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Anaphoric topic-shift devices

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Anaphoric topic-shift devices¹

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Abstract

West-European languages use \pm definite articles for distinguishing arguments as \pm previously mentioned, c.q. presupposed. Just like definite articles, 3rd person pronouns can be indexed for a discourse mentioned antecedent. In addition, there are devices indicating whether the topic of a clause is the same as the topic of the preceding clause (topic-maintenance) or different from it (topic-shift). These topic-shift/topic-maintenance tactics vary with the type of language.

The present paper will characterize the \pm topic-shift anaphoric pronouns in Germanic and Romance languages and range them upon a saliency scale (cf. Ariel 1990, 2001, Givón 1983, Gundel et al. 1993). This will bring about a new analysis of Ariel's accessibility hierarchy. Germanic and Romance languages use different means for the same topic-shift device. A longitudinal study of Dutch and French child language shows that early child language already reveals the topic-shifting elements in otherwise typologically different languages.

Keywords: topic-shift, Germanic *d*-pronouns, Romance CLLD, acquisition

1. Introduction

The major change in child language is the transition from a situation-bound exophoric reference system ('situation deixis') to a discourse-bound endophoric system ('discourse deixis') (Atkinson 1979, Hickmann 1982, Karmiloff-Smith 1979, Schaeffer 1997, Hoekstra & Hyams 1998, among others). Child language demonstrates this change in general before the third birthday (Van Kampen 2004).

The Dutch, French and Italian discourse fragments in (1) show how dense the reference-tracking devices tend to be in the adult language. In (1) we see a set of intended referents (*a girl, an attic, a bed, a little bear*). Members from this reference set appear and reappear in changing configurations when the story unfolds. The different selections from the reference set are due to the subcategorization/theta frame of each new predicate.

(1) a. Dutch

[De kleine beer]_i ging de trap op [naar de zolder]_k. **Daar**_k zag *hij*_i [een meisje]_m. *Hij*_i was stomverbaasd. **Die**_m had *hij*_i nog nooit gezien. *Ze*_m lag in *zijn*_i bedje. *Ze*_m sliep.

b. French

[Le petit ours]_i grimpa l'escalier jusqu'[au grenier]_k. **Là**_k, *il*_i vit [une jeune fille]_m. *Il*_i était stupéfait. **Elle**_m/[**cette fille**]_m, *il*_i ne *l*_m'avait jamais vu,. *Elle*_m s'était couchée sur le petit lit. *Elle*_m dormait.

¹ The paper of this manuscript was presented at the *Meeting of the Deutsche Gesellschaft für Sprachwissenschaft (DGfS) 'Workshop on Anaphoric uses of demonstrative expressions'*, Siegen 28-02-01-03 2007. The paper was accepted for publication, but due to circumstances, the proceedings book did not appear.

c. Italian

[L'orsetto]_i salì [in soffitta]_k. *Lì*_k, *pro*_i vide [una ragazzina]_m. *Pro*_i fu sorpreso. *Lei*_m/[**la ragazzina**]_m, *pro*_i non *l*_m'aveva mai vista prima. *Pro*_m era stesa nel *suoi* lettino. *Pro*_m dormiva.

'The little bear went upstairs to the attic. There he saw a girl. He was flabbergasted. He had never seen her. She was lying in his bed. She was asleep.'

The acquisition of grammar begins with learning predicate subcategorization frames by means of situation-bound clauses. Such clauses are supported by referents that can be gestured at ('physically given referents', Ariel 2001). The referential devices are at first mainly bare nouns used as quasi names and a few situation-bound pronouns. The latter are, besides 1st and 2nd person pronouns, 3rd person anaphors which are or could be accompanied by a pointing gesture or a gaze. The present paper will argue that it depends on the type of input language whether the 3rd person anaphors in early child language are 3rd person pronouns (English), 3rd person (doubled) clitics (French) or 3rd person demonstratives (Dutch/German).

As soon as a minimal amount of predicate subcategorization frames has been acquired and stacked up in the lexicon, a completely new development sets in. Child language starts using the early deictic anaphors that used to function for situational reference in a new way. They begin to appear as devices that perform a reference tracking in linguistic discourse. The shift to discourse-bound reference tracking is further marked by a simultaneous and sharp rise in the child's use of articles and (depending on the language type) 3rd person pronouns or clitics, as will be shown by longitudinal graphs. This development generally takes place before the child's third birthday. The acquisition of these discourse devices makes the language (and its user) less situation-bound (Van Kampen 2002, 2004). By discourse anaphors, I mean anaphoric relations without further contrastive intentions. Although child language intonation is highly expressive, the comprehension and the use of contrastively stressed elements is atypical for child language and appears much later (Szendroï 2004, Reinhart 2004, among others). See (2).

- (2)
- a. Period 1: situation-bound (deictic) anaphors.
 - b. Period 2: discourse-bound anaphors and articles (before the age of three).
 - c. Period 3: contrastively stressed anaphors (years later).

The discourse reference devices are learned from the adult input. They indicate whether an argument is newly introduced or has already been referred to earlier. This at least is the contribution of the West-European article and pronoun system. The reference tracking in discourse by means of anaphoric pronouns are indicated in (1) with subscripts under the italics. In addition to that index-system, there is a superimposed discourse device for topic-shift marked by bold face. The bold faces in (1) indicate that the new clause offers one of its arguments as a new point of orientation, different from the orientation point of the preceding sentence. The choice of the antecedent for the topic-shifting anaphor is not free. It has to be the argument intonationally marked as prominent in the preceding

clause. I call this prosodic prominence of an argument ‘focus’.² The focus of the preceding clause may be turned into the topic of the new sentence due to the topic-shifting anaphor. See the antecedent indexing for the bold faces in (1). The topic-shifting anaphors are in principle sentence-initial. They can be stressed, but their effect does not rely on contrastive or emphatic stress.

The topic-shift devices vary with the type of language. Germanic V2nd languages (Dutch/German/Swedish) use a sentence-initial demonstrative variant to indicate the topic-shift. They appear as such in Dutch (E-ANS 1997: par. 5.6.3.3.1, Comrie 2000, Van Kampen 1997:92ff, 2004), in German (Duden 1997:289, Bosch, Katz & Umbach 2007, Diessel 1999a, 1999b, Zifonun et al. 1997), in Swedish (Mörnsjö 2002). These ‘discourse demonstratives’ are indicated here as *d*-pronouns as in Koster (1978).³ The *d*-pronouns follow the definite article paradigm (German, Swedish) or the demonstrative paradigm (Dutch). The option of a clause-initial *d*-pronoun is not open to Romance languages. In case of topic-shifting, they may use a full, strong, personal pronoun in adjunct position, but they often use a full DP in adjunct position doubled by a clitic or *pro*, see (1)b,c (CLLD ‘Clitic Left Dislocation’). In sections 3-5, I will discuss the properties of these devices in Dutch and have a short look at German and Romance French/Italian. They will all be related to Ariel’s (1990, 2001) accessibility hierarchy in section 6 where I will propose a reinterpretation of that accessibility scale.

The deictic devices that are initially used by the child for situation-bound reference are those that develop later in the topic-shift devices of discourse grammar. This seems the general development. Pointing elements for situational deixis get being used for indicating the focus referent that has just been highlighted in the preceding sentence. See the bold faced anaphors in (1). This will be fleshed out in the next section.

2. Discourse anaphors in acquisition

The acquisition of discourse reference in Romance and Germanic languages has been studied in Karmiloff-Smith (1981, 1985), Schaeffer 1997, Hickmann & Hendriks (1999), Campbell et al. (2000), Wittek & Tomasello (2005), Tedeschi (2007), Rozendaal (2008), Hendriks et al. (2009), among others. These studies generally investigate how a choice develops between full NP versus 3rd person pronouns/clitics (or *pro*) for new referents versus given referents. A slightly different view is taken in Serratrice (2005, 2007) and Van Kampen (1997, 2004) author&co (2007).⁴ They rather focus on the acquisition

² The term ‘focus’ is used in all kind of different ways. See for three different views De Swart & De Hoop (1995). The present approach, prosodic prominence in the preceding sentence, is closest to Steedman (1991). It suffices for the purpose of the paper.

³ I represent the *d*-pronoun in the glosses by DPro.

⁴ There is experimental work by Kuehnast, Bittner & Gagarina (2009), Bittner & Kuehnast (submitted) on the acquisition of personal pronouns and *d*-pronouns in German by 3-years-old and 5-years-old children. Unfortunately for my purposes, the experiments were base on stories acted out by hand puppets. Actors and objects were present in the situation and could be pointed at. This circumstance makes their results less suitable for the study of reference to previous discourse.

pronominal means for \pm topic-shift in discourse.⁵ It is the explicit orientation in the present paper.

Children start with anaphoric reference that is still situation-bound and discourse-free. There is no, or hardly any, reference to previously mentioned antecedents (Lyons 1979, Atkinson 1979, Hickmann 1982, 2003, Schaeffer 1997, Hoekstra & Hyams 1998, among others). Articles and discourse anaphors are lacking in early situation-bound child language. The reference-tracking system of topic-maintenance, - the italic faces in (1) -, and topic-shift, - the bold faces in (1) -, is not yet present. Acquisition graphs show for discourse reference-tracking a simultaneous rise of articles and personal pronouns/clitics (Van Kampen 2004). The graphs are re-duplicated for child Dutch in (4) and (partly) for child French in (9). The simultaneity of the graphs for each child is underlying a single acquisition step for D^o indexing in discourse reference. The shift from situation-bound versus discourse-bound language may be important enough to characterize it as the shift from ‘early child language’ (situation-bound) to ‘later child language’ (discourse-bound). This shift has generally taken place before the child’s third birthday. This is corroborated by experimental results in De Cat (submitted). She shows that French preschool children as young as 2;6-3;3 already possess the discourse competence necessary to encode given and new topics. Wittek & Tomasello’s (2005) found that children aged two-and-a-half are sensitive to referents that are introduced in the previous discourse, but that younger children are not. The findings are based on an elicitation task with children acquiring German.⁶

In what follows, I shortly track the development of anaphoric devices in the spontaneous speech for one Dutch child (Sarah, van Kampen corpus) and for one French child (Grégoire, Champaud corpus). Both corpora are publicly available in the CHILDES database (MacWhinney 2006). The quantitative analysis of the child data serve as a case study. It illustrates that early child language already reveals the (later) topic-shifting elements in typological different languages, i.e. demonstratives (*d*-pronouns) in Dutch and dislocated elements in French, the bold faces in (1)a and (1)b.

2.1 Topic-shifting anaphors in child Dutch

The analysis for Dutch Sarah is based on 28 recordings of 45 minutes between the ages of 1;6 (week 80) and 3;0 (week 156). The first period is characterized by the use of deictic situation-bound 1st and 2nd person pronouns and demonstratives. The reason for this seems to be that 1st and 2nd person pronouns express a \pm speaker opposition and the demonstratives a \pm proximate opposition, all situation-bound oppositions.⁷ In the recordings till week 120 (12 recordings between 1;6-2;3.16), Sarah did not use any anaphor to mark a reference to the linguistic discourse. There was hardly any use of 3rd person pronouns and there was no use of the use of the demonstrative as a discourse anaphor referring to a linguistic

⁵ Serratrice (2005, 2007) is concerned with the question how topic-shift/topic-maintenance controls the choice between null and overt subjects in bilingual English-Italian children.

⁶ Wittek & Tomasello (2005) used, for their experiment, specific questions like *was ist mit dem Besen?* (‘what happened to the broom?’) and general questions like *was müssen wir holen?* (‘what do we need to get?’) (cf. also Tedeschi 2007). This type of elicitation task indeed triggers 3rd person pronouns (specific question) versus full NPs (general question). One may keep in mind, though, that this is a less complicated task than discourse reference tracking in a running conversation.

⁷ Dutch has the <-proximate> demonstratives *die/dat/hier* (‘that (one)/here’), and the <+proximate> *dit/deze/daar* (‘this/these (ones)/there’).

antecedent. The referent of the demonstrative was always present in the immediate speech situation. Examples of such demonstratives, referring to a referent in the situation, are given in (3).⁸

- (3) Anaphoric pronouns: gesture-sustained
- a. (playing Memory; one card doesn't match) (week 107 / 2;0.17)
 Sarah: **Die** kan niet meer.
 That can not more
 'That one does not fit anymore.'
- b. (looking at a picture) (week 116 / 2;1.10)
 Sarah: Oehoe, uilen op het dak.
 'Oehoe, owls on the roof.'
 mother: Ja, twee uilen op het dak.
 'Yes, two owls on the roof.'
 Sarah: **Deze** hoefe niet op (h)et dak.
 This need not on the roof
 'This one does not need to go on the roof.'

Early child Dutch uses the demonstrative abundantly. The primary selection of the demonstrative was also observed by Haegeman (1996) for the Dutch child Hein (Utrecht corpus CHILDES, MacWhinney 2006).

The second period starts around week 120. At that point almost all Sarah's sentences are finite (Van Kampen 2004). It is only in the second period that Sarah starts using articles before nouns with some regularity. This is reflected in graph B in (4).⁹ The graph for 3rd person pronouns (graph C) in (4) shows the growing reliance of the child on discourse anaphors. The parallel acquisition graphs (same period, same speed) in (4) indicate that indeed the acquisition of discourse anaphors and articles are closely related.¹⁰ It constitutes a striking support for the claim that a single basic acquisition step takes place, the D^o indexing for discourse reference.¹¹ The parallel acquisition of articles

⁸ A majority of the demonstratives that are used in the early files appear in non-finite sentences ('root infinitives'). In sentences with a finite predicate, I counted 50 examples demonstratives. All 50 examples were related to a referent in the situation. Presentationals were excluded from the count.

⁹ Graph B represents Sarah's use of articles (and other D^o elements) before nouns, the ratio $\langle +D[-NP] \rangle / \langle \pm D \rangle [-NP]$. In Dutch, the use of a determiner is obligatory with singular count nouns and definite plural nouns and only the \pm positions in these contexts were counted.

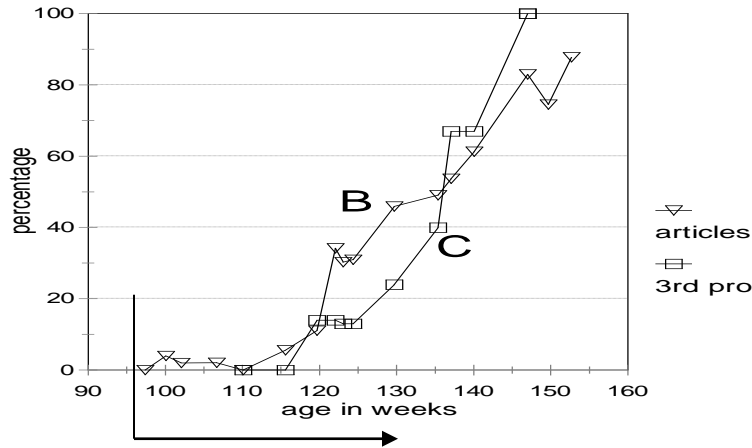
Guasti et al. (2008) give similar growth curves of articles for Sarah and three other Dutch children. Although their graphs are distorted by an inappropriate non-numerical scaling on the time-axis, their study felicitously confirms that all four children start from a zero phase and use articles systematically around the age of three. Guasti et al. explain the initial absence of articles by arguing that the child starts with a default value of a UG parameter for nominal phrases. This 'innate UG' inspired approach is not taken up here.

¹⁰ Reliance on discourse anaphora will of course vary with the type of conversation in the file. Assuming a balanced even-handed conversation between mother and child, it is plausible that the percentage of personal pronouns reached by the child will at first trail the percentage used by the mother, while eventually the child will catch up and reach the level of the adult conversation partner. Therefore, I counted the use of 3rd person pronouns by the child w.r.t. the use by the mother. Each point in graph C then represents the ratio of 3rd person pronouns w.r.t. nouns (DP[+pronoun]/DP[+/-pronoun]) in the speech of Sarah, measured as a percentage of the ratio DP[+pronoun]/DP[+/-pronoun] in the speech of the mother within the same file.

¹¹ Language acquisition is gradual. Acquisition graphs have a slope and systematic D^o indexing easily takes a half year and more than a million short input sentences. Such a long process does not seem to be a point-

and anaphoric pronouns has also been argued for by Hoekstra & Hyams (1995) and Schaeffer (1997).

(4) Dutch Sarah: rise of articles and 3rd p. pronouns (graphs from Van Kampen 2004).



Situation-bound demonstratives (present from the very beginning on)

Graph B: articles before nouns

Graph C: 3rd person pronouns

It may be deduced from the graphs in (4) that discourse anaphors are acquired simultaneously with articles, and that the use of demonstratives runs ahead of both. The rise in the use of articles and the parallel rise in the use of 3rd person pronouns take place between week 120 (2;3.16) and week 145 (2;9.7). A qualitative study of the Sarah files shows that 3rd person pronouns are indeed used as anaphors to indicate the maintenance of a topic that has already been introduced in the preceding sentence, or in general to indicate non-topic-shift, i.e. the italic faces in (1)a. At the same time, the demonstratives *die* and *dat* used previously for situation-bound reference are now also applied as *d*-pronouns that indicate a topic-shift w.r.t. the preceding sentence, i.e. the bold faces in (1)a.¹²

Examples of discourse-bound 3rd person pronouns for non-topic-shift and *d*-pronouns for topic-shift are given in (5) and (6).

- (5) a. (talking about a bird in a picture-book) (week 125/2;4.27)
 mother: Ja, hij heeft de schaar, de vogel.
 ‘Yes, he has the scissors, the bird.’
 Sarah: Schaar, vogel_i. Teen! *Hij_i* heb een teen, he?
 Scissors, bird. Toe! He has a toe, ‘he’?
 ‘Scissors, bird. Toe! He has a toe, isn’t it?’

like milestone, as one of the reviewers observes. The change itself from situation-bound to discourse-bound reference, though, is appalling. It makes the language of the child situation-free.

¹² Conventional recordings, as well as psycholinguistic experiments, have the disadvantage to invite situation-bound utterances, as in (5)a and (6)a. The crucial point here is that, due to the acquisition of D^o, the child is in principle capable of referring to a linguistically given antecedent. See also Gundel et al. (2007).

- b. (about the son of the nanny (not present at the recording))
 Sarah: Tim_i kan nog nie(t) lopen. (week 150/2;10.18)
 Tim can yet not walk
 ‘Tim can’t walk yet.’
 mother: Kan Tim_i nog niet lopen?
 Can Tim yet not walk?
 ‘Tim can’t walk yet?’
 Sarah: Nee, *hij*_i is nog klein.
 ‘No, he is still little.’
*Hij*_i heef(t) voetjes.
 ‘He has little feet.’
- (6) a. (shifting the attention to a picture at a jigsaw puzzle) (week 133/2;6.18)
 mother: Dan past die (=stukje) misschien daar?
 Then fits that (=piece) perhaps there?
 ‘Then that one fits there perhaps?’
 Sarah: **Die**_i is voor pappa, [*die hondje*]_i.
 DPro is for daddy, that doggy
 ‘That doggy is for daddy.’
- b. (about a sweater) (week 140/2;8.6)
 mother: Nou doen we [*de trui*]_i weer aan, hoor.
 Now do we the sweater again on, indeed.
 ‘We will put on the sweater again now.’
 Sarah : Nee, **die**_i wil ik niet aan.
 No, DPro want I not on.
 ‘No, I don’t want to put that one on.’
*Hij*_i is niet droog.
 ‘He is not dry.’

Topic-shifting *d*-pronouns appear in the position Spec,C, in front of the finite verb in C^o, Den Besten’s (1983) configuration, which is already acquired at week 120 by Sarah.

2.2 Topic-shifting anaphors in child French

The analysis for French Grégoire is based on 10 recordings between the ages of 1;10 (week 93) and 2;6 (week 129). At first Grégoire did not use anaphoric devices for (linguistic) discourse reference. A gesture-sustainable antecedent was always present.¹³ This first period is characterized by the use of deictic situation-bound 1st and 2nd person pronouns and demonstratives (also gesture-sustainable), but the latter much less than in the Sarah files. Instead, Grégoire makes use of 3rd person clitics doubled by a noun, the bold faces in (1)b. The primary selection of clitics doubled by a noun has been observed earlier by De Cat (2002, 2004) for the children from the York corpus (CHILDES, Mac Whinney 2006). There are a few instances of a single clitic in the speech of Grégoire before week 120, for example the one in (7), but I assume that, in such instances, a

¹³ In the 170 sentences with a finite verb (till 2;3), I counted 58 examples of dislocated nouns doubled with a clitic to indicate a referent in the situation. Again, presentationals were excluded from the count.

gesture accompanies the clitic (Van Kampen 2002). This is corroborated by De Cat (submitted) who found that, in an experimental setting, French children aged 2;6-3;3 sometimes use a simple single clitics instead of a dislocated element doubled by a clitic, but most of the time (88%) the children supported the single clitic with a gesture.

- (7) (playing that the child's hand sticks to the investigators ear) (1;10.20/week 94)
 investigator: tu cognes ? (you bump against?)
 Grégoire: elle colle (it (=the hand) sticks)

It is the gesture that brings in focus the intended referent, not the unstressed clitic. The gesture directs the hearer's attention towards an object present in the utterance situation (Kleiber 1994: chapt. 5).

Examples of dislocated nouns doubled by a clitic and referring to a referent in the situation are given in (8). The dislocations sometimes are to the left as in (8)a, but most of the time they are to the right, as in (8)b (Van Kampen 2002, 2004, Van der Linden & Sleeman 2007). The preference of right-dislocations seems an effect of the presence of a situation-bound gesture-sustained referent. It does not need an element at the left periphery for discourse-linking to a previously mentioned antecedent.

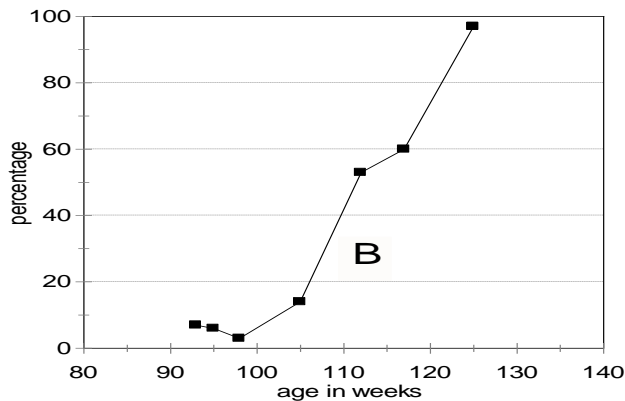
- (8) Anaphors: gesture-sustained
- a. (looking at a picture in a book) (Grégoire 1;9.28/week 95)
Crocodile_i, **il**_i mange.
 'Crocodile, he eats.'
 - b. (holding a car) (Grégoire 1;11.22/week 103)
Elle_i roule, [**la voiture**]_i.
 'She goes, the car.'
 - c. **Celle-là**_i, **elle**_i est petite. (Grégoire 2;1.25/week 112)
 That-there, she is little
 'That one, she is small'
 - d. C'est [**un canard**]_i et **ça**_i roule. (Grégoire 2;3/week 117)
 It's a duck and it rides
 (it's a duck and it goes)

The same type of evidence comes from elicited narratives with picture sequences in a study by Hickmann & Hendriks (1999). They report for this context that French children up to the age of seven use dislocated nouns doubled by a clitic (*le chien, il* 'the dog, he') to bring in a new discourse topic. It shows that even older children may heavily rely on the situational context when pictures are involved. In the adult language, a newly introduced discourse topic can, in general, not be referred to by a definite description (lexical definite DP or pronoun/clitic).

Again, as for child Dutch, the rise of articles indicates the growing use of nouns as referential arguments in linguistic discourse. Grégoire uses French articles systematically

after week 125.¹⁴ The rise of articles is narrowly related to the rise of discourse anaphors. These are for child French single clitics. See the graph in (9) and the table in (10).¹⁵

(9) French Grégoire: rise of articles



Graph B: the rise of articles before nouns

(10) French Grégoire: articles, single clitics and ‘doubled’ clitics (Van Kampen 2004)

age in weeks	a. determiners	b. dislocated noun + clitic (in % w.r.t single clitic)		c. single subject clitic		d. single object clitic
				<i>il</i>	<i>elle</i>	<i>le/la</i>
93	7%	8	89% (8/9)	0	1	0
94	6%	7	78% (7/9)	0	2	0
98	3%	7	78% (7/9)	0	2	0
105	14%	19	100% (19/19)	0	0	0
112	53%	3	--- **	0	0	0
117	60%	8	57% (8/14)	2	4	0
125	97%	11	28% (11/39)	19	0	9
127-129	100%	51	33% (51/155)	66	28	10

The grey area in (10) indicates that the acquisition point of articles (>80%) (10)a is simultaneous with a sudden rise of single (non-doubled) subject clitics (10)c and object clitics (10)d in the speech of French Grégoire.¹⁶ In adult French, single clitics are used for presupposed referents without a topic-shift effect, whereas the left-dislocated element doubled by a clitic (CLLD) induces a topic-shift (Givón 1983, Ashby 1988: 206, Lambrecht 1994, among others). This will be elaborated upon in section 5. The main point here is that the sudden rise of single clitics (the italic faces in (1)b) in the speech of

¹⁴ French children acquire articles earlier than Dutch children do. The reason for this difference between child Dutch and child French is analyzed in Van Kampen (2004). It is irrelevant for the present purpose of topic-shift.

¹⁵ The Champion corpus is less suitable to measure Grégoire’s mastery of the single clitics comparing it with the clitic use of his mother. A researcher is present at each recording. The mother is most of the time speaking with the researcher, taking a discourse perspective that is bound to overtax Grégoire’s grip of the conversation. This contrasts with the balanced conversation between Sarah and her mother.

¹⁶ The table in (10) shows no difference between the acquisition of subject and object clitics. This deviates from Hamann et al. (1996) who found that object clitics do not appear as easily as subject clitics. I will not disentangle this difference here, but see Van Kampen (2004) and Pirvulescu & Belzil (2008) for an explanation.

Grégoire can be characterized as the acquisition of discourse structure reflected by a set of presupposed referents in discourse.¹⁷ If one of them is used in the sentence-initial subject position, we have a case of ‘topic of the previous sentence is maintained in the present sentence’. The dislocated element + clitic (the bold faces in (1)b) can now signal a topic-shift as in the adult language.

Examples of the discourse-bound devices for \pm topic-shift that appear after week 120 are given in (11).

- (11) Anaphors: discourse-bound: Topic-shift versus topic-maintenance
(inventing a story) (2;5.27/week 129)
- Grégoire: Maman, elle m'a protégé pour écraser [la jeep]_i.
Mummy, she me has protected for crash the jeep
‘Mummy, she has protected me from being crashed by the jeep.’
- Grégoire: [**La jeep**]_i, **elle**_i a écrasé ma maman.
‘The jeep, she has crashed my mummy.’
- investigator: Mais qu'est ce qu'elle faisait [cette jeep]_i au bord de la mer?
But what-is-it-that she did that jeep at the side of the sea?
‘But what did that jeep do at the seaside?’
- Grégoire: *Elle*_i a roulé sur la mer.
She has rolled on the sea
‘She has gone on the sea.’

As in the example above, later child French as well as adult French show a preference for left-dislocated topic-shifting elements (Givón 1983, Ashby 1988: 206, De Cat 2002: table 4.9). This change in preference, from right-dislocated topics in early child French to left-dislocated topics in later child French, seems to me to reflect a growing reliance on linguistic discourse reference by means of sentential topics. Appearance at the left-periphery implies a topic that takes scope over the following sentence. It re-orientates the sentence with the new (changed) topic in mind.¹⁸

Let me summarize the acquisition results. Early child language shows the use of situation (deictic) anaphors. They are used exophorically, accompanied by a gesture or gaze that brings in focus a referent in the situation. The rise of the graphs for D^o indexing elements marks the acquisition of discourse reference. It introduces anaphoric devices to indicate a presupposed referent without topic-shift, the italic faces in (1). The deictic anaphors that were first used exophorically are now also applied to indicate topic-shift in discourse grammar, the bold faces in (1). This is not accidentally so. It is a general development. Pointing elements for situational deixis get being used for indicating the focus referent just highlighted in the preceding sentence.

It is not immediately relevant for the present argument whether the child always uses its discourse devices felicitously. It will take the child several years to make a fully effective use of its means for discourse reference, including contrastive topic marking.

¹⁷ Unlike the pronouns in Dutch, French clitics do not appear simultaneously, but at the end of the graph for articles. This is probably, because clitics imply the acquisition of a different argument placement in addition to the argument pronominalization.

¹⁸ See Lambrecht (1981) for a detailed analysis of the differences between left-dislocation and right-dislocation in French. He considers right-dislocated elements “anti-topics”.

However, typological differences are immediately present. This simply follows from the fact that the basic system of \pm topic-shift anaphoric devices is acquired at the age of three. The main point here is the early use of situation-bound anaphors. These will later in the adult grammar turn into the topic-shift devices, in Dutch the ‘demonstrative’ and in French the (left-dislocated) ‘noun doubled by a clitic’ (CLLD, Clitic Left Dislocation). The early use of these ‘pointing elements’ for situational deixis is presented here as a case study for two children. Fortunately, the primary selection of demonstratives is also observed by Haegeman (1996) for the Dutch child Hein and the primary selection of a clitic doubled by a noun is also observed by De Cat (2002, 2004) for the French children of the York corpus.

Language acquisition data of other languages should show that the development of anaphoric pronouns for topic-shift take a similar pathway. For instance, English does not bring in a specific pronominal device for topic-shift as the other (V2nd) Germanic languages do.¹⁹ It rather uses a stressed personal pronoun. Interestingly, early child English shows an abundant use of situation-bound (single) 3rd person pronouns (*he/it*) (Campbell et al. 2000, Van Kampen 2006:218). Hamann and Plunkett (1998) show that V2 Danish child language shies away from 3rd person pronouns for a well-marked period. They suggest, much in line with the present view, that children might initially lack the necessary discourse anchoring for referentially presupposed arguments.

My preliminary conclusion is that child language is the area where limited data already reveal the typological properties of grammar. Early (situation-bound) child languages already incorporate topic-shifting devices that are taken from the adult input. This brings me to the typological properties of the languages discussed here. The main focus will lie on the *d*-pronoun for topic-shift in Dutch in the next section.

3. Germanic *d*-pronouns

The *d*-pronoun of Germanic V2nd languages is morphologically and functionally close to the relative pronoun (Wiltschko 1998, Van Kampen 1997). The relative pronouns of standard German mainly follow the paradigm of the *d*-pronoun (*der, die, das*). The Dutch relative pronouns are partly from the *d*-pronoun paradigm (*die, dat*), like German, and partly from the *w*-pronoun paradigm (*wat/wie*), like English. The reason of this difference between German and Dutch follows from the learnability of gender in Dutch, see Van Kampen (2007a). The *d*-pronoun paradigm is given in (12). Dutch structural *d*-pronouns are unlike *d*-pronouns in German in being only marked for \pm neuter.²⁰

¹⁹ English may use the demonstrative *that* in sentence-initial position, but only as a subject and only to refer to a preceding state of affairs rather than to a preceding antecedent taken up as a topic, see (i) a (cf. Mikkelsen 2005, among others).

(i) I like to wear blue suede shoes.
That (‘wearing blue suede shoes’) gives me the idea of being the oversensitive Elvis.

²⁰ When the antecedent is animate and has neuter gender, Dutch may use *die* as well as *dat* as a corresponding *d*-pronoun (Audring 2006: table 2). The attested cases in (i) are from Van Kampen (2007a).

(i) a. Dit is het verhaal van een meisje_{<+neuter>}. *Dat* wilde een monster worden. (mother Sarah)

(12) Dutch *d*-pronouns

structural	<i>die</i> <-neuter>
	<i>dat</i> <+neuter>
oblique	[<i>daar</i>] ... (op)

The *d*-pronouns will be indicated below as pronouns that have the A-bar status like relative pronouns that requires a Spec,C position and that binds an argument gap (Van Kampen 1997:92ff).

Morphologically, Dutch *d*-pronouns remind also of non-preposed demonstrative pronouns, be it that their position (Spec,C) and their function (topic-shifting) are different. The *d*-pronouns have a sentence-connecting discourse function and, unlike the demonstrative, they seem to be restricted to the sentence-initial Spec,C position. This holds, like in the case of relatives, for a further unmarked, non-contrastive, use. Moreover, *d*-pronouns lack the proximate/distal opposition of demonstratives. They appear with the unmarked distal variants in (12) only, see the examples in (13) (cf. Rooryck 2003).

- (13) a. Toen zag zij het huis van de beren. Dat/*dit wilde ze van binnen zien.
Then saw she the house of the bears. DPro wanted she from inside see
'Then she saw the house of the bears. She wanted to see it inside.'
- b. Zij ging eerst op de grote stoel zitten. Maar die/*deze vond ze te hard.
She went first on the big chair sit. But DPro found she too hard
'First she sat down on the big chair. But she found it too hard.'

This seems reasonable. The demonstrative may refer to objects closer or further away from the speaker, whereas the *d*-pronoun refers to the focus of the preceding sentence only, as I will show in section 3.2.²¹

-
- b. This is the story of a girl. DPro wanted a monster to become
't Beest<+neuter> is er niet bij. *Die* woont in het kasteel (Sarah 4;0.11)
the Beast is there not with. DPro lives in the castle

The closer the *d*-pronoun is to its antecedent, as in (i)a or as holds for relative pronouns, the more likely it is to agree syntactically with this antecedent (Verhoeven 1990, cf. Audring 2006: 90, 98). In V2 relatives, though, the use of *dat* seems completely ungrammatical, see (ii) (from Zwart 2005).

- (ii) Jan wil met een meisje trouwen (en) die/*dat komt uit Zweden.
Jan wants with a girl marry (and) Dpro comes from Sweden
'Jan wants to marry a girl (and) she comes from Sweden'

²¹ Comrie (2000) includes the proximal *deze* as an example of a pragmatically conditioned 'demonstrative', a *d*-pronoun. Comrie relies on Huizinga's (1936 3rd revised edition; original edition 1924) *Erasmus* as the data-base. This is in principle an ingenious choice. Huizinga is considered a master of Dutch prose. His style is nevertheless academic and (nowadays) old-fashioned. The present use of *deze* is mainly restricted to human antecedents and to written Dutch, see (i) (E-ANS 1997: par. 5.6.3.3.1).

- (i) Toen sprak de minister van Justitie. *Deze* hield staande dat
Then spoke the secretary of Justice. This (one) made the contention that

The discourse sequence in (14) will be the orientation case for the present paper. When the initial argument is a *d*-pronoun as *die* in (14)b, it represents the sentential topic, but at the same time it is marked as different from the topic in the preceding sentence *de kleine beer* in (14)a. The *d*-pronoun in Spec,C is a topic-shifting device. The topic *die_m* (*het meisje_m*) in (14)b may be maintained in (14)c, but only by means of the personal pronoun *ze_m*. This is illustrated by the three consecutive sentences (i) old topic [*de kleine beer*]_i + focus [*een meisje*]_m in (14)a, (ii) topic-shift *d*-pronoun *die_m* in Spec,C picking up the focus [*een meisje*]_m of the preceding sentence in (14)b, and (iii) new topic maintained as a 3rd person pronoun *ze_m* in (14)c.

- (14) a. (i) old topic + focus
 _{topic}[De kleine beer]_i zag op de zolder _{focus}[een meisje]_m.
 The little bear went upstairs to the attic
 b. (ii) topic-shift picking up the focus
 _{topic}*Die_m* had *hij_i* nog nooit gezien.
 He had never seen her.
 c. (iii) topic-maintenance
 _{topic}*Ze_m* lag in zijn bedje. _{topic}*Ze_m* sliep.
 She was lying in his bed. She was asleep.’

A *d*-pronoun *die_m* would be ungrammatical in (14)c, unless it is interpreted as a highly marked contrast to the presumed expectation of the hearer.

For the remaining of this section, I will discuss the A-bar status of the *d*-pronouns in 3.1, the focus-antecedent of the *d*-pronouns in 3.2, and the topic-shifting function of the *d*-pronouns in 3.3. The full picture is somewhat blurred, because the *d*-pronoun *die* can be used sentence-internally as a variant of the personal pronouns for inanimate referents. I will discuss this later as a special case in section 3.4.

3.1 A-bar status of the *d*-pronoun

Let me clarify my usage of the term topic first. Reinhart’s (1981) characterization of the sentence topic as ‘what the sentence is about’ is still in need of a syntactic characterization more sensitive to the language type. The non-contrastively stressed ‘topic’ in V2nd Dutch may be syntactically restricted to the first referential argument the *begingroep* (‘initial group’). The notion ‘initial group’ is taken here from the structural linguist Paardekooper (1955: chapt.7). It comprises Spec,C, either the complementizer or the finite verb, the inverted subject and weak pronouns. The notion ‘initial group’ is not covered by a suitable label in generative grammar. One may notice, though, a Germanic and Romance parallel, the subject and further pronominal clusters around the clause-defining head C^o (V2nd Germanic) or I^o (Romance)

Germanic V2nd languages allow a “aboutness” announcement in the Spec,C position. If there is no topic-shift, the “aboutness” holds on for the subsequent sentences. It is referred to by standard personal pronouns (topic-maintenance) whether or not in Spec,C.

The examples from Huizinga’s *Erasmus* show that the use of *deze* is not restricted to the sentence-initial position in written Dutch. It is somewhat like *the latter* in formal English and *ce dernier* in formal French. I will leave this highly formal stylistic option aside. See Van Kampen (1997).

The aboutness phrase is a \pm pronominal DP. The pronominal variants are besides subject pronouns, also the standard A-bar pronouns. These are relative pronouns, question *wh*-pronouns, and topic *d*-pronouns.

- (15) a. *wh*-pronoun
Wie_i heeft de kleine beer *t_i* gezien? [*Het meisje_i*] met de blonde haren
 ‘Who did the little bear see? The girl with the blond hair’
- b. relative pronoun
 [*Het meisje_i*] *die_i/dat_i* hij heeft *t_i* gezien
 The girl that he has saw
 ‘The girl he saw’
- c. *d*-pronoun
 De kleine beer zag op zolder [*een meisje_i*]. *Die_i* lag te slapen.
 ‘The little bear saw in the attic a girl. DPro was sleeping’

I assume here that arguments moving over the subject have an A-bar status in Spec,C and that they gain at the same time a kind of (topic) prominence. The A-bar status not only holds in this view for question pronouns and relative pronouns, but also for Germanic *d*-pronouns. See for further arguments Wiltschko (1998) and Van Kampen (1997: 92ff).²² Just like *wh*-pronouns and relative pronouns, *d*-pronouns allow long (Spec,C-to-Spec,C) movement, see (16)a-d.²³

- (16) a. *wh*-pronoun
Wie_i denk je dat de kleine beer *t_i* heeft gezien?
 ‘who do you think that the little bear saw?’
- b. relative pronoun (from the SAND corpus, Barbiers et al. 2006)
 Dat is [*de man_i*] *die_i* ik denk dat *t_i* het verhaal heeft verteld
 That is the man that I think that the story has told
 ‘that is the man who I think has told the story’

²² One of the reviewers suggests that the Spec,C may serve as a position for either A-bar status constituents and A-status (base-generated) constituents, serving to distinguish between contrastive topics (A-bar status) and non-contrastive topics (A-status), as in Neeleman et al. (in press), Neeleman & Van de Koot (2008), (cf. Frey 2004b). Only elements that have A-bar status have quantificational properties and A-bar *d*-pronouns therefore imply a (contrastive) selection from a set interpretation. See also Wiltschko (1998) who proposes that *d*-pronouns differ from personal pronouns by selecting from a set. I would like to argue, though, that a contrastive effect seems possible rather than necessary. English relatives and Germanic *d*-pronouns allow a neutral intonation and even zero variants. For that reason, I follow here Lasnik & Stowell (1991) who assume two kinds of A-bar movements, A-bar-quantificational and A-bar-anaphoric. The latter is exemplified by the anaphoric *d*-pronoun and by the (Romance) CLLD, i.e. left-dislocation doubled by a clitic (cf. Kechagias 2009 for CLLD in Greek). Contrastively used *die* falls within the definition ‘A-bar quantificational’ (contrastive w.r.t. a set).

²³ The DBNL (Digital Library for Dutch Literature) acknowledges the type with the *d*-pronoun in (16)b (DBNL Constatijn Huygens ‘Hofwyck’, note 2204). ‘In modern spoken Dutch this is possible too: *de man, die weet ik dat het gedaan heeft*’ (‘the man, DPro know I that has done it’). A google search on the Internet confirmed this.

- b. *d*-pronoun (from the poem ‘The Frisian poet’ by Piet Paaltjes)
 En drink er [dit glas Pommies]_i bij. *Die*_i weet ik dat t_i lekker smaakt
 And drink there this glass Pommies with. DPro know I that nice tastes
 ‘and drink with it a glass of Pommies. I know that it tastes nice’

For that reason, I take it that all *d*-pronouns in Spec,C, whether subject or non-subject, have a kind of A-bar pronoun status. However, the subject in initial position need not have an A-bar status. The unstressed or (contrastively) stressed 3rd person subject pronoun does not allow long movement, see (17).

- (17) *ZIJ_i/*ze_i denk ik dat t_i het verhaal heeft verteld
 She think I that the story has told
 ‘I think that she has told the story’

The assumption that the *d*-pronoun is restricted to the Spec,C A-bar position and to its topic-shift function will be exemplified below.²⁴ It will be further supported by percentages from quantitative corpus studies.

The *d*-pronoun cannot appear as freely in a sentence-internal A-position. Compare the grammatical *d*-pronoun in (18)a to the ungrammatical one in (18)b.

- (18) [De beer]_i heeft [aan het meisje]_k gesnuffeld.
 The bear has an the girl sniffed
 ‘The bear sniffed at the girl’
 a. [Spec,C *Die*_k [C vond]] hij_i lekker ruiken.
 DPro found he nice smell
 ‘He thought that she smelled nice.’
 b. [Spec,C Hij_i [C vond]] **die*_k/*haar*_k/*d*’r_k lekker ruiken.
 He found *DPro/her nice smell
 ‘He thought that she smelled nice.’

The same Spec,C requirement holds for the oblique pronoun *daar* (‘there’).²⁵ See the examples in (19) with the animate antecedent *zijn vader* (‘his father’).

²⁴ The Latin use of ‘relatives’ in the initial position of root clauses (‘relative root clause connection’ see Kühner & Stegmann 1912:498) must have been a matter of topic-shift as well, as in (i).

- (i) legatosque_k ad Hannibalem misit. Qui_k egressi sunt. (Livius book XIII, 33)
 messengers to Hannibal he sent . RelPro disembarked are
 and he sent messengers to Hannibal. And these men disembarked.

²⁵ The present paper only deals with *d*-pronouns (structural *die*, *dat* and oblique *daar*). It does not consider *d*-adverbs like *daar* (‘there’), *dan* (‘then’ implication/future), *toen* (‘then’ past). One of the reviewers remarks that the *d*-adverb *daar* does not need to appear sentence-initially, which is true. The sentence-internal use of *d*-adverbs admittedly needs further research. The Spec,C position, though, is largely preferred. See Bouma (2008:147) who, in the Corpus Gesproken Nederlands (Spoken Dutch Corpus, CGN 2004), found that the orienting adverbs *dan* (‘then’), *toen* (‘then’) and *daar* (‘there’) have a ‘strong tendency’ to appear sentence-initially. Jansen (1981:63) comes to the same conclusion and adds that 83% was activated in the previous discourse. Part of the sentence-internal *d*-adverbs may have involved a contrastive effect, which arguably causes an A-bar status in situ. None of this contradicts the stand taken here that *d*-pronouns in sentence-initial position are topic-shifters, whereas they are neither topic-shifters nor even topic in sentence-internal position.

- (19) [De kleine beer]_i vond [zijn vader]_k geweldig
 The little bear found his father terrific
 ‘The little bear thought his father was terrific’
- a. [_{Spec,C} Daar_k [C kon]] hij_i altijd op rekenen. (topic-shift)
 DPro could he always on count
- b. [_{Spec,C} Hij_i [C kon]] **daar*_k altijd op rekenen.
 He could *DPro always on count
- c. [_{Spec,C} Hij_i [C kon]] altijd op ‘*m*_k/*hem*_k rekenen. (no topic-shift)
 He could always on him count
 ‘He could always count on him’

In (19)b the *d*-pronoun *daar* is ungrammatical, and a personal pronoun is required. This follows from the Spec,C (A-bar) restriction of *d*-pronouns. Free use of *d*-pronouns with \pm animate antecedents and neutral intonation is only possible in Spec,C. The internal A-position requires personal pronouns, at least for animate antecedents, as exemplified in (18)-(19). I will come back to the animacy restriction in section 3.4.

It is important to note here that the Spec,C restriction holds in general for the non-contrastive use of the *d*-pronoun. Germanic V2nd languages do not need specific stress on topic-shifting elements, because these languages rather have a build-in syntactic Spec,C position that serves to mark the initial *d*-pronoun as topic-shifter (Van Kampen 2004:169). As noted by Jansen (1978:107, 1981:82), fronted constituents are almost never accent bearers. They are typically unstressed.²⁶ The *d*-pronoun in Spec,C is typically unmarked, it need not and usually does not carry stress, and it does not serve a contrastive or emphatic effect. Counts in corpora of spoken Dutch (Jansen 1981:60, Bouma 2008: table 4.8) reveal that the majority (around 85%) of the sentence-initial arguments are pronominal (personal pronoun and *d*-pronoun) and that they almost never are accent bearers (Jansen 1978).²⁷ The unstressed non-contrastive use of the *d*-pronoun in Spec,C is supported by an additional phenomenon. The *d*-pronoun in Spec,C can be left empty in spoken Dutch when the referent is traceable in the discourse. Topic-drop in Dutch is the dropping of the *d*-pronoun (Jansen 1978:107 and references therein, Van Kampen 1997).²⁸ A corpus study in Jansen (1981:117) confirms this. Within the present analysis, the empty *d*-pronoun induces topic-shift, and, as stands to reason, carries no stress.²⁹ This view tallies well with Lambrecht’s (1986, 1994: 172) claim that unaccented pronouns are preferred topic expressions.

When used contrastively or emphatically, the *d*-pronoun may loose its restriction to Spec,C. The *d*-pronoun may appear in sentence-internal position when in the company of

²⁶ This corpus-supported claim contrasts with Givón (1984:354), Diessel (1999b) and Comrie (2000). These authors claim, without giving support by corpus counts, that the anaphoric *d*-pronoun has a contrastive or emphatic effect.

²⁷ Jansen (1978, 1981) counted *d*-adverbs as well. If one includes these, the percentage of sentence-initial pronominal elements rises to >90%. Jansen (1978:104) concludes from this that almost all subject-inverted sentences have “short deictic sentence-initial elements” and notes that this was already observed by Overdiep (1949: 525) and Sassen (1953:212).

²⁸ Below in section 6 I will reinterpret the saliency hierarchy from Ariel (1990, 2001). The topic-drop, c.q. empty *d*-pronoun, does not fit Ariel’s hierarchy or my reinterpretation very well. I must leave it as a problem.

²⁹ See for topic-drop also Koster (1978) and Weerman (1989).

a focusing adverb like *nog* ('still'), *ook* ('also') or *niet* ('not'). In that case, *die* gets a contrastive flavor and stress, as in (20) (indicated by capitals). One may assume a sentence-internal A-bar position for contrastively marked 'Association with Focus' (Von Stechow 1991, Van Kampen 1997:134f).

- (20) Is het meisje hier nog geweest? Nee, ik heb *DIE* nog niet gezien, wel de beer.
 Is the girl here still been? No, I have DPro yet not seen, but the bear
 'Has the girl been here? No, I haven't seen her yet, but the bear I have'.

Contrastive emphasis is not the same as topic-shift. Topic-shift is (i) a binary function (yes/no), (ii) categorially bound to the *d*-pronoun (in V2nd languages), (iii) positionally bound to the Spec,C (in V2nd languages), and (iv) without intonation effects. Contrastive use of pronouns is not bound to *d*-pronouns, not bound to the Spec,C position, nor is it binary. It is rather a superimposed cumulative effect. The sentence-internal *d*-pronoun in (20) does have a contrastive effect, and by consequence it is stressed.³⁰

3.2 Properties of the antecedent

Whereas personal pronouns may refer to any antecedent DP, the Germanic A-bar *d*-pronouns require that their antecedent (i) be marked as prominent in the preceding clause and (ii) be a major constituent.

The *d*-pronoun in (21)a refers back to an argument that had an intonation prominence and that was not the running topic. It picks up the focus of the preceding sentence and turns it into the new topic.

- (21) [[De grote beer]_j zijn zoontje]_i zag in zijn bedje [een meisje]_k liggen.
 The big bear his son saw in his bed a girl lie
 'The big bear's son saw a girl lying in his bed.'
 a. *Die*_{k/*i/*j} keek erg verbaasd.
 DPro looked very surprised
 'She looked very surprised.'
 a'. *Ze*_{k/*i} was net wakker geworden
 She/DPro was just awake
 'She had just woken up'

The constituent *een meisje* ('a girl') in (21) carries the sentential stress. For that reason, *een meisje* can be picked up as the shifted topic in the next sentence by the *d*-pronoun *die*. The third sentence (21)a' underlines that the *d*-pronoun in the second sentence was indeed the new topic (topic-shift). It is maintained as the personal pronoun *ze* ('she').

If, by contrast, the object phrase *het meisje* moves to the left as in (22), or if it were pronominalized by *haar* ('her') as in (23), it loses focus and sentential stress. Therefore, it can no longer be referred to by the salient topic-shift *d*-pronoun. *Het meisje* in (22) and *haar* in (23) should then be taken up by a personal pronoun.

³⁰ One of the reviewers judged the sentence-internal use of the contrastively stressed *d*-pronoun in (20) ungrammatical. Since *die* may also appear in this context sentence-initially, this judgment is not undermining my analysis and I leave it for further research.

- (22) [De kleine beer]_i heeft [het meisje]_k nog [op de zolder]_m gefotografeerd.
 The bear's son has the girl still in the attic photographed
 'The little bear has still taken a picture of the girl in the attic.'
 a. *Die*_{m/*i/*k}/*Ze*_k was erg klein.
 DPro/She was very small
 'It was very small.'
- (23) Het meisje holde de trap op. De kleine beer riep haar_k nog na.
 The little bear ran the stairs up. The little bear called her after
 'The little bear ran up the stairs. The little bear called after her.'
 a. **Die*_k/*Ze*_k luisterde niet.
 DPro/She listened not

The major constituent property of the antecedent is demonstrated in (24).

- (24) Heb jij [het vriendinnetje van [de kleine beer]_k]_i naar boven zien gaan?
 Have you the girlfriend of the little bear upstairs see go?
 'Did you see the little bear's girlfriend go upstairs?'
 a. Ja, *die*_i/*?zij*_i is naar bed gegaan.
 Yes, DPro/*?she* is to bed gone
 'Yes, she went to bed.'
 b. Nee, *hij*_k/**die*_k heeft haar een bord pap gegeven.
 No, *he*/**DPro* has her a plate porridge given
 'No, he has given her a plate of porridge.'
 c. Ja, *hij*_k/**die*_k riep haar nog na.
 Yes, *he*/**DPro* called her still after
 'Yes, he still called after her.'

Usually, the argument in focus is not the subject, and hence the subject is usually not the antecedent of the *d*-pronoun, but that is not relevant. The *d*-pronoun may in principle refer back to a subject, if the subject has sufficient prominence. I will give two examples.

A first example constitutes an indefinite subject. An indefinite subject usually gets focus and will be referred to by a *d*-pronoun in the next sentence, see (25).

- (25) Er is ook [een blond meisje]_k gefotografeerd.
 There is also a blond girl photographed
 'There was also taken a picture of a blond girl.'
 a. *Die*_k/*?ze*_k is ooit model geweest.
 DPro/*?she* is once model been
 'She used to be a model.'

Another example constitutes a subject antecedent that is placed in focus by applying contrastive stress, as indicated by the capitals in (26). In that case, the antecedent is also taken up by a *d*-pronoun.

- (26) Die lekkere pap heeft [de KLEINE BEER]_i aan het meisje gegeven.
 That delicious porridge has the little bear to the girl given
 ‘The little bear gave that delicious porridge to the girl’
 a. Die_i heeft daarmee een goede indruk op haar gemaakt
 DPro has therewith a good impression on her made
 ‘He has really made a good impression on her with that.’
 a'. Hij/*die maakte daarom een huppelpasje
 He/DPro made therefore a hop

The example in (26) above is due to an anonymous reviewer. The same reviewer also brings in the example below. Sentence (27)a introduces a new referent *zijn vrouw* (his wife). The reviewer subsequently claims that the *d*-pronoun *die* in (27)a does not introduce a new topic. It is rather *zijn vrouw* (‘his wife’) that does. The intonation on *zijn vrouw* would support that claim. For a full discussion, I add here (27)a' and (27)a" as a potential continuation of that discourse.

- (27) Jan_i zag op maandag [een mooie nieuwe Toyota]_k.
 John saw on Monday a nice new Toyota
 a. Die_k heeft [zijn vrouw]_m de dag daarna voor hem gekocht.
 DPro has his wife the day after for him bought
 a'. Die_m/??Ze_m gaat over het geld
 DPro/she controls the financial affairs
 a". *Die_m/Ze_m /DIE_m is gefortuneerd
 DPro/she/ is well-off

In the view of the reviewer, shift topics typically carry a B-accent (a fall-rise intonation, see Jackendoff 1972, Büring 2003).³¹ In (27)a *zijn vrouw* would carry the B-accent and therefore announce the new topic. I reject this and offer the following interpretation. The first sentence is about *Jan_i*. *Jan_i* is the first referential DP in the initial group (C-domain) and for that reason topic in (27). The focus in (27) is *Toyota_k*. Sentence (27)a begins with the *d*-pronoun *die_k* and it is about the *Toyota_k*. The *d*-pronoun *die_k* shifts the topic and refers, as it should, to the focus in the preceding sentence *Toyota_k*. The intonation marking on [zijn vrouw]_m in (27)a directs the attention to John’s spouse. By my definition (topic = first referential DP in the initial group), [zijn vrouw]_m is syntactically disqualified as a topic in (27)a. The consequences of my topic definition are confirmed in the sequel (27)a'-(27)a". Sentence (27)a' is intuitively about John’s spouse and informs us about her powerful position. According to the definition *die_m* is the topic and moreover, - being a *d*-pronoun -, it should function as a topic-shifter that refers back to the focus of the preceding sentence [zijn vrouw]_m. It does. The unstressed personal pronoun *ze_m* is

³¹ A B-accent is “maximally realized as L+H* followed by a default low tone and a high boundary tone (L H%)” (Neeleman & Van de Koot 2008). The studies that argue for a ‘B-accent’ on topic-shifting elements mostly rely on question-answer pairs with clear contrasting effects. Consider Jackendoff’s (1972) famous example *Well, what about Fred? What did HE eat? Fred ate the beans.* Fred is a contrastive topic and implies the choice from a set (*who ate what?*). These question-answer pairs are characteristic of interrogations in court. There are implicit denials about presuppositions. The intonation properties of contrastive topics have been the subject of several works, among others, Büring (1997), Jacobs (1997), Krifka (1998), Frey (2004b). This type of conversation is not considered here.

possible, but as a marginal option. It will be used only if the participants in the conversation are well-aware of the way John's household is working. Sentence (27)a' is in that case only a reminder of a presupposed state of affairs that does not need an explicit topic-shift marking. Assuming now the option *die_m* in (27)a', further information about John's spouse will not allow a topic-shifting *die_m*. The topic-maintenance in (27)a" by the unstressed personal pronoun *ze_m* is obligatory. So far, so good. If one would nevertheless use *die_m* in sentence (27)a", a completely new effect of contrast comes in and a definite selection from the set {John, his wife}. Sentence (27)a" would in that case be equivalent to "John is the have-not in the relationship".

Finally, it should be noted that a sentence like (27)a hardly occur in spoken Dutch. The corpus study of Bouma (2008: table 6.2) reveals that when the object is fronted in Dutch as in (27)a, the subject is pronominal in 98% (3012/3187) of the cases. The reason for this may be that full DPs are new and new DPs are much more likely to be interpreted as new topics. The speaker would therefore avoid an OVS construction with a full DP subject.

3.3 Topic-shift function of the *d*-pronoun

Various quantitatively oriented studies (Bosch Katz & Umbach 2007, Kaiser & Trueswell 2004) take the demonstrative paradigm as the starting point. They subsequently picture the demonstrative as an anaphor with a strong tendency to refer to the non-subject of the preceding sentence, opposed to the free reference of the personal pronoun. Above, I have shown that the *d*-pronoun may in principle refer back to a subject, if the subject has sufficient prominence. The syntactic argument functions of the antecedent of the *d*-pronoun are basically irrelevant.

The argument functions of the *d*-pronoun are irrelevant too. The *d*-pronoun indicates a shift of topic whatever its own argument function or the argument function of its antecedent. See the potential antecedents indexed *i* and *k* in (28)a and the corresponding *d*-pronouns in (28)b. This view is also presented by Bosch & Umbach (2007).

- (28) argument function of antecedent
- | | | | | |
|----|---------------------------|------------------------------------|--------------------------------------|--|
| a. | [Het meisje] _i | zag | [het berenhuis] _k | (<i>berenhuis</i> = direct object) |
| | 'The girl | saw | the bear-house' | |
| b. | Er stond | [een groot berenhuis] _k | (<i>berenhuis</i> = subject) | |
| | 'There stood | a big bear-house' | | |
| c. | [Het meisje] _i | liep | [naar [het berenhuis] _k] | (<i>berenhuis</i> = preposition object) |
| | 'The girl | walked | to the bear-house' | |
- argument function of *d*-pronoun
- | | | | | | |
|-----|------------------------|-------------------------------------|-----------------------|----------------------------------|---------------------------------|
| a'. | <i>Dat_k</i> | vond | <i>ze_i</i> | erg mooi | topic-shift <i>dat</i> = object |
| | DPro | found | she | very beautiful | |
| | | 'She thought it was very beautiful' | | | |
| b'. | <i>Dat_k</i> | zag er | prachtig uit. | topic-shift <i>dat</i> = subject | |
| | DPro | saw there | beautiful out | | |
| | | 'It looked beautiful' | | | |

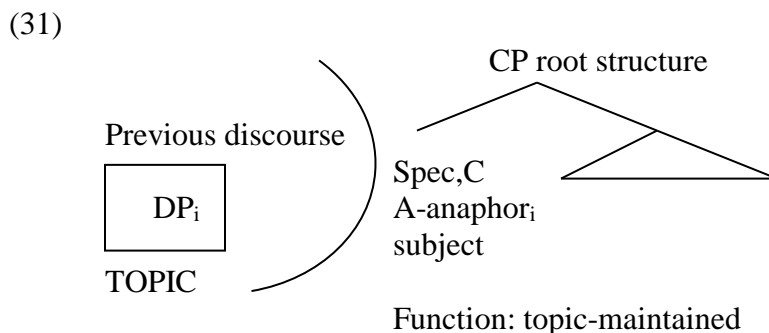
The use of the (non-contrastive) *d*-pronoun in Spec,C differs from the use of the 3rd person pronoun. A 3rd person pronoun is used in A(argument)- position and indicates that there is no topic-shift (E-ANS 1997: par. 5.6.3.3.1).³² It may, but need not, maintain the topic of the preceding sentence (and has as such to be a subject nominative). Consider the examples in (29)a of the object *een meisje* ('the girl') maintained as the object *haar* ('her') and (29)b of the subject *de kleine beer* ('the little bear') maintained as the topic-subject *hij*.

- (29) [De kleine beer]_i zag [een meisje]_k in zijn bedje.
 'The little bear saw a girl in his bed.'
 a. Hij_i vond *haar*_k/**die*_k er lief uitzien.
 He found her/*DPro there nice out-see
 'He thought that she looked rather nice.'
 b. Dat meisje vond *hij*_i/**die*_i er lief uitzien.
 That girl found he/*DPro there nice out-see
 'He thought that that girl looked rather nice.'

In the last sentence (29)b, the object has been topicalized, which induces subject-verb inversion in V2nd Dutch. Of course, a 3rd person subject may also occupy the sentence-initial Spec,C position and does not induce topic-shift in that case, see (30).

- (30) *Hij*/**die* (de kleine beer) vond het meisje lief.
 He/*DPro (the little bear) found the girl nice
 'He thought that the girl was nice.'

In (30) the subject is a 3rd person pronoun and there is no topic-shift. I take here the position of Holmberg (1986) and Rizzi (1991) that the Spec,C position in V2nd languages may also function as an A-position for the canonical subject. That is to say, the sentence-initial pronouns in (28) and (30) both occupy the Spec,C position, but only in (28) it is an A-bar position for the *d*-pronoun. The personal pronoun *hij* in (30) is in a canonical subject position, as represented by the tree structure in (31).

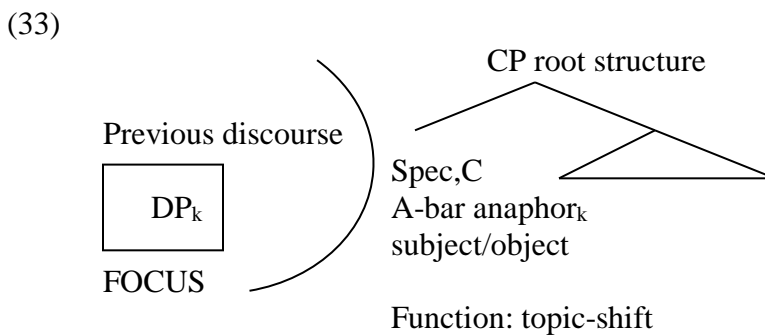


Objects in sentence-initial position are A-bar topics. In unstressed contexts, object pronouns in Spec,C will invariably appear as a *d*-pronoun, see (32).

³² The E-ANS (1997: par. 5.6.3.3.1) speaks of “preferences”, but at the same time considers the non-topic-shifting use of the *d*-pronoun “excluded”.

- (32) [De grote beer]_i wees naar [zijn zoontje]_k
 ‘The big bear pointed at his son.’
 a. *Die*_k/*’*m*_k (zijn zoontje) vond hij_i (de grote beer) wat klein.
 DPro/*him (his son) found he (the big bear) what small
 ‘He found him a little bit small.’

The anaphor ’*m* in (32) is an unstressed object personal pronoun. The anaphor ’*m* cannot enter Spec,C, because Spec,C rejects in principle unstressed, non-contrastive, personal pronouns that are not subject (’*m* ‘him’, *d’r* ‘her’ and *t* ‘it’). See Jansen (1981), Zwart (1997), among others. Within the present view, an unstressed personal pronoun implies ‘no topic-shift’ and hence subject function.³³ The (almost complete) absence of object personal pronouns in Spec,C is reported in various corpus studies, for Dutch in Bouma (2008: table 4.11), for German in Weinert (2007: tables 1.5-1.6) and in Bosch, Katz & Umbach (2007: figure 1). The structural conditions for the topic-shift *d*-pronoun in Spec,C are given in the tree in (33).



As argued for in section 3.1, the *d*-pronoun is typically unstressed. A contrastive effect of the *d*-pronoun in sentence-initial Spec,C position needs not induce topic-shift. Consider for instance the *d*-pronoun in (34)b,c.

- (34) [Het meisje met de gouden haren]_i is ook gefotografeerd.
 The girl with the golden locks is also photographed
 ‘The girl with the golden locks was taken a picture of.’
 a. *Zij/ze*_i is ooit model geweest.
 She is once model been
 ‘She used to be a model.’
 b. (ook) *DIE*_i is ooit model geweest.
 (also) DPro is once model been
 ‘It was she (too) that used to be a model.’
 c. *DIE*_i is ook ooit model geweest.
 DPro is also once model been
 ‘It was she that used to be a model too.’

³³ Travis (1984) and Zwart (1997) interpret this differently. The unstressed personal subject pronoun in sentence-initial position suggests to them an IP structure. They feel that the Dutch root clause offers the option of a finite verb I^o in the predicate-initial position with the subject in Spec,I, like French and English have. This view is as such not incompatible with the present account in terms of ±topic-shift, as far as I can see.

The constituent *het meisje met de gouden haren* is running topic and referred to in (34)a by the subject personal pronoun *zij/ze* without topic-shift. Yet, it can also be referred to by the stressed *d*-pronoun *DIE* in (34)b. The construction has the flavor ‘as opposed to others’ and the *d*-pronoun is used here contrastively. In this case, the *d*-pronoun loses its neutral function of topic-shifter. The example in (34)b can be improved by adding in (34)c a focusing adverb like *ook* (‘also’) that puts the *d*-pronoun clearly in focus, cf. also (20). The point is argued for in Van Kampen & Pinto (2007), Van Kampen (2007b) for Dutch and in Bosch & Umbach (2007) for German.

The formal characteristics of the *d*-pronoun can now be summarized as in (35).

- (35) Topic *d*-pronouns
- a. follow the paradigm of some *A-bar anaphor*.
 - b. are pronouns located in *Spec,C* of V2nd languages.
 - c. indicate a *topic-shift* without contrastive stress.
 - d. must take as antecedent a major constituent focused in the preceding clause.

The picture above is not complete. When the (non-contrastive) *d*-pronoun is used with inanimate referents it seems to lose its *Spec,C* restriction as well as its topic-shifting function. I will get to that complication in the next section and argue that a *d*-pronoun used sentence-internally stands in for a 3rd person pronoun. This is due to a morpho-syntactic gap in the Dutch pronominal system.

3.4 The *d*-pronoun with inanimate antecedents

The limitation of (non-contrastive) *d*-pronouns to *Spec,C* seems less strict when the antecedent is inanimate.³⁴ Two clear cases can be presented. Both show how a *d*-pronoun makes up for the absence in Dutch of a 3rd person inanimate pronoun.

The first case constitutes the oblique pronoun *daar* (‘there’) with an inanimate antecedent. Consider (36) with the inanimate antecedent *zijn woord*.

- (36) Hij heeft je [zijn woord]_k gegeven
 He has you his word given
 ‘He has given you his word’
- a. *Daar*_k kun je altijd op rekenen. (topic-shift)
 DPro can you always on count
 - b. Je kunt *daar*_k/*er*_k altijd op rekenen. (no topic-shift)
 You can DPro always on count
 - c. Je kunt altijd *[op *het*_k] rekenen.
 You can always on it count

The example in (36)b seems in contrast with the *Spec,C* requirement of the *d*-pronoun *daar* (‘there’), cf. (19). However, this is only apparently so. The difference between the ungrammaticality of (36)c and the grammaticality of (36)b is due to the fact that in Dutch the complement of P cannot be a non-animate pronoun (Van Riemsdijk 1978). The oblique case of pronouns not marked for animate is expressed by a pronominal adverb

³⁴ Thanks to Hilda Koopman (p.c.) and to an anonymous reviewer for pointing this out to me.

daar/er that binds a trace governed by the preposition. The pronominal adverb *daar/er* occupies a sentence-internal A-bar position (called *r-position*). Example (36)b is grammatical simply because of restrictions on the complement of P that disallows (36)c.

The second case constitutes the argument pronoun *die*. The Spec,C restriction clearly holds with animate antecedents, cf. (18), but it does not seem hold when the antecedent is inanimate. In (37) *de zolder* is taken up by *die* sentence-internally without topic-shift.

- (37) [De zolder]_i was leeg, toen de kleine beer *die*_i/?'m voor het eerst zag
 The attic was empty, when the little bear DPro/him for the 1st time saw
 (no topic-shift)
 'The attic was completely empty when the little bear set foot on it'

The pronoun *die* in (37) stands in for a 3rd personal non-animate pronoun. It concerns a tricky case of pronominal reference in Dutch. Dutch marks grammatical \pm neuter gender on personal pronouns, nouns and demonstratives/*d*-pronouns, but only personal pronouns are marked for (semantic) gender \pm masculine, see (38).

(38) a. grammatical gender

	<-neuter>	<+neuter>
noun	de villa (the villa)	het huis (the house)
<i>d</i> -pronoun	die	dat
pres. pronoun	hij/zij (subject) hem/haar (object) 'm/d'r (reduced object)	het (subject) het (object) 't (reduced object)

b. semantic gender

	<+masculine>	<-masculine>
pers. pronoun	hij/hem/'m	zij/haar/d'r

The mismatch between grammatical gender specifications on the noun and semantic gender specifications on the personal pronoun causes uncertainty among Dutch speakers in case of anaphoric reference (Audring 2006, 2007, Van Kampen 1997, E-ANS 1997: par. 3.3.3). When the antecedent is inanimate (or perhaps, more restrictively, non-human) there is no way to define the semantic gender of the antecedent, as (39) illustrates (example from Audring 2007).³⁵

- (39) De tentoonstelling was over voordat ik *die*/?'m/*d'r kon bezoeken
 The exhibition was over before I DPro/him/her could visit
 'The exhibition was over before I could attend it'

The gender uncertainty in (39) is resolved by *die* which is, just like the noun, unspecified for semantic gender.³⁶ It is used as a non-topic-shifting anaphor for lack of a 3rd person

³⁵ The pronominalization of inanimate antecedents as feminine is lost altogether in spoken Dutch.

³⁶ The plural 3rd person pronoun *ze/zij* does not distinguish between sex or gender. The following contrast (my intuition) is now predicted.

- (i) Mama beer had nog wel aan de lepel gedacht (singular 'spoon')

pronoun that refers to inanimate antecedents. One may compare it to the use of *den/det* in Swedish and Danish (Perridon 2003: 243).³⁷ There are more tricky questions concerning the use of anaphoric pronouns in Dutch. See in particular Audring (2006).³⁸

Quantitative support comes from two corpus studies, one for Dutch (Bouma 2008) and one for German (Bosch, Katz & Umbach 2007). Bouma (2008) reports the use of *d*-pronouns in sentence-initial versus sentence-internal position in the Corpus Gesproken Nederlands (Spoken Dutch Corpus). It appears that object *d*-pronouns are used 36% sentence-internally. Subject *d*-pronouns, by contrast, are hardly used sentence-internally, but overwhelmingly appear in sentence-initial Spec,C. Now, subjects are often animate, especially subjects of transitives (Dahl 2008). There is no need for the use *die* in case of an animate subject sentence-internally, because there is no uncertainty about the \pm masculine gender. The corpus study in Bosch, Katz & Umbach (2007: figure 1) reveals that German object *d*-pronouns uniquely appear in sentence-initial position. They simply do not appear in sentence-internal position, because German still has a full-fledged gender system for nouns and pronouns. The German speaker is comfortable with the paradigm of the personal pronoun and needs not switch to the *d*-pronoun.

Let me summarize the Dutch data. There is a Spec,C specific A-bar anaphor, the *d*-pronoun, that need not be marked by emphatic or contrastive intonation. It refers to an argument that has focus prominence in the preceding sentence. The *d*-pronoun turns the focus referent of the preceding sentence into a new topic. Like the relative pronoun, the *d*-pronoun in Spec,C may have any argument function in the sentence. The other non-(contrastive) anaphoric pronouns in Spec,C are subject personal pronouns. They are A-pronouns, not Spec-C specific and may appear in Vfin-subject inversion construction. One may conclude that the Spec,C requirement of the (non-contrastive) *d*-pronoun seems to hold. In case the *d*-pronoun is used in sentence-internal position, it is due to a morpho-syntactic gap in the Dutch pronominal and nominal system. Used sentence-internally as in (39), *die* has the same properties as the 3rd person pronoun. This does not affect the status of the *d*-pronoun as a topic-shifting A-bar anaphor in Spec,C.

	de lepels		(plural 'spoons')
	Mummy bear had still to the spoon/spoons thought		
	'Mummy bear had thought of the spoon / spoons'		
a.	Helaas had de kleine beer	die/?'m/*d'r niet meegenomen.	(singular, antecedent 'spoon')
		??die/ze	(plural, antecedent 'spoons')
	Unfortunately, the little bear	DPro/him/her not with-taken	
		DPro/them	
	'Unfortunately, the little bear had not taken it / them with him'		

³⁷ Diachronically, Swedish and Danish, facing the same problem, have replaced the old three gender system and promoted the former demonstrative pronouns *den* and *det* into personal pronouns for non-person reference, whereas they kept *han* (masculine) and *hon* (feminine) for person reference.

³⁸ Audring (2006) shows that there is a strong interaction between \pm countable nouns and the use of anaphoric pronouns in Dutch.

4. Anaphoric *d*-pronouns in German

The characteristics of the *d*-pronoun in German seem to be compatible with the analysis above, i.e. (i) Spec,C/A-bar requirement; (ii) topic-shift function; and (iii) focus antecedent

There are a few empirical investigations showing that the Spec,C is the locus of the *d*-pronoun. Bosch, Katz & Umbach (2007: figure 1) found, for a corpus of German newspaper texts, that subject 3rd person pronouns appear equally (roughly 50-50%) in sentence-initial and in sentence-internal position, whereas object 3rd person pronouns uniquely (almost 100%) occupy a sentence-internal position. By contrast, object and subject *d*-pronouns mostly (93%) occupy a sentence-initial (Spec,C) position.³⁹ A somewhat similar picture is given in Weinert's (2007: tables 1.5-1.6) study of spontaneous spoken data. It is compatible with the structural conditions in (31) and (33).

Traditional German grammars have given some attention to the difference in function between *d*-pronouns and personal pronouns. Weinrich (1993) and Zifonun et al. (1997) suggest, in this regard, that the *d*-pronoun is used if the antecedent is part of the rheme. Personal pronouns would refer to thematic entities (roughly 'topics'), whereas *d*-pronouns refer to entities that are part of the rheme (roughly 'comment') (Weinrich 1993). Elaborating on the suggestions in Zifonun et al. (1997), Bosch, Katz & Umbach (2007) speculate that the *d*-pronoun might have a topic-shift function. See also Weinert (2007).

Another support for the analysis that the German *d*-pronoun is a topic-shifter that requires a focal referent just like in Dutch, comes from Frey (2004a). Frey compares left dislocation constructions and so-called hanging topic constructions in German. The left dislocation construction is doubled in German/Dutch by the *d*-pronoun, see (40)a. The hanging topic construction is doubled by a personal pronoun, see (40)b.

- (40) a. den Hans, den mag jeder
the-acc Hans, DPro likes everyone
Everyone likes Hans
b. den Hans, jeder mag ihn
the-acc Hans, everyone likes him

Frey now argues that the left dislocated argument in (41)a has to be a new topic. It cannot maintain the topic of the previous sentence. He gives the following example in German. The left dislocation *dieser begabte Architect* + *d*-pronoun is perfectly grammatical in (41)a where it refers to the argument *Peter* in focus. If, by contrast, the argument *Peter* moves to the left as in (41)b, it loses focus and sentential stress.

- (41) a. Heute hat erfreulicherweise Peter_i einen Auftrag bekommen.
Today has fortunately Peter a commission got.
[Dieser begabte Architect]_i, der_i hat das wirklich verdient.
This talented architect DPro has it really deserved
b. Heute hat Peter_i erfreulicherweise einen Auftrag bekommen.
*[Dieser begabte Architect]_i, der_i hat das wirklich verdient.

³⁹ One wonders how much of the remaining 7% fits a clear emphatic/contrastive interpretation.

The hanging topic construction behaves differently. The dislocated phrase of the hanging topic construction may very well pick up a referent which was the topic in the preceding sentence as in (42) (Frey 2004a: section 5.3).

- (42) Heute hat Peter_i erfreulicherweise einen Auftrag bekommen.
 [Dieser begabte Architekt]_i, er_i hat das wirklich verdient

I assume that removing the left dislocated element in (41) and (42) gives the same grammaticality judgments. It perfectly fits the present analysis of *d*-pronoun versus personal pronoun. Note that the left-dislocated structure in Dutch/German is an often studied phenomenon and it is as often assumed to have the same properties as the left dislocation doubled by a clitic (CLLD) in Romance (Anagnostopoulou 1997, Grewendorf 2008). I did not include it in the present study, though, because it seems to have a quite marked character (Jansen 1981). This is not the case for the CLLD construction in Romance.

Support for the present idea that the *d*-pronoun requires an antecedent in focus comes from the corpus study in Weinert (2007: 14). Her figures show that *d*-pronouns overwhelmingly (84%) refer to full NPs, not to pronominalized variants. This is compatible with my argumentation for Dutch in (23). A more semantic, but somewhat similar, analysis of the *d*-pronoun requiring an antecedent in focus is given by Bosch & Umbach (2007). They argue that a *d*-pronoun in German requires a focal referent, see their examples in (43).

- (43) Gestern habe ich Karl_k getroffen. Er_k arbeitet jetzt bei einem Herrn Paul_i.
 Yesterday have I Karl met He works now by a Herr Paul
 ‘Yesterday I met Karl. He works for a certain Herr Paul now.’
- a. Der_i/*Er_i arbeitet mehr als alle anderen.
 DPro/he works more than anybody else
- b. Aber der_i/*er_i mag ihn_k nicht.
 ‘But DPro/he likes him not
 But he (herr Paul) doesn’t like him.’
- c. Aber den_i/*ihn_i mag er_k nicht.
 But DPro/he like he not
 ‘But he (herr Paul) doesn’t like him’

Herr Paul in (43) is introduced by an indefinite DP in focus position and therefore selected by the topic *d*-pronoun, in the alternatives (43)a,b (subject) and (43)c (object).

Bosch & Umbach (2007) argue further that beside its discourse topic-shift function, the *d*-pronoun may get an additional emphasis when used in a focus position itself. They characterize such *d*-pronouns as ‘true pointing elements’. See the examples in (44). *Karl* is a discourse topic that is taken up by the *d*-pronoun that serves a contrastive function. The example in (44)a gets improved when the *d*-pronoun is made unambiguously ‘focal’ by adding *auch mal* in (44)b or applying focus stress and adding *auch* in (44)c, cf. the Dutch example in (34)c.

- (44) Gestern habe ich Karl_k getroffen. Er_k arbeitet jetzt bei IBM.
 Yesterday have I Karl met He works now by IBM
 ‘Yesterday I met Karl. He works for IBM now.’
- a. *DEN*_k sollten wir mal einladen.
 DPro must we once invite
 ‘It is him we should invite some time’
- b. *DEN*_k sollten wir auch mal einladen.
 DPro must we also once invite
 ‘We should invite HIM too some time’
- c. *DEM*_k hätte ich das wirklich nicht gewünscht.
 DPro had I that really not wished
 ‘I would have wished better for hím’
- d. Auch *DEN*_k sollten wir mal einladen.
 Also DPro must we once invite
 ‘We should invite hím too some time’

As in the Dutch examples in (34), the *d*-pronoun loses its topic-shift function in German when it is used emphatically or contrastively.

Bosch & Umbach underline their arguments with the ungrammatical examples in (45)a,a’.

- (45) Gestern habe ich Karl_k getroffen. Er_k arbeitet jetzt bei IBM.
 Yesterday I met Karl_k. He_k works for IBM now
- a. **Dem*_k hat man die Wohnung gekündigt. (no reference to focus *IBM*)
 DPro has one the house given notice
 ‘He’s been given notice to leave his flat’
- a’. **Der*_k hatte letzte Woche einen Autounfall (no reference to focus *Wohnung*)
 DPro had last week a car accident
 ‘He had a car accident last week’
- b. Man hat ihm_k die Wohnung gekündigt.
 One has him the house given notice
 ‘He’s been given notice to leave his flat’
- b’. Er_k hatte letzte Woche einen Autounfall
 He had last week a car accident
 ‘He had a car accident last week’

The *d*-pronoun in (45)a,a’ is not contrastively marked and therefore it is ungrammatical. Because there is no topic-shift, the 3rd person pronoun *ihm/er* should be used, as in (45)b,b’.

The Germanic C-domain allows the free inversion of the subject, which leaves the Spec,C open for a smoothly running topic-shift + subject-finite verb inversion. French, by contrast, in general resists such subject-finite verb inversions. To make a topic-shift, French has to turn to a different device. This device seems to operate for Italian too.

5. Parallels in Romance: topic-shifting devices in French and Italian

The distinction between two kinds of free anaphoric pronouns (A-/A-bar) seems to hold for French and Italian as well. French and Italian do not belong to the V2nd type, and do not use movement of a *d*-pronoun to Spec,C. Due to the typological restriction, different devices for topic-shift come in. I will first consider the discourse devices for \pm topic-shift in French and subsequently in Italian. It turns out that different languages make their different choices from a general saliency hierarchy to express \pm topic-shift. The analysis as presented here leads me to a more structural characterization of ‘antecedent accessibility’ than the one proposed by Ariel (1990, 2001), Givón (1983), Gundel et al. (1993) in section 6.

A non-pro-drop SVO language like French avoids in general subject-finite verb inversion. Argument prominence in root clauses is reached by DP adjunction. French prefers a left-dislocation construction to induce topic-shift (Givón 1983, Ashby 1988: 206). Consider (46). A left-dislocated structural argument in an A-bar position is doubled by a clitic pronoun (*il*) with which it shares case, number and gender features.⁴⁰ The A-bar constituent that occupies the left-dislocated position can be a lexical DP (*le petit ours* in (46)a) or a pronoun (*lui* in (46)b). In French, topic-shifting A-bar anaphors are adjoined full strong pronouns.

- (46) a. Le petit ours, [IP *il* grimpeait l’escalier].
The little bear he climbed the stairs
‘The little bear went upstairs.’
b. *Lui*, [IP *il* grimpeait l’escalier].
He, he climbed the stairs
‘He went upstairs.’

This type of dislocation is called Clitic Left Dislocation (CLLD). It is often assumed that the dislocated constituent is base-generated in left-dislocated position and licensed by rules of predication (Van Riemsdijk & Zwarts 1974, Chomsky 1977, Cinque 1990, Anagnostopoulou 1997, among others). Others have proposed that the left dislocated element is the result of A-bar movement (Cinque 1977, Sportiche 1993). The main idea here is that the Romance left-dislocated pronoun is (non-quantificational) A-bar anaphoric, just like the *d*-pronoun in Germanic (cf. Kechagias 2009 for CLLD in Greek). The doubling (subject or object) clitic is locally related bound to the dislocated element as a kind of ‘shadow pronoun’.⁴¹

The \pm topic-shift device in French is illustrated in (20) and (21) below. When there is no topic-shift, the 3rd person clitic appears in argument position, see (47).

⁴⁰ The picture in Romance fits nicely with Aissen (1992). Aissen claims that cross-linguistically there is a clause-external position for topic-shift and a clause-internal position for topic-maintenance. Her analysis is based on a study of Mayan languages. See also De Swart & de Hoop (1995).

⁴¹ The term ‘shadow pronoun’ as the companion of an A-bar device was used by Perlmutter (1972) and taken from an Arabian grammatical tradition.

- (47) [Le petit ours]_i a voulu suivre [le grand ours]_k .
 ‘The little bear has wanted follow the big bear.’
 ‘The little bear wanted to follow the big bear.’
 a. *Il*_i/*[*lui, il*]_i était curieux (topic-maintenance)
 He/*he, he was curious
 ‘He was curious.’

When there is a topic-shift, it refers to the preceding focus (*le grand ours*) and French uses its strong 3rd pronoun in dislocated A-bar position, see (48)a. The dislocated pronoun is doubled by a clitic.⁴² See for arguments that the strong pronoun in French is dislocated Lambrecht (1981) among others.

- (48) [Le petit ours]_i a voulu suivre [le grand ours]_m .
 The little bear has wanted follow the big bear
 ‘The little bear wanted to follow the big bear.’
 a. [*Lui, il*]_m/[*le grand ours, il*]_m/**il*_m grognit un peu (topic-shift)
 He, he /the big bear,he/*he grumbled a bit
 ‘He grumbled a bit.’

Based on a corpus of written French Lambrecht (1986: chapt.6) shows that topics are preferably unaccented pronouns. He argues that the dislocated element is used to promote a referent from accessible to active status, i.e. in my terms inducing a topic-shift, from which point on it can be coded as a preferred topic expression by an unaccented (doubled) pronoun (Lambrecht 1994:176). It may be added that the non-V2nd SVO languages (French, Italian) may use their strong 3rd person pronouns (plus a clitic) for topic-shift, but they don’t need to. They may as well repeat the full DP (plus a clitic) *le grand ours, il* (‘the big bear, he’).

For pro-drop Italian, Grimshaw (1995) and Grimshaw & Samek-Lodovici (1998) have shown that *pro*-drop is restricted to ‘topic-connected’ arguments, which I read as a case of topic-maintenance. Carminati (2002) scrutinized the quantitative effects of Grimshaw’s statement. She subsequently found that the null anaphor *pro* shows a ‘strong tendency’ to refer to the subject of the preceding sentence. I must add again that the subject-tendency is not fixed grammatically and in principle irrelevant, cf. (25), whereas topic-hood and especially ‘running topic’ is invariably the relevant factor. The present point of view is the explicit position taken in Frascarelli (2007) and Frascarelli & Hinterhölzl (2007). Based on a corpus of spontaneous speech data, Frascarelli (2007:703f) shows that 3rd person null subjects in Italian invariably maintain the discourse topic, independent of the syntactic function of the antecedent. When a new referent is introduced, a strong subject pronoun is used in the following clause to induce topic-shift. After this formal topic-shift, the strong pronoun is taken up by a null subject (topic-maintenance) (Frascarelli 2007:706), cf. the discourse sequence in (14) for

⁴² In the examples (46)-(48) both subject and object arguments represent a masculine person. The masculine (unstressed) clitic *il* has a strong pronominal variant *lui*. The feminine strong pronominal variant is a stressed *elle*, as opposed to the unstressed clitic *elle*. Now topic-shift to a feminine referent would give *elle, elle*. Avoidance of the adjacency of two identical elements leads to: stressed *elle* for topic-shift, versus unstressed *elle* for non-topic-shift. Of course, stressing a pronoun may also result in contrastive interpretations. The problem reminds of the use of a stressed pronoun in English. A stressed pronoun may be used for topic-shift if the language does not have both weak and strong pronouns.

Germanic. Frascarelli supports her analysis further with intonation patterns as an independent criterion of ‘topic type’.

The \pm topic-shift device in Italian is illustrated in (49) and (50) below. A difference with French is that Italian applies *pro*-drop when the pronominal subject is non-contrastive, but apart from that the devices for \pm topic-shift seem to be identical.⁴³ The non topic-shift A-anaphors are the φ -set elements *pro*/*Agr* when subject, and *clitic* when object. Both appear within A-structure/IP.⁴⁴

- (49) [L’orsetto]_i vide [la ragazzina]_m solo la sera.
 The little bear saw the girl only in the evening.
 ‘The little bear saw the girl only in the evening.’
 a. *Pro*_i /*[*lui, pro*]_i non l_m’aveva mai vista prima.
 (He)/*he, (he) not her had ever seen before.
 ‘He had never seen her before.’

When there is a topic-shift, the A-bar anaphoric strong 3rd pronoun or a full DP is used in dislocated position.⁴⁵ The dislocated pronoun is doubled by a *pro* when subject or by a clitic when object.

- (50) [L’orsetto]_i salì in soffitta per salutare [la ragazzina]_m.
 The little bear went-up in attic for greet the girl
 ‘The little bear went upstairs to the attic to say hallo to the girl.’
 a. [*Lei, pro*_m]/**pro*_m stava ancora dormendo.
 She, (she)/*(she) was still sleeping
 ‘She was still sleeping.’

The structural conditions for topic-shift in Romance French and Italian (52) seem parallel to the structural conditions for topic shift in V2nd Germanic Dutch (51).

- (51) Structural conditions for topic-shift anaphors (Germanic V2nd)
 a. The A-bar anaphor refers to the focus prominence of the preceding clause.
 b. The A-bar anaphor is a *d*-pronoun that is restricted to the Spec,C position.
- (52) Structural conditions for topic-shift anaphors (Romance non-V2nd)
 a. The A-bar anaphor refers to the focus prominence of the preceding clause.
 b. The A-bar anaphor is a strong personal pronoun that is in principle restricted to the dislocated position.

The Romance/Germanic difference is that the Germanic A-bar anaphor binds an empty place (a trace), whereas the Romance A-bar anaphor binds a *clitic* or *pro*, see (53).

⁴³ Richard Kayne pointed out to me that Italian seems to use left-dislocation in ways that French doesn't. An explanation is still lacking

⁴⁴ It is often assumed that clitics are in an A-bar position and bind an (empty) argument position. The distribution A/A-bar as I use it here is meant differently. It intends to separate A-bar anaphors in sentence-initial position with sentential scope from the scope-less anaphors within IP, including the clitic.

⁴⁵ For the use of 3rd person subject pronouns to signal topic-shift in Italian, see also Serratrice et al. (2004).

(53)

anaphor	Dutch/German	French/Italian
in A-bar position topic-shift	Spec,C A-bar <i>d</i> -pronoun	clause-adjoined strong personal pronoun
in A-position no topic-shift	empty position in A-structure	<i>clitic</i> or <i>pro</i> in A-structure (IP)

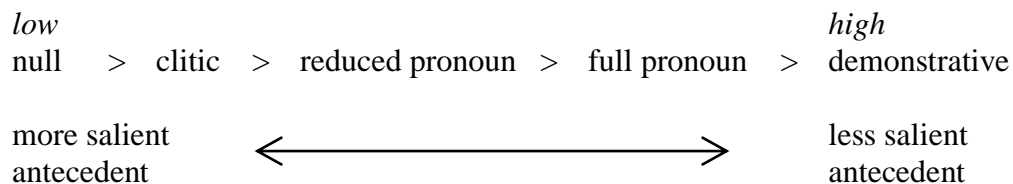
The V2nd type of language seems designed for topic-shift. It employs the *d*-pronoun A-bar anaphor, the Spec,C position and the easily inverted subject + finite verb. The Romance languages have strong personal pronouns only, adjoined to the outside and supported by clitics on the inside. Subject-finite verb inversion is resisted.

6. A reinterpretation of Ariel's PF saliency

Both Dutch/German and French/Italian anaphoric expressions can be divided into topic-shifting and non-topic-shifting. The topic-shifting anaphors show a more prominent syntactic demeanor. They appear in Spec,C (Germanic) or in an IP-adjunction (Romance) and refer to the focus of the preceding sentence.

The anaphoric choices made by the speaker have been related to the accessibility of the information for the hearer. A speaker in a conversation has to take into account to which degree a referent is accessible (or salient) for the addressee. A referent may be more/less accessible due to general knowledge, physical surroundings or previous linguistic material. Ariel (1990, 2001), Givón (1983), Gundel et al (1993) propose that the anaphoric expressions reflect the pragmatic accessibility of the antecedent in a reversed correlation. Consider the accessibility hierarchy for pronominal elements from Ariel (2001:29) in (54).⁴⁶

(54) Accessibility hierarchy for anaphoric pronouns (Ariel 2001)



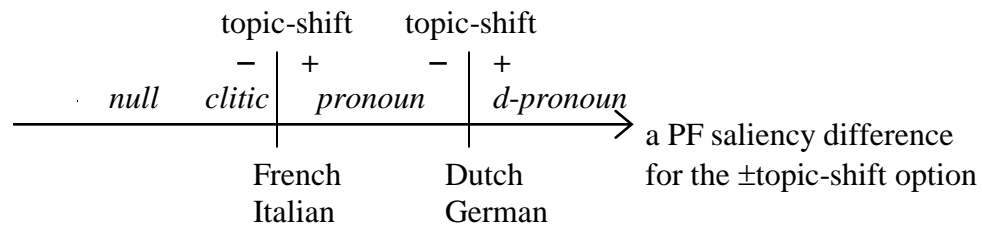
Antecedents that are highly accessible already would need no more than a simple anaphoric expression to be referred back to. These anaphoric expressions are thought of as selected for the easy job and they are ranked low on the hierarchy scale. Antecedents that are less accessible would need a more specific anaphoric expression. These

⁴⁶ Ariel talks about 'referent' where I prefer 'antecedent'. Ariel's accessibility of the antecedent is determined by a variety of situational functions like \pm topic, \pm recently mentioned, \pm stereotype expectations, and \pm physically given. The present analysis is rather occupied with the distinction situation-bound/situation-free (Chomsky 1968).

anaphoric expressions are for the harder job and they are ranked high on the hierarchy scale.

The scale in (54) reflects a rising degree of anaphoric saliency and a reversed correlation with the antecedent accessibility. The present view is different. There is no reversed correlation between the anaphoric expression and the antecedent. Rather, there is a function of non-topic-shift versus topic-shift. The less salient pronominal element signals non-topic-shift. It may, but need not, refer to the preceding topic and confirm the expected topic-maintenance. The more salient anaphor in sentence-initial position refers to the (salient) focus of the preceding sentence and it causes topic-shift. See the reinterpretation of the hierarchy scale in (55). The scale in (55) (globally) replicates the scale in Ariel (2001), but I add a \pm topic-shift function. Subsequently, I will argue that the binary opposition (\pm topic-shift) is the relevant distinction to interpret the scalar hierarchy, see (59) below.

(55) Accessibility hierarchy for anaphoric pronouns (present view)



Germanic and Romance use the same accessibility hierarchy to express the \pm topic-shift relation, but they exploit the scale in a different way. French and Italian oppose personal pronouns versus clitics/*pro*. Dutch and German opt for *d*-pronouns versus personal pronouns. Within the present view, both the Dutch strong pronouns (subject *hij, zij, het* ‘he, she, it’ and object *hem, haar, het* ‘him, her, it’) as well as its weak variants (*ie, ze, ’t* and *’m, d’r, ’t*) fall in the group of non-topic-shift pronouns, see the example in (34)a repeated here as (56)a.

- (56) Het meisje met de gouden haren is ook gefotografeerd.
 The girl with the golden locks is also photographed
 ‘The girl with the golden locks was taken a picture of.’
- a. *Zij/ze* (= het meisje met de gouden haren) is ooit model geweest.
 She (= the girl with the golden locks) is ever model been
 ‘She used to be a model.’

Support for a grammatically defined \pm topic-shift opposition that makes a two-way division between pronominal devices comes from eye-tracking experiments reported in Kaiser & Trueswell (2004), although they interpret their results differently. Kaiser & Trueswell depart from the saliency hierarchy for anaphoric pronouns in (54), and from the idea that subject antecedents are more salient than object antecedents. They subsequently tested the effects of the Dutch full (feminine singular) subject pronoun *zij* and the weak (feminine singular) subject pronoun *ze*, see (57). Example (57)a, but not (57)b, is from Kaiser and Trueswell.

- (57) [De leerlinge]_i stak [de lerares]_k met een potlood
 The student poked the teacher with a pencil
 a. *Ze/zij_i* was gekleed in een groene trui (topic-maintained)
 She was wearing a green sweater.
 b. *Die_k/*ze_k/*zij_k* was gekleed in een groene trui (topic-shifted)
 DPro/she was wearing a green sweater.

Their experiments show that both *zij* and *ze* are equally used to refer to the subject *de leerlinge* ('the student'), rather than to the object *de lerares* ('the teacher') (low saliency in their analysis, no topic-shift in my analysis). They argue that this is unexpectedly so, because reduced pronouns are lower on the hierarchy scale than full pronouns, cf. (54). Kaiser & Trueswell conclude correctly that the *ze/zij* choice is not triggered by referent saliency.⁴⁷ Within the present view, the counterpart to *ze/zij* in (57)a is the *d*-pronoun in (57)b, which was not tested for feminine antecedents by Kaiser & Trueswell (2004). The relevant point, though, is that the antecedent of the *d*-pronoun should be in focus. If the object *de lerares* gets represented by an unstressed object pronoun (non-focus), the use of the *d*-pronoun becomes weird (*die_k*) or ungrammatical (*die_i/die_j*).

- (58) [De leerlinge]_i stak [haar]_j [met [een potlood]_k]
 The student poked her with a pencil
 a. *Die_i/*j_k* was gekleed in een groene trui
 DPro was wearing a green sweater.

The more prominent *d*-pronoun should refer to the preceding focus, *een potlood* in (58), but that makes (58)a a weird sentence.

The present two-way division in function (topic-shift versus non-topic-shift) is expressed in the table in (59) by a black topic-shift and a grey non-topic-shift distinction. Only the 3rd person masculine pronoun in Dutch, French and Italian is given in the table. The black/grey opposition in the table indicates which pronominal devices a language happens to exploit for its \pm topic-shift opposition. The grey area in (59) underlines that pronouns in Dutch cannot be topic-shifters. The subject as a personal pronoun in Spec,C is simply the running topic, whether reduced weak pronoun (*ze*) or full pronoun (*zij*).

- (59) Hierarchy of anaphoric pronominal devices: less salient → most salient

	null <i>pro</i>	clitic pronoun	weak pronoun	strong pronoun	<i>d</i> - pronoun
Dutch			<i>ie</i> (subject) <i>'m</i> (object)	<i>hij</i> (subject) <i>hem</i> (object)	<i>die</i> (subject) <i>die</i> (object)
French		<i>il</i> (subject) <i>le</i> (object)		<i>lui, il</i> (subject) <i>lui, le</i> (object)	
Italian	pro/agr (subject)	<i>lo</i> (object)		<i>lui, pro</i> (subject) <i>lui, lo</i> (object)	

⁴⁷ The full pronoun may be stressed and then serve a contrastive effect as also noted by Kaiser & Trueswell.

The less salient pronoun indicates non-topic-shift. It may refer back to the preceding topic, as in (57)a. As a topic it is syntactically non-salient and does not carry the sentence stress. By contrast, the more salient pronoun does not refer to the preceding topic. It is the pronoun with deixis quality used in early child language for situation deictic reference. In the linguistic discourse, it refers to the focus salient antecedent in the preceding sentence. This antecedent in focus carries the sentential stress and has a high syntactic saliency.

The topic-shifting anaphors arise from the situation-bound, gesture-sustained anaphors in early child language. Later, when linguistic discourse reference enters the speech of the child, they are rescheduled as topic-shifting devices. The distinction between topic-maintaining referents and topic-shifting referents is a decisive tool to switch the system from a situation-bound to a discourse-bound orientation. Early situation-bound child language was already shaped to switch over to adult discourse-bound system. The switch is nevertheless clearly depicted in acquisition graphs. The graphs show the ongoing rise in referential devices between two-and-a-half and three, as was shown in section 2. Typological differences are present in the speech of the child from the very beginning on. They are (creatively) spotted in the input.

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