THE EFFECTIVENESS OF SOPHISTICATED TOYS IN
PLAY-THERAPY WITH TWELVE YEAR OLD CHILDREN

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Dean of the Graduate School
THE EFFECTIVENESS OF SOPHISTICATED TOYS IN
PLAY-THERAPY WITH TWELVE YEAR OLD CHILDREN

THESIS

Presented to the Graduate Council of the
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MASTER OF SCIENCE

By

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Denton, Texas
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CHAPTER I

INTRODUCTION

The effectiveness of child-centered play-therapy is generally felt to diminish at the age of twelve or older. It is more or less taken as a rule of thumb that such therapy is most useful with those children whose ages fall somewhere between four to eleven years.

Rogers expressed this feeling when he stated "Between four and ten or twelve, some use of play techniques would almost certainly be advisable since verbalization of significant feelings is not easy for the child at this age" (14, p. 74). From the time of this statement to the present most authors have been saying relatively the same thing concerning the most suitable age limits of play therapy. An example of this trend is seen by Rambert (13), who set the upper age limits between ten and twelve years.

Dorfman, in her discussion of age and the effectiveness of play-therapy, stated that "A young adolescent may be quite humiliated at finding himself compelled to occupy a room where everything is in miniature . . . Perhaps it would be better to allow those of approximately eleven years and over
to choose between the playroom or an office" (2, p. 256). This feeling was voiced by Durham (3) in an article in which he stated that the use of the playroom was of no more use by the age of twelve.

Further agreement in this position can be noted in the writings of Sanger (15), who noted that the best results gained from play-therapy occur for children under the age of twelve. Alexander (1) states that the upper age limits should be set between the ages of ten and fourteen. Wertman (19) wrote that the play technique works best with an upper age limit of ten, but could be used up to the age of twelve. And finally, Jones (6), working with blind children, stated that below the age of thirteen, the best results of play-therapy could be expected.

With the exception of an experimental study by Goller (5), no significant research into the matter of age limits and other variables affecting the outcome of play-therapy had been conducted until a series of experiments conducted by Lebo, which started in 1952 and ran until 1958 (7, 8, 9, 10, 11, 12). Using a quantitative rating method, Lebo scored some 4,692 statements made by groups of children four, six, eight, ten and twelve years of age, while in a play-therapy situation. The number of statements made by each group was also recorded. His results show that the twelve-year-old children
made the "lowest percentage of statements while playing" (11, p. 235). In his own words "... the sight of 'baby' toys dissuades twelve-year-olds from speaking. They seem to feel such toys beneath them and that the playroom is not theirs ... Our present collection of toys may be driving the twelve-year-olds from the playroom" (11, p. 236).

Perhaps the problem arising from this loss of affectiveness of the playroom with twelve-year-olds may best be stated in the words of Ginott (4). In a discussion of Dorfman's suggestion of letting the child choose either the playroom or the office, he stated, "Dorfman's suggestion does not offer a solution for many children who are too old to utilize play-therapy and too young to sustain interview-therapy" (4, p. 73). It is the opinion of this author that since one of the main problem areas with emotionally disturbed children is a lack of the ability to communicate their feelings and emotions, there is a true need to bridge this gap of silence. With the use of normally recommended play-therapy toys the chance of achieving this needed communication is very small because of the paradox created by the situation. On the one hand, the therapist is trying to convince this young person that he is a worthy, valuable person, while on the other there is the exact opposite implication suggested by the "baby-like" toys.
In answer to this problem, Ginott (4) recommended the use of mechanical or electronic machines such as rifle galleries, table bowling and boxing machines, in conjunction with the other materials suggested by Slavson (16) in his activity group therapy. However, these materials are quite expensive, and work best in group settings. The problem for most therapists, in working with twelve-year-old children in a one-to-one situation, is exactly what techniques and/or materials to use in conducting their therapy, especially when working with a limited budget.

Slavson (16), Ginott (4) and Lebo (11) have all suggested that more "grown-up" or sophisticated toys be employed when working with these older children, and such toys will be the interest of this study. It is the aim of this investigation to compare the use of normally recommended toys, ordinarily used in the play-therapy setting, with more sophisticated, "grown-up" toys, when working with twelve-year-old children.

Hypothesis

From the implications noted in the related literature, the following hypotheses were investigated:

1. Twelve-year-old children, using grown-up play equipment will make a significantly larger number of statements than a matched group of twelve-year-olds using normally recommended toys.
2. The twelve-year-olds in the "grown-up" toy group will make more self-revealing statements than will those in the "normally recommended" toy group.

The .05 level of significance will be used to determine differences.
CHAPTER BIBLIOGRAPHY


CHAPTER II

RELATED LITERATURE

An important premise in this study is that a child's verbalizations are a suitable means of judging his feelings and attitudes and that these verbalizations may be used as indicators of the progress and/or success of any therapeutic technique.

This position, although supported by many therapists, is not universal in its acceptance. The therapists who disagree feel that speech is not a requirement for play-therapy success, and that many children benefit greatly from such therapy while remaining essentially silent. Axline (1) noted the success of a small Negro boy who, after remaining seated, tilted back in his chair, and speechless for many weeks, happily announced finally, that he had been "playing White Man."

Vigotsky (7) has also stated that some children may simply prefer to conceal their feelings, and not voice them at all. Solomon (6) writes that some children show marked improvement with very little verbalization concerning their problems or inner thoughts.
On the other hand, there are many therapists who feel that such nonverbal children are among the minimum of successes. Even Axline, in her discussion regarding the case of the Negro boy states, "Who can tell what this experience meant to that child? How can we evaluate the effectiveness of such a play experience?" (1, p. 6).

Lebo has written that in the light of the mass of verbatim material found in the literature, "speech productions are still important indicators of therapeutic success...If the child speaks little it is felt that successful communication has not been established, and that therapy is headed for failure. Speech in therapy would seem to be an adequate index of therapeutic suitability" (3, p. 233).

In order to make use of verbal records, made by children, to the best advantage, it is necessary to handle them objectively. One method of achieving this objectivity involves placing the child's statements into various categories. A list of such categories was developed by Finke (later Borke), and later revised by Lebo (2). These categories are descriptive in nature, and include such groupings as Statements indicating aggression; curiosity about the situation; exploring the limits of the playroom, and twenty other categories (see Appendix A for the complete list of Borke's Categories).
This list was developed especially for work with children in the play-therapy situation.

In a study by Lebo (4) investigating the selection of toys for the playroom and the effectiveness of these toys, Borke's categories were employed with a slight variation. Lebo was particularly interested in the number of statements made by children, and the extent to which these statements were self-revealing. To achieve this purpose, he placed each statement into its appropriate category, and then instructed his judges to rate the categories as to revealing or unrevealing of the self. A rating scale of one to five was employed, with a rating of one indicating a statement to be very self-revealing; a three rating indicating that it was neutral; and a five rating being given to those statements most unrevealing of the self.

In order to combine the factors of number of statements, and variety of categories, Lebo devised the Verbal Index, which is described fully elsewhere (4). Briefly, it consists of summing all of the statements given a rating of one; a rating of two; etc., and dividing each of these sums by its own rated score. All of these units are then added to give the Verbal Index, or VI. This procedure is performed on all of the responses made by a child while playing with a given toy during therapy. In this manner the responses made while playing
with each of the various toys can be compared quickly and objectively for the amount and the level of self-revealing statements. Thereby, the value of each toy may be judged in relation to each of the other toys.

A second factor to be considered in such a study as this is concerned with which toys are normally employed in play-therapy. Moustakas (5) and Axline (1) have published lists of such toys, generally accepted as being suitable for child-centered, play-therapy rooms. A list of these toys is provided in Appendix B.

Most toys used in play-therapy have been adopted for the playroom because of their favorable acceptance by the children in the therapy situation. However, Lebo (4) has pointed out that many times the toys used in play-therapy are merely collected, rather than selected. Using the VI to rate the responses made while playing with normally recommended toys, Lebo reported that many of these toys were not as valuable as reported, while some other unrecommended toys were found to be very effective. A list of the unrecommended toys used by Lebo (4) is provided in Appendix C.
CHAPTER BIBLIOGRAPHY


CHAPTER III

METHODOLOGY

Subjects

The data used in this study were obtained from students attending the North Texas State University Laboratory School. Ten children were selected on the basis of chronological and intellectual factors. Chronologically, each child could vary no more than four months in either direction from the age of 12 years. All subjects presumably were normal children.

One factor would seem to make these children differ from other normal children; their unusually high intelligence scores as measured on the California Mental Maturity Scale. Although the scores of the subjects did not differ significantly, all scores were at least one sigma above the normal I. Q. of 100. Their scores on the Stanford Achievement Test also reflected this heightened ability by the fact that all subjects, except one, were advanced at least one grade level.

Therapy

Each subject was seen, individually, for three, one-hour child-centered play therapy sessions. All of these session
were conducted by the same therapist, in the same room, and at the same time of day. Complete recordings were made of each session.

Before the start of the first session for each child, a list of 10 sentence-completion items was administered (see Appendix D for this list of Items). This procedure was taken in order to compare the manner in which the subjects responded to common stimuli with the amount to which their responses were self revealing as a criterion. Borke's Categories and the Verbal Index were used to make this comparison. The differences between the group means on this measurement were found to be insignificant by a $t = 1.02$ (df = 4, P<.01). These results are reported in Table I.

**TABLE I**

$t$-SCORES OF THE MEAN DIFFERENCES BETWEEN SENTENCE-COMPLETION ITEM VI SCORES

<table>
<thead>
<tr>
<th>Verbal Index Rating</th>
<th>Grown-Up Toy Group</th>
<th>Normal Toy Group</th>
<th>$t$</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>27.87</td>
<td>26.50</td>
<td>1.02*</td>
<td>1.03</td>
</tr>
</tbody>
</table>

*P < .01
Procedure

The ten subjects were matched on five variables other than age. These factors were amount of verbalization, sociometric ratings, I.A., achievement level, and sex. The first of these variables, the amount of verbalization, was judged by the teacher with the use of a five point rating scale (see Appendix E). This scale was constructed so that a rating of five indicated a large amount of verbalizations, while a rating of one was given to a subject who made few verbalizations. The mean difference between the two groups results in a $t = 2.40$ (df = 4, $P < .05$), as seen in Table II.

### Table II

$t$-scores of the mean differences between sociometric and verbalization ratings of grown-up and normal toy groups

<table>
<thead>
<tr>
<th></th>
<th>Grown-Up Toy Group</th>
<th>Normal Toy Group</th>
<th>$t$</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Sociometric Rating</td>
<td>18*</td>
<td>17*</td>
<td>.52**</td>
<td>.76</td>
</tr>
<tr>
<td>Total Verbalization Rating</td>
<td>19</td>
<td>12</td>
<td>2.41***</td>
<td>.50</td>
</tr>
</tbody>
</table>

*Correlated groups  
**$P < .1$  
***$P < .05$
The teacher also rated each subject on a sociometric scale with the criterion being the number of friends and/or the popularity of the child. This scale was constructed similarly to the verbalization scale consisting of five ratings, with the maximum rating of five being given to those children who were judged as having very many friends in the classroom, (see Appendix F). When the difference between means of the group was measured with the use of the t-test, the resulting score was nonsignificant $t = .52$ (df = 4, $P < .1$). These results may be seen in Table II.

The subjects were matched next on their measured I.Q. and achievement test scores. Statistically, the group differences of means between the I. Q. scores resulted in a nonsignificant $t = 2.03$ (df = 4, $P < .1$). The differences between the group means for the Achievement Test scores resulted in a nonsignificant $t = .06$, (df = 4, $P < .1$). These results are presented in Table III.

The two groups were matched as best as possible as to sex, and only one pair was mixed along this variable.

Equipment

The two groups differed in the types of toys which were available for the subjects to use while in the therapy session. In the first group the toys normally employed in
TABLE III

_T-Scores of the Mean Differences Between I. Q._

_Scores and Achievement Test Scores for the_  

_Grown-Up and Normal Toy Groups_

<table>
<thead>
<tr>
<th></th>
<th>Grown-Up Toy Group</th>
<th>Normal Toy Group</th>
<th>( t )</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean I.Q.s</td>
<td>121*</td>
<td>132*</td>
<td>2.03**</td>
<td>7.99</td>
</tr>
<tr>
<td>Mean Achievement Test Scores</td>
<td>8.88*</td>
<td>8.96*</td>
<td>.06**</td>
<td>1.33</td>
</tr>
</tbody>
</table>

*Correlated means

**P > .1

Play therapy were available, while in the other group these toys were removed, and more sophisticated, grown-up toys used in their place.

The toys selected for use in the grown-up toy group were chosen because of their ability to be used by both adults and adolescents equally well. Some of these items are designed specifically as toys, while others may not be toys at all, but are rather articles which are considered as novel and/or interesting, (tape-recorder, typewriter, playing cards, etc). A list of these toys is provided in Appendix G.
The toys employed in the "normally recommended toy" group were taken directly from the published lists of Axline, Moustakas, and Lebo.

Treatment of Data

The data collected in this experiment were handled in the manner suggested by Lebo concerning the use of the Verbal Index with verbal material. This method included the use of both the Verbal Index and Borke's Categories. By this process it was possible to obtain quantitative figures related to the number and self-revealing nature of the two groups responses. There is a slight variation of the Lebo method, however, in that in the present study the Verbal Index was computed for the whole group of toys in each condition, while in the Lebo experiment it was computed for each toy.

The Verbal Index was computed for each of the therapy sessions and then appropriate t-tests were utilized on the differences of the group means on this Index for the total of the three sessions. In a separate measurement, the total number of statements made by the two groups was also compared by use of the t-test.
CHAPTER IV

STATISTICAL ANALYSIS OF THE RESULTS

A total of 1357 statements were recorded from the 30 play therapy sessions. Using the Verbal Index these statements were rated separately as to their self-revealing nature. The total number of statements made by each subject was also recorded. In this manner each subject received two sets of scores: his total number of statements and a total Verbal Index for the three one-hour play sessions.

The subjects’ scores were then separated according to the group into which they fell and the differences between the group means computed. The results of this procedure indicated that in both the case of the Verbal Index and the total number of statements, the "grown-up" toy group was significantly different from the normally recommended toy group in the hypothesized direction.

Looking at the number of statements recorded by the two groups, it was found that the "grown-up" toy group produced almost twice as many statements as did the normal toy group. Statistically, this difference produced a $t = 9.54$, ($df = 4$, $p < .001$), which is highly significant. These results may be seen in Table IV.
Table IV

*t*-SCORES OF MEAN DIFFERENCES BETWEEN GROWN-UP AND NORMAL TOY GROUP FOR TOTAL NUMBER OF STATEMENTS AND TOTAL VERBAL INDEX

<table>
<thead>
<tr>
<th></th>
<th>Grown-Up Toy Group</th>
<th>Normal Toy Group</th>
<th>t</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Verbal Index</td>
<td>408*</td>
<td>164.26*</td>
<td>9.48*</td>
<td>10.3</td>
</tr>
<tr>
<td>Total Number of Statements</td>
<td>894*</td>
<td>463*</td>
<td>9.54*</td>
<td>17.98</td>
</tr>
</tbody>
</table>

*Correlated means
**P < .001

Not discounting the large difference in the number of statements between the two groups, the findings observed between the two groups for the Verbal Index are both interesting and noteworthy. For here too the "grown-up" toy group achieved a score over twice the size of that of the other group. In this case the Verbal Index for the "grown-up" toy group nearly tripled the Verbal Index for the normally recommended toy group. This difference resulted in a $t = 9.48$, ($df = 4$, $p < .001$). These results may be seen in Table IV.
Discussion of the Results

The results of this experiment (as seen in Table IV), clearly support the research hypothesis in both parts. Concerning the number of statements which the subjects made, the group using the "grown-up" or more sophisticated toys made nearly twice as many statements as did the group using the normally recommended toys. This finding indicates that something in the "grown-up" toy group was more comfortable, less strange or puzzling, and finally more conducive to establishing interest and conversation than in the normally recommended toy group. It does not seem reasonable that a twelve-year-old child should have much, if any interest at all, in the toys listed on most normally recommended toy lists which were in fact designed for younger children.

One of the factors upon which effective therapy is based is the establishment of good rapport and freedom of communication between the therapist and the client. If this is the case, it would not seem plausible to place a child in a situation in which he no longer identifies or wishes to be associated. And if it occurs that the child is placed in such a situation, consideration might be given to how much such a child is likely to relate, and of what nature the communication will be.
This brings us to the second part of the research hypothesis, that of the self revealing nature of the statements recorded by two groups of subjects. The results gained in support of the prediction that the "grown-up" would make more self revealing statements were highly meaningful. For now we have evidence that twelve-year-olds not only make more responses when presented with toys aimed more at their own level but also that these children make more self revealing statements when using such toys. In other words, not only can the therapist expect to achieve a freer flow of communication between the child and himself, but also that what the child is saying is more self revealing.
THE BEST WAY TO HELP THE BEST...
Conclusions

When discussing the purpose and utility of toys with emotionally disturbed children, one speaks of the importance of the establishment of contact, or communication, or self expression. And that is why toys work so well with children because the toys capture their interest and promote such expression. This purpose is not fulfilled however, with the use of the normally recommended toys with twelve-year-olds. The interest simply is no longer there for these toys, and if placed with them any potential communication may actually be retarded.

The results of this experiment indicated however, that the usefulness of the playroom with these children is not gone. By simply revising the inventory of the toys to be used with twelve-year-olds, a child who is caught in that stage of being too old for the ordinary playroom and too young for the interview-room may possibly be aided without the problems encountered by many therapists with the use of the normally recommended toys.

Recommendations

The one main recommendation inferred from the results of this study is that the value of the playroom with children over eleven years of age not be forfeited. The fact is that
the playroom, or a modified version of it, could probably be used with a good deal of success for several years beyond eleven; that is, if there were the need.

Also there is the possibility that the playroom may not be used to its best advantage with many of the older children whose ages are near eleven or twelve. Emotionally disturbed children are not isolated completely from the world around them, nor do their interests remain stagnant at the level of five or six-year-olds. With this in mind, it might be well for the child therapist to make appropriate changes in the availability of certain more "grown-up" or sophisticated toys to the older of his play-therapy children.
APPENDIX A

HELEN BORKE CATEGORIES FOR QUANTIFYING

THE PLAY THERAPY PROCESS (Lebo, 1955)

A. Curiosity about the situation and things present in it. (Why did you choose me?)

B. Simple description, information, and comments about play and playroom. (This is an army)

C. Statements indicating aggression. (All references to war, storms, dying, etc.)

D. Story Units. (Any imaginary dialogue)

E. Definite decisions. (I'm going to build a bridge)

F. Inconsistencies, confusion, indecision, and doubt. (I wonder if this will work)

G. Exploring limits of the playroom. (Can I paint this?)

H. Attempting to shift the responsibility to the therapist. (What should I do next?)

I. Evidence of interest in the counselor. (What do you do?)

J. Attempting to establish relationship with the counselor. (Do you know what I'm going to do?)

K. Negative statements about Self. (I'm stupid, I'm afraid)

L. Positive statements about the Self. (I'm good in school)

M. Negative statements about family, school, things made or present in the playroom, the situation, activities, etc. (I don't like my sister)
N. Positive statements about family, school, things made or present in the playroom, the situation, activities, etc. (I like it here)

O. Straight information and stories about family, school, pets, teacher, self, etc. (We live in a big house)

P. Asking for information. (Where is the paint)

Q. Questions or comments pertaining to time during the interview. (How much longer do we have?)

R. Exclamations. (Crazy! Oh! Darn!)

S. Unclassifiable. (Yes. Hello. Goodbye.)

T. Insightful statements revealing self-understanding. (I wasn't loud but I was mean)

U. Ambivalent statements. (I'm scared in here but I like to come here)

V. Sound effects. (Such noises as siren, machine gun, airplane)

W. Mumbling or talking to self in a voice too low to be heard. (Speech not directed to therapist and not understandable)
APPENDIX B

LIST OF NORMALLY RECOMMENDED PLAY-THERAPY TOYS

1. Air planes
2. Variety of toy animals
3. Dolls
4. Balloons
5. Black board and Chalk
6. Nursing Bottles
7. Bow and Arrows
8. Cars and Trucks
9. Clay
10. Cloth or Rags
11. Crayons
12. Cups and Saucers
13. Hand Puppets
14. Completely furnished Doll House
15. Doll Family
16. Guns, Hatchets and Knives of rubber
17. Mallets and Peg Board
18. Paints
19. Sand Box
20. Shovels
21. Toy Soldiers
22. Water
23. Scissors
24. Telephone
25. Blocks
26. Bed for Doll with covers
APPENDIX C

NON-RECOMMENDED TOYS SUGGESTED BY LEBO (1955)

1. Rubber Balls
2. Bubble Blowing Equipment
3. Checker game
4. Coffee Pot
5. Coloring Books
6. Comic Books
7. Cord or Rope
8. Film Viewers with Film Strips
9. Fireman's Helmet
10. Lady's Hat
11. Handcuffs
12. Hoe
13. Magazines
14. Marbles
15. Play Money
16. Rake
17. Lady's Shoes
18. Stand-up-figures of Peter Rabbit, his family and Farmer Brown
19. Man's Sweater
20. Thumb Tacks
21. Washboard
22. Whistle
APPENDIX D

LIST OF 10 SENTENCE-COMPLETION ITEMS

1. I am very... 
2. A close friend should... 
3. It is important to... 
4. It is wrong to... 
5. I feel unhappy when... 
6. I don't like myself when... 
7. I become angry if... 
8. It is right to... 
9. My friends always... 
10. I feel bad when...
## APPENDIX E

TEACHER RATING SCALE FOR AMOUNT OF SUBJECT VERBALIZATION

<table>
<thead>
<tr>
<th>SUBJECTS</th>
<th>Speaks Very Much</th>
<th>Speaks Above Average</th>
<th>Average Speech</th>
<th>Speaks Little</th>
<th>Speaks Very Little</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>(5)</td>
<td>(4)</td>
<td>(3)</td>
<td>(2)</td>
<td>(1)</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3.</td>
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<td>4.</td>
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<td>5.</td>
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<td>6.</td>
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<td>10.</td>
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</tbody>
</table>
### Appendix F

**Teacher Rating Scale for Subject Sociometric Standing**

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Very Many Friends (5)</th>
<th>Many Friends (4)</th>
<th>Some Friends (3)</th>
<th>Not Many Friends (2)</th>
<th>Few Or No Friends (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
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APPENDIX G

TOYS USED IN "GROWN-UP" TOY GROUP

1. Portable Tape Recorder
2. Pastel Chalks (Colored)
3. World Map Puzzle
4. Checker Game
5. Modeling Clay
6. Deck of Cards
7. Colored felt-tipped Pens (6)
8. Paint Set with varying sizes of brushes and a wide range of colored paints (Tempra).
9. Plastic Model (do-it-yourself) Car, Rocket, Airplane and Human Figure Kits.
10. Dress designs and Material
11. Scissors, Thread, Buttons, etc.
12. Typewriter and Paper
13. Writing paper, Pen, and Pencil
14. Drawing and Painting Paper
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