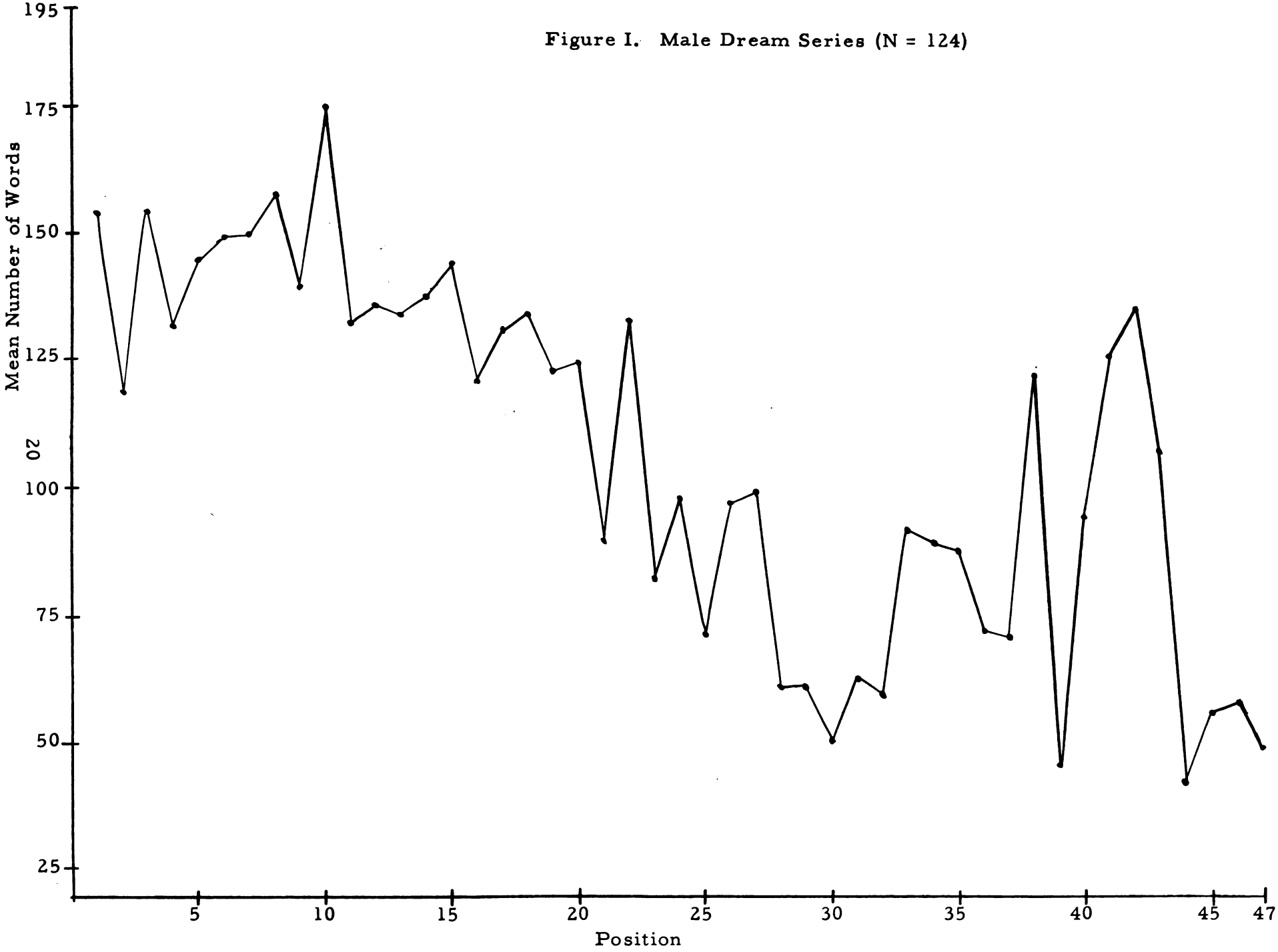


Figure II. Female Dream Series (N = 215)

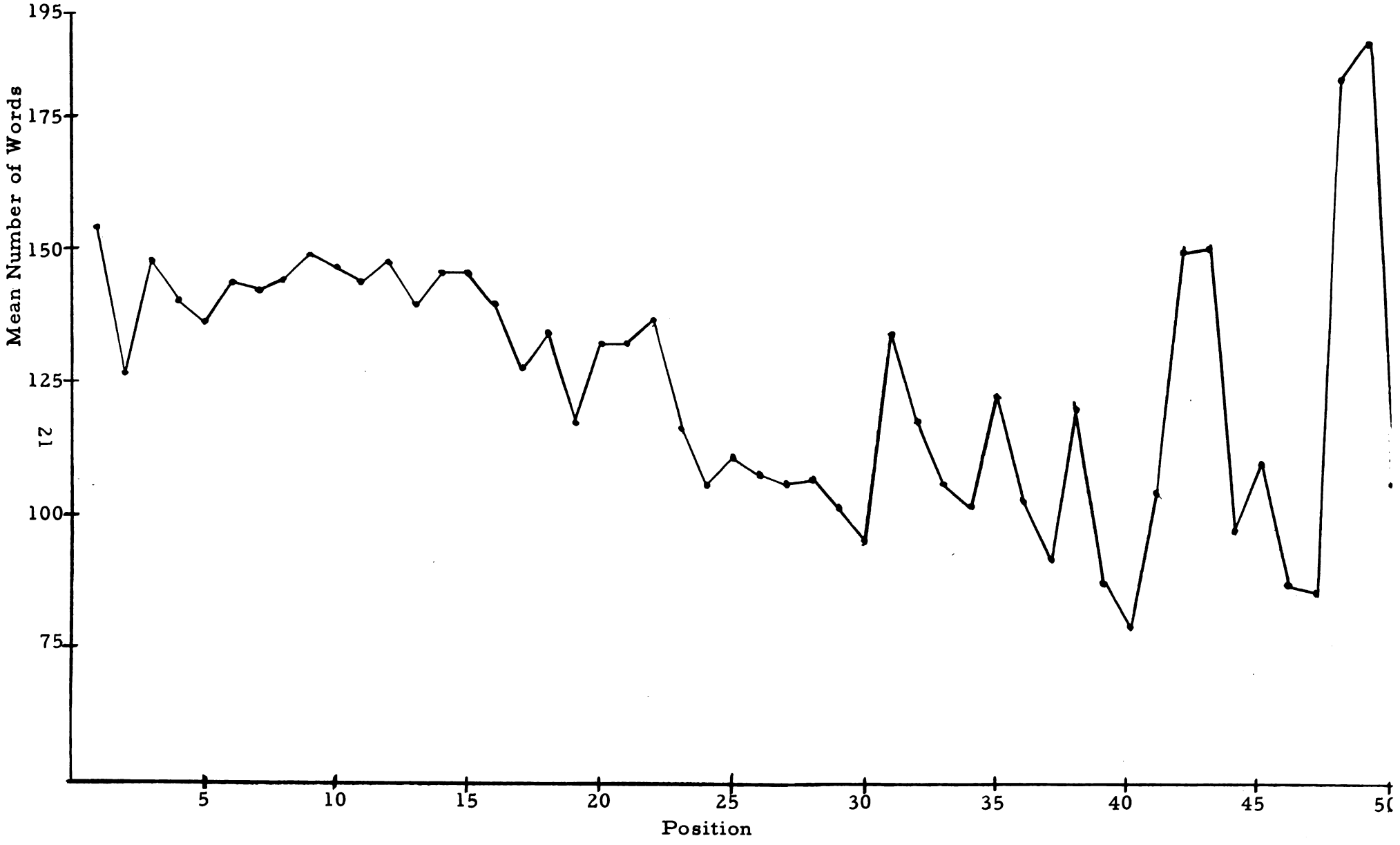


Figure III. Male Subgroup No. 1 (N = 124)

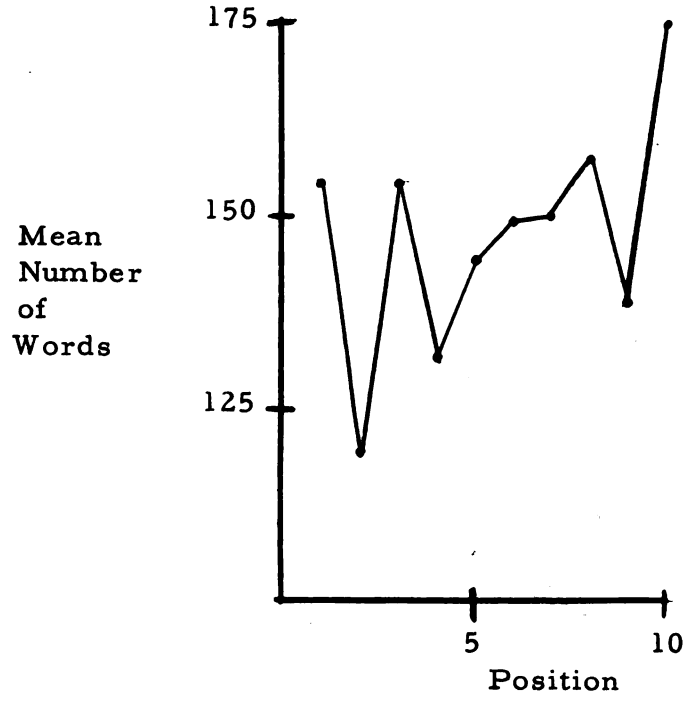


Figure IV. Male Subgroup No. 2 (N = 105)

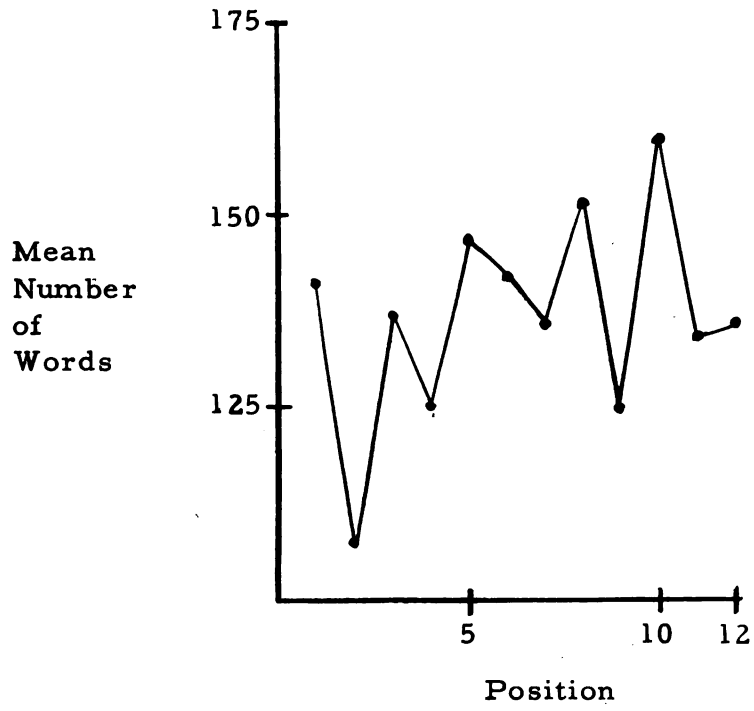


Figure V. Male Subgroup No. 3 (N = 58)

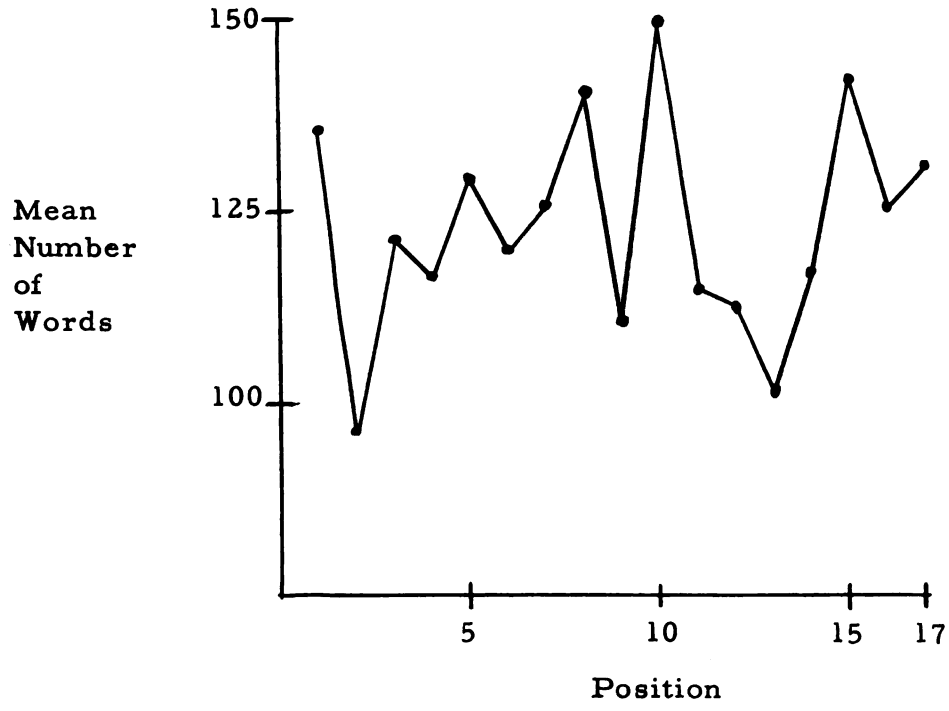


Figure VI. Male Subgroup No. 4 (N = 29)

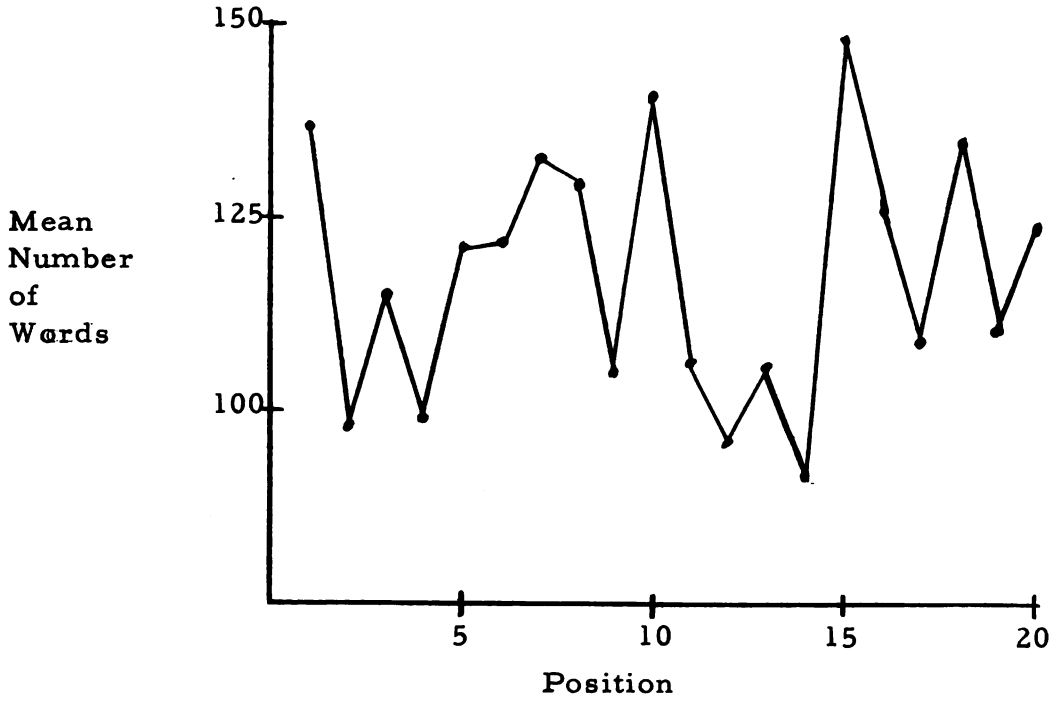
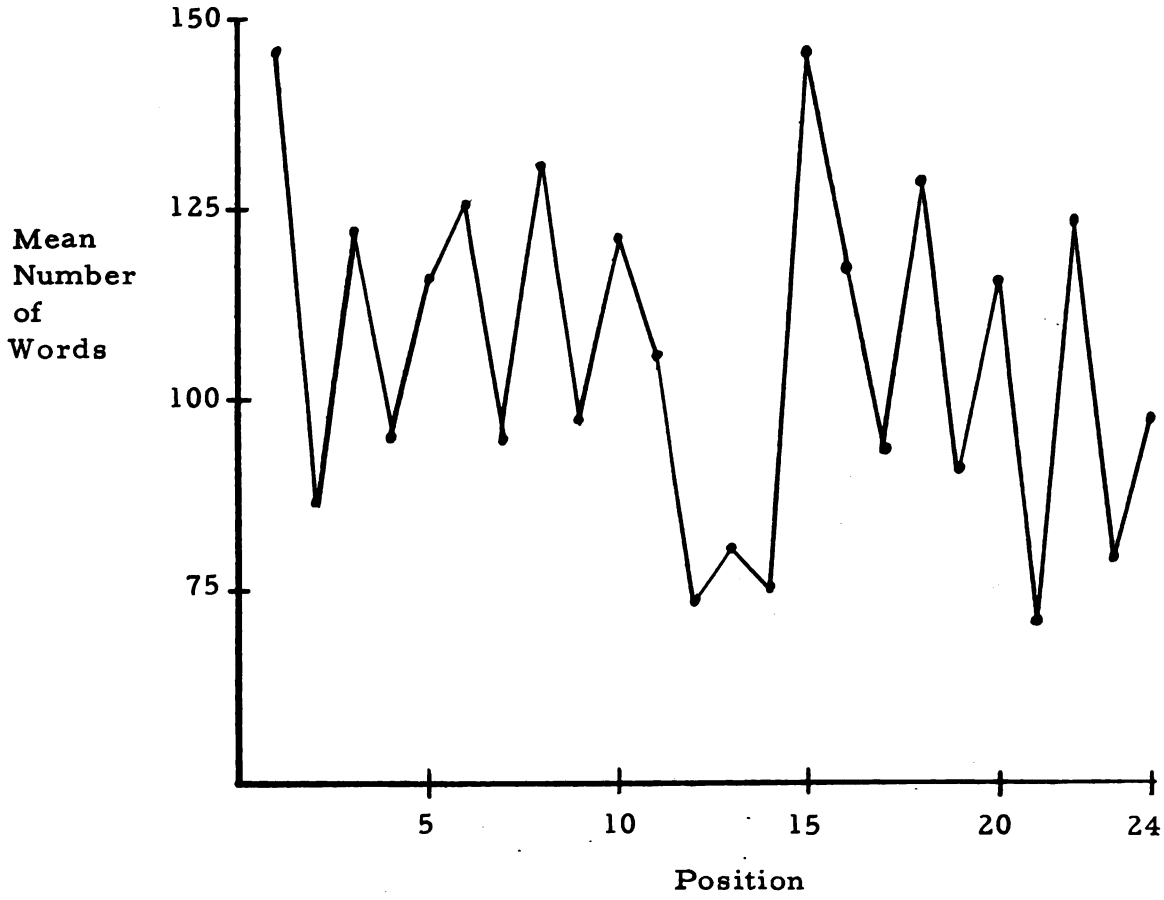


Figure VII. Male Subgroup No. 5 (N = 17)



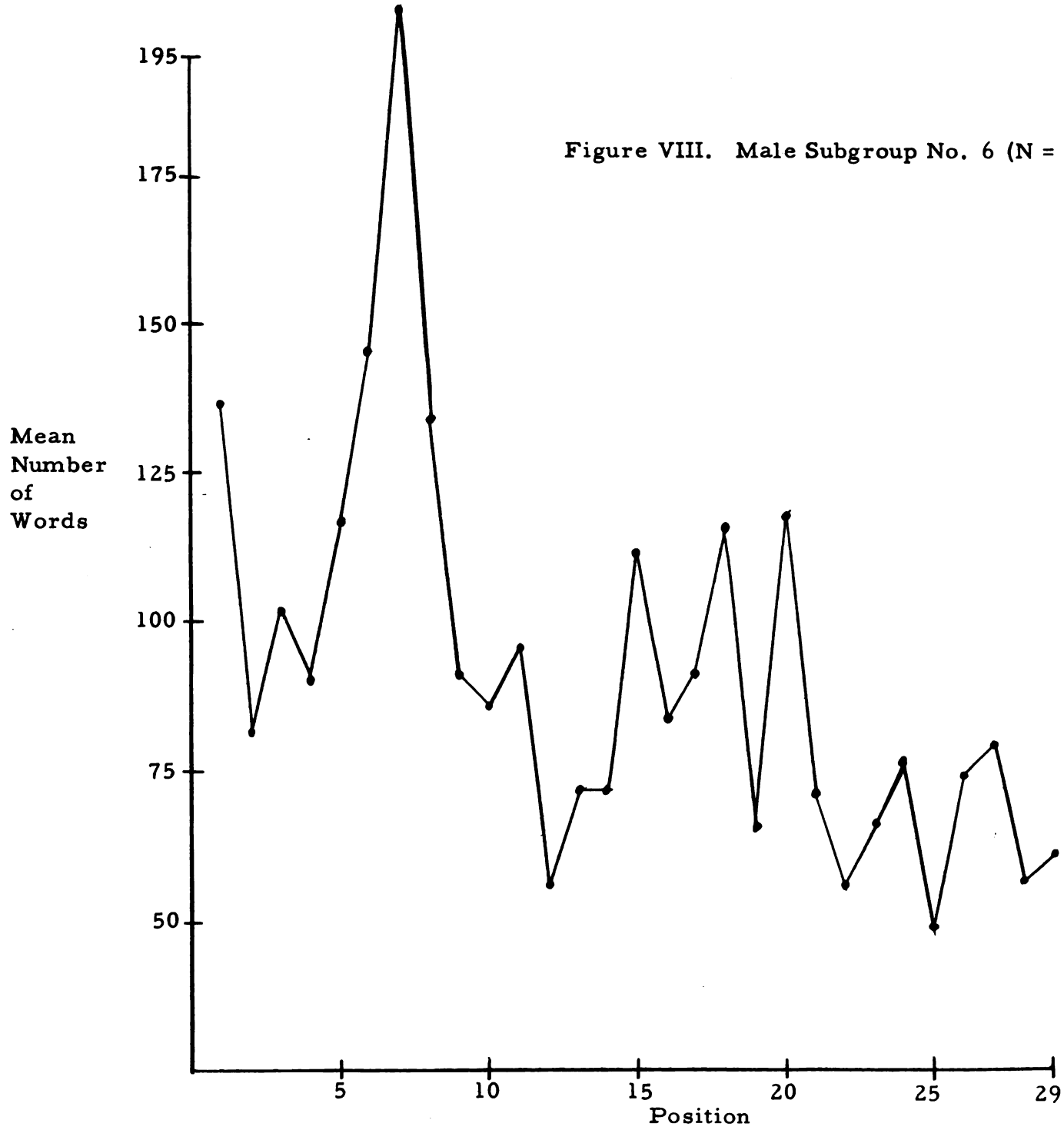


Figure VIII. Male Subgroup No. 6 (N = 10)

Figure IX. Female Subgroup No. 7 (N = 215)

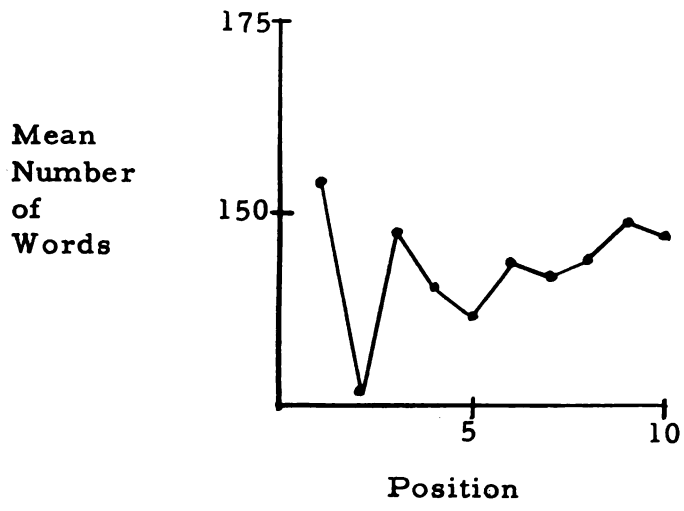


Figure X. Female Subgroup No. 8 (N = 163)

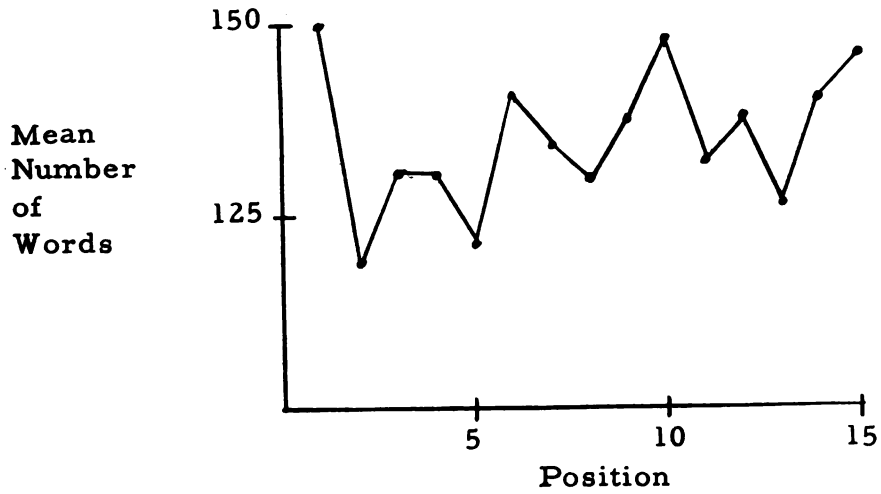


Figure XI. Female Subgroup No. 9 (N = 107)

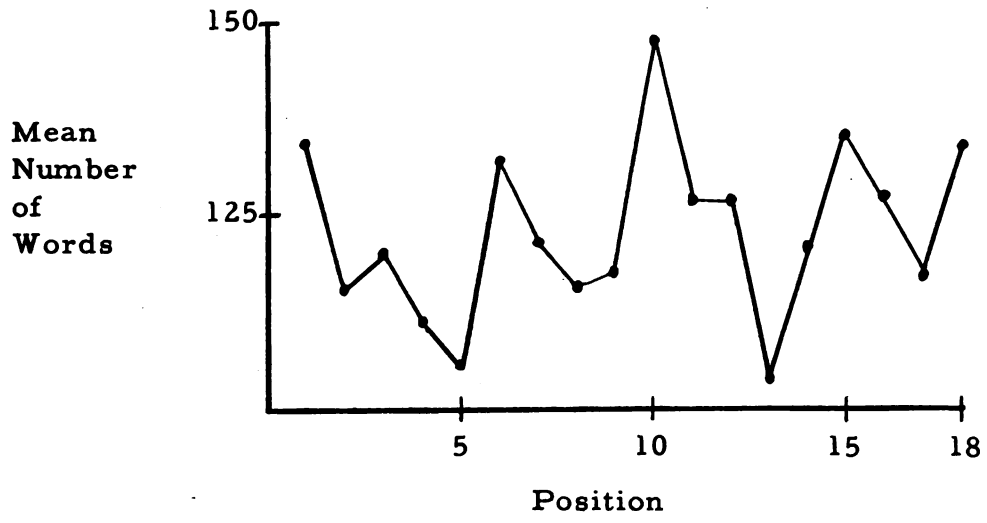


Figure XII. Female Subgroup No. 10 (N = 54)

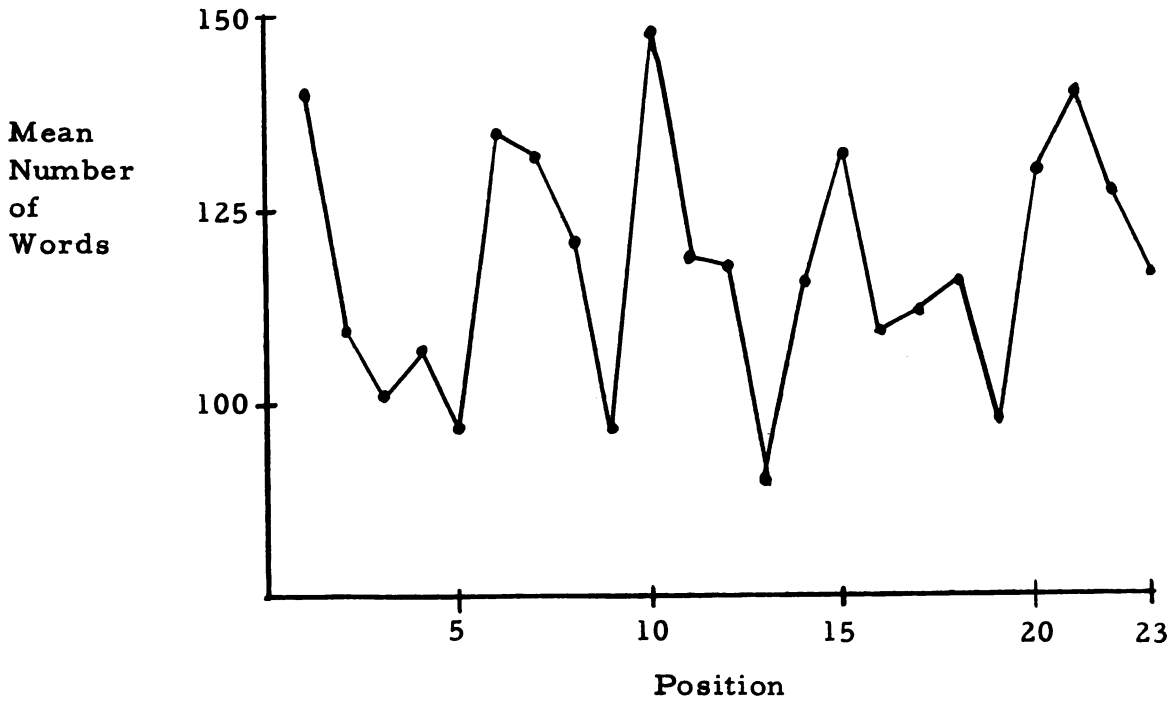


Figure XIII. Female Subgroup No. 11 (N = 29)

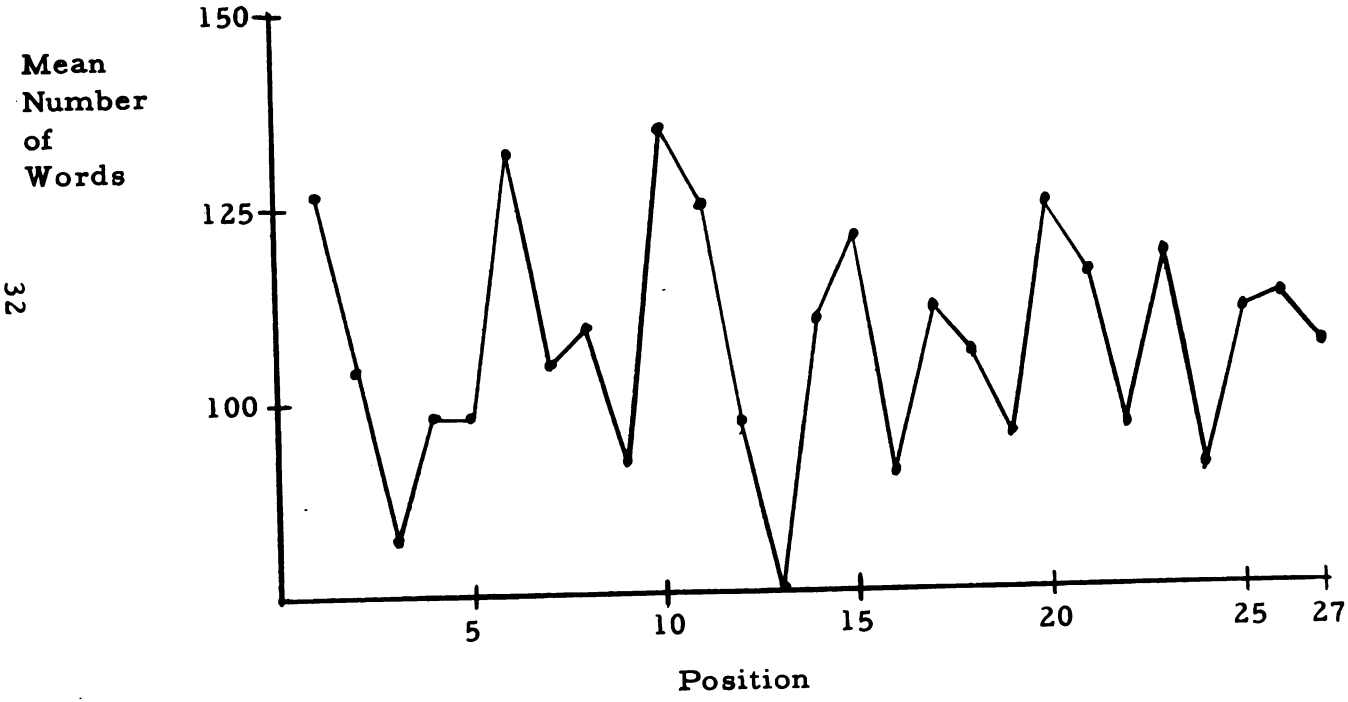


Figure XIV. Female Subgroup No. 12 (N = 16)

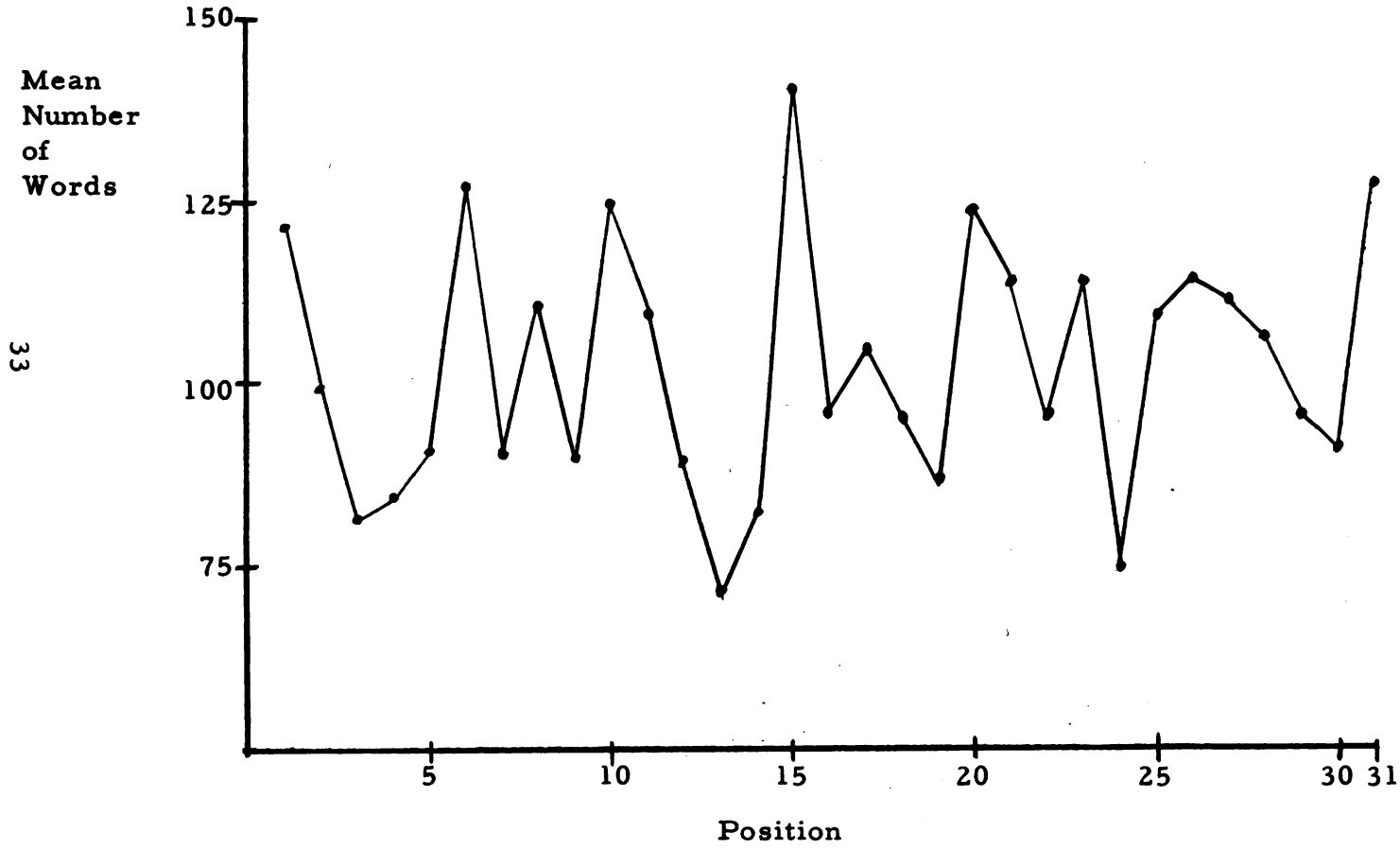
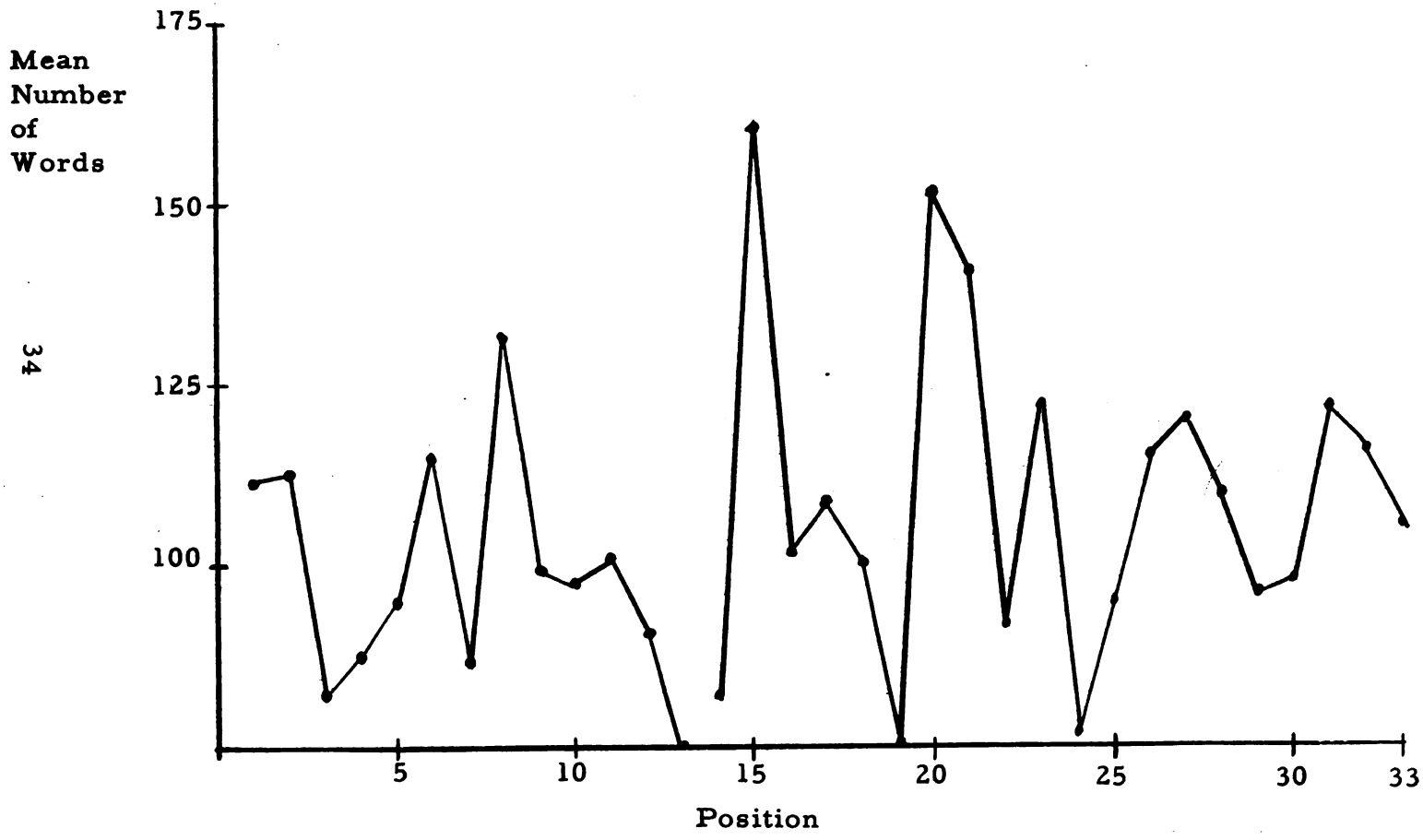


Figure XV. Female Subgroup No. 13 (N = 11)



DISCUSSION

Authenticity is given to the dreams by the following factors. First of all, each student had the opportunity to choose a topic. It was emphasized that those dreams must be real. The subjects were informed that code numbers, and not their names, would be used for identification purposes. It was felt that in this way the subjects would offer less resistance in relating all remembered elements of the dream--no matter how socially unacceptable they may be. For the Spring, 1962 and Fall, 1962 semesters, each student if, in choosing a dream topic, had the further choice of writing a fake or real dream series. Naturally, the real dream presented in the dream series is the recollection and not the complete reproduction of the actual dream.

Ramsey (7), in reporting a study by Manaceine, who found that the number of dream reports is less for those subjects with lower intellectual capacity, suggests that individuals with greater intellectual capacity would reflect this in the richness and variety of the content in their dream reports. Bearing this in mind, the range of intellectual functioning of the subjects in this present study was narrowed to approximately an above average range; this range control was achieved by the selection

of college students.

An important factor concerning the dream report is that of the limitations involved in translating the predominant visual imagery to written statements. In short, some subjects may be loquacious and give detailed descriptions whereas others may give only vague and general descriptions. This difficulty of transferring visual imagery to written statements, however, was present in all cases and would seem more or less a constant throughout an individual's dream reports.

In accordance with Ramsey's (7) statement that studies have demonstrated the trend for women to report a higher frequency of dreaming than men, the present study revealed a trend for females to report a higher frequency of dream reports than males. Any attempt to explain the reasons for this sex difference would be conjecture.

It can be stated in general that the tendency (not always statistically significant) was for the dream reports to increase in length as the dream series progressed. This finding lends support to the learning and practice hypothesis, and does not support a defensive repression hypothesis. The two exceptions to this finding (one only being statistically significant) are

from the male subgroups writing the longer dream series. These two exceptions may be explained, perhaps, by boredom or other outside interests and work.

SUMMARY

The object of this study was to determine in what way dream report length varies with its position in a dream series. It was hypothesized that the length would either increase, due to a learning effect, or decrease, as the result of defensive repression.

Dream reports in the form of a dream series were collected from 339 students (124 males and 215 females).

The females showed a trend to report more dreams, and there was a trend for an increase in length of dream report as the dream series progressed.

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APPENDIX

Dream Diary: All you need do for this assignment is keep a record of the dreams that you have or the dreams that you recall during this term. You will be expected each time you awaken from sleep, either during the night or in the morning, to make a reasonable effort to recall what you might have been dreaming beforehand.

Several observers have reported that one can more often recall a dream or more numerous details of a dream if, when, waking up, one lies perfectly still, not moving and keeping one's eyes closed. That would seem a good procedure to follow each time you awaken from sleep. Try first to recall whether you were or were not dreaming; and then, if it is your impression that you were dreaming, attempt to capture the details of the dream. When you have done this, write out your impressions as fully and completely as possible. It will help to keep pad and pencil close by your bed. In writing out a dream, do not modify the details, do not censor, do not struggle after prose perfection. Write out your impressions as they occur to you, whether the sequence be logical or not. You can transcribe these later in the day but here too do not modify your original script. Faulty syntax will not be met with scorn. Also, should you suddenly recall a dream some time during the day, record this as well.

Please number each dream sequentially and include the date of the night on which the dream occurred. Since this assignment requires little active work, everyone who undertakes it will be expected to write out all the dreams they remember, beginning this night and ending two nights before the due date.

Fake "Dream" Diary: This is a somewhat different term paper option. Those who choose this may simply fake a dream diary. In making up such a series of fictitious dreams, only one consideration is of importance: attempt to make your series resemble as nearly as possible what you think a "real" dream diary would contain--but do not consult any of your classmates who are actually doing a "real" dream diary. Construct your fake diary on your own, guiding yourself throughout by what you think happens in dreams.

In handing in your paper, follow the same format as that for a "real" dream diary, numbering each fake dream

report sequentially and including a date (preferably when written). It would be best by far not to leave this task for the last night: one cannot do a good job in one sitting. Do it gradually over the term. The expected number of fake dream reports per term paper will be announced later.