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# A study in the language acquisition styles of language delayed toddlers

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Title:  A Study in the Language Acquisition Styles of
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Nelson, in her 1973 study of normal toddlers and in her
subsequent studies in 1975 and 1981, Bloom, Lightbrown, and
Hood in 1975, Bates and McWhinney in 1987, and Horgan in 1981
determined that all children do not acquire language along
the same developmental course.  Rather, there are some chil-
dren whose early childhood language is comprised primarily

of names for objects and people, a referential style. Then there are those children whose early childhood language is comprised of primarily verbs, adjectives, function words, and expressive phrases such as "bye-bye," an expressive language style.

Nelson, in her 1981 study, also found that referential speakers, until age 30 to 36 months, have significantly larger vocabularies than do expressive speakers.

Bates and McWhinney in 1987 claimed that most children are neither expressive or referential. Rather they fall somewhere in the middle, using both strategies. They further concluded that it is the children at the extreme ends of the referential/expressive continuum that may exhibit qualitatively different language styles.

The purpose of the present study was to determine if language delayed toddlers, 18 to 30 months of age, were at one end of the referential/expressive continuum. It was this researcher's hypothesis that due to the restricted vocabulary of children who use an expressive language style, that the delayed toddlers would tend to be more expressive speakers.

A vocabulary checklist was completed by parents and evaluated in terms of the percent of referential words in the total vocabulary. Those scoring 40% and below were classi-fied as expressive. Those scoring 60% and above were clas-sified referential and those falling between 41% and 59% were classified as neither referential or expressive.

The normal group consisted of 26 toddlers between 18 and 30 months, and the delayed group consisted of 27 toddlers of the same age group. The criteria for the delayed group was as follows: (1) less than 10 words at 18 to 23 months, and (2) less than 50 words or no two-word combinations at 24 to 34 months.

A Chi Square test on each individual group, normal and delayed, and a multinomial probability test comparing the two groups showed significant differences in the use of language styles within the two groups, and a significantly different distribution of styles. In other words, more toddlers than would be expected by chance choose a referential strategy, and fewer choose an expressive strategy for both the normal and delayed groups. Also, when comparing the two groups it was found that significantly more normal toddlers than delayed toddlers used a referential strategy, and significantly fewer used an expressive or no specific strategy.

A STUDY IN THE LANGUAGE ACQUISITION STYLES

OF LANGUAGE DELAYED TODDLERS


by

SHELLY SAUNDERS


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requirements for the degree of


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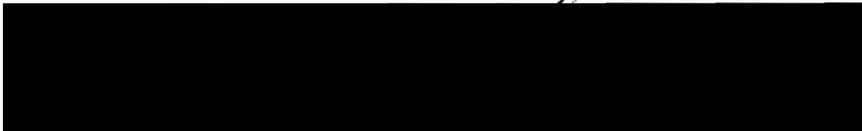Shelly Saunders presented March 14, 1990.

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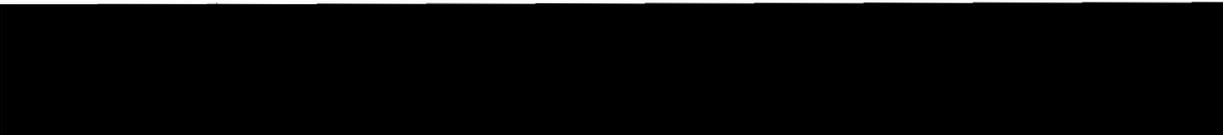
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CHAPTER I

INTRODUCTION

To this date most research done in the area of indi-
vidual differences in language acquisition has been focused
on those children with normal language development.  This
thesis in language learning styles will examine individual
differences in children with expressive language delays.

In the 1960's the literature in language acquisition
gave the impression that all children acquire language along
the same developmental course:  naming, to telegraphic
speech, to grammar (Bates and McWhinney, 1987).  However,
beginning in the 1970's researchers such as Nelson (1973)
and Bloom, Lightbrown, and Hood (1975), began researching
individual differences in the way children acquire language.
Nelson, in 1973, found that children use different strategies
to acquire language:  a referential or naming strategy,
versus an expressive or prosocial strategy.  Bloom, Light-
brown, and Hood (1975) reported similar findings in that some
children use predominantly nouns in their early language
acquisition while others use mainly pronouns.  These two
groups were termed "nominal" and "pronominal."  Those chil-
dren who were termed referential or nominal speakers were
reported to have a significantly larger vocabulary than those
children who were defined as expressive speakers.

## PURPOSE

The purpose of this study is to determine if language delayed toddlers tend to use one strategy in preference to the other in acquiring language. That is, do language delayed toddlers prefer a referential strategy using predominantly naming words, or do they choose an expressive strategy using predominantly social interactive language, such as: need, want, and bye-bye. Secondly, the study will ask whether the distribution of strategy use in the delayed group differs from that in the normal group. The findings of this study could be helpful in determining treatment goals for expressive language delayed toddlers. That is, if it is found, as expected, that expressive language delayed toddlers tend toward a more expressive style of acquiring language, remediation could focus on developing naming skills.

## RESEARCH HYPOTHESIS

Significantly more toddlers in the language delayed group will use an expressive language acquisition style than do toddlers in the normal group.

## NULL HYPOTHESIS

Neither the expressive language delayed or normal toddlers will show a preference for either a referential or an expressive language acquisition style.

# DEFINITION OF TERMS

1.  <u>Expressive language delayed toddlers</u>--refers to those toddlers with limited expressive vocabularies who show: (1) less than 10 words at 18 to 23 months, and (2) less than 50 words or no two-word combinations at 24 to 34 months.

2.  <u>Expressive style</u>--productive vocabularies of toddlers that contain at least 60% pronouns, verbs, adjectives, function words, and expressive phrases such as "bye-bye."

3.  <u>Normal language toddlers</u>--refers to those toddlers with expressive vocabularies of (1) more than 10 words at 18 to 23 months, and (2) more than 50 words and use of two-word combinations at 24 to 34 months.

4.  <u>Referential style</u>--productive vocabularies of toddlers that contain at least 60% referential words, names of objects and people.

5.  <u>Toddlers</u>--children between 18 and 24 months of age.

CHAPTER II

REVIEW OF THE LITERATURE

LANGUAGE ACQUISITION THEORIES

There have been four major theories of language acqui-
sition predominate in the literature in this field.  The
first is the behaviorist approach to language acquisition
which proposes that language is learned through classical
and/or operant conditioning (Skinner, 1957; Watson, 1924).
The second approach, the linguistic approach, assumes that
language has a structure somewhat independent of language
use.  Chomsky claimed that these structures consist of a
finite set of rules shared by all speakers of a language
(Gleason, 1989), and that they are learned through innate
biological processes.

The primary assumption of the third approach, cognitive
interactionist, is that language development is based on the
sequence of language development.  This theory is based on
Piaget's theory of cognitive development (Piaget, 1926).  An
example of this is that a child must reach the object perma-
nence stage in order to be able to hold an object's image in
mind before the words that represent objects can be acquired.
A fourth approach is the social interactionist theory of
language acquisition.  The idea behind this theory is that

young children first use language as a social tool for inter-
acting with their parents. Those that support this approach
propose that the child cues the parent as to the appropriate
language needed for language development (Gleason, 1989).
In other words, the young child needs efficient social com-
munication at each stage of language development in order to
improve his/her language skills (Gleason, 1989).

## INDIVIDUAL DIFFERENCES IN ACQUISITION STYLES

Although these theories offer differing explanations of
how language is acquired, they assume that all children go
through basically the same course of development, i.e.,
naming, to telegraphic speech, to grammar, with the only dif-
ference being the rate at which acquisition takes place
(Horgan, 1981).

In 1973 Nelson began to study the possibility that
there are individual differences in the way children acquire
language. In her study of 18 children from 12 to 30 months
of age, Nelson used the first 50 words acquired by each
child and assigned these words to form classes (nominals,
action words, modifiers, personal-social terms, and function
words).

Briefly, what she found was that all children learn
names or labels for familiar people, animals, foods, toys,
vehicles, and household objects. However, there was a dif-
ference in the proportion of nominals in their vocabularies.
Ten of the subjects had early lexicons that were dominated by

words for objects. These subjects were labeled "referential" speakers. Eight of these subjects had a higher proportion of pronouns, modifiers, function words, and personal-social items, "stop it," "go away," etc. These children were labeled "expressive" speakers.

Nelson, in this 1973 study, argued that these differences were due to different hypotheses about how language is used. The referential group was learning language to talk about and categorize the objects in their environment. The expressive group was more socially oriented and was acquiring the means to talk about themselves and others.

Other studies conducted by Nelson (1975a, 1975b, 1981), Bloom, Lightbrown, and Hood (1975), Bates and McWhinney (1987), and Horgan (1981), support Nelson's 1973 findings that children seem to acquire language through different strategies and that these differences fall consistently along these referential/expressive lines.

In Nelson's 1975 study on individual differences in early semantic and syntactic development, it appeared that the strategy of language acquisition used by a child was related to the child's theory of the function of language as reported in her 1973 study. In this same study it was also found that expressive speakers acquired language by repeating many whole phrases and sentences. It appeared that they acquired language at a slower rate than did the referential speakers. They used more personal and impersonal pronouns and their early lexicons were oriented toward

social interaction (Nelson, 1975a). The referential speakers on the other hand, had significantly larger vocabularies by age 2 years and used more agents in their early lexicons. It appeared that their early language was oriented toward the action of people (Nelson, 1975a).

In another study, Nelson (1975b) found that referential speakers clearly went from one-word to two-word phrases whereas expressive speakers tended to use imitative multi-word phrases from the very beginning. In 1981 Nelson again reported that referential speakers used a significantly larger vocabulary than did the expressive speakers until 24 to 30 months of age. At this age the two groups' vocabularies were approaching the same size. It was also found in the 1981 study that expressive speakers used mainly pronouns in sentences while the referential speakers used mostly nouns in their first word combinations (Nelson, 1981).

In looking at pronoun use in early language acquisition Bloom et al. (1975) also found individual differences in acquisition styles. In this study it was found that two of the four subjects used a nominal style, phrases or sentences composed of mostly nouns and other content words, and the other two subjects were said to use a pronominal style, phrases in which the same meaning was conveyed using non-specific pronominal forms or pronouns. However, by the time the four children in this study reached a mean length of utterance (MLU) of 2.5, the differences in noun and pronoun use had disappeared (Bloom et al., 1975).

There appear to be several characteristics that link the referential and nominal and the expressive and pronominal styles together (Bates and McWhinney, 1987). Expressive and pronominal styles are associated with a greater tendency to imitate at both the word level and the sentence level. Also, the articulation of both the expressive and pronominal groups is usually imprecise and difficult to understand (Bates and McWhinney, 1987). As for the nominal and referential speakers they tend to emphasize the use of nouns and the development of noun phrases (Horgan, 1981). They also characteristically go from one-word to two-word phrases followed by sentences. In contrast, the pronominal/expressive speaker uses imitative multiword phrases and sentences from the beginning with poor articulation skills.

In summary, nominal/referential speakers are character- ized as follows: larger vocabularies until 30 to 36 months, predominantly noun lexicons, clear articulation, definite one-word and two-word stages followed by sentences. The pronominal/expressive speakers are characterized by: higher proportion of pronouns in sentences, poorer articulation, and a higher proportion of verbs, modifiers, function words, adjectives, and expressive phrases.

Although there appear to be individual differences in language acquisition styles, it should be noted that both referential and expressive styles fall on a continuum rather than a dichotomy with most children falling somewhere in the middle, using both strategies, and that the two styles of

language acquisition do not seem to result in different language outcomes by the age of 2-1/2 or 3 years. It is the children at the extreme ends of the continuum that may reflect qualitatively different acquisition strategies (Bates and McWhinney, 1987). This study will ask whether children with late acquisition of expressive language represent one end of this continuum.

CHAPTER III

METHODS

SUBJECTS

The subjects were comprised of a total of 53 children,
26 with normal expressive language skills and 27 with delayed
expressive language skills.

The subjects were obtained from three sources for a
larger study being conducted at Portland State University.

1. All parents of children 18-30 months of age seeking
   well-baby checkups, within a 5-month period, for
   their children at three local pediatric clinics
   were asked to complete a questionnaire describing
   the child's expressive vocabulary (see Appendix A).

2. Subjects were also obtained from a radio broadcast
   describing the study and giving a phone number
   parents could call. These parents also completed
   the vocabulary questionnaire.

3. Parents responded to a newspaper article in The
   Oregonian requesting subjects for a larger study
   being conducted at Portland State University.
   These parents also completed the vocabulary question-
   naire. Criteria for eligibility in the language
   delayed group were as follows:

      a.   18-23 months:  use of less than 10 words, by
           parent report.

      b.   24-34 months:  use of less than 50 words or
           no two-word combinations, on the parent
           questionnaire.

All other subjects with larger vocabularies at the above age levels were considered candidates for the normal group. All delayed subjects were invited to participate in the study. Normal subjects were chosen from the pool of candidates so that the two groups were matched for age, sex, race, and socioeconomic status. All subjects, normal and delayed, passed a hearing screening in a sound field at 25 dB and showed cognitive ability within normal range on the Bayley Scales of Infant Development (Bayley, 1969). All subjects appeared to have normal neurological function based on a behavioral observation.

This researcher remained blind as to the diagnostic group in which each subject was placed until both gathering and analyzing of the data were completed.

Parent permission forms were distributed and explained by researchers at the subject's first evaluation session at Portland State University (see Appendix B).

INSTRUMENTATION AND PROCEDURES

The instrument used to assess expressive vocabulary size and assign subjects to groups was the Language Development Survey (Rescorla, 1989) (see Appendix A). This

checklist has been used to identify expressive language delay
in toddlers and is reported to have excellent reliability and
validity (Rescorla, 1989). It consists of 350 words divided
into various semantic categories.

The checklist was completed by each subject's parent
at the initial evaluation at Portland State University fol-
lowing these instructions printed on the form: "Circle each
word your child says. Don't include words your child can
understand but not say. It's okay to count words that are
not pronounced clearly. If your child speaks a foreign lan-
guage, please check off the English version of the words he
uses." (See Appendix A.) (No speakers of a foreign language
were included in this study.)

The words on the list were names for familiar foods,
toys, animals, body parts, places, people, clothes, vehicles,
personal items, outdoor and household items, action words,
modifiers, and others such as "A,B,C," "bye-bye," etc.
(For a complete list of the words please see Appendix A.)

From the checklist, words reported for each subject
were assigned by this researcher to form classes according
to Nelson's 1973 criteria (nominals, action words, modifiers,
function words, and personal-social items). Also, following
Nelson's rules, nominals were assigned to the category of
referential words, while all other form classes were assigned
to the category of expressive words (Appendix C).

The percentage of referential words used by each sub-
ject was calculated by dividing the number of referential

words reported on the Language Development Survey by the total vocabulary size reported there. Those subjects with 60% or more nominal words were assigned to the referential group and those with 40% or fewer nominal words were assigned to the expressive group. Those whose use of nominals fell between 41% and 59% were assigned as "neither referential or expressive." The 60% and 40% cutoffs were chosen for the purpose of distinguishing those children who show some marked preference from those who use both referential and expressive vocabulary with similar frequency. This latter procedure was not done in Nelson's 1973 study.

## RELIABILITY

Interjudge reliability was used to assess the reliability of assigning words to the referential and expressive categories on the vocabulary checklist. A second judge was trained in assigning words to form classes according to those used in Nelson's 1973 study. Ten percent of the checklist were randomly selected and the words independently assigned to class forms by a trained graduate student. The interjudge reliability was then calculated by means of percent of agreement. The interjudge reliability, using this procedure, was 100%.

## DATA ANALYSIS

Data from the vocabulary checklist were analyzed using a Chi Square test (Shapiro and Sardy, 1985) to decide

whether the proportion of the two language styles, referential and expressive, were used with equal frequency by toddlers in the language delayed group. A Chi Square test of multinomial probabilities was used to decide if the two groups differed significantly in the proportion of subjects choosing each strategy.

CHAPTER IV

RESULTS AND DISCUSSION

RESULTS

The data were analyzed to see if significantly more expressive language delayed toddlers used an expressive language learning style than those toddlers in the normal group. The following results were obtained.

A Chi Square test was used to determine if there was a significant difference in the number of subjects using a referential as opposed to expressive language learning style for both normal and delayed groups (see Table I).

TABLE I

CHI SQUARE TEST RESULTS FOR NORMAL AND DELAYED GROUPS

| Subjects | Style | | | Chi Square |
|---|---|---|---|---|
| | Referen-tial | Expres-sive | Neither | |
| Normal | 25 | 0 | 1 | 47.58 |
| Delayed | 15 | 5 | 7 | 6.29 |

(K-1) df = 2. With 2 df a Chi Square value greater than 5.99 is required at the .05 level of significance to reject the null hypothesis.

The Chi Square value computed from the data for the delayed group was 6.29 with 2 degrees of freedom (Table I). This exceeds the critical value of 5.99 using an alpha level of .05. Thus, more delayed toddlers than would be expected by chance chose a referential strategy, and fewer chose an expressive strategy. The same results were found for the normal group. However, when the two groups were compared, a Chi Square test of multinomial probabilities revealed that the distribution of strategy use in the two groups was significantly different. In other words, significantly more normal toddlers than delayed toddlers used a referential strategy, and significantly fewer used an expressive or no specific strategy. This distribution resulted in a Chi Square value of 11.98 with 2 degrees of freedom, with a critical value of 5.99 at an alpha level of .05 (see Table II).

TABLE II

CHI SQUARE TEST OF MULTINOMIAL PROBABILITIES
BETWEEN NORMAL AND DELAYED GROUPS

| Subjects | Style | | | Chi Square |
| --- | --- | --- | --- | --- |
| | Referen-tial | Expres-sive | Neither | |
| Normal | 25 | 0 | 1 | 11.98 |
| Delayed | 15 | 5 | 7 | |

(K-1) df = 2. With 2 df a Chi Square value greater than 5.99 is required at the .05 level of significance to reject the null hypothesis.

Since there is a significant difference between the two groups, this researcher examined the kinds of discrepancies between the means, standard deviations, range, and percentage of subjects using the expressive style, referential style, or neither style.

By examining Tables III and IV, it is clear that the delayed group shows greater diversity in vocabulary acquisition style. The delayed group had a range of 0 to 100% referential words while the normal group had a range of 58% to 85% referential words, indicating that the delayed group has more subjects at the extreme ends of the referential/ expressive continuum. Bates and McWhinney (1987) implied that it is those children at the extreme ends of the referential/expressive continuum that may have qualitatively different language styles. This may apply to some of the subjects in the delayed group.

TABLE III

MEANS, STANDARD DEVIATIONS, AND RANGES OF PROPORTION OF
REFERENTIAL WORDS FOR NORMAL AND DELAYED GROUPS

| Subjects | M | SD | Range (%) |
| --- | --- | --- | --- |
| Normal | 65.50 | 6.55 | 58-87 |
| Delayed | 55.85 | 21.40 | 0-100 |

TABLE IV

PERCENTAGE OF TODDLERS IN THE THREE CATEGORIES
FOR NORMAL AND DELAYED GROUPS

| Subjects | Referential | Expressive | Neither |
|----------|-------------|------------|---------|
| Normal   | 96          | 0          | 4       |
| Delayed  | 56          | 19         | 25      |

When looking at the percentages of referential and
expressive speakers and those that adopt neither strategy,
the delayed group again appears to be more diversified.  The
normal group contained 96% referential speakers while only
56% of the delayed group were referential speakers.  On the
other hand, 19% of the delayed group were expressive speakers
while 0% of the normal group used an expressive language
style (Table III).  Also, the normal group had only 4% who
were neither referential or expressive while the delayed
group had 25% of the subjects in the neither category.

DISCUSSION

It may be that toddlers in the delayed group have prob-
lems acquiring language because their strategy for learning
language is in conflict with their theory of the function of
language.  Nelson, in her 1973 study, found that those chil-
dren in the referential group were learning language to talk
about and categorize the objects in their environment, while
the expressive group was more socially oriented and was
acquiring a means to talk about themselves and others.  In

other words, a language delayed toddler may think that lan-
guage has a more social function, to control the environment,
but is learning names for objects, people, etc. If this tod-
dler thinks that language is used for social purposes rather
than categorizing the objects in their environment as the
referential speakers appear to be doing, then the strategy
of naming objects and people may not have significant meaning
for this toddler. They may need to learn new vocabulary in
a more social context such as, "I want the ball." The refer-
ential learner may need to learn new vocabulary by having
words put into categories such as animals, toys, people, etc.

A source of variance in the results concerning the
delayed group may be in the definition of language delayed
for the 24 month and over group. Under the definition in
this study, language delayed subjects may have vocabularies
the same size as subjects in the normal group, but were
classified as delayed because they used no two-word phrases.
Since it is known that, for the most part, expressive
speakers have smaller vocabularies than do the referential
speakers (Nelson, 1981), there may be a greater number of
expressive speakers in the delayed group if, for the 24 month
and older subjects, language delay was defined in terms of
limited vocabulary only and not two-word phrases. By using
this criterion, all those termed delayed would be in the
delayed group based on the same criteria rather than having
a 50-word or less vocabulary for some and not for others.

In examining the delayed group, 7 subjects had vocabularies over the 50-word cutoff for establishing language delay, but were classified as delayed because they used no two-word utterances. All 7 of these subjects were referential speakers. None of the delayed subjects who were categorized in the expresssive or neither categories had vocabularies over 50 words. If the criterion for language delay was based on vocabulary size only for the 24 month and older category there would have been 8 referential, 5 expressive, and 7 neither toddlers in the delayed group, instead of 15 referential, 5 expressive, and 7 in the neither category. This would have resulted in a chi value of .72 which is less than the critical value of 5.99 at the .05 alpha level with 2 degrees of freedom. These results show that there is not a significant difference in the language learning styles of the toddlers in the delayed group and would therefore change that outcome of the study.

A strength in the design, and hence the results, of this study is the procedure for distinguishing the referential speakers from the expressive speakers. It will be recalled that the purpose of this study was to establish whether or not language delayed toddlers tend to use an expressive language style. It was not clear in Nelson's 1973, 1975, or 1981 studies on individual differences of normal children 12 to 30 months of age what parameters were used to determine whether a subject was referential or expressive. This researcher felt that in order for the

results of the current study to be valid, those subjects who
had vocabularies close to 50% referential and 50% expressive
should not be considered in either category. To clearly
identify referential as opposed to expressive speakers, those
with referential vocabularies of 40% and below were classi-
fied as expressive and those with 60% and above were classi-
fied as referential. These parameters should have eliminated
any variance that may have been caused by classifying sub-
jects in the wrong category. In using these parameters,
those assigned to either category truly represent expressive
or referential language styles.

In reviewing the method of obtaining the subjects'
vocabulary size and content, this researcher feels that by
using a vocabulary checklist instead of a vocabulary diary
as Nelson (1973) did may have lead to some incorrect, under
or over, reporting of the vocabularies of the subjects.
There may have been words that the parents did not report on
the checklist because they did not remember them at the time
they were filling out the checklist. Another concern is that
a parent may have over-reported the number of words their
child has in his/her vocabulary. For example, it is possible
to see a word on the checklist that may have been used once
or twice by a child but is not used consistently in the cor-
rect context and is reported as a vocabulary word. It is
this researcher's opinion that a word must be used consist-
ently in the correct context before it can be considered part
of a child's vocabulary. However, it should be noted that

Rescorla (1989) reports validity of the <u>Language Development Survey</u> to be excellent.  This type of reporting error could have been alleviated if the checklist instructions were "to circle any words your child uses correctly on a consistent basis" rather than "circle any word your child says."  Many toddlers say a word once or twice and then do not use the word again for a long time.  It seems to this researcher that such words are not truly part of their expressive vocabularies.

CHAPTER V

SUMMARY AND IMPLICATIONS

SUMMARY

Most theories of language acquisition assume that
children learn language along the same course of development,
i.e., naming, to telegraphic speech, to grammar with the only
difference being the rate at which language is acquired
(Horgan, 1981).

Nelson, in her 1973 study of normal toddlers and in her
subsequent studies, 1975a, 1975b, and 1981, Bloom, Lightbrown,
and Hood (1975), Bates and McWhinney (1987), and Horgan (1981)
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The purpose of the present study was to determine if language delayed toddlers, 18 to 30 months of age, were at one end of the referential/expressive continuum. It was this researcher's hypothesis that due to the restricted vocabulary of children who use an expressive language style, that the delayed toddlers would tend to be more expressive speakers.

A vocabulary checklist was completed by parents and evaluated in terms of the percent of referential words of the total vocabulary. Those scoring 40% and below were classified as expressive. Those scoring 60% and above were classified as referential and those falling between 41% and 59% were classified as neither referential or expressive.

The normal group consisted of 26 toddlers between 18 to 30 months and the delayed group consisted of 27 toddlers of the same age group. The criteria for the delayed group was as follows: (1) less than 10 words at 18 to 23 months, and (2) less than 50 words or no two-word combinations at 24 to 34 months.

A Chi Square test on each individual group, normal and delayed, and a multinomial probability test comparing the two groups showed significant differences in the use of language styles within the two groups, and a significantly different distribution of styles. In other words, more toddlers

than would be expected by chance choose a referential strat-
egy for both the normal and delayed groups.  Also, when com-
paring the two groups it was found that significantly more
normal toddlers than delayed toddlers used a referential
strategy, and significantly fewer used an expressive or no
specific strategy.

## IMPLICATIONS

### Research

Further research in the area of language delayed chil-
dren and individual differences is needed.  A follow-up study
on these same language delayed toddlers is recommended to
establish if any of these toddlers are actually late bloomers
as opposed to chronically language delayed.  It would be
interesting to know if there was a significant difference in
language styles in those subjects who remain language delayed
as 4 and 5 year olds.  If there were a significant difference
for this group it would suggest that an evaluation of a
child's language style, referential or expressive, could
provide important diagnostic information.

### Clinical

From the present study it appears that examining a
language delayed child's vocabulary in terms of referential
or expressive style in addition to the traditional analysis
of quantity of expressive vocabulary could be helpful in the
diagnostic process.

It is this researcher's feeling that the more information speech and language pathologists have about language delayed children the better they can design treatment programs.  For example, if a child is hard of hearing a clinician teaches strategies for that child to learn language through lip reading, using contextual cues, etc.  In other words, the best strategy for teaching language to a hearing impaired child is the one that best suits the individual child, not the same strategy for every child.  The same should be true for the language delayed toddler.  Even though this study does not indicate the type of treatment plan that would best suit these delayed toddlers it is this researcher's opinion that by utilizing the child's strategy for learning language, referential or expressive, you could change the context of the treatment program to best suit each toddler.  A social context could be used for the expressive language learner and a naming or categorizing context could be used with the toddler who uses a referential style to learn language.

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APPENDIX A

VOCABULARY CHECKLIST

APPENDIX A

VOCABULARY CHECKLIST

Please circle each word your child says.  Don't include
words your child can understand but not say.  It's ok to
count words that aren't pronounced clearly.  If your child
speaks a foreign language, please check off English versions
of the words he uses.

FOOD
apple
banana
bread
butter
cake
candy
cereal
cheese
cookie
crackers
drink
egg
food
grapes
gum
hamburger
hotdog
ice cream
juice
meat
milk
pizza
pretzel
raisins
soda
soup
spaghetti
tea
toast
water

TOYS
ball
balloon
blocks
books

crayons
doll
picture
present
swing
teddybear

OUTDOOORS
flower
house
moon
rain
sidewalk
snow
sky
street
sun
tree

ANIMALS
bear
bee
bird
bug
bunny
cat
chicken
cow
dig
duck
elephant
fish
frog
horse
monkey
pig
puppy

snake
tiger
turkey
turtle

BODY PARTS
arm
bellybutton
bottom
chin
ear
elbow
eye
finger
foot
hair
hand
leg
mouth
neck
nose
teeth
thumb
toe

PLACES
church
home
hospital
McDonalds
park
Sesame St.
school
store
zoo

ACTIONS
bath
breakfast
bring
brush
catch
clap
clean
close
comb
come
cough
dance
dinner
doodoo
down
eat
feed
finish
fix
get
give
go
help
hug
jump
kiss
look
love
lunch
nap
outside
pattycake
peekaboo
peepee
push

ride
run
see
show
sing
sit
stop
take
throw
tickle
up
walk
want
wash

HOUSEHOLD
bed
blanket
bottle
bowl
chair
clock
cup
door
floor
fork
glass
light
pillow
plate
potty
radio
room
sink
soap
spoon
table

telephone
towel
trash
TV
window

PERSONAL
glasses
key
money
paper
pen
pencil
penny
pocketbook
tissue
toothbrush
watch

PEOPLE
aunt
baby
boy
daddy
doctor
girl
grandma
grandpa
lady
man
mommy
own name
pet name
uncle

CLOTHES
belt
boots
coat
diaper
dress
gloves
hat
jacket
pajamas
pants
shirt
shoes
slippers
sneakers
socks
sweater

VEHICLES
bike
boat
bus
car
motorcycle
plane
stroller
train
trolley
truck

MODIFIERS
all gone
all right
bad
big
black
blue
broken
cold
dark
dirty
good
happy
heavy
hot
hungry
mine
more
nightnight
open
pretty
red
shut
stinky
that
this
tired
wet
white
yellow

OTHER
A,B,C, etc.
away
booboo
bye-bye
curse words
hi, hello
in
me
my
myself
no
off
on
please
scuse me
shut up
thank you
under
welcome
what
where
why
yes
you
yumyum
1,2,3, etc.

Please list any other words your child uses:

_____

_____

Does your child combine 2 words?  ("more cookies,"
"car bye-bye")

                    YES _____        NO _____

Please list below THREE of your child's longest
and best sentences.

_____

_____

_____

APPENDIX B

COVER LETTER

APPENDIX B

COVER LETTER

Dear Parents,

    We are trying to learn more about at what age children begin speaking, and what kinds of words they use when they start to talk.  We would appreciate it greatly if you would answer the following questions and return this form to the nurse before you leave the office.  Your cooperation in this study is voluntary and if you choose not to complete the questionnaire it will in no way affect the treatment you receive at Kaiser Permanente, at Portland State University, or anywhere else.  If you choose to fill out the questionnaire, I would appreciate your including your phone number so that I may contact you in case I have a question.

    We would like to study a few children in greater depth, as well.  If you would be interested in this later part of the study, please indicate so at the bottom of the question- naire and give your name, address, and phone number.  Again, your cooperation is completely voluntary.  If you have any questions about the study, or about your child's speech, please do not hesitate to call me at Portland State Univer- sity at 229-3142.

    Thank you in advance for your help.


        Yours,


        Rhea Paul, Ph.D.
        Assistant Professor

Encl.

APPENDIX C

REFERENTIAL AND EXPRESSIVE FORM CLASSES

APPENDIX C

REFERENTIAL AND EXPRESSIVE FORM CLASSES

REFERENTIAL

Food
apple
banana
bread
butter
cake
candy
cereal
cookie
cracker
drink
egg
food
grapes
gum
hamburger
hotdog
ice cream
juice
meat
milk
pizza
pretzel
raisins
soda
soup
spaghetti
tea
toast
water

Toys
ball
balloon
blocks
book
crayons
doll
picture
present
swing
teddybear

Outdoors
flower
house
moon
rain
sidewalk
snow
sky
street
sun
tree

Animals
bear
bee
bird
bug
bunny
cat
chicken
cow
dog
duck
elephant
fish
frog
horse
monkey
pig
puppy
snake
tiger
turkey
turtle

Body Parts
arm
bellybutton
chin
ear
elbow
eye

finger
foot
hair
hand
leg
mouth
neck
nose
teeth
thumb
toe

Places
church
home
hospital
McDonalds
park
Sesame St.
school
store
zoo

Household
bed
blanket
bottle
bowl
chair
clock
cup
door
floor
fork
glass
light
pillow
plate
potty
radio
room
sink

soap
spoon
table
telephone
towel
trash
TV
window

Personal
glasses
key
money
paper
pen
pencil
penny
pocketbook
tissue
toothbrush
watch

People
aunt
baby
boy
daddy
doctor
girl
grandma
grandpa
lady
man
mommy
own name
pet name
uncle

Clothes
belt
boots
coat
diaper

## REFERENTIAL (cont.)

dress
gloves
hat
jacket
pajamas
pants
shirt
shoes
slippers
sneakers
socks
sweater

### Vehicles
bike
boat
bus
car
motorcycle
plane
stroller
train
trolley
truck

## EXPRESSIVE

### Actions
bath
breakfast
bring
brush
catch
clap
clean
comb
close
come
cough
dance
dinner
doodoo
down
eat
feed
finish
fix
get
give
go
help
hug
jump
kiss
look
love
lunch
nap
outside
pattycake
peekaboo
peepee
push
ride
run
see
show
sing
sit
stop
take
throw
tickle
up
walk
want
wash

### Modifiers
all gone
all right
bad
big
black
blue
broken
cold
dark
dirty
good
happy
heavy
hot
hungry
mine
more
open
pretty
red
shut
stinky
tired
wet
white
yellow

### Pronouns
me
my
myself
that
this
you

### Other
A,B,C, etc.
away
booboo
bye-bye
curse words
hi, hello
in
nightnight
no
off
on
please
scuse me

EXPRESSIVE (cont.)

shutup
thank you
under
welcome
where
why
yes
yumyum
1,2,3, etc.


Other words as noted by parents:

Referential                          Expressive

_____          _____

_____          _____

_____          _____

_____          _____

_____          _____

_____          _____


Two-word combinations:

_____

_____

_____