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THE USE OF PRONOUNS BY YOUNG CHILDREN: A
NOTE ON THE DEVELOPMENT OF SELF-
AWARENESS*

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Because pronouns are more highly generalized symbols than other parts of speech, their early use by children has considerable psychological significance as a means of throwing light on the development of conceptual thinking. To some extent, this fact has been recognized. One of the standard questions that concerned the earlier students of child psychology had to do with the process of learning to distinguish between the self and the rest of the universe. The use of the first personal pronoun has commonly been taken as evidence that at least a primitive stage in the development of self-awareness has been reached, and child biographers have therefore been at pains to note the age at which this pronoun first becomes a part of the child's spoken vocabulary. Surprisingly enough, however, few of the published records contain an adequate account of the conditions under which the word was first used, and since most of the reports are concerned only with a single child, few conclusions of general significance are warranted.

The study about to be reported is based upon observational records of the spontaneous conversations of children enrolled in the nursery school and experimental kindergarten of the University of Minnesota, Institute of Child Welfare. The method employed by McCarthy (2) which consists in recording for each child a sample of 50 consecutive responses under uniform conditions was employed.

In McCarthy's study, the child under observation was alone in a room with an adult observer who provided him with toys and picture books but avoided direct verbal stimulation as far as was consistent with maintaining an easy natural atmosphere. Our study consists of two sets of records for each child. The first was secured under conditions identical with those reported by McCarthy, except that we used a small testing room in the nursery school building

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whereas McCarthy's subjects were observed in their own homes. The second set of records was taken during the free-play hour in the nursery school or kindergarten. Series I (hereinafter known as the "Controlled" or *C Series*) thus includes remarks made to an adult or undirected monologue during solitary play with toys, while Series II, called the "Free" or *F Series*, consists chiefly of remarks made to other children, although, inasmuch as every verbal response was recorded from the time of beginning the observation until 50 such remarks had been secured, the records also include some remarks made to teachers and a fair amount of monologue not clearly directed to any particular person.

Each child was observed individually within a month of the date midway between birthdays. As a rule, the two observations for a given child were made on consecutive days; the interval between observations was never greater than a week. All observations were made by persons accustomed to the speech of children; they are for that reason likely to be somewhat more accurate than would be the case had they been taken by individuals of less experience in this field. While independent observers were found to agree very closely in their records, there is reason to think that this agreement understates the true accuracy of recording, since it is not always easy for two full-sized adults to occupy the most favorable position for observation at the same time. However, a preliminary experiment indicates that under condition *C*, the correlation between the total number of pronouns reported for each of 16 children by two simultaneous observers is approximately .96 when age is held constant while under condition *F*, where the maintenance of equally favorable conditions of observation is more difficult, the corresponding figure is around .92. It was not feasible to secure a sufficient amount of data to determine conclusively whether the agreement between observers varies with the age of the children observed, but examination of the discrepancies in the records as well as common-sense judgment suggests that such a relationship exists and this for two reasons, first, the greater difficulty of understanding the speech of the younger children and, secondly, the relatively small number of pronouns used at those ages, and the consequent low standard deviations of the individual scores.

This study differs from most others on the development of language in children, since it is concerned mainly with the changes

in the content of children's speech under different types of social stimulation. Most of the previous studies have been based upon only a single situation, or in those instances where the speech in two or more situations has been compared, the number of cases has been small or the composition of the groups has varied from situation to situation. Smith (6) reports a study of two sets of records taken under conditions similar to those of the present study, but there is much uncontrolled variation in the conditions of study. The records were obtained from several American nursery schools and kindergartens by several different investigators, and from white children in Hawaii. While it is stated that some of the subjects were observed in both situations, there is no information as to the extent to which this was done or as to the usual lapse of time between observations in these cases. Since the number of observations under the controlled situation was 107 as compared to 198 during free-play; it is evident that the groups are far from being identical. The major part of the report, moreover, is concerned with age and sex differences; the situational analysis is very cursory. In an unpublished study by McConnon, (4) the language responses of nursery school children were studied under a number of different conditions, but the group used was not large and because of fluctuating conditions of attendance, the composition of the various subgroups varies slightly from one situation to another. The number of cases also varies slightly but is usually fewer than 25. In none of these studies was any special analysis of pronoun usage attempted.

McCarthy (3) observed each of 31 nursery school children in two situations similar to those reported here. This study was carefully controlled but because of the small number of cases at each age, conclusions were of necessity very tentative. However, two trends of probable significance were noted, viz., more than three times as many emotionally-toned responses and a greater tendency toward egocentric responses during free-play than in the controlled situation. Of the 31 children observed, 29 gave more egocentric responses in Situation *F* than in Situation *C*.

In classifying a given response as egocentric or socialized, McCarthy used a modification of Piaget's functional method. This procedure is admittedly rather subjective, although it has the advantage of being based on complete units of speech rather than upon single words. In the present study, we have approached the ques-

TABLE 1
MEAN FREQUENCY OF OCCURENCE OF CERTAIN SPECIFIED GROUPS OF PRONOUNS PER SAMPLE OF 50 RESPONSES, BY AGE, SEX,
AND CONDITIONS OF OBSERVATION

Age and sex Condition	Boys 2½			Girls 2½			Boys 3½			Girls 3½			Boys 4½			Girls 4½			Boys 5½			Girls 5½		
	C	F	No. cases	C	F	9	C	F	17	C	F	21	C	F	18	C	F	25	C	F	55	C	F	49
Pronouns																								
I. I, me, myself	3.1	3.0		2.8	2.8		9.2	9.2	10.4	10.9		7.9	14.2		9.2	11.4	16.1		11.2	12.9		11.3	15.4	
II. My, mine	3.3	4.3		3.7	1.7		0.8	2.3	0.8	2.3		1.0	4.0		1.1	1.9	2.5		1.1	2.1		1.3	2.8	
III. We, us, ours	0.8	—		0.6	—		1.2	1.4	1.2	1.4		1.5	1.8		1.4	3.3	2.4		0.8	1.6		1.8	1.9	
IV. You, your, yours, yourself	0.4	0.5		0.6	1.9		4.1	4.7	4.1	4.7		2.5	6.9		3.7	6.9	8.0		2.9	5.9		3.7	7.5	
V. He, him, his, she, her, hers, himself, herself	0.8	0.5		0.9	0.7		4.2	0.7	4.2	0.7		3.7	2.1		4.3	2.2	2.6		4.2	2.4		5.4	1.5	
VI. They, them, their, theirs (persons)	—	—		—	—		0.4	0.1	0.4	0.1		0.8	—		0.6	0.6	1.2		0.3	0.3		0.7	0.3	
VII. Who, whose	—	—		—	—		0.7	—	0.7	—		0.3	0.3		0.6	0.5	0.2		0.2	0.1		0.4	0.4	
VIII. It, that, its, what, this	12.4	1.6		10.8	3.9		11.7	5.7	11.7	5.7		11.5	7.9		9.4	7.2	9.4		11.0	10.2		11.8	10.2	
IX. They, them, those, these, their, theirs (objects)	13.8	—		—	1.6		4.8	2.1	4.8	2.1		4.8	2.4		5.8	2.3	3.4		6.0	3.3		5.6	3.3	
Total pronouns	24.6	9.9		19.4	19.0		38.3	28.9	38.3	28.9		34.0	39.6		36.1	36.3	45.8		37.7	38.8		42.0	43.3	

tion of egocentricity by means of an analysis of the pronouns used in the two situations. This method has the merit of objectivity since the only source of error lies in the recording of the original responses and this, as was stated before, is probably a small one. Moreover, the type of analysis made here has been useful in bringing to light certain trends in the development of conceptual thinking that have hitherto escaped observation.

Table 1 shows the mean number of occurrences of certain specified pronouns in each sample of 50 consecutive remarks by a total of 203 children under the two situations described.

Examination of Table 1 reveals interesting variations in the use of certain specified pronouns or pronoun-groups according to the age and sex of the children and the conditions under which the observations were made. For both sexes and at all ages with the single exception of the small group of two-year-old boys, pronouns of the first person singular occur with far greater frequency during free play with other children than in the controlled situation where the child presumably feels less need to assert himself. The same trend is shown in the use of the possessions, *my* and *mine*. Insofar as the use of these pronouns is indicative of something in the nature of an ego-consciousness, it is evident that this feeling is brought to the fore in the more competitive situations of group play far more frequently than is the case during the less socialized conditions of the controlled situation. This is wholly in accordance with McCarthy's findings.

Strictly speaking, the first personal pronoun can have no true plural. The so-called plural forms (*we*, *us*, *ours*) involve an idea of cooperation or of identifying oneself with the group that seems to be relatively late in appearing. Among the two-year-olds there is no record of the use of any of these words in the free-play situations, and the few scattering instances of their use with adults suggest a copying of adult phraseology rather than a true concept of joint action. It may be noted in this connection that in Shirley's study of 25 babies (5) only a single instance of the use of the first person plural is recorded. After the age of two, these pronouns are used somewhat more often in the *F* than in the *C* situation, but the frequency is not great at any age.

Pronouns of the second person, like those of the first, occur much more frequently during play with other children than when alone

with an adult. They are not often used by the two-year-olds. We have not attempted to distinguish between the singular and the plural usage since the identity of word-form makes differentiation on the basis of the written record impossible in the majority of cases, and even at the time of observation, the distinction is not always evident.

In classifying pronouns of the third person we have attempted, as far as possible, to distinguish between those referring to persons and those referring to objects and here we have again separated the singular from the plural forms. Examination of Table 1 shows that each of these groups of pronouns shows a marked excess in frequency of use in the *C* situation, and that the plural forms referring to persons are used but rarely at these ages. Shirley records a single instance of the use of the word "*them*" by a child under the age of two, but does not specify whether the reference was to persons or to objects.

The use of the neuter pronouns, *it*, *that*, etc., greatly exceeds the use of the more specific masculine and feminine forms at all ages, and this is especially true of the plurals. Moreover, the use of the neuter pronouns is much more frequent in the controlled situation where the child is playing with toys and looking at pictures than it is in the free situation where other children are present and competing for his attention. The explanation for this is so obvious that the point would hardly seem worth mentioning except for the fact that proportions of the various parts of speech in the language of children are frequently quoted in a fashion that might lead the reader to think that these proportions depend almost wholly upon the child's level of development and vary but little with the conditions of observation. The unsoundness of this point of view will be apparent from an examination of the data here presented. As a matter of fact, while most of the pronouns here listed show a distinct difference in frequency of usage according to the immediate situation under which they are used, age differences are not always apparent, even when no allowances are made for the increasing length of the sentence. Considering absolute frequency, the pronouns that show greatest increase in usage with advancing age are those of the first and second persons and to a somewhat less extent, the third person singular when referring to persons and not to objects. The neuter pronouns show little absolute change in frequency as age advances.

This appears to be due to the fact that the younger child characteristically uses these pronouns as a substitute for the names of unknown objects. "What's *that*? *That's* a funny thing." "*It* makes a noise, doesn't it?" etc., are expressions heard over and over again in any nursery school.

The comparatively rare use of third-person plurals referring to persons is another point of interest. Apparently, for the young child at least, objects lend themselves to grouping much more readily than do people. Our data do not show a single instance of the use of third-person plural pronouns with personal antecedents before the age of 3½, after which the typical frequency is roughly one occurrence in two samples, that is, about once in 100 responses.

Whether or not third-personal pronouns referring to persons are equally rare in the speech of older children and adults is not easy to determine because of the difficulty of reproducing the situations used in this study. My guess would be that adults use them more frequently than children do, though probably not so often as the same pronouns with non-personal antecedents. As a partial and admittedly very inadequate check, I counted the number of such pronouns in ten random samples of written discourse, each from a different book and a different writer and each sample a full page in length. The books included fiction [4], biography [1], psychology [1], anthropology [1], sociology [2], and popular science [1]. The number of sentences in each sample varied from 9 to 21; the total number was 131. The number of third-person plural pronouns referring to persons ranged from 0 to 6; the total number was 17; while those not referring to persons number 24. The total number of words was 3420, or an average of 26.1 words per response, which is approximately 5½ times the average length of the sentences used by the five-year-old-girls in the controlled situation. Thus it appears that in these samples of written discourse by adults, pronouns of the third-person plural that refer to persons occurred about 2½ times as frequently as in the spoken discourse of preschool children while those not referring to persons are found only about 1/3 as often.¹ Whether we are dealing here with a true

¹These ratios are computed for samples containing an equal number of words. They are approximations only, since reference to Table 1 will show that there is a good deal of shifting about from one group to the next in the total frequency of these pronouns. We have taken 0.5 and 5.0 as

age difference or whether the apparent difference is purely the result of the different character of the material used cannot be said with assurance from the data at hand, but scrutiny of the original records of the children's speech shows many instances in which the names of individual children are enumerated in detail when an adult would almost certainly have used one of the collective pronouns, *they* or *them*.

Thus far we have considered changes with age in the use of pronouns only in an absolute sense, without regard to the fact that sentence-length is also increasing with age. Table 2 shows the percentages obtained by dividing the mean number of pronouns of each type by the mean number of words in the sample.

When allowance is made for the increase with age in the typical length of the responses (see last line of Table 2) the proportion of pronouns of all classes shows no consistent trend with age in the *C* situation, while in the *F* situation there is for the boys a slight indication of an increase in the proportion of pronouns as age advances. This tendency does not hold for the girls, however, and as the differences shown by the boys are small, they may represent only a chance departure from a stable ratio. Likewise, there is no consistent difference between the two situations in the total percentage of pronouns used.

Certain of the pronoun groups, however, show interesting variations with age and condition of experiment. The increase with age in frequency of use of the first personal pronoun, holds good for the relative as well as for the absolute comparison. The greater use of these pronouns during free play shows up even more clearly in terms of the percentage of pronouns than in their absolute frequency, since the average length of sentence is shorter in the *F* than in the *C* situation. The same may be said of pronouns of the second person. Third person singular neuters make up a steadily decreasing proportion of the total number of words in the *C* situation, but the percentages tend to increase with age in the *F* situation.

In all probability it is this preponderance of the third person

the most representative figures for the frequency of pronouns of the first and second type respectively in a sample of 50 responses totalling 238 words, which is the average for five-year-old girls in the *C* situation. This is compared with 17 of the first and 24 of the second in an adult sample of 3420 words.

TABLE 2
RATIO OF THE NUMBER OF PRONOUNS OF VARIOUS CLASSES TO THE TOTAL NUMBER IN THE SAMPLE
(In percentages)

	Boys 2½		Girls 2½		Boys 3½		Girls 3½		Boys 4½		Girls 4½		Boys 5½		Girls 5½	
	C	F	C	F	C	F	C	F	C	F	C	F	C	F	C	F
I, me, etc.*	2.6	2.6	2.5	8.7	5.9	7.2	4.4	10.8	4.5	6.1	5.2	8.2	5.8	6.8	5.1	8.0
My, mine	2.8	3.8	3.3	1.6	0.5	1.5	0.6	3.1	0.5	1.0	0.4	1.3	0.6	1.1	0.6	1.5
We, etc.	0.7	—	0.5	—	0.7	0.9	0.8	1.4	0.7	1.8	0.5	1.2	0.4	0.8	0.8	1.0
You, etc.	0.3	0.4	0.5	1.8	2.3	3.1	1.4	5.3	1.8	3.7	1.8	4.1	1.5	3.1	1.7	3.9
He, she, etc.	0.7	0.4	0.8	0.6	2.4	0.5	2.1	1.6	2.1	1.2	1.8	1.3	2.2	1.3	2.4	0.8
They,	—	—	—	—	0.2	0.1	0.4	—	0.3	0.3	0.2	0.6	0.2	0.2	0.3	0.2
(pers.) etc.	—	—	—	—	0.4	—	0.2	0.2	0.3	0.3	0.2	0.1	0.1	0.1	0.2	0.2
Who, etc.	—	—	—	—	6.6	3.8	6.4	6.0	4.6	3.8	5.7	4.8	5.7	5.4	5.3	5.3
It, etc.	10.4	1.4	9.8	3.7	—	—	—	—	—	—	—	—	—	—	—	—
They (non-	—	—	—	—	2.7	1.4	2.7	1.8	2.9	1.2	2.7	1.7	3.1	1.8	2.5	1.7
pers.) etc.	20.7	8.6	17.4	17.9	21.7	18.5	19.0	30.2	17.7	19.4	18.5	23.3	19.6	20.6	18.9	22.6
Total	118.8	114.0	110.6	106.1	177.1	151.0	179.3	131.1	203.3	187.2	222.0	195.8	191.7	188.5	222.8	191.5
Mean no. words in sample	2.37	2.28	2.20	2.12	3.34	3.02	3.58	2.62	4.06	3.75	4.44	3.91	3.83	3.77	4.45	3.83
Mean no. words per response																

*For a complete list of the pronouns included in each group, see Table 1.

neuter singulars among the pronouns used in the *C* situation that accounts for the fact that, contrary to popular opinion, the absolute number of pronouns used in the course of 50 responses shows no increase with age after the maximum has been reached at $3\frac{1}{2}$ years, and in proportion to the total number of words used the number of pronouns actually declines. The use of an unusually large number of pronouns in this situation may thus be regarded as evidence of linguistic immaturity, rather than maturity in children over the age of $3\frac{1}{2}$ years.

Table 3 shows the correlations between the total number of

TABLE 3
ODD-EVEN CORRELATION OF TOTAL NUMBER OF PRONOUNS IN SAMPLE CORRECTED BY SPEARMAN-BROWN PROPHECY FORMULA

	$2\frac{1}{2}$		$3\frac{1}{2}$		$4\frac{1}{2}$		$5\frac{1}{2}$	
	B	G	B	G	B	G	B	G
Free	.87	.95	.72	.70	.68	.88	.77	.58
Controlled	.85	.40	.77	.91	.89	.81	.76	.86
No cases	9	9	17	21	18	25	55	49

pronouns in the odd-numbered responses and the corresponding number in the even-numbered responses by age and sexes separately after correction for total length by means of the Spearman-Brown prophecy formula. Although these correlations are not extremely high, they indicate a degree of stability of the data that is sufficient for group comparisons. In view of the small number of pronouns belonging to the various sub-classes in the individual records, it has not seemed worth while to compute self-correlations for this part of the analysis. It is apparent from the data given in Table 1 that a sample of 50 responses is not sufficient for the study of individual differences in the use of separate pronouns, but the consistency of the group trends shown in Tables 1 and 2 is evidence of their validity as group measures.

That females are somewhat more precocious than males in the use of language is demonstrated by their earlier mean age of beginning to speak, the use of longer sentences during the preschool years, larger vocabularies during childhood, and higher scores on reading tests and English composition tests at all ages. McCarthy has shown that in all available measures of speech in which age progression appears, girls are somewhat more advanced than boys during

the preschool years. Studies of college students have shown that in many respects, at least, this superiority of the female sex is maintained throughout the adolescent period. Our data show a similar trend with respect to the use of pronouns. The mean total number of pronouns in the *F* sample is greater for girls than for boys at every age. In the *C* situation, however, the total pronoun count for boys is greater than that for girls at the two younger ages. Examination of Table 1 provides a possible explanation. At these ages the third person singular neuters account for more than half of the pronouns used in that situation. The superior vocabularies of the girls enable them to substitute actual names of objects in many instances where the boys still cling to the more primitive "this" and "that." Thus the greater total number of pronouns used by the boys at these ages should probably be interpreted as an indication of linguistic inferiority rather than superiority.

The ratio of the number of first personal pronouns to the number of second and third combined has by some writers been taken to have some significance as an indication of egocentricity. A study by Anderson (1) in which the data consisted of samples of compositions written by students in a junior college, reports a slightly higher average value for this index in the compositions written by women students than in those written by men, but the difference obtained is smaller than its standard error and so may be only a chance variation. For the children of our groups, no consistent sex difference in respect to this tendency was established, but the proportion of first personal pronouns used in the *F* situation greatly exceeds that found in the *C* situation. This is true, even when the ratio is based only upon the pronouns referring to persons with all those having a neuter antecedent (both singulars and plurals) excluded (see Table 4).

TABLE 4
RATIO OF THE NUMBER OF FIRST PERSON SINGULAR PRONOUNS TO THE NUMBER OF THOSE IN THE SECOND AND THIRD PERSON

	A				B			
	C		F		C		F	
Age	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
2½	0.37	0.53	2.81	1.34	5.67	4.46	7.30	4.26
3½	0.43	0.38	0.99	0.92	1.28	1.28	2.41	2.03
4½	0.42	0.45	0.67	0.75	1.19	1.48	1.37	1.58
5½	0.42	0.45	0.78	0.78	1.65	1.29	1.75	1.97

A. All pronouns including neuters.

B. Only pronouns referring to persons; neuters omitted.

Of the 16 sex comparisons in Table 4, the pronoun-index is higher for the boys than for the girls in 7 instances, the girls lead in 7 cases and in the remaining cases the ratios are equal. It is interesting to note that age progression is much more clearly seen in the free play situation than it is in the more rigidly controlled but less highly socialized condition of the experimental room, and that under the former conditions both sexes show a fairly rapid drop in this ratio from the age of $2\frac{1}{2}$ to $4\frac{1}{2}$ with a slight rise at the age of $5\frac{1}{2}$. Although this suggested increase in self-assertiveness among the five-year-olds may be only a chance variation from a stabilized value it is nevertheless not wholly without interest, in view of recent findings by Wolf (7) and others which suggest that social competition first becomes clearly apparent in the average child around the age of five years. The fact that the five-year-olds were enrolled in kindergarten while the other children were all in the nursery school should also not be overlooked, since, as has been pointed out before, the immediate situation is so important a factor in determining the form and content of children's speech.

Two facts of decided importance for students of the development of speech in childhood have been brought out by this study. First, it has been shown that the immediate situation exercises an important effect upon the form and content of speech, and that accordingly, any statements regarding the average or usual characteristics of the language of persons of any age must be limited to the conditions under which the records were secured or to such other situations as have been empirically demonstrated to be their psychological equivalents. Secondly, it is clear that many of the formal grammatical classifications of adult usage are inadequate to bring out significant developmental trends in the speech of children. The very marked changes that occur in the use of pronouns, for example, are almost wholly obscured when all pronouns are grouped into a single class. Developmental processes are qualitative as well as quantitative, and in devising systems for classifying behavioral manifestations it is necessary to keep these qualitative changes in mind if the systems are to be useful. It is suggested that in the study of children's language, too much attention has been paid to the type of grammatical analysis used by adults and too little to the developmental changes in conceptual thinking and social drives that lie back of the verbal expression. In this respect, Piaget has set an example by which many of us can well profit.

SUMMARY

1. Samples of the spontaneous conversations of 203 children in two psychologically dissimilar situations have been analyzed with respect to the frequency of usage of certain specified pronouns in each situation. Each sample consisted of 50 consecutive responses.

2. In agreement with the findings of other investigators, the percentage of pronouns in the total sample shows little consistent change with age or sex after the age of three years. Certain specified groups of pronouns, however, show very pronounced changes with age and with the conditions of observation.

3. Pronouns of the first person singular (including the possessives) are used far more frequently during play with other children than when the child is alone with an adult. Both singular and plural pronouns of the third person with non-personal antecedents show the opposite trend in very marked degree.

4. Pronouns of the third person plural with personal antecedents are but rarely used at these ages.

5. Neuter pronouns of the third person singular make up a decreasing proportion of the total number of words used as age advances. This is due to the fact that the young child characteristically uses these pronouns in place of the names of unfamiliar objects. As vocabulary increases, nouns are gradually substituted for the indefinite neuters.

6. Sex differences are not large but tend to favor the girls in those aspects of pronoun usage that show a developmental trend. An index of egocentricity obtained by dividing the number of first personal pronouns by the sum of those in the second and third persons was unrelated to sex, but showed a high relation to the immediate situation.

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