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The use of the definite and indefinite articles by Italian preschool children*

R. J. D. POWER AND M. F. DAL MARTELLO

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ABSTRACT

In deciding whether to use a definite or indefinite referring expression a speaker must apply a pragmatic rule: the definite article is usually appropriate if the listener is already familiar with the referent, and the indefinite article if not. Several studies have investigated at what age this rule is mastered by children. The most satisfactory procedure so far adopted is a task in which the subject must narrate a pictorially-presented story to another child who cannot see the pictures. It has been found that 5-year-old children already follow the correct rule quite well, except that they make 'egocentric errors' (i.e. using the definite article when first mentioning a referent) in around 15–35% of instances. Experiment 1 here confirms that this pattern of results is also obtained using Italian children. A problem with this experimental design is then raised: it does not exclude the possibility that subjects might produce the correct response distribution by following a rule based on the speaker's familiarity with the referent, not the listener's. To check this possibility, a modified design was used (Experiment 2) in which the subject had to narrate the story to two listeners, one after the other. Significantly more egocentric errors were made on the second narration of the story than on the first narration.

INTRODUCTION

In order to use the definite and indefinite articles correctly, children must acquire two kinds of knowledge. Firstly, they must learn the various forms of the articles; these differ from language to language and may be relatively simple, as in English, or complex, as in Italian. (For instance, the possible translations of the in Italian are *il, lo, la, i, gli, le, and l', depending on number, gender, and the phonetic form of the next word.) Secondly, they must learn in which contexts the use of a given article is appropriate; here, by contrast, there are only slight variations among English, Italian, and related languages.

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In particular, for straightforward referring expressions such as might occur in children's stories, the rule governing the choice between the definite and indefinite articles is virtually the same.

Simply stated, the rule is as follows. When a speaker S mentions a referent (a rabbit, let us say) to a listener L, the decision whether to employ the definite or indefinite article must take account of L's current state of knowledge. If L is already familiar with the rabbit, either by direct experience or by report, then S should use the definite article (the rabbit) or some other definite referring expression such as a pronoun (it); if instead L is not yet familiar with the rabbit, S should use the indefinite article. This rule is a PRAGMATIC one: it requires the speaker to construct and utilize a model of the person he is talking to. In view of this, particular interest attaches to the question of whether young children are able to use the articles appropriately.

In terms of the rule just given we can distinguish two types of error that a speaker S might make when using the articles. First, S might employ the indefinite article in a context in which L was already familiar with the referent (thus perhaps giving L the false impression that a new individual was being introduced into the story): this has been called the 'incoherence error' (Emslie & Stevenson 1981). Second, S might employ the definite article in a context in which L was not yet familiar with the referent. This error has often been observed in 3- to 5-year-old children (Brown 1973, Bresson, Bouvier, Dannequin, Depreux, Hardy & Platone 1970, Bresson 1974, Maratosos 1976) and has been linked to Piaget's writings on egocentricity (Piaget 1955); for this reason it is usually called the 'egocentric error'.

Although the early studies cited above reported frequent egocentric errors by young children, it has not proved easy to demonstrate this type of error clearly under experimental conditions. Subjects naturally tend to assume that any materials that are presented will already be familiar to the experimenter; consequently, whenever the experimenter plays the role of listener, it is difficult to create a situation in which the indefinite article is unequivocally appropriate. A procedure which seems to solve this problem satisfactorily has been introduced by Warden (1976, Experiment 3). Warden's basic idea was to ask subjects to narrate a story not to the experimenter but to another subject. In brief, his procedure was as follows. Two subjects, S and L, were seated at opposite ends of a table with a screen running across the middle. Three drawings, making up a simple cartoon story, were then placed one by one in front of S. The experimenter pointed out that L could not see the drawings, owing to the screen, and asked S to narrate the story to L. S's narrative was taperecorded. It was found that under these circumstances adults always used the indefinite article on first mentions of each referent, and the definite article (or a pronoun) on subsequent mentions. The results for the 3- and 5-year-old groups were instead as shown in Table 1.
USE OF ARTICLES BY ITALIAN CHILDREN

TABLE 1. Percentage of definite and indefinite references on first and second mentions in Warden (1976)

<table>
<thead>
<tr>
<th></th>
<th>First mention</th>
<th>Second mention</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Indefinite</td>
<td>Definite</td>
</tr>
<tr>
<td>3 years</td>
<td>46</td>
<td>54</td>
</tr>
<tr>
<td>5 years</td>
<td>62</td>
<td>38</td>
</tr>
</tbody>
</table>

At first sight, Warden's data seem to constitute a clear demonstration of the egocentricity effect. However, as Emslie & Stevenson (1981) have pointed out, Warden's result may have been at least partly due to two artefacts: (i) the children may have been narrating the story to the experimenter rather than to the other subject; and (ii) the cartoon stories were perhaps too implicit (see, for example, the story reproduced in Clark & Clark (1977: 369) which is indeed quite difficult to interpret). Emslie & Stevenson therefore tried repeating Warden's procedure with some slight improvements. Two simple cartoon stories were constructed, each person and object being distinctively coloured to facilitate cross-picture identification (Warden had instead used line drawings). It was repeatedly stressed during the experiment that S should narrate the story to L, who could not see the pictures; to remind S of L's presence, the screen was adjusted so that S could see the top of L's head. With these changes in design a considerable improvement in performance was obtained, as Table 2 shows.

TABLE 2. Percentage of definite and indefinite references on first and second mentions in Emslie & Stevenson (1981)

<table>
<thead>
<tr>
<th></th>
<th>First mention</th>
<th>Second mention</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Indefinite</td>
<td>Definite</td>
</tr>
<tr>
<td>3 years</td>
<td>84</td>
<td>13(^a)</td>
</tr>
<tr>
<td>4 years</td>
<td>85</td>
<td>15</td>
</tr>
</tbody>
</table>

\(^a\) The other 3% of responses were inaudible.

The aim of the first experiment reported here is to check whether the use of the articles by Italian preschool children corresponds to that of their English counterparts. To investigate this question we have repeated as exactly as possible the procedure described by Emslie & Stevenson (1981) except for one change necessitated by a slight difference between English and Italian in the usage of the definite article (this difference will be explained in the next section).
CHILD LANGUAGE

EXPERIMENT 1

METHOD

Materials

Two stories were used. Each story consisted of three pictures. The plots of the stories were taken from Emslie & Stevenson (1981). They were as follows:

First Story

Picture 1: A girl sits in a chair holding a teddy bear. A dog watches.
Picture 2: The dog runs off with the teddy bear in its mouth. The girl looks startled.
Picture 3: The girl chases after the dog, which has dropped the teddy bear.

Second Story

Picture 1: A boy and a girl are fishing on a river bank. There is a small branch on the ground beside them.
Picture 2: The boy falls into the water. The girl looks startled.
Picture 3: The girl holds out the branch to the boy to help him out of the river.

The pictures were drawn on white cards measuring 32 x 24 cms. Each character and object was distinctively coloured to facilitate cross-picture identification.

The reason for using stories composed of three pictures is to ensure that each main referent is mentioned at least twice, thus permitting a comparison to be made between first and second mentions. In choosing which referents should be considered for scoring we followed two criteria: (a) the referent should be mentioned at least twice by nearly all subjects; (b) the referent should be one for which the use of the indefinite article on first mentions was clearly correct, according to the judgement of adult speakers of Italian. On the basis of the second criterion, references to the teddy bear in the first story were not scored, owing to a special feature of the Italian definite article—namely, its use in noun phrases implying possession. Although Italian does have a possessive construction which corresponds approximately to expressions like English 'her teddy bear', this construction is often not used when the possession relation can be inferred from the context. Because of this convention, it would be possible in Italian to begin the first story with the sentence: *Una bambina tiene l'orsacchiotto* (literal translation: 'A girl is holding the teddy bear'; free translation: 'A girl is holding her teddy bear') even though the literal translation of this sentence into English sounds like an egocentric error.
USE OF ARTICLES BY ITALIAN CHILDREN

Subjects
Fifty girls and boys from a 'scuola materna' (nursery school) in Padua participated in the experiment. Fifteen of the children were aged three, 10 were aged four, and 25 were aged five. All of them spoke Italian.

Procedure
The children were examined in pairs; so far as possible each child was paired with one of similar age. One child of each pair was assigned the role of speaker and the other the role of listener. S and L were seated facing one another at a table. A screen was then placed across the middle of the table so that the pictures could be presented to S without L seeing them; the screen was low enough, however, to permit S and L to see each other's faces. The S members of the pairs were told that they would be shown a picture story and that they should tell the story to L, who could not see the pictures. The pictures of the first story were then presented to S one by one. S was reminded several times that he or she should narrate the story to L because L could not see the pictures. S's narrative was taperecorded. The children then swapped roles for the second story, which was presented in exactly the same way.

Results
For each story, two central referents were specified. In the teddy bear story the central referents were the girl and the dog; in the fishing story they were the boy and the girl. For each subject, then, four referring expressions were included in the data, except for rare occasions (2.5% overall) in which the subject failed to mention a central referent at least twice. The results were collated by going through the taperecorded narratives and noting whether the first and second mentions of each central referent had been definite or indefinite.

To assess the effect of age on performance the children were put into two groups: first, 3- and 4-year-olds, and second, 5-year-olds. The results for the 3- and 4-year-olds were amalgamated for several reasons: (i) most of the 3-year-olds were fairly close to their fourth birthday; (ii) considered separately, the sample sizes of the 3- and 4-year-olds were rather small; (iii) the data for 3- and 4-year-olds did not seem, on inspection, to reveal any important differences. The distribution of definite and indefinite referring expressions on first and second occasions of mention is shown in Table 3.

Although egocentric errors were quite common in the 3- and 4-year-old group (40% overall) there was still a substantial shift from the indefinite to the definite article in the overall scores for first and second mentions: a slight preference for the indefinite article on first mentions was converted on second mentions to a strong preference for the definite article. The significance of
CHILD LANGUAGE

TABLE 3. Percentage of definite and indefinite references on first and second mentions

<table>
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<tr>
<th></th>
<th>First mention</th>
<th>Second mention</th>
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<tbody>
<tr>
<td></td>
<td>Indefinite</td>
<td>Definite</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3-4 years</td>
<td>60</td>
<td>40</td>
</tr>
<tr>
<td>5 years</td>
<td>82</td>
<td>18</td>
</tr>
</tbody>
</table>

This difference was tested by performing a Wilcoxon test on the numbers of definite references made on first and second mentions by each subject; the number of definite references on second mentions was significantly higher both for the 3- and 4-year-old group ($P < 0.002$) and for the 5-year-old group ($P < 0.00001$).

Like Warden (1976) we found that performance improved with age: the proportion of egocentric errors fell from 40% (3- and 4-year-olds) to 18% (5-year-olds). This difference was marginally significant ($P < 0.05$, Mann–Whitney).

It may be worth adding, finally, that the results did bear out our earlier remarks about the use of the definite article in Italian to indicate possession. In the first story, 16 out of 25 first mentions of the teddy bear were definite, compared with 8 and 10 respectively for the girl and the dog. (Of course these numbers are too small to support any general conclusion; our decision to exclude references to the teddy bear was based on the intuitions of adult Italians, not on the performance of the children.)

DISCUSSION

Considering the present study in conjunction with those of Warden (1976) and Emslie & Stevenson (1981), the most striking feature of the results seems to us to be how well the younger children manage to perform the task. In all three studies, the response distributions for 3- and 4-year-old children show a clear differentiation between first and second mentions, indicating that at least some of the subjects are already able to take account of the viewpoint of the listener. However, a possibility that has not yet been considered is that this sensitivity to the listener might be only apparent. The observed shift from the indefinite to the definite article on second mentions could be due to the application by the child of an egocentric rule: that is, a rule which referred not to the listener’s state of knowledge but to the speaker’s. Suppose that the child, when constructing a referential expression, employs the indefinite article if the referent is one that has just come to his attention, and the definite article if instead he has been familiar with the referent for some time. In the context of the story-narration task this rule would produce a tendency to
prefer the indefinite article on first mentions, since the speaker would be likely to mention each referent shortly after becoming aware of it, and a strong preference for the definite article thereafter. Yet the rule is entirely egocentric—it takes no account of the listener at all.

The purpose of the second experiment reported here is to check this possibility. The procedure used is identical to that of Experiment 1 except for one feature: the subject has to narrate the story not just to one listener but to two listeners, one after the other. The point of this procedure is to see what will happen when the subject mentions each referent for the FIRST time to the SECOND listener. At this stage of the experiment, S is familiar with the referent and L is not; consequently, if S’s criterion for choosing between the articles is his OWN familiarity with the referent, then he should erroneously continue to use the definite article. If instead S is correctly taking account of whether L is familiar with the referent, then he should revert to the indefinite article.

EXPERIMENT 2

METHOD

Materials

As Experiment 1, except that the plot of the second story was altered; it was found that a few of the children had difficulty understanding the fishing scene. The following story was used in its place:

Picture 1: A girl stands holding a balloon with a long string. A bird passes overhead.

Picture 2: The girl has let go of the string and watches in alarm as the balloon rises into the sky. The bird flies towards the balloon.

Picture 3: The bird has grasped the string with its beak and is pulling the balloon back to the girl, who is smiling again.

Subjects

Fifty girls and boys aged five attending nursery schools in country districts outside Treviso.

Procedure

As Experiment 1, except that each subject narrated a story to two listeners, L1 and L2. First of all, S narrated a story to L1, while L2 waited in another room. Then L1 left the room, L2 entered in his or her place, and S narrated the same story to L2 (again prompted by the pictures). Twenty-five of the children told the teddybear story and 25 told the balloon story. The listeners were either non-subjects of about the same age, or subjects who had told the other story.
RESULTS

As in Experiment 1, two central referents were specified for each story; in the balloon story these were the girl and the bird. For each subject, the data scored were the number of definite and indefinite references on first and second mentions for each of the two narrations of the story. The results are given in Table 4. The first row of the table shows the response distribution when the story was told to the first listener; the second row shows the response distribution when the same story was told to the second listener.

<table>
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<th>First mention</th>
<th>Second mention</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Indefinite</td>
<td>Definite</td>
</tr>
<tr>
<td>1st narration</td>
<td>61</td>
<td>39</td>
</tr>
<tr>
<td>2nd narration</td>
<td>40</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>90</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>94</td>
</tr>
</tbody>
</table>

The main finding of the experiment was the increase in the proportion of egocentric errors when the story was told to the second listener - the error rate rose from 39% to 60%. This difference was significant ($P < 0.001$, Wilcoxon). This shift towards the definite article on the second narration of the story was only partial, however; it did not eliminate the difference in the response distributions for first and second mentions. The number of second-mention definite references clearly exceeded the number of first-mention definite references not only for the first narration of the story ($P < 0.00001$, Wilcoxon) but also for the second narration ($P < 0.00002$, Wilcoxon).

It may be worth mentioning, finally, that the 5-year-old children from a city school used in Experiment 1 made fewer egocentric errors than the children from country schools used in Experiment 2 (18% compared with 39%); this difference was significant ($P < 0.01$, Mann–Whitney). (In making this comparison, of course, we considered the data for the first narration of the story only.)

GENERAL DISCUSSION

Our main finding is that children aged three to five do make a large number of 'egocentric errors' in using the articles. The child's ability to use the articles correctly can best be assessed by examining performance on the second narration of the story in Experiment 2; here the error rate on first mentions for 5-year-old subjects was as high as 60%. As we have shown the original story-narration task (Warden 1976, Experiment 3) overestimates the extent to which the child is taking account of the listener, since it fails to
control for the possibility that the subject might produce the correct response distribution by applying a speaker-centred rule.

However, our results do not of course imply that 3- to 5-year-old children are unable to apply the correct listener-centred rule. On the contrary, even in the strictest condition examined (i.e. the second narration of the story in Experiment 2) there was clear evidence of a shift from the indefinite to the definite article on second mentions, indicating that at least some of the subjects were sensitive to the state of knowledge of the listener. The ability of young children to take account of the given-new distinction has also been noted by Bennett-Kastor (1983) in a study of referential noun phrases in child narratives; in addition, Ackerman (1983) has found that 4-to 6-year-old children are already quite good at judging the adequacy of a referential noun phrase in relation to a previous discourse context. Overall, the evidence suggests that children are able to formulate another person's viewpoint, but that they often fail to do so when the problem they are tackling has other complex features (Donaldson 1978).

So far we have considered only two rules which might govern the children's use of the articles: the correct 'listener-centred' rule, and an alternative 'speaker-centred' rule. Another possibility which we have failed to control for is that some children might apply a 'discourse-centred' rule: that is, to use the indefinite article on first mentions RELATIVE TO A GIVEN NARRATION OF THE STORY, and the definite article on subsequent mentions during that narration. Application of this rule would produce the correct response distribution even in our Experiment 2, since in telling the story to the second listener the subject would see himself as instituting a new discourse.

To investigate this possibility, the crucial condition is one in which a referent which has not been previously mentioned in the story is nevertheless familiar to the listener, either through inference or through prior knowledge; a speaker following the discourse-centred rule would use the indefinite article in these circumstances, while a speaker following the listener-centred rule would use the definite article. A study by Bennett-Kastor (1983) suggests that children in the age range 2- to 5-years increasingly tend to use the definite article in such contexts. After collecting a corpus of spontaneous narratives, Bennett-Kastor analysed the frequencies of various types of referential noun phrase (indefinite article, definite article, pronoun, name, etc.) on first and subsequent mentions at four age levels (two through five). She found that as children progressed from two years to five years they increasingly preferred the definite to the indefinite article on FIRST MENTIONS. At first sight this result seems paradoxical, but it emerged on closer examination that nearly all the noun phrases in question referred either to archetypal characters (e.g. the wolf, the witch) or to objects which were inferable from the context (e.g. the fireplace in the story of the three little pigs). It should be noted that the central referents employed in our picture stories were not of this type and
hence that our results (like those of Warden 1976, Emslie & Stevenson 1981) showed the opposite trend: as age increased the proportion of definite references on first mentions declined.

Comparing the four experiments which have been carried out using Warden's method (Warden 1976, Emslie & Stevenson 1981, our Experiment 1, our Experiment 2), a considerable disparity emerges in the error rates obtained. For 5-year-olds, for example, Warden reports an egocentric error rate of 38%; this agrees closely with our Experiment 2 (39%), but the corresponding figure for our Experiment 1 is 18%, while the error-rate reported by Emslie and Stevenson for 4-year-old subjects is only 15%. These differences are probably due partly to the circumstances of the experiments, and partly to the backgrounds of the children; in Warden's experiment, performance may also have been depressed by the greater difficulty of his stories. The importance of background is evidenced in particular by the significant difference found between our 5-year-old groups in Experiments 1 and 2. The children who took part in Experiment 2 came predominantly from traditional rural backgrounds (they lived in country districts around Treviso); such children have relatively limited opportunities to listen to stories at home, still less to tell stories themselves. By contrast, the subjects in Experiment 1, who attended a school in Padua city centre, were distinctly more confident and expressive.

REFERENCES


