CHAPTER V.

RESULTS.

Differences between the performances of the sexes on the ITSC.

Differences in performances of children from the three socio-economic classes.

Differences in performances of children from the three socio-economic classes on vocabulary test.

Differences in performances of children from the three socio-economic classes on Draw-a-man test.

RESULTS.

The main interest of this research has been to study sex-role preference as determined by the IT Scale scores with other factors as socio-economic status of the child and his personal backgrounds.

The distribution of the subjects in the three socio - economic levels is as follows :-

Group I. 28 upper middle socio economic class (21 boys and 7 girls).

Group II. 96 Middle socio-economic class (57 boys and 39 girls).

Group III. 45 Lower middle socio-economic class (31 boys and 14 girls).

TABLE I.

The group scores, variability and difference on ITSC test for Boys & Girls.

	No.	Mean.	Range.	Median.	Mode.	S.D.	t.	C.R.
Boys.	109	48.34	2-83	52.0	71-80	23.793	5.69*	5.89
Girls.	60	29.38	0-74	28.5	31-40	17.627		

* Significant at 1 % level.

Table I shows, the group scores, variability and differences on IT Test for boys and girls. The ITSC mean of the

total score for 60 girls in the three socio-economic groups is 29.38 while the mean of the total score for 109 boys is 48.34.

The test value obtained by the test of significance for mean difference is 5.69 (significance beyond 1 percent level). Thus the hypothesis that there is no difference between boys and girls' sex role preferences among children of 3 to 6 years of age, is rejected (Table I). Null hypothesis 1.

The rejection of this hypothesis is further supported by several correlations as seen in Table II. The range of scores in Table I for boys and girls also show that boys are more varied as a group on masculinity than girls. This is seen by the range of the scores on IT Scale 2 to 83 being the range for boys, 0-74 being the range for the girls. The range in the scores of the group of boys and girls is further evident from the value of S.D. from the mean. This value is 23.79 for boys and 17.62 for girls. The critical ratio showing the possible scatter in the total group is 5.89 which is significant at 1 percent level.

As indicated by the mean values, boys are higher on masculinity than girls are on femininity.

Table II shows the correlations between the sex of the child and total subpart scores of the IT Scale pooled within three socio-economic levels.

TABLE II.

Correlations between the sex of the child and total subpart scores of the IT Scale pooled within 3 socio-economic levels.

Related variances.	Correlation.	Level of confidence.
Total IT Scale score x Sex.	0.38	Beyond .01
Score of subpart I x Sex.	0.25	" .02
Score of subpart II x Sex.	0.30	" .01
Score of subpart III x sex.	0.3425	" .01

The rejection of the hypothesis of no difference between the sample of boys and girls in their sex role preferences among children of 3 to 6 is further supported by the correlation value of 0.38 which was found to exist between the total ITSC related to sex. This being significant beyond .05 level. A correlation of .25 was found to exist between the subpart I of the ITSC related to sex which is significant beyond, .02 level.

For subpart II into sex, and subparts III into sex, a correlation of .30 (beyond .01 level of significance) and .34 (beyond .01 level of significance) were found respectively.

It can be seen from the table II that the correlations for sub part II into sex, and subpart III into sex are higher than the correlation of subpart I into sex.

The correlationsb between the sex of the subject and the subpart 1, 2 and 3 are not higher than the total correlations of the ITSC.

Thus the hypothesis that there is no relationship

between the three subparts of the ITSC and sex is rejected. (Reference to Null hypothesis No. 4).

TABLE III.

Correlations between subparts of IT Scale for boys and girls.

Sex.	Subparts.		
	I & II.	II & III.	I & III
Boys.	0.083 x	0.29 xxx	0.1615 5% level.
Girls.	.046 x	.10 x	0.11 x

x For boys I & II parts insignificant.
xxx II & III significant at 1% .
xx I & III significant at 5 %

For Girls. not significant.

Table III also includes the correlations among the three subparts for Boys and Girls seperately.

In case of boys the correlations between subparts II and III is significant (1 % level) and the subpart I & III is significant (5 % level). The correlations between the subpart I and II for boys is not significant.

In other words the 16 cards in subpart I depicting masculine and feminine choices were not picked up by boys so as to show a consistent masculine choice. In fact sometimes the boys in this sample picked up a masculine choice and sometimes a feminine choice. Also this pattern of inconsistent choice preference remains evident as seen in subpart II, of the ITSC. The paired choice cards

King-Queen etc. were not consistently picked up by the boys to show masculine choices. However this inconsistency is further confirmed when correlation for boys between the subpart I & II are attained. This interaction further clarifies such an inconsistency on the part of the boys in picking up masculine choice cards.

Since the correlations for subpart II and III are significant at 1 %. It could be said that the 8 paired choice cards in subpart II and the four cards showing children dressed up as boy or girl, girlish boy, boyish girl, in subpart III indicated a consistent choice of masculininity by boys. In other words boys in this sample picked up masculine choice cards more often than they picked up feminine choice cards.

The interaction between the subpart I and II shows that on the subpart I of ITSC where there are 16 possible choices out of which 8 were to be scored for judging the masculine or feminine preference and on subpart III of the ITSC indicating the children dressed up as boy or girl (4 cards), there is a positive relationship between subpart I & III which is significant at 5% level. The value of coefficient is 0.1615. In other words when these two subparts are taken together, boys in this sample picked up the masculine choice more often than the feminine choice cards.

This picture was not evident in the interaction between subpart I and II.

The correlation value is higher in the interaction between subpart II and III (0.29) than in the case of subpart I

and III (0.1615). In otherwords the pattern of masculine choices are more clear in the interaction between parts II and III than it is evident in subpart I & III. Although both the correlations are significant.

None of the correlations for Girls between subparts I and II, II and III and I & III were found to be significant. therefore it seems in all the subparts girls did not show any consistent pattern of the feminine choice. In other words sometimes girls in this sample picked up a masculine choice and sometimes they picked up a feminine choice. This would indicate a confused or diffused pattern of femininity in the sample of girls as against a clear pattern of masculinity in the sample of boys as far as this population is concerned.

TABLE IV.

Means and variances for the three subparts of the IT Scale by Sex.

	Boys.	Girls.	Boys Variance.	Girls Variance.
IT Scale Subpart				
I.	4.56	3.75	1.985	2.520
" II.	7.67	4.60	21.171	22.840
" III.	4.51	2.63	7.237	4.149

In order to look at the differences between boys and girls, in terms of their preference on various subparts of the ITSC, means and variances for the three subparts of the ITSC by sex were calculated.

DISTRIBUTION OF SCORES ON THE
I.T. SCALE FOR CHILDREN
TOTAL SAMPLE (BOYS & GIRLS)

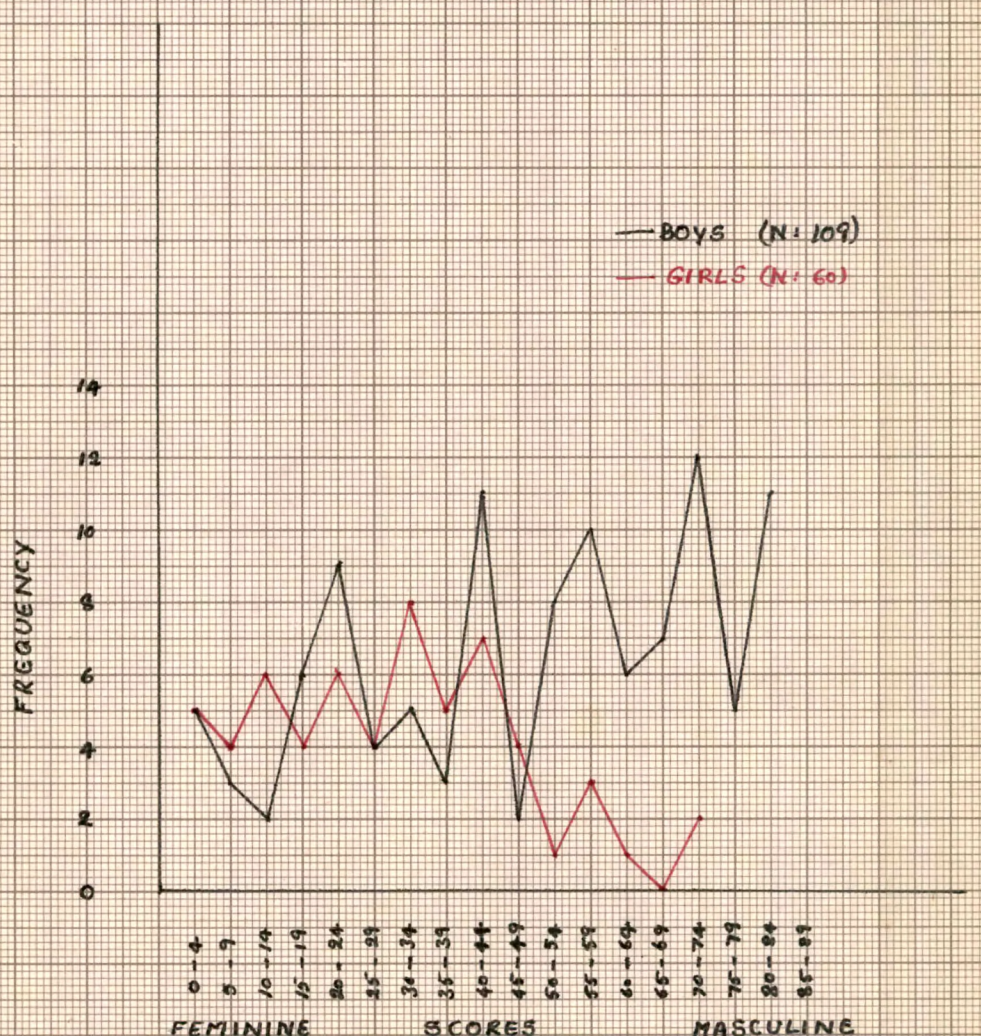

Figure 1

DISTRIBUTION OF SCORES ON THE IT. SCALE
SUB PART I FOR 'CHILDREN -
TOTAL SAMPLE (BOYS & GIRLS)

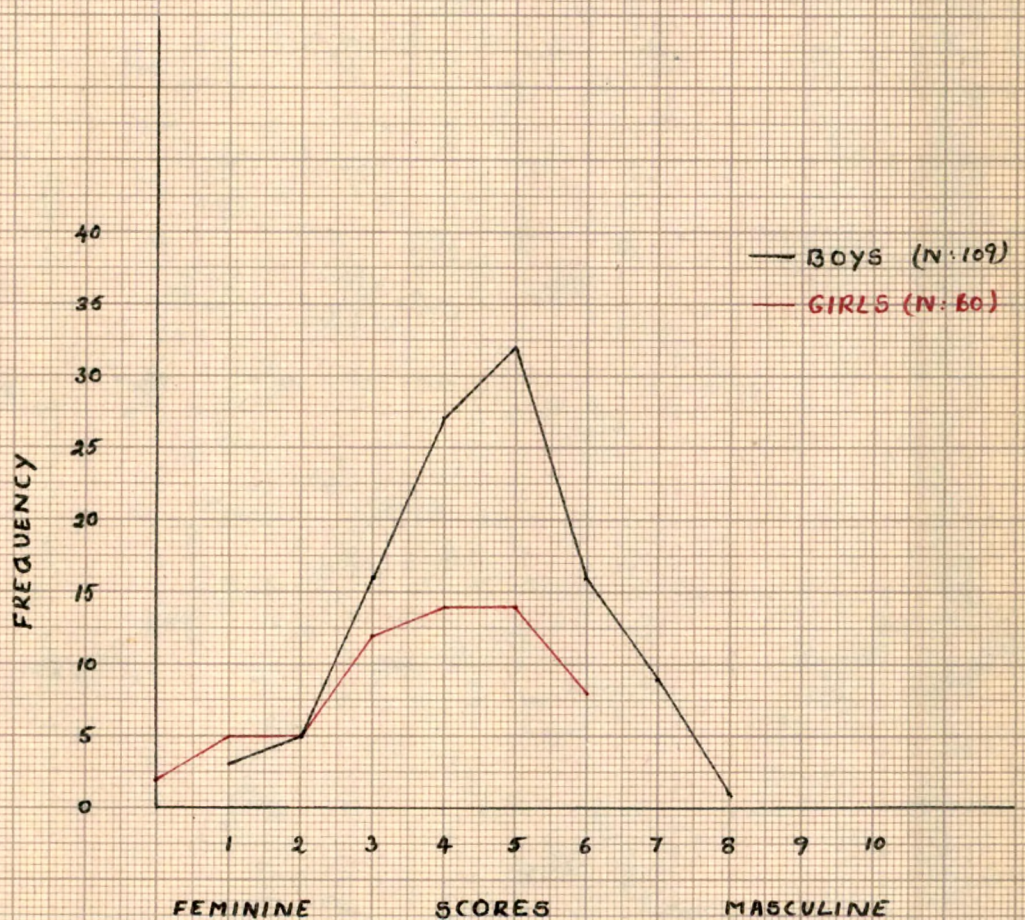

Figure 2

DISTRIBUTION OF SCORES ON THE I.T. SCALE
SUB PART II FOR CHILDREN-
TOTAL SAMPLE (BOYS & GIRLS)

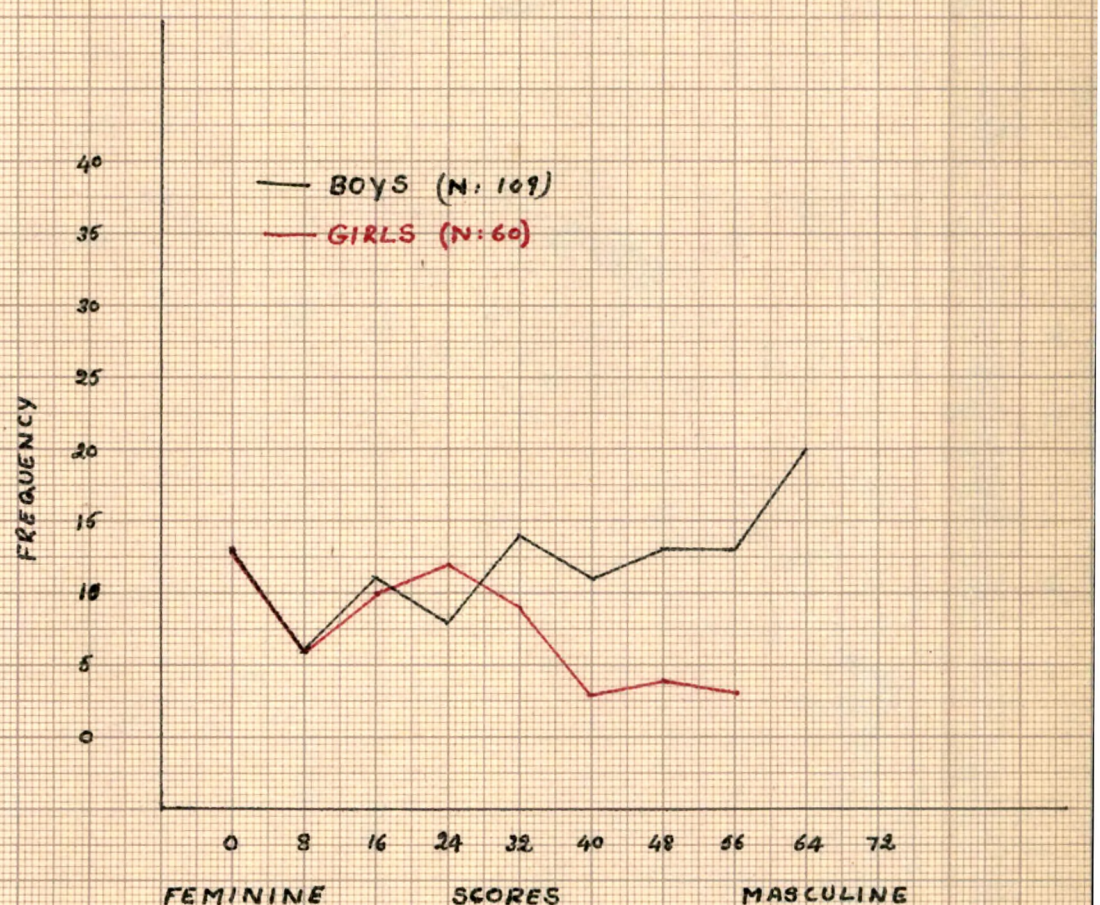

Figure 3

DISTRIBUTION OF SCORES ON THE I.T. SCALE
SUB PART III FOR CHILDREN
TOTAL SAMPLE (BOYS & GIRLS)

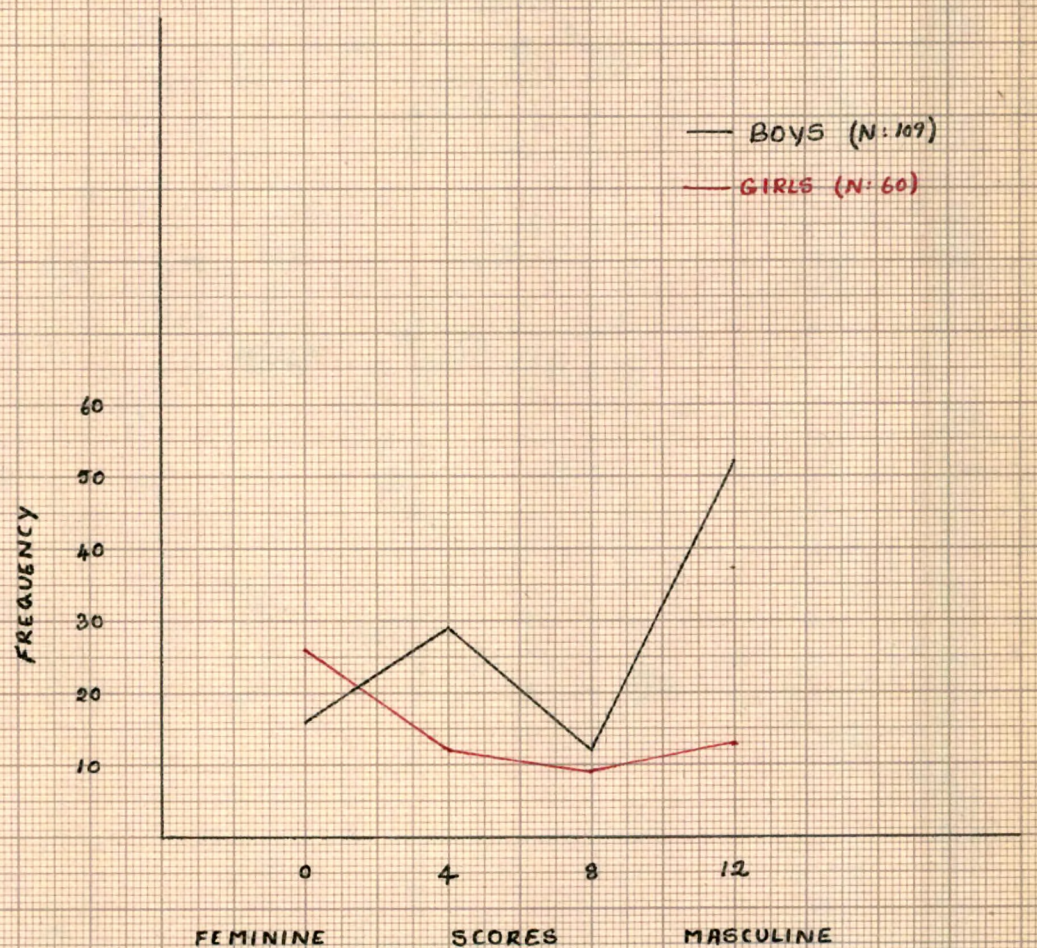

Figure 4

Table IV clarifies that means for boys on all the three subparts are higher than girls (4.56, 7.67, 4.51 for boys as against 3.75, 4.60 and 2.63 for girls). In other words, the boys picked up on all the three subparts of ITSC masculine choice cards more often than girls picking up feminine choice cards.

The value of variance for subpart I & II is higher in case of girls than in case of boys respectively (1.98 boys, 2.520 girls, 21.17 boys, 22.84 Girls subpart II. In the subpart III this value is higher for boys than for girls. (7.23 boys, 4.149 girls). In other words as a group girls showed a more varied or scattered pattern of choice in subpartI and II of ITSC than boys. On the other hand in the subpart III boys showed a more varied choice pattern than girls. (Refer to figure 1,2,3, & 4).

Thus looking at tables I through IV they show that :-

(1) The correlations for boys indicating masculine pattern of choices are more consistent over a greater number of subparts than girls.

(2) The mean values of masculine and feminine choices on ITSC shows that boys are more masculine than the girls are feminine as seen in their patterns of choices on the ITSC.

(3) In the total sample of ITSC, the variance reveals the larger deviations from the means in the case of boys as compared to girls.

(4) The value of variance when seen for each of the three subparts of the ITSC, girls are more varied on two subparts of the ITSC then boys.

TABLE V.

Rank orders, percentages and differences of choices of boys and girls on the toy pictures section of the IT Scale for children. Subpart I.

Toy Item.	Boys' Rank.	Girls' Rank.	Boys' %	Girls' %	x^2	Level of confidence.
1.	2.	3.	4.	5.	6.	7.
1. Necklace.	15	9.5	39.45	50.	1.705	Non significant
2. Doll.	1	3.5	69.72	58.333	2.227	"
3. Train Engine.	12.5	2	45.87	61.666	3.865	* .05
4. Gun.	3	11.5	61.47	41.66	6.117	* .02
5. Cradle.	6.5	5.5	52.29	55.00	0.113	Non significant
6. Dishes.	9.5	3.5	47.706	58.33	1.749	"
7. Soldiers.	2	5.5	64.22	55.00	1.382	"
8. Knife.	14	9.5	42.201	50.	0.950	"
9. Bullok Cart.	8	1	48.62	70.	7.184	* .01
10. Dump Truck.	4.5	11.5	60.55	41.666	5.552	* .02 Significant
11. Purse.	12.5	5.5	45.87	55.00	1.759	Non Significant
12. High Chair.	9.5	15	47.706	36.666	1.916	"
13. Racer.	6.5	14	52.29	40.	2.343	"
14. Earth Mover.	4.5	5.5	60.55	55.00	0.491	"
15. Doll Buggy.	9.5	13	47.706	41.666	0.569	"
16. Baby Bath.	16.	16.	20.183	26.666	0.933	"

* Significant.

In order to look at the differences between boys and girls, in terms of their performances on the ITSC subparts, the rank orders, percentages and differences of choices in boys and girls on the three subparts of the ITSC by their individual card items is presented in Table V, VI and VII.

Table No. V shows a further classification of feminine and masculine choices.

8 Feminine choice cards on subpart I of ITSC.

The classification of feminine cards for boys and girls can be seen as follows :-

Card No.	Subject matter in the card.	% Boys.	% Girls.
1.	Necklace.	39.45	50.00
2.	Doll.	69.72	58.3
5.	Cradle.	52.29	55.00
6.	Dishes.	47.7	58.3
8.	Knife.	42.2	50.0
11.	Purse.	48.87	55.0
15.	Doll Buggy.	47.70	41.66
16.	Baby Bath.	20.18	26.66

Higher percentage of boys have selected cards No. 2 and 15 although these are actually feminine choice cards. Cards No. 1,5,6,8,11, and 16 are selected by higher percentage of girls in this sample.

The next classification shows 8 masculine choice cards on subpart I of ITSC.

Masculine card choices as seen from Table V.

Card No.	Subject matter in the card.	% Boys.	% Girls.
3.	Train Engine.	45.87	61.66
4.	Gun.	61.47	41.66
7.	Soldier.	64.22	55.00
9.	Bullok Cart.	48.62	70.00
10.	Dump Truck.	60.55	41.66
12.	High Chair.	52.29	55.00
13.	Racer.	52.29	40.00
14.	Earth Mover.	60.55	55.00

Card No. 3,9,12, which are actually masculine choice cards, higher percentage of girls selected these cards. All the other cards No. 4,7,10, 13, 14, which are masculine cards were selected by higher percentage of boys.

Except for the particular cards mentioned, girls scored higher on feminine cards and boys scored higher on masculine cards as far as this sample of 3 to 6 year old children is concerned.

When calculated, the x^2 values indicate whether the entire sample of boys and girls that selected each of these cards differed significantly or not on masculinity & femininity. only card 9 (Bullok cart), Card No. 10 (Dump Truck), Card 3 (Train Engine) and Card 4 (Gun) came out to be significant.

In other words these cards were selected by higher number of boys or girls as the case be in the total sample of boys and girls on ITSC. For other cards, the same comment can not be made as this difference was not found to be significant.

TABLE VI.

Percentages and differences of choices of boys and girls on eight paired picture section of the IT Scale for children on subpart II.

	Boys.		Girls.		X^2	Level of Confidence.
	Male choice %	Female choice %	Male choice %	Female choice %		
1.	2.	3.	4.	5.	6.	7.
1. KING & QUEEN. Indian King. " Queen.	59.63	40.37	26.67	73.33	16.856	Beyond .001
2. CLOTHES. Girls Clothes. Boys "	66.97	33.03	38.33	61.67	12.935	"
3. SEWING PARTS. Things for Hankey. Things for Aeroplane.	52.29	47.71	46.67	53.33	.438	Not significant
4. FACE ARTICLES. Girls' face. Boys' face.	58.33	41.67	36.67	63.33	7.243	Beyond .01
5. OBJECTS. Household objects. Mechanical Toys.	59.63	40.37	33.33	66.67	13.509	"
6. SHOES. Women's Shoes. Men's Shoes.	55.50	44.95	31.67	68.33	8.496	"

Contd....

1.	2.	3.	4.	5.	6.	7.
7. CHILD AT PLAY.						
Girls Playing. Boys Playing.	58.33	41.67	26.67	73.33	15.526	Beyond .001
8. HOUSEHOLD THINGS.						
Building Tools and cooking articles.	53.33	46.67	23.33	76.67	14.068	Beyond .001

Table VI indicates the boy's and girls' preferences of choices on the 8 paired cards of the ITSC - subpart II.

Table VI shows that higher percentage of boys picked up masculine paired choice cards than feminine choice cards. In the same manner higher percentage of girls picked up feminine choice of the paired card than the masculine part of the paired card.

In other words except for card 3 Sewing parts Vs things for aeroplane all the cards show a significant difference in the preference order of masculine or femin[illegible]pair of the card on the ITSC.

On card 3 perhaps, this difference was not significant because both boys and girls might feel equally attracted to Aeroplane as a toy. Girls at this age may not quite clearly identify with sewing materials as having strong feminine attraction.

Thus it might be further said that on subpart II of ITSC, this difference which is evident in the direction of masculine or feminine choices cannot be attributed to choice only but that such a difference in choice must exist for children between 3 to 6 years

of age. This is evident by the X^2 values significant beyond .001 and except for the paired card No. 3 in subpart 1 of ITSC.

TABLE VII.

Percentages and differences in choices of Boys and Girls on the four child figure section of the IT Scale for children.

Sr. No.	Child Figure.	Boys. %	Girls. %	X^2	Level of confidence.
1.	Girl.	13.76	43.33		
2.	Boyish girl.	10.09	15.00	22.642	Beyond .001
3.	Girlish Boy.	26.44	20.00		
4.	Boy.	47.71	21.67		

Table VII shows the differences in choices of boys and girls on the four child figure section of IT Scale for children.

The higher percentage on a card would indicate that more boys or girls picked up that card than any other card. The scores of children on this card also indicate the differences in choice or preference as well as the attractiveness of a feminine and masculine card to a child. On an average girls' percentage are higher on cards 1 and 2 than that of the boys. Boys' percentages are higher on cards 3 and 4.

Girls as a group preferred card 1, girl dressed up as girl more than any of the other cards. Boys preferred card 4, Boy dressed up as boy more often than any other card.

In other words girls picked up the picture that resembles most a feminine character more often and boys picked up more often the picture that resemblete masculine character.

This pattern is different on card 2 and card 3 (Boyish girl and Girlish boy). The girls seemed to pick as a group, either the most feminine (card 1) child or one of the two confused children (card 2 or 3). More boys picked up Girlish Boy (28.44) Card No. 3 than girls picking up boyish girl 15 %.

Also a smaller percentage of boys picked up the most feminine choice card (13.76) as compared to the percentage of girls who picked up the most masculine choice card (21.67).

A larger number of boys picked up their sex appropriate card, (Card No. 4, 47.71) as compared to Girls who picked up their sex appropriate card (card No. 1, 43.33).

The boys and girls in this sample of 3 to 6 years old as a separate group tended to either select the sex appropriate card (1 or 4) or selected one of the confused figures.

x^2 value indicating the differences in the choices of Boys and Girls on the four child figure section of the ITSC is 22.642, which is significant beyond .001 level of confidence. Thus this difference in choice towards masculine and feminine direction in case of boys and girls could not be attributed to chance only but such a difference in choice must exist for children between 3 to 6 years of age in this sample.

GRAPH SHOWING AGE AND AVERAGE SCORES OF VOCABULARY TEST – BOYS & GIRLS

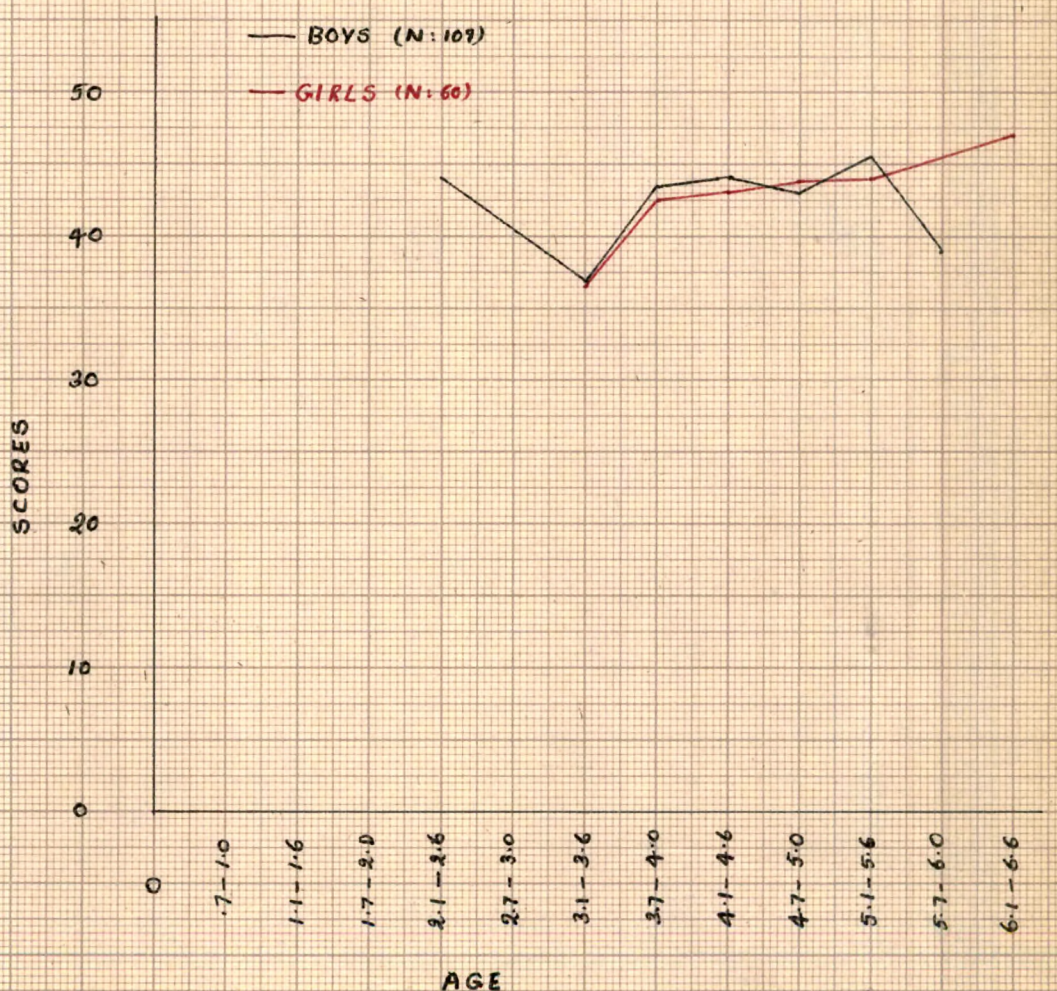

Figure 5

TABLE VIII.

Analysis of variance, showing the difference between Boys and Girls from three different socio-economic Status and their performance on IT Scale.

Sr. No.	Source.	d.f.	S.S.	M.SS.	F.	Level of confidence.
1.	Sex.	1.	13905.59	13905.59	28.64	Beyond .01
2.	S.E.S.	2.	523.15	261.57	0.54	Not significant.
3.	Interaction.	2.	1192.79	596.40	1.228	"
4.	Error Residual.	164.	79626.70	485.53		

To see the relationship between the sample of boys and girls from the three socio-economic levels on thieir performance on IT Scale, more closely, in Table VIII, F ratio x values are calculated. This table shows :-

(a) Between group variance of sex and socio-economic Status.

(b) Within group variance of sex as well as socio-economic status, treated individually for sex and S.E.S.

The F values that is expected to occur by chance alone, either .05 or .01 proportion of the time will indicate that the total distribution of these means is an unlikely chance occurance. This value of F which is 28.64 for evaluating the sex differences in this sample of boys and girls in the choice of masculine or feminine cards is significant beyond .01 level. Therefore, it is unlikely that the difference in the means of boys and girls could have

occurred by chance alone.

Thus the two means of the sample of boys and girls in this sample of ITSC could be considered as different.

When the two groups of boys and girls are seen on their socio-economic status, the variance between the three groups', F value is 0.54, which is not significant.

Thus the differences between the means of the three socio-economic level groups, in this sample cannot be attributed as having an effect on their sex preference choices as measured by ITSC.

The differences between the means of sex and socio-economic groups (i.e. when the same sample is divided as boys and girls as coming from the 3 different socio-economic status groups), this value of F [illegible]1.228 which is not significant, thus the null hypothesis number 2 of no relationship between the socio-economic status and the sex-role preference choice on IT Scale is accepted. Table IX confirms this (ITSC and S.E.S. non-significant).

Table IX

Correlations between ITscale and other variables

		BOYS.	GIRLS.
ITSC and Vocabulary Test.		.035	.189,39
ITSC and Age.		= .3156 Sig. .01 Level.	= .140,74
ITSC and 'Draw-a-man'.		= .095751	.160,81
ITSC and S.E.S.	Upper Middle & Middle	= .078	
	Middle and Upper and Middle.....	= .052	
	Upper Middle and Lower Middle.....	= .0322	

Table IX indicates various correlations between the ITSC and Vocabulary, ITSC and age, ITSC and S.E.S. and ITSC 'Draw-a-man' test.

In order to evaluate the relationship between the ITSC and other four measures used for this study, various values of r were calculated. Only the correlations between ITSC and age came out to be negatively significant, in the case of boys. In the case of girls, this value was also negative but was not significant. In other words the masculine choice preference on ITSC is negatively related to age. Thus as age of the subject increases his score on masculine choice on ITSC decreases. This can be explained by the fact that the mean difference in the group of boys as compared to girls was higher on the measure of masculinity and femininity, however boys as a group showed far more varied choices on the ITSC than girls.

Thus the null hypothesis of No relationship between the sex role preference on ITSC AS related to the child age is accepted

null hypothesis No.3.

The null hypothesis of no relationship between the sex role preference choice on ITSC and 'Draw-a-man' test in this sample of boys and girls is also accepted, null hypothesis No. 9.

The null hypothesis of no relationship between the sex role preference choice on ITSC and vocubulary test in the sample of Boys and Girls is also accepted. Null hypothesis No.8. The result in table IX, thus further clarifies that the measures used with ITSC not showing any relationship with vocabulary Items and "Draw-a-man" test further confirms the fact that these meesures were not used with an assumption that they are necessarily related but in fact were used in order to give more understanding about the nature of this sample.

II. VOCABULARY TEST:

In the following three tables No. X, XI and XII some results related to vocabulary items and ITSC are presented.

TABLE X.

Differences in vocabulary test between boys and girls

	No.	Mean.	Range	Median.	Mode	S.D.	t	C.R.
Boys	109	43.50	23-51=28	41	44	4.81	1.5*	1.49
Girls	60	42.32	24-50=26	43	40	5.00		

* Non significant

Table X shows the group scores, variability and differences on vocabulary items for the children and the total

Sample of boys and girls.

The mean for the vocabulary items for the total sample of (109) boys is 43,50, whereas the mean for the total sample of girls (60) is 42.32.

The t test value obtained by the test of significance for mean difference is 1.5. This value is not significant.

The range of scores on the performance on vocabulary items shows that girls are more varied as a group than boys, although this difference is not striking (Fig. 5). The range of the scores in the group of boys is 28. The range of the scores for girls is 26. The range of the scores for girls is further evident from the value of S.D. from the mean. This value is 4.81 for boys and 5.0 for the girls.

The value of critical ratio showing the possible scatter in the total group is 1.49. This value is not significant.

In other words in this sample of 3 to 6 years old, boys and girls do not differ on their performance on vocabulary test. It can be further stated that the mean score difference between the two groups is only 18. Thus both the groups' performance on the vocabulary test can be said as almost identical.

TABLE XI. (a)

Variance scores on vocabulary test for Boys & Girls by Socio-Economic level.

	Upper Middle.	Middle.	Lower Middle.
Male	936/21	2436/57	1969/31
Female	302/7	1621/39	616/14

TABLE XI. (b).

Source.	d.f.	S.S.	M.S.S.	F.	Level of confidence.
Sex.	1.	13.77	13.77	0.572	Non significant.
S.E.S.	2.	148.34	74.17	3.083	Beyond 0.05
Interaction.	2.	29.06	14.53	0.604	Non significant.
Error Residual.	164.	3944.84	24.05		

Table XI shows the relationship between boys and girls from the three socio-economic levels on the vocabulary test, also,

The F ratio value calculated to observe.

(a) The variance between sex and socio-economic status on the vocabulary test and

(b) The variance within the groups of boys and girls and within the socio-economic status when treated separately.

The particular value of F ratio that is expected to occur by chance alone either at 0.05 or .01 proportion of the time, would indicate that the total distribution of these means is an unlikely chance occurance.

The F ratio value for the three socio-economic groups on vocabulary test is 3.083 which is significant beyond 0.05 level of

confidence therefore it is unlikely that means of the three socio-economic groups in this sample, which are different could have occurred by chance alone. Thus the mean difference on vocabulary test performance as pooled from three different socio economic groups may be considered significantly different.

The sex wise performance of this sample (Boys & Girls) on vocabulary test when calculated, the value of F obtained is 0.572. This value is not significant. In other words boys and girls in this sample (109 B, 60 G) do not differ in their performance on vocabulary test.

F, ratio value is further obtained to see the interaction effect of this sample by obtaining the effect of interaction of sex groups and socio-economic status groups. Here the obtained value of F is 0.604, which is not significant. In other words children in this sample when compared on sex and socio-economic status, these factors have not influenced their performance on the vocabulary test.

Summary of table XI shows that :-

In this sample of 3 to 6 years old children.

(1) Sex of the subject has no influence on his/her performance on the vocabulary test.

(2) Socnio-economic status alone has influenced the performance of the subject on the vocabulary test. Therefore socio-economic status of the child and his performance on the vocabulary test are seen as related. Null hypothesis No. 6 is therefore rejected.

(3) There is no interaction effect of sex and socio-economic status of the subkject. As when these two were taken together, it did not influence the performance of the subject on the vocabulary test. Null hypothesis No. 5 is therefore accepted.

Table XII indicates various correlations between the vocabulary test & ITSC, 'Draw-a-man' age and socio-economic status of the subject in this sample of 3 to 6 years old children.

TABLE XII.

Correlations between vocabulary test and 'Draw-a-man' test, vocabulary test & age, vocabulary test & ITSC, vocabulary test and S.E. Status.

Test.	Boys.	Girls.
Vocabulary and 'Draw-a-man' test.	.59274 Significant at 1% level.	.2951 Significant at .02 level.
Vocabulary test and age.	0.1361	0.3823 Significant at .01 level.
Vocabulary test and ITSC.	.035	.18939
Vocabulary test and socio-economic status.	Upper Middle & Middle...	.165
	Middle & Upper Middle...	.085
	Upper Middle & Lower Middle.....	.0116
Vocabulary and sex.		.0105 Not Sig.

In order to arrive at the relationship between vocabulary test and other four measures used with vocabulary test in this study, various values of r were calculated. The correlation value of vocabulary and 'Draw-a-man' test is significant, for boys, this value is .57274 which is significant at 1% level. For girls this value is .2951, which is significant at .02 level. Thus the performance of the

children in this sample of 3 to 6 years old when compared on these two measures, 'Draw-a-man' test and 'Vocabulary test' is significant. However the value shows a higher correlation for boys than for girls.

Thus it seems that in this sample there is a relationship of boys' and girls' performance as revealed through their scores from vocabulary test and 'Draw-a-man' test. However, this relationship is higher in case of boys than in case of girls. It can be further stated from the obtained & r value that children who performed better on vocabulary test also were more clear in labelling their drawings.

The correlation value between vocabulary and age is significant for girls. This value is 0.3823, which is significant (at 1% level). This value is 0.1361 for boys and it is not significant.

In other words in this sample of 3 to 6 years old children the sample of girls when measured to evaluate their performance on vocabulary test and 'Draw-a-man' test, indicated a positive relationship. This nature of relationship was not evident in the sample of boys. Therefore the null hypothesis No. 7 is accepted, for boys only.

From the value of correlation in the sample of girls, it can be further stated that girls who performed better on vocabulary test, also performed well on draw-a-man test.

The correlation values of 3 different socio-economic levels of children from this sample when related to their performance on vocabulary test, this value is not significant. Therefore, it can

be said that the socio-economic class of the subject is not related to his/her performance on vocabulary test. However when 3 socio - economic groups are combined to see influence of S.E.S. on vocabulary by using analysis of variance (Table XI) socio-economic level seems to have some influence on vocabulary score (F value is 3.08, significant at 0.05 level). The correlation value between vocabulary and ITSC also is not-significant. This can be further explained by the fact that vocabulary test was only used as an additional measure to understand the structure of the sample. This measure was not used with an assumption that it could bear any relationship or effect on the performance of the subject on ITSC. It was used to see that in - sufficient vocabulary, may not interfere with the subjects' ability or inability to perform on the ITSC. Therefore subjects who were found below their age level performance on vocabulary test were excluded from the study.

Thus the null hypothesis No. 8 stating no relationship between vocabulary, test and ITSC is accepted.

'Draw-a-Man' Test: To study the differences in the performance of children from three socio-economic classes on 'Draw-a-man' test, x^2 analysis was used. (Figure 6 shows the age and average scores of Draw-a-man test by sex).

Table XIII shows x^2 analysis from three different socio-economic levels lebelling men figure of drawing as masculine or feminine figures.

TABLE XIII.

X^2 Analysis showing children from three different socio-economic levels labelling man figure of drawing as masculine or feminine figure.

	Upper Middle.	Middle.	Lower Middle.	Total.
Opposite Sex.	7 e = 8.44	31 e = 28.97	13 e = 13.57	51.
Same Sex.	21 e = 19.55	65 e = 67.02	32 e = 31.42	118.
Total.....	28	96	45	169

X^2 0.6 not significant.

X^2 analysis as seen from table XIII reveals that the subjects from three socio-economic levels labelling their drawings as men/women, do not differ significantly. x^2 value is 0.6 which is not significant.

In other words the difference that exists in these three socio-economic groups in their performance on 'Draw-a-man' is not good enough. Thus a child's socio-economic group has no effect on the nature of the label (men/women) that he uses for his drawing on 'Draw-a-man' test.

This idea is further elaborated in Table XIV.

TABLE XIV.

X^2 analysis showing the sex of children labeling man figure of Draw-a-man test as masculine or feminine figure.

	Male.	Female.	Total.
Same sex	83	35	118
Opposite sex	26	25	51
Total.....	109	60	169

X^2 = 5.82 significant at 5% level.

GRAPH SHOWING AGE AND AVERAGE SCORES OF DRAW-A-MAN TEST (BOYS & GIRLS)

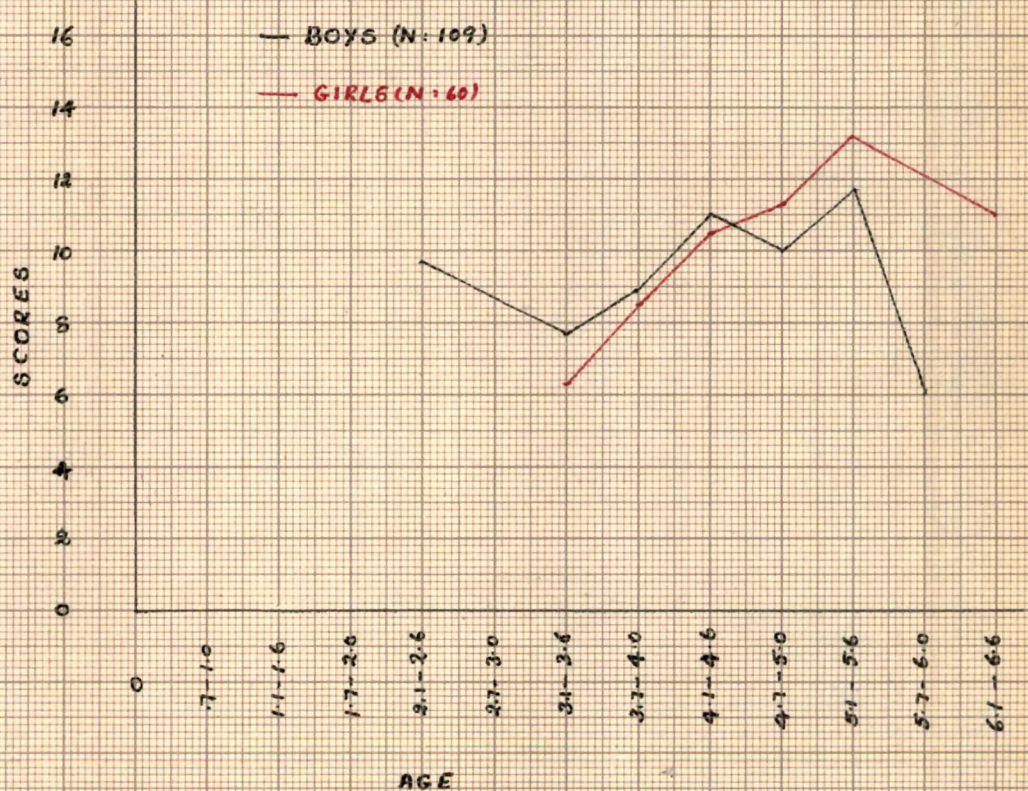

Figure 6

Table XIV shows the distribution of the total sample of boys and girls using the opposite sex label or same sex label to their drawings. Larger number of boys in comparison to girls have labelled their drawings as same sex (83 B v/s 35 G) just about equal number of boys and girls in this sample of 3 to 6 years old children have labelled their drawings as opposite sex (26 B v/s 25 Gxirls).

This value of x^2 indicates that the two groups of boys and girls in this sample differ in their performance on 'Draw-a-man' test and that this difference is not by chance.

In order to further see the differences in the performance of children from the different socio-economic classes on draw-a-man, the following table shows the Analysis of variance, showing the influence of sex and socio-economic status and the interaction between S.E.S. on draw-a-man test.

TABLE XV.

Analysis of variance table showing the influence of sex and socio-economic status and interaction between sex and S.E.S. on 'Draw-a-man test.

Source.	d.f.	S.S.	M.S.S.	F.	Level of confidence.
Sex.	1.	1.69	1.69	.082	Not significant.
S.E.S.	2.	27.22	13.61	.665	"
Inter-action.	3.	79.73	39.87	1.899	"
Residual.	164.	3355.64	20.46	-	

This table shows :-

(a) The variance between sex and socio-economic status on the draw-a-man test for this sample of 3 to 6 years old children.

(b) The variance within the groups of boys and girls and within the socio-economic status when treated seperately. The particular value of F ratio that is expected to occur by chance alone either at 0.05 or .01 proportion of the time, would indicate that the total distribution of these means is an unlikely chance occurance.

The - F values in table XV for sex, socio-economic status groups and interaction between sex and socio-economic groups are not significant. Therefore the difference that may exist between and within these groups may be just due to chance and such a difference is not statistically significant. In other words sex of the subject in this sample of boys and girls, socio-economic status of the subject and the performance on 'Draw-a-man' are not related factors.

TABLE XVI.

Correlations between Draw-a-man test and ITSC, Draw-a-man test and Age, Draw-a-man test and vocabulary test, Draw-a-man test & socio-economic status.

	Boys.	Girls.	
Draw-a-man test and ITSC.	- .095751	.16081	
Draw-a-man and age.	.12657	.44126	Significant at .01 level.
Draw-a-man and Vocabulary.	.59274 Significant at .01 level.	.2951	Significant at .01 level.
Draw-a-man and S.E.S.	Upper middle & Middle.	.0063	
	Middle & Lower Middle.	.1305	
	Upper Middle & Lower Middle	.153	
Draw-a-man and Sex.		.021	Not Sig.

In order to study the relationship between 'Draw-a-man' test and various other measures used with ITSC. Values of r were calculated. (Fig. 7. shows the relationship between Vocabulary test scores and Draw-a-Man test scores by sex).

The correlation value of Draw-a-man and age in this sample of 3 to 6 years old is significant for girls, the correlation value for girls is .44126, which is significant at .01 level. This value is not significant for boys. In other words it can be said that age of the subject in this sample of girls is related, to her performance on 'Draw-a-man', however such a relationship is not seen in boys. As age of the girl in this sample increases, she performes better on 'Draw-a-man test'.

GRAPH SHOWING RELATIONSHIP BETWEEN VOCABULARY TEST SCORES AND DRAW-A-MAN TEST SCORES

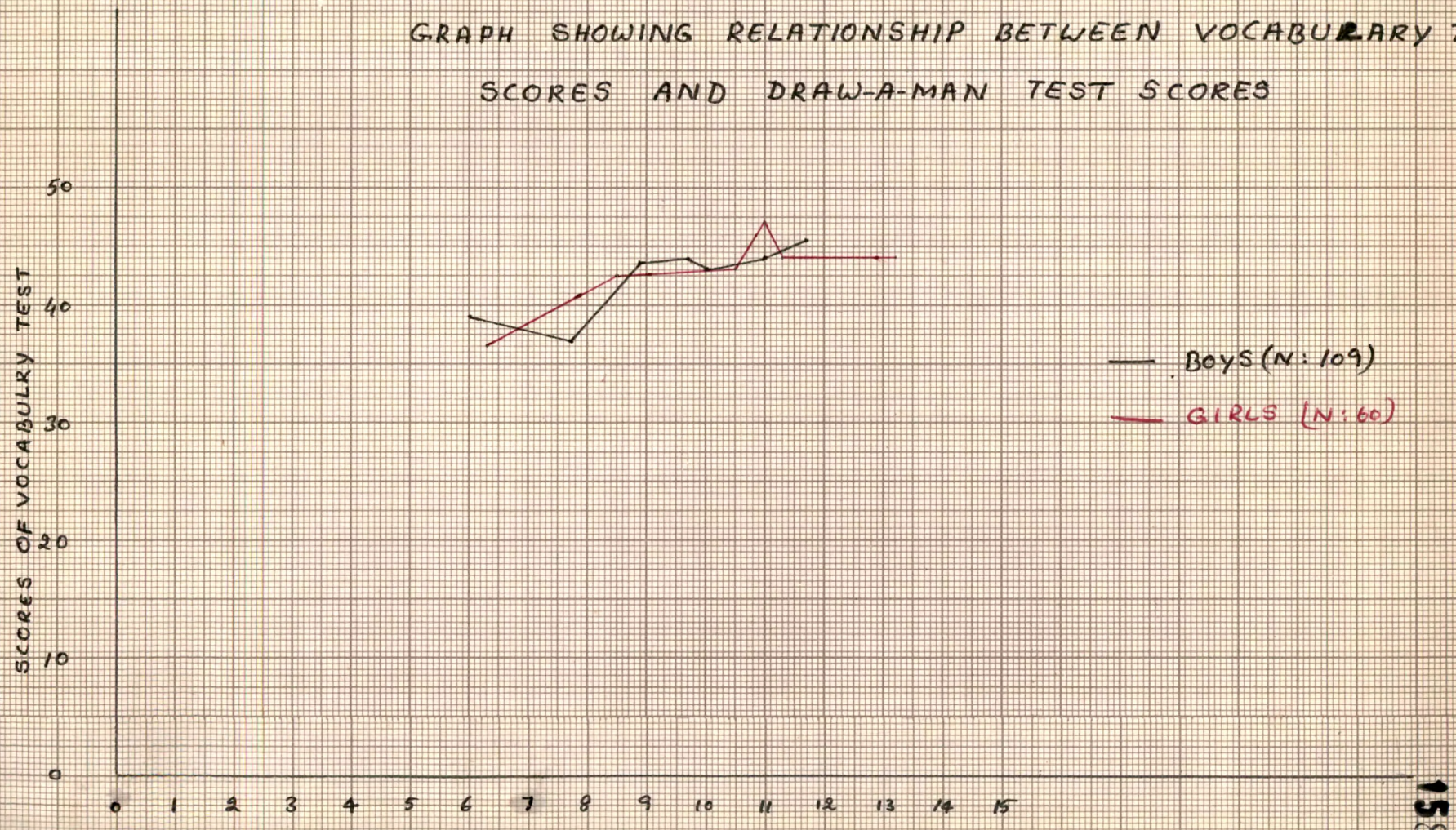

Figure 7

Although this result was not hypothesised for the present study however the draw-a-man test does show such a relationship between age and the performance of the subject.

The null hypothses No. 8 of no relationship between the age of the subject and draw-a-man is accepted for boys only. However, since such a relationship if found to exist for girls in this sample, the later part of null hypothesis no. 8 (of no relationship in girls between Draw-a-man test and vocabulary is rejected).

The value of r showing relationship between draw-a-man and vocabulary test is .59274 significant at .01 level and for girls it is .2951 significant at .02 level. Therefore this value of r suggests that the 3 to 6 yearsold boys & girls in this sample who performed better on 'Draw-a-man test', also performed better on vocabulary test.

The correlation values of three different socio - economic levels of children from this sample where related to their performance on 'draw-a-man test', They were found not significant, therefore it can be said that the socio-economic class of the subject is not related to his/her performance on 'draw-a-man' test. Therefore the null hypothesis no. 10 is accepted.

The correlation value between Draw-a-man and ITSC is also insignificant. Such a non significant relationship can be further explained by the fact that 'Draw-a-man test' was

used in this study by the investigater only to locate the way, the subject labelled his drawings. The interest was not to evaluate his/her drawing or to see a relationship between 'Draw-a-man' and ITSC.

Thus the Null hypothesis No. 9 of no relationship between 'Draw-a-man test' and ITSC in this sample of 3 to 6 years old children is accepted.

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