

Appendix 1

INTERNAL STATES WORDS

PERCEPTION

- 1) To feel cold/hot
- 2) To see
- 3) To look
- 4) To listen to
- 5) To hear
- 6) To be tired
- 7) To be deaf

EMOTIONS AND AFFECTS

- 8) To feel well/bad
- 9) To be happy
- 10) To be glad
- 11) To be cheerful
- 12) To like
- 13) To enjoy
- 14) To be friend
- 15) To love
- 16) To kiss
- 17) To smile
- 18) To be afraid
- 20) To be angry
- 21) To be scared
- 22) To be sad

COGNITION

- 23) To know
- 24) To dream
- 25) To forget
- 26) To remember
- 27) To think
- 28) To seem
- 29) To understand
- 30) To believe

INTENTIONS AND ABILITIES

- 31) To want
- 32) To be able
- 33) To succeed in

OBLIGATION AND MORAL JUDGMENT

- 34) To must, to have to
- 35) To be clever
- 36) To be good
- 37) To be bad
- 38) To be very bad
- 39) To be crazy
- 40) To may

ISW WITHIN EXPLICATIVE LINGUISTIC CONTEXT

"And the frog *smiled* and they *remain friends* forever"

"The dog *kisses* the child because they *love* each other"

"Because, because he didn't *know* where to go"

"They *have to* get married, they *must* go to Church"

"But Why? Hasn't(he) *heard* it? How come? Maybe they are a little deaf"

INTRODUCING REFERENTS IN ELICITED DISCOURSE:
FINNISH VS. TURKISH

Lisa Dasinger Aylin Küntay

University of California, Berkeley

Introducing referents in such a way that their identity is made clear to the listener is one of the basic requirements of intelligible discourse. Most developmental research in this area has focused on children learning languages with articles, namely Indo-European languages like English, French, and German (e.g., Bamberg, 1987; Hickmann, Hendriks, Roland, & Liang, to appear; Karmiloff-Smith, 1981; Warden, 1976; Wigglesworth, 1990). These studies have found that children first use forms which presuppose a referent's identifiability upon first mention. This is followed by a period, around 6;0 or 7;0 years of age, in which first mention devices are linked to character centrality or status, the more central character(s) receiving definite descriptions. The adult system, in which indefinite forms are consistently used for all previously unidentified referents, does not emerge until somewhat later, between 8;0 and 10;0 years.

In this paper, we look at children's developing ability to introduce characters into discourse in the context of picture-book narratives in two languages, Finnish and Turkish. Studying these two languages gives us the opportunity to examine children's first mention devices in languages which

do not have an obligatory article system. To date studies of languages without articles, e.g., Mandarin Chinese (Hickmann et al., to appear), Japanese (Clancy, 1992; Nakamura, 1993), Polish (Smoczynska, 1992), and Warlpiri (Bavin, 1987), have supported the general trend found for child speakers of article-bearing languages of increasing differentiation of first and subsequent mentions with development. The nature of this trend, however, appears to depend in part on the particular features of the language being learned.

This study is an attempt to broaden our understanding of how language typology affects the development of the expression of definiteness in a narrative context by examining the comparative effect of the optionality of article-like elements in Finnish and Turkish.

The lexical expression of definiteness in Finnish and Turkish

In this section we will review the ways relevant to our study in which definiteness is expressed.¹ By definiteness, we mean the pragmatic category of referent identifiability. Following Du Bois (1980), definite expressions are those which allow the listener to identify the entity referred to, while indefinite expressions are those which have referents presumed non-identifiable to the listener.

In Finnish and in Turkish, the expression of definiteness is associated with a number of different parts of the grammar which serve other functions as well, e.g., case assignment, word order, and the lexicon. These devices may act singly or in combination with one another to indicate the definiteness of a referent. In many utterances, contextual cues alone signal referent identifiability. The languages' lack of a set of devices whose sole or

¹ For more complete descriptions of the expression of definiteness, see Chesterman (1991), and Dasinger (1995), for Finnish, and Dede (1986), Erguvanli (1984), Erguvanli-Taylan and Zimmer (1994), and Küntay (1995), for Turkish.

primary function is the marking of referent identifiability and the consequent overlap of the expression of definiteness with other parts of the grammar make for a certain amount of flexibility in the marking of definiteness, should a Finnish or Turkish speaker choose to explicitly express it at all.

Finnish²

In addition to the demonstratives *tämä* 'this' and *tuo* 'that', Finnish has a number of optional article-like elements for indicating definiteness, the most common of which (in colloquial speech) are the numeral *yks(i)* 'a, one' and the determiner *se* 'the, that, it' and its corresponding plural form *ne* (Chesterman, 1991; Laury, 1991; Setälä, 1891; Vilkuna, 1992).³ The distribution of these forms in their article function is chiefly a matter of speaker choice, rather than an automatic response to contextual pressures (Vilkuna, 1992). The following two examples of story beginnings illustrate the use of these forms:⁴

- (1) *olipa* *kerran* *yks* *poika* *ja ...*
 be-PAST.3SG-CL once INDEF boy-NOM and
 'Once upon a time (there) was a boy and ...' [F6.j]
- (2) *se* *poika* *meni* *ulos*
 DEF /boy-NOM /go-PAST.3SG out
 'The boy went out.' [F6.g]

² This discussion pertains to singular referents only. For plural referents, the opposition between partitive vs. nominative and accusative case is also relevant in the expression of definiteness in Finnish. Since our analyses only deal with singular referents, this distinction will not be discussed here.

³ *Se* functions as a third person inanimate pronoun when used alone.

⁴ Standard orthography will be used throughout. The narrators' ages are given in boldfaced square brackets. The abbreviations used in the morphological glosses are: ABL [= ablative], ACC [= accusative], ADESS [= adessive], CL [= clitic], DAT [= dative], EVID [= evidential], GEN [= genitive], ILL [= ILLATIVE], INF [= infinitive], INDEF [= the indefinite numeral 'one'], NOM [= nominative], PART [= PARTITIVE], PAST [= past], PRES [= present progressive], 3SG [= third person singular].

In (1), the indefinite form *yks* (in combination with postverbal positioning) signals the status of *poika* 'boy' as that of a newly introduced entity. In contrast, *se* in (2) presupposes its identifiability on the part of the listener.

Bare nouns in Finnish can be definite or indefinite. Indefinite subjects tend to be placed postverbally. Objects, whose default position is postverbal, can be interpreted as definite or indefinite, depending on the contextual cues.

Turkish

In Turkish, there are no obligatory articles which determine the status of definite versus indefinite nominal subjects. However, the numeral *bir* 'one' can be regarded as an optional marker of indefiniteness (Dede, 1986). The following examples are illustrative:

(3) *bir çocuk ev-in-den çık-mış*
INDEF child home-GEN-ABL go.out-EVID
'A child went out of his house.' [T20.e]

(4) *çocuk sokak-ta yürü-rken*
child street-LOC walk-WHILE
'While a/the child was walking on the street,'
bir baloncu-ya rastlı-yor
INDEF balloonman-DAT run.into-PRES
'Runs into a balloonman' [T20.c]

The presence of the indefinite numeral *bir* in utterance (3) signals that the following entity is newly introduced for the listener. The absence of *bir*, as in example (4), leaves the indefiniteness status of the noun unmarked, which, however, invites a definite reading due to its sentence initial position.

As for nouns in non-subject grammatical roles, case endings become relevant to the interpretation of definiteness. Erguvanlı-Taylan and Zimmer

(1994) lay out four distinct direct-object constructions that are differentiated in terms of the parameters of definiteness and specificity:

1) definite direct objects, as in (5), where the head noun of the object NP is marked with the accusative suffix *-(y)I*

(5) *bir gün bir çocuk ev-in-den çık-mış*
one day INDEF child house-GEN-ABL go.out-EVID
'One day a child went out of his home'
birden baloncu-yu gör-müş
suddenly balloonman-ACC see-EVID
'Suddenly saw the balloonman' [T7.d]

2) indefinite direct objects with the indefinite article *bir* and with accusative marking on the head noun, as in (6)

(6) *adam bir doktor-u arı-yor*
man INDEF doctor-ACC look.for-PRES
'(The) man is looking for a (specific) doctor' [constructed example]⁵

3) indefinite direct objects with the indefinite article *bir* and no case marking on the head noun, as in (7)

(7) *... git-miş*
go-EVID
'(The child) went'

bir baloncu gör-üyor
INDEF balloonman see-PRES
'(He) sees a balloonman' [T9.i]

4) indefinite direct objects with neither an indefinite article nor any case marking on the head noun, as in (8).

(8) *bir çocuk yürü-yor-muş*
INDEF child walk-PRES-EVID
'A child was walking'

⁵ Such constructions do not appear in the present corpus.

baloncu gör-müş
balloonman see-EVID
'(He) saw (a) balloonman' [T5.e]

As examples (5) to (8) demonstrate, lack of accusative marking on a direct object indicates that it is indefinite. On the other hand, the presence of accusative casemarking indicates definiteness.

Oblique objects are interpreted as definite in Turkish unless they are preceded by the indefinite numeral *bir*. Examples (9) and (10), in which the oblique object (balloonman) is mentioned for the first time, illustrate definite and indefinite objects respectively.

(9) *Şimdi burada bir tane çocuk var*
now here INDEF child exists
'Now here there is a child'
ev-den çık-ıyor
house-ABL go.out-PRES
'Goes out of the house'
baloncu-dan bir balon al-ıyor kırmızı
balloonman-ABL INDEF balloon buy-PRES red
'(He) buys a balloon from the balloonman, a red one' [T7.b]

(10) ... *gid-iyor*
go-PRES
'(he) goes'
sonra bir tane baloncu-ya rastlı-yor
then INDEF balloonman-DAT run into-PRES
'then (he) runs into a balloonman' [T5.d]

On the surface, Finnish and Turkish present typologically similar systems in the recruitment of devices for expressing definiteness. These similarities are summarized in the table below. Both languages exploit the numeral one as a marker for indefiniteness, and both allow definite or indefinite interpretations for bare subject and object NPs. Finnish has a definite article-like element, and Turkish has the opposition between case-marked and non-case marked singular objects.

Table 1. Nominal devices for expressing definiteness in Finnish and Turkish

	Explicitly definite	Explicitly indefinite	Definite/Indefinite (Indeterminate)
Finnish	<i>se</i> + noun <i>dem</i> + noun	<i>yks(i)</i> + noun	bare noun
Turkish subject	<i>dem</i> + noun	<i>bi(r)</i> + noun	bare noun
Turkish object	noun + case	<i>bi(r)</i> +noun+case <i>bi(r)</i> + noun	bare noun

The distinctions illustrated in Table 1 constitute the coding categories for our data: indefinite + noun, definite + noun, and bare noun. In addition to these categories, we also coded for nouns modified by adjectives (adjective + noun) and for first mentions consisting of a zero or pronoun form (zero/pronoun). Adjectives appear to function in Finnish as a means of softening the blow of preverbal encodings of new referents— it is common for Finnish speakers to use a noun phrase prefaced by an adjective when introducing a referent in preverbal subject position.

Subjects, materials, and methods

Data were collected from native Finnish (N=55) and Turkish (N=87) speakers aged 3;0 to 9;0 years and adults using a wordless six frame picture story developed by Karmiloff-Smith (1981). The story's action centers around a boy who procures a balloon from a balloonman and subsequently loses it. Subjects first familiarized themselves with the story by looking at the pictures and then told it to a naive listener who could not see the pictures.

Results

There are three opportunities for referent introductions in narrating this story: two animate characters (the boy and the balloonman), and one inanimate entity (the balloon). We are concerned with the first mention devices used by children and adults for introducing the boy and the balloonman only, looking at developmental trends and crosslinguistic similarities and differences as a function of language typology (for analyses of first mention devices for the balloon, see Dasinger, 1995 for Finnish and Küntay, 1995, for Turkish).

Tables 2 and 3 show the distribution of introductory forms employed for the boy by speakers of the five age groups, in Turkish and Finnish. In both languages, the rate of use of indefinite forms— either indefinite lexical devices or adjectives— increases with age. This is accompanied by a decrease in the use of bare nouns. Turkish and Finnish speakers differ, however, in the preferred means of marking indefiniteness. Turkish speakers exploit *bi(r)*, the numeral one, starting at 5;0 years of age, while Finnish speakers rarely use the corresponding form *yks(i)* at any age, instead preferring nouns modified by adjectives starting at 8;0 years.

Table 2. Distribution of first mention devices for the boy in Turkish

	3- to 4- yr-olds	5-yr- olds	6- to 7- yr-olds	8- to 9- yr-olds	Adults
Indefinite + Noun	2 (10%)	6 (30%)	7 (44%)	7 (50%)	5 (33%)
Adjective + Noun					2 (13%)
Bare Noun	18 (90%)	14 (70%)	9 (56%)	7 (50%)	7 (47%)
Zero/Pronoun					1 (7%)

Table 3. Distribution of first mention devices for the boy in Finnish

	3- to 4- yr-olds	5-yr- olds	6- to 7-yr- olds	8- to 9-yr- olds	Adults
Indefinite + Noun	1 (8%)	1 (14%)	2 (14%)	2 (16%)	1 (10%)
Adjective + Noun				4 (33%)	6 (60%)
Bare Noun	8 (67%)	5 (71%)	9 (64%)	5 (42%)	3 (30%)
Definite + Noun	2 (16%)	1 (14%)	3 (21%)	1 (8%)	
Zero/Pronoun	1 (8%)				

Tables 4 and 5 show the distribution of introductory forms employed for the balloonman by speakers of the five age groups. For Turkish speakers, the use of indefinite forms predominates from 5;0 years on. In Finnish, bare nouns are the preferred device for all age groups. This finding coincides with our results for the encoding of the boy.

Table 4. Distribution of first mention devices for the balloonman in Turkish

	3- to 4- yr-olds	5-yr- olds	6- to 7- yr-olds	8- to 9-yr- olds	Adults
Indefinite + Noun	4 (20%)	9 (50%)	9 (60%)	10 (72%)	8 (62%)
Bare Noun	8 (40%)	1 (6%)	6 (40%)	2 (14%)	1 (8%)
Definite + Noun	6 (30%)	6 (33%)		2 (14%)	4 (30%)
Zero/Pronoun	2 (10%)	2 (11%)			

Table 5. Distribution of first mention devices for the balloonman in Finnish

	3- to 4- yr-olds	5-yr- olds	6- to 7-yr- olds	8- to 9- yr-olds	Adults
Indefinite+ Noun			4 (29%)	1 (9%)	
Adjective + Noun			3 (21%)	1 (9%)	3 (30%)
Bare Noun	6 (50%)	6 (100%)	6 (43%)	9 (82%)	7 (70%)
Definite + Noun	1 (8%)				
Zero/Pronoun	5 (42%)		1 (7%)		

Overall, Turkish speakers more frequently employ local means of marking indefiniteness, i.e., the numeral one, while Finnish speakers rarely use the corresponding local marker *yks(i)*. Turkish speakers' greater reliance on *bi(r)* as an indefinite marker may be an indication of the higher degree of grammaticization of the numeral one as an indefinite article in this language compared to in Finnish. This may be due to a relatively greater pressure in Turkish to distinguish between definite and indefinite objects, since case-marked objects in Turkish are usually interpreted as definite, unless they are prefaced by the indefinite numeral. In Finnish, however, there is no relation between object case and definiteness for singular objects, in effect freeing the Finnish speaker from the use of indefinite local forms. This does not mean that the Finnish speaker avoids non-local devices for encoding indefiniteness. Sixty percent of Finnish adults used a construction which places the newly introduced balloonman in postverbal subject position, maintaining the boy as the continuing topic, a device which explicitly marks the balloonman as indefinite. This is illustrated in the following adult example.

- (13) *ja hđntđ vastaan tulee ilmapallokauppias.*
and he-PART towards come-3SG balloon.seller-NOM
'and towards him comes a balloon seller.' [F20.d]

Conclusion

Our conclusions are the following:

- Overall, Finnish and Turkish children, like child speakers of other languages, exhibit a similar course of development in the marking of definiteness in elicited picture-book narratives, in that its adult-like marking is a relatively late development.
- Global typological distinctions between article and non-article-bearing languages are inadequate to account for the differences between Turkish and Finnish. Although both languages are considered article-less languages, language-specific pressures favor certain devices over others for expressing definiteness.
- Turkish and Finnish appear to be at different points in the development of the numeral one as a marker of indefiniteness. In Turkish, we argue that *bi(r)* is more grammaticized than *yks(i)* in Finnish as an indefinite article. We propose that the particular systemic pressures operating in Turkish vs.. Finnish are responsible for these differing courses of historical development in the two languages.
- In both Finnish and Turkish there is a conglomeration of devices, namely, case, word order, optional article-like elements, and contextual cues, which determine and/or contribute to the definiteness interpretation of a referent. In this way, the system for expressing definiteness is arguably more diffuse or less transparent than in languages like English which have articles, because it is not marked in a single place. This has a consequence for online speech processing as a matter of "thinking for speaking" (Slobin, 1996). Even adult Turkish and Finnish speakers do not always feel compelled to explicitly

distinguish between definite and indefinite reference, even though forms for accomplishing this are at their disposal.

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REFERENT TRACKING IN GREEK AND GERMAN CHILDREN'S NARRATIVES*

Ursula Stephany
University of Cologne

Introduction

The speaker's ability to create coherent texts taking into consideration the hearer's actual state of knowledge is a part of mature linguistic competence and takes many years to develop. As pointed out by Hickmann (1991, p. 157), "the ontogenesis of discourse cohesion corresponds to the development of children's ability to 'anchor' speech in context and thus to use language *as its own context*". A major device for achieving textual coherence is referring expressions. Reference is coded according to the accessibility of referents to the hearer in a given context and has been

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