

When typological *rara* generate *rarissima*: analogical extension of verbal agreement in Dutch dialects

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1. Introduction¹

In a recent paper, Siewierska (1999) points out the typological rarity of so-called ‘grammatical agreement’ of verbs, which is defined as the type of agreement in which an inflectional person marker is accompanied obligatorily by another person marker carrying a larger referential load, usually an anaphoric element.² Grammatical subject agreement is found in 2 languages in the sample (n=272). The rarity of the phenomenon is assumed to be due to a tendency to develop new agreement markers when the ‘old’ ones become non-referential. Although typologically rare, grammatical subject agreement commonly occurs in the Germanic languages, such as in Dutch. Significantly, in some Dutch dialects the subject agreement morphology extends to word classes other than verbs, viz. complementizers such as *da(t)* ‘that’, *a(s)* ‘if’,... and to the answer particles *ja* ‘yes’ and *neen* ‘no’.

In this paper, we will discuss grammatical subject agreement of non-verbal constituents, a typological *rarissimum*. The discussion focuses on Dutch, with occasional references to the other Continental West Germanic languages where similar phenomena are found (Frisian and German). In section 2, it will be argued that the extension of grammatical subject agreement is a (relatively) recent phenomenon. Section 3 provides a diachronic account of the pathway that has led to this extension. In section 4, cross-linguistic parallels will be discussed for each of the phenomena that have played a role in the rise of grammatical subject agreement of non-verbal constituents. The existence of cross-linguistic parallels for each of the processes involved in the emergence of non-verbal agreement indicates that the rarity of the phenomenon results from the rarity of some of the conditions that trigger its emergence.

2. From *rarum* to *rarissimum*: agreement in Dutch dialects:

In (1), instances are given of grammatical agreement in Dutch. These instances, as most data in this paper, are drawn from the Syntactic Atlas of Dutch Dialects (henceforth: SAND), a large-scale fieldwork project carried out at several institutions in the Netherlands and Belgium. The project aimed at tacking stock of syntactic variation in the Dutch language area, which consists of the Netherlands, the northern half of Belgium, and French Flanders, i.e. a small area in the north of France where some older people still speak a dialect of Dutch (see Cornips and Jongenburger 2001a, 2001b and the SAND-atlases itself for more information on the project). In (1a), a 3pl.-inflectional *-n* is obligatorily attached to the verb. As the 3pl.-pronoun *ze* ‘they’ is also obligatory, the *-n* in (1a) is a relevant example of grammatical agreement. This pattern is found in Standard Dutch, and also generally in the Dutch dialects (although some dialects use a different ending than *-n*, e.g. *-ne*, *-t* or *-nt*). (1b-c) shows data from the Flemish dialects, which are spoken in French Flanders and the Belgian provinces West and East Flanders. In some of these Flemish dialects, the same agreement-*n* attaches to the complementizer *da* ‘that’ (1b) or to the answer particle *ja* ‘yes’ (1c). In (1b), the complementizer *da* ‘that’ carries a 3pl. agreement-*n* which is also found on the verb *gaan*. In (1c), the answer particle *ja* is followed by a 3pl. *-n* and the clitic *s* ‘they’.

(1) Grammatical agreement of complementizers and answer particles in Dutch

- a. *Gaa-n=ze morgen naar Gent?*
go-3PL=they tomorrow to Ghent.
'Are they going to Ghent tomorrow?'
- b. *Ze zegg-en da-n=ze naar Brussel gaa-n.* (Flemish dialects)
They say-3PL that-3PL=they to Brussels go-3PL
'They say that they are going to Brussels.'
- c. *Jaa-n=s.* (Flemish dialects)
yes-3PL=they
'Yes, they do.'

Grammatical agreement is cross-linguistically rare. In Siewierska's (1999) sample of 272 languages only two examples are found (cf. also Dahl 1990, Dryer 2005 on non-pro-drop). The phenomenon is typically found in (Western) Europe (grammatical agreement is found consistently in Dutch, English, Faroese, Frisian, French, German, Icelandic, French, and some Rhaeto-Romance dialects). Siewierska (2004: 268) mentions some non-European instances as well: four Papuan languages (Au, Ekari, Koiari and Vanimo), and three Oceanic ones (Anejom, Fehan and Labu).

Among the Western European languages with grammatical agreement, a limited number of dialects of Continental West Germanic (Dutch, Frisian and German) show complementizer agreement. Agreement of the answer particle *ja* 'yes' seems to be found only in Dutch.³ Hence the phenomena under investigation are rarissima. Given that grammatical agreement as such is already a rarum, this is hardly surprising. It is furthermore interesting that even in contemporary varieties of Dutch, Frisian, and German, grammatical agreement of non-verbal constituents is by no means found in all of the dialects. For Dutch and Frisian, SAND (see esp. map 21) provides 155 dialects with some form of complementizer agreement, in a representative sample of 267 dialects. In addition, non-verbal grammatical agreement hardly occurs in the historical varieties of the West Germanic languages (Goeman 1997a; De Vogelaer 2005: 99-103; De Vogelaer, Devos, and van der Auwera 2006), and it is not found in historical varieties of the other Germanic languages either. This indicates that non-verbal grammatical agreement is a relatively recent extension rather than a relic from earlier stages of the (West) Germanic languages. Complementizer agreement and agreement of answer particles are therefore particularly interesting phenomena also from a diachronic point of view. Accordingly, our explanation for the existence of non-verbal agreement will focus on the diachrony of the phenomenon, more precisely on the conditions in which non-verbal agreement emerges.

3. Extension of a rarum: a diachronic account

3.1. The rise of complementizer agreement

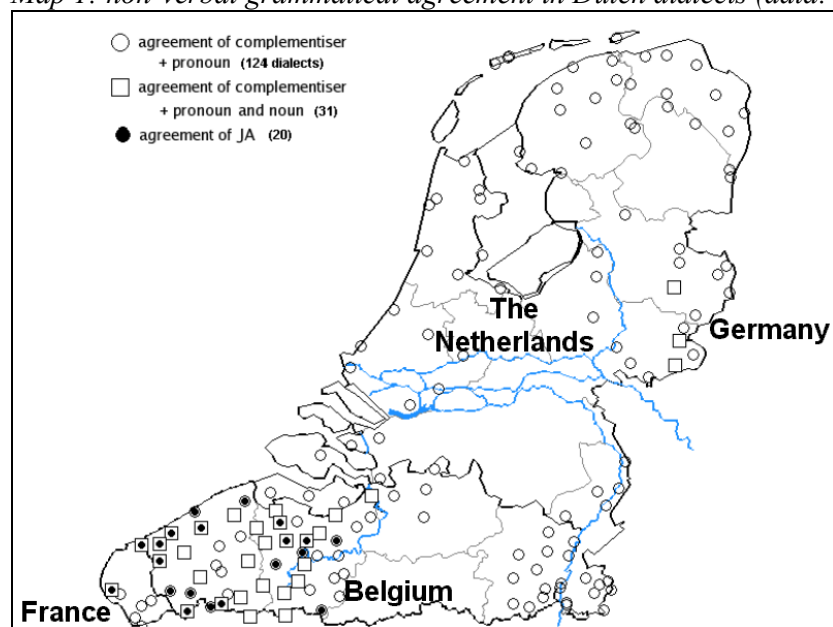
SAND provides 155 dialects with some form of complementizer agreement (n=267). (2) repeats the example from (1), and adds an example with a lexical subject. In both cases, the complementizer *da* 'that' is followed by a third person plural subject that causes an agreement-*n* to appear following *da* 'that'.

(2) Complementizer agreement in Flemish dialects

- a. *Ze zegg-en da-n=ze naar Brussel gaa-n.* (Flemish dialects)
They say-3PL that-3PL=they to Brussels go-3PL
'They say that they are going to Brussels.'
- b. *Ze zegg-en da-n die mannen ook gaa-n.* (Flemish dialects)
They say-3PL that-3PL those men also go-3PL
'They say that those men are going as well.'

In the dialects in which complementizer agreement is found, it is often optional: in most dialects, the inflectional *-n* following *da* 'that' can be dropped. In addition, there tend to be restrictions on the subjects that cause the agreement markers to occur. For instance, complementizers are often inflected only when they are followed by clitics, as in (2a); patterns like (2b) occur in fewer dialects than (2a), and, when they occur, the agreement marker is left out more frequently (see, e.g., Hoekstra and Smits 1997: 20-21). In the majority of the complementizer agreement dialects, the phenomenon is only found for a number of grammatical persons (e.g., only for third person plural or second person singular; see SAND, map 21). The first restriction can be illustrated with a map. Map 1 shows the data extracted from SAND-map 21, and adds whether the relevant dialects only show agreement of complementizers followed by pronouns (cf. 2a), or also of complementizers followed by nouns (as in 2b). Also depicted is whether these dialects have *ja*-agreement (1c). Agreement in a pronominal environment is found in many distinct regions in the Dutch-speaking area. A very restricted subset of these dialects, i.e. 31 SAND-dialects, also have complementizer agreement in clauses with nominal subjects. Agreement of the answer particle *ja* 'yes' is even more rare: only 20 SAND-dialects have it, all of which are dialects from the south west of the Dutch language area (where Flemish dialects are spoken).

Map 1: non-verbal grammatical agreement in Dutch dialects (data: SAND)



Complementizer agreement has received a good deal of attention in the literature. In general, two types of explanations have been proposed for its existence (see De Vogelaer, Devos, and van der Auwera 2006: 215-217 for discussion). First, it has been suggested that agreement in

Dutch is bound to a structural position in the clause rather than to inflected verbs (see most generative accounts, e.g. Hoekstra and Maráčz 1989, Haegeman 1992, Carstens 2003, Van Koppen 2005). In contrast, the inflectional *-n* following *da* has also been explained as an analogical extension from the enclitic position to the verb to other, syntactically similar environments (e.g., Kathol 2001; Zwart 2006; see also Goeman 1997b for accounts that are similar yet do not use the term analogy). The structural accounts and the analogical ones differ as to their implications for the systematicity of complementizer agreement: a structural account seems to imply that complementizers systematically behave like inflected verbs, whereas an analogical account simply states that complementizers can (but must not) take over some (but not all) of the characteristics of inflected verbs, leaving much more room for differences in the way complementizers and inflected verbs behave. Hence, the fact that complementizer agreement shows up quite sporadically in Dutch seems to provide a strong argument in favour of the analogical accounts (De Vogelaer, Devos, and van der Auwera 2006; Zwart 2006: 67-70).⁴

Analogical accounts differ from the structural ones in that analogical extension is not obligatory, unlike mechanisms such as the ‘spell-out of agreement features’. Neither is there a principled reason why the analogy would be restricted to complementizers (cf. the rise of *ja*-agreement, see section 3.2). But like the structural accounts, analogical accounts rest on the classical observation that both complementizers and finite verbs occupy what is called the ‘left brace’ of the brace construction. Significantly, the brace construction refers to a pattern characterising the word order of the Continental West Germanic languages, i.e. the languages in which complementizer agreement occurs. As shown in (3a,b), for the main clause the left brace is the finite verb and the right brace is non-finite verbal material. In main clauses, the subject is either placed in front of the left brace (SV order, see 3a), or it appears to the right of the left brace (XVS order, as in 3b). In clauses such as (3b), the position of the subject vis-à-vis the finite verb is identical to its position vis-à-vis the complementizer in subordinate clauses (3c), in which the left brace is the complementizer and the right brace is verbal material (both finite and non-finite).

(3) The Dutch brace construction

		left brace					right brace
a.	Hij	zal		het	boek	morgen	lezen.
	He	will		the	book	tomorrow	read
b.	Morgen	zal	hij	het	boek		lezen
	Tomorrow	will	he	the	book		read
c.	Ik geloof	dat	hij	het	boek	morgen	zal lezen.
	I believe	that	he	the	book	tomorrow	will read

‘(I believe that) he will read the book tomorrow.’

The pattern in (3b) occurs very frequently in all varieties of Dutch: both De Schutter (1976: 172) for Standard Dutch and De Meersman (1985: 128) for East Flemish dialects found that around 40% of their corpus examples of declarative main clauses show XVS-word order, i.e. neither the subject nor the inflect verb occupies the first position (see Nübling 1992 for similar data for German).⁵ Furthermore, polar questions (with VS-order) and non-polar non-subject questions (with XVS-order) have postverbal subjects. This constellation, we claim, makes it possible for patterns normally appearing in clauses like (3b) to extend to clauses like (3c). More precisely, forms which are, historically speaking, exclusively found enclitic to the inflected verb in (3b) may also be adopted in the position enclitic to the complementizer. Thus several present-day pronouns are formed in the enclitic position to the verb, and subsequently extended to other positions. (4) shows data for the 1pl. pronoun *me*, a pronoun found in

southwestern dialects. It originates in the position enclitic to the verb, through fusion of the older pronoun *we* and the inflectional *-n*. Next, *me* is introduced in other syntactic environments, as shown in (4b,c). Here too, the syntactic similarities between complementizers and inflected verbs make the complementizers the most plausible target for analogical extensions from the enclitic position to the verb. Thus, in (4b), the pronoun *me* which had emerged in clauses like (4a) is also used following complementizers in stead of the etymological form *we*. (4c) shows that analogical extensions are also found elsewhere, such as in sentence-initial position. Only a subset of the dialects in which (4b) is found also show (4c), suggesting that the use of *me* in sentence-initial position is a younger development than the use of *me* following complementizers.

(4) Analogical extensions in Dutch: first person plural pronouns in Flemish dialects

- | | | | |
|----|--|---------------|---|
| a. | <i>Naar Brussel</i> ga=me!
to Brussels go=we
To Brussels we go! | with | <i>ga=me</i> < <i>gaa-n=we</i>
<i>go=we</i> <i>go-1PL=we</i> |
| b. | <i>Ik zeg</i> da=me <i>naar Brussel</i> <i>gaa-n!</i>
I say that=we to Brussels go-1PL
To Brussels we go! | historically: | <i>da=we</i>
<i>that=we</i> |
| c. | Me=gaa-n <i>liever naar Brussel.</i>
<i>we=go-1PL</i> rather to Brussels
'We rather go to Brussels.' | historically: | <i>we=gaa-n</i>
<i>we=go-1PL</i> |

(4) also suggests an explanation for the observation that complementizer agreement occurs far more often in clauses with clitic subjects than in clauses with strong pronouns or lexical elements as subjects. The fact that the 1pl. inflectional ending is easily deleted when it is followed by a clitic, or fuses with the clitic, makes the 1pl. form of the complementizer very similar to the 1pl. form of the verbs most closely resembling the complementizer, in this case the present tense of monosyllabic verbs such as *gaan* 'to go' or *doen* 'to do'. The situation in the first person plural is to a large extent representative for the entire verbal paradigm: in many dialects, verbal endings are deleted when the verb is followed by a clitic in several grammatical persons. This is illustrated with data from the dialect of Geraardsbergen, in the first two columns of (5). The first column (*clitic* + *gaan* 'to go') shows the verb *gaan* 'to go' as it appears in clauses with SV word order (and sentence-finally in subordinate clauses): 7 of the 8 verb forms in that column carry an overt inflectional ending. The second column (*gaan* 'to go' + *clitic*) shows that this ending is often dropped when the verb is followed by a subject clitic. There, only 2 of the 8 verb forms carry an overt inflectional ending. Significantly, this deletion of overt inflectional endings renders the *gaan* 'to go' + *clitic* paradigm very similar to the combination 'complementizer + clitic', which is shown in the third column in (5). Thus, apart from structural similarities between verbs and complementizers of the type illustrated in (3), many dialects show a very clear morphological similarity between the combinations 'verb + clitic' and 'complementizer + clitic', which may very well have facilitated analogical extensions from the 'verb + clitic' paradigm to the complementizer paradigm. More precisely, the insertion of the 3sg. *-t* and the 3pl. *-n* on the complementizer fully levels the differences between the two paradigms. Due to this complete identity with the 'verb + clitic' paradigm, the complementizer paradigm from the Flemish dialect of Geraardsbergen in (5) is considered a complete paradigm, even though it only shows overt agreement in two forms (3masc.sg. and 3pl.).

(5) A complementizer agreement paradigm in the dialect of Geraardsbergen (sources: SAND and Goeman 1980: 295)

	<u>clitic + gaan</u> 'to go'	<u>gaan</u> 'to go' + <u>clitic</u>	<u>da</u> 'that' + <u>clitic</u>
<i>1sg.</i>	k=ga 'I go' I=go	ga=ek 'go I' go=I	da=ek 'that I' that=I
<i>2sg.</i>	ge=gaa-t you=go-2	ga=je go=you	da=je that=you
<i>3sg.masc.</i>	hij=gaa-t he=go-3SG	ga-t=en go-3SG=he	da-t=en that-3SG=he
<i>3sg.fem.</i>	ze=gaa-t she=go-3SG	gaa=se go=she	da=se that=she
<i>3sg.neut.</i>	t=gaa-t it=go-3SG	gaa=t go=it	da=t that=it
<i>1pl.</i>	me=gaa-n we=go-1PL	ga=me go=we	da=me that=we
<i>2pl.</i>	ge=gaa-t you=go-2	ga=je go=you	da=je that=you
<i>3pl.</i>	ze=gaa-n they=go-3PL	gaa-n=ze go-3PL=they	da-n=ze that-3PL=they

In general, these paradigmatic zero's are caused by cliticization (cf. (4), where 1pl. *me* is the product of a merger of 1pl. *-n* and the clitic *we*). Since the occurrence of many paradigmatic zero's in the complementizer paradigm is quite typical for the dialects displaying the phenomenon, it appears to be the case that cliticization is an important factor in the emergence of complementizer agreement.

An additional and in fact stronger indication for the fact that cliticization is an important factor in the emergence of complementizer agreement is that the phenomenon typically occurs in clauses with clitic subjects. Indeed the dialects in which complementizer agreement is found in clauses with non-clitic subjects constitute a subset of the dialects with complementizer agreement in clauses with clitic subjects (cf. map 1). This observation indicates that complementizer agreement in clauses with clitic subjects constitutes a necessary condition for complementizer agreement with non-clitic subjects to emerge. In a way, the emergence of complementizer agreement in clauses with clitic subjects creates a double analogical pressure to the combination 'complementizer + noun', viz. pressure from the 'verb + noun'-pattern (e.g., *gaan-n dieven* 'go thieves') on the one hand, and from the 'complementizer + clitic'-pattern (e.g., *da-n ze* 'that they') on the other. Diachronically, then, complementizer agreement with clitic subjects seems to be the older phenomenon. (6) shows the entire pathway:

(6) The emergence of complementizer agreement: a pathway

<u>starting point:</u> cliticization			<u>step 1:</u> transfer of inflection to clitic contexts			<u>step 2:</u> transfer to non-clitic contexts	
da zij ... that they	>	da=ze ... that=they	>	da-n=ze ... that-3PL=they	>	da-n=ze ... that-3PL=they	
da dieven that thieves		da dieven that thieves		da dieven that thieves		da-n dieven that-3PL thieves	

The pathway in (6) reflects the diffusion of the different developments in the contemporary dialects: as one moves from the right to the left in (6), fewer dialects are found in which the

relevant development is witnessed: the starting point, cliticization to complementizers, is witnessed in all Dutch dialects. The first analogical extension (step 1) is quite widespread; the second one (step 2) is rare, and is observed only in dialects in which the first extension has taken place. This can be illustrated with additional SAND-data: SAND mentions 28 dialects with a 3pl. *-n* before non-clitic subjects, on a total of 66 dialects with *-n*-inflection preceding 3pl. *ze*. In addition, all 28 dialects inflect complementizers when they are followed by clitics as well.

The data in (2), (4), (5) and (6) all come from the Flemish dialects, but the differences between complementizer agreement in clauses with clitic subjects and clauses with non-clitic subjects are also observed in other dialects with complementizer agreement. For instance, for the area to the north of the river Maas (in the Netherlands), SAND provides 22 dialects with complementizer agreement in the third person plural, of which only 3 show complementizer agreement in clauses with lexical subjects. Hence the pathway in (6) seems to be valid for other dialects, too.

3.2. The rise of agreement of answer particles

Focussing on agreement of the answer particle *ja* ‘yes’, Map 1 in section 3 provides instances of overt agreement markers from 20 dialects, all dialects from French Flanders and the Belgian provinces of West and East Flanders.

(7) *ja*-agreement in Flemish dialects

Jaa-n=s
 yes-3PL=they
 ‘Yes, they do.’

In the literature, more instances of *ja*-agreement can be found from the Hollandic dialects, which are spoken in the Dutch provinces North and South Holland, at the west coast of the Netherlands (Van Ginneken 1954: 11; see also (10)). Apart from agreement of *ja* ‘yes’, agreement of *neen* ‘no’ is found. Outside the Hollandic dialects, clear instances of *neen*-agreement are extremely rare, since the fact that *neen* ends in an /n/ in most dialects inhibits the insertion of an agreement-*n*. Like complementizer agreement, *ja*-agreement seems to originate in clauses with clitic subjects: in all dialects of Dutch, both in the contemporary and the historical sources, not a single instance of *ja*- or *neen*-agreement is found without a clitic being present as well (e.g., 3pl. *jaa-n=s* exists, but *jaa-n* ‘yes-3pl’ does not). Hence the use of the clitics seems to be a necessary condition for the appearance of agreement markers, giving rise to the hypothesis that the former phenomenon predates the latter. As for the use of clitics following *ja* ‘yes’ itself, this is believed to originate from elliptical sentences in which the combination of *ja* and the clitic was followed by a verb, typically *doen* ‘to do’ or another auxiliary (see Devos 1986 for arguments). The hypothesized source construction, a pattern resembling short answers in English, is still found in some present-day Dutch dialects (see Van Craenenbroeck 2004: 225). The complete pathway for the rise of agreement markers following *ja* ‘yes’ would thus be like (8). In (8), two steps are distinguished: first, short answers develop a tendency to lose their verb, with the combination of *ja* ‘yes’ and the clitic as a result. Second, an agreement marker (in this case a 3pl. *-n*) is inserted in between *ja* ‘yes’ and the clitic.

(8) The emergence of agreement of *ja* ‘yes’: a pathway

ja ze (doen)	>	jaa=s(e)	>	jaa-n=s
yes they do		yes=they		yes-3PL=they

The relevant mechanism is, again, analogy. Like complementizers, answer particles which are followed by clitics are thus possible targets for analogical extensions from the enclitic position to the verb. However, answer particles are typically used in an isolated way, i.e. the clitic is not followed by any other constituents. Hence, the syntactic behaviour of answer particles differs substantially from the behaviour of verbs, and they are thus weaker targets for analogy than complementizers. This explains why *ja*-agreement is rarer than complementizer agreement. The fact that *ja*-agreement is restricted to dialects in which complementizer agreement occurs even suggests that the complementizer environment acts as a second source construction. Answer clitics' status as relatively weak targets for analogy explains why there are no dialects with a complete paradigm for *ja*-agreement. (9) shows the paradigms of *gaan* 'to go' + *clitic* and of *ja* 'yes' for the West Flemish dialect of Ieper. The *ja*-paradigm provides one clear instance of grammatical agreement: in the third person plural an inflectional *-n* is found. The paradigm also shows one form in which *ja*-agreement is clearly lacking, viz. *jaa=n* (lit. 'yes-he'): given that verbs receive a *-t* when they are followed by a 3sg. masculine pronoun, one would expect *ja* 'yes' to show the same ending (i.e. a form like *jaa-t=n* 'yes he [does]', on the analogy of *gaa-t=n* 'goes he').

(9) Agreement of *ja* 'yes' in the West Flemish dialect of Ieper (*source: SAND*)

	<u><i>gaan</i> 'to go' + <i>clitic</i></u>	<u><i>ja</i> 'yes'</u>
<i>1sg.</i>	<i>gaa=k</i> 'go I' go=I	<i>jaa=k</i> 'yes I do' yes=I
<i>2sg.</i>	<i>ga=je</i> go=you	<i>jaa=j</i> yes=you
<i>3sg. masc.</i>	<i>gaa-t=n</i> go-3SG=he	<i>jaa=n</i> yes=he
<i>3sg. fem.</i>	<i>gaa=se</i> go-3SG=he	<i>jaa=s</i> yes=she
<i>3sg. neut.</i>	<i>gaa=t</i> go=it	<i>jaa=t</i> yes=it
<i>1pl.</i>	<i>ga=me</i> go=we	<i>jaa=m</i> yes=we
<i>2pl.</i>	<i>ga=je</i> go=you	<i>jaa=j</i> yes=you
<i>3pl.</i>	<i>gaa-n=ze</i> go-3PL=they	<i>jaa-n=s</i> yes-3PL=they

Like in the previous section (cf. (5)), it should also be noted that both the paradigm of the monosyllabic verb *gaan* 'to go' + *clitic* and the paradigm of *ja* 'yes' show very few overt inflectional endings. In that sense, even without the extension of grammatical agreement, both paradigms are already very similar.

The data that were shown in (7)-(9) are exclusively Flemish, as the Flemish dialects are the only ones in which *ja*-agreement is found in present-day dialects. But the generalizations hold for other regions as well. (10) shows a Hollandic example of *ja*-agreement from the literature. In these dialects, most first and third person plural verbs receive an inflectional *-e*, which is found following complementizers as well. Older sources indicate that the very same *-e* also attached to *ja* 'yes', but a /d/ appeared in between *ja* and the combination of the inflectional *-e* and the clitic *we* or *ze*.

(10) Grammatical agreement of answer particles: Hollandic dialects (Van Ginneken 1954: 11)

Q: *Mog-e= we/ze morgen naar Gent?*
 may-1,3PL= we/they tomorrow to Ghent.
 ‘Can we / they go to Ghent tomorrow?’

A: 1pl.: *Ja-d-e=we*
 yes- /d/ -1PL=we
 ‘Yes, we do.’
 3pl.: *Jaa-d-e=ze*
 yes- /d/ -3PL=they
 ‘Yes, they do.’

Although the /e/ following *ja* ‘yes’ is, in diachronic terms, clearly an extension of an agreement marker, it is not clear how it should be analysed synchronically. It may be a fully functional inflectional element in its own right, like the *-n* in the Flemish 3pl.-form *jaa-n=s* ‘yes they do’. But the use of a /d/ in Hollandic *jadewe* ‘yes we do’ and *jadeze* ‘yes they do’ suggests that the /e/ may also be part of an enclitic pronoun *-ewe* or *-eze*. /d/ is commonly used as a linking sound in the relevant dialects, but the linking /d/ remains absent in front of inflectional *-e*’s which are attached to verbs and complementizers.

3.3. Summary: the diachrony of non-verbal grammatical agreement

(11) summarizes the diachrony of the two rarissima under investigation, *ja*-agreement and complementizer agreement. Both can be conceived of as analogical extensions of a rarer, grammatical verb agreement. The starting point of the development is the cliticization of pronouns to a non-verbal constituent, resulting in a pattern which resembles the combination of the present tense of a verb followed by a clitic. Dialects differ as to the type of verbs that are taken as a model for the analogy: in the examples above, monosyllabic verbs such as *gaan* ‘to go’ are the relevant class, but there are dialects in which polysyllabic verbs act as the model. The actual development of complementizer agreement consists of two steps: first, the inflectional endings are extended from the enclitic position to the verb to other clitic contexts, through analogy. The data indicate that the transfer towards the position following the complementizer is much more likely than the transfer to the position following *ja* ‘yes’: the former extension gives rise to 3pl. inflectional *-n*’s in 66 SAND-dialects; the latter in only 20, all of which show a 3pl. *-n* on complementizers as well. This relates to the greater resemblance of the syntactic positions in which complementizers and verbs are placed (both appear in a clause, in the so-called ‘left brace’, whereas *ja* ‘yes’ is not followed by a clause). The second step is a further analogical extension of the use of the inflectional endings, which are introduced in non-clitic contexts. Whereas endings after step 1 are only used when they are followed by clitics, a smaller number of dialects have extended them to clauses with lexical subjects and strong pronominal subjects (‘step 2’).

(11) The emergence of grammatical agreement of non-verbs: summary

<u>STARTING POINT:</u>		<u>STEP 1: analogy 1</u>		<u>STEP 2: analogy 2</u>		
-cliticization		transfer of inflection		transfer to non-		
-°elliptical <i>ja</i> -tags		to clitic contexts		clitic contexts		
<i>gaa-n ze</i>	>	<i>gaa-n=ze</i>	>	<i>gaa-n=ze</i>	>	<i>gaa-n=ze</i>
<i>da ze</i>	>	<i>da=ze</i>	>	<i>da- n=ze</i>	>	<i>da-n=ze</i>
<i>dat dieven</i>	>	<i>dat dieven</i>	>	<i>dat dieven</i>	>	<i>da-n dieven</i>
<i>ja ze [doen]</i>	>	<i>ja=ze</i>	>	<i>jaa-n=z(e)</i>	>	<i>[jaa-n=z(e)]</i>

The diachronic scenario in (11) is, of course, a language-specific one, and hence it provides no answer to the question why the relevant phenomena are rarissima. At least two answers are conceivable to that question: it may be that the relevant diachronic processes are rare. But it may also be the case that the processes are themselves not rare, but that the conditions allowing them are only seldom met. In the next section some cross-linguistic parallels for the processes will be discussed, and we will end up arguing for the second of the two possible answers.

4. Cross-linguistic parallels

4.1. Cliticization in non-verbal environments

The starting point in the diachronic pathway for the rise of both complementizer agreement and *ja*-agreement is cliticization. The syntactic environment in which the cliticization process takes place, differs in the two cases. The clitics following complementizers can be considered second-position clitics, a type which is typologically well-attested (cf. Klavans 1985, Halpern and Zwicky 1996). The clitics following *ja* ‘yes’ and *neen* ‘no’ derive from a pattern in which *ja* ‘yes’ and *no* ‘neen’ were followed by a pronoun and a verb. Hence, from a diachronic point of view, the cliticization may have been caused by the verb that followed, although the clitics have attached phonologically to the preceding constituent, in this case the answer particles *ja* ‘yes’ and *neen* ‘no’. Cross-linguistically, such processes are indeed attested (Klavans 1985: 104-105; cf. Bybee 2002, Cysouw 2005).⁶ A very close parallel to the Dutch development is observed in the development of the French answer particle *oui* ‘yes’ (which did, however, not develop agreement). French *oui* ‘yes’ derives from the Latin phrase *hoc ille* (lit. ‘yes that’), which, in turn, is an elliptical version of *hoc ille fecit* (lit. ‘yes that does’), via the intermediate form *oil* (= *o* + 3sg. *il*; von Wartburg 1922). In older varieties of French, other combinations of *o* and pronouns were found than *o-il*, such as *o-je* ‘yes I’ and *o-tu* ‘yes you’ (Robert 1985). Hence, French *oui* ‘yes’ developed along a similar pathway as did the combination of *ja* ‘yes’ and clitics found in Dutch dialects. The main difference is that French only retained *oil* (> *oui*), i.e. the form with 3sg. *il*, whereas Dutch *ja* ‘yes’ still combines with non-3sg. clitics as well, giving rise to complete paradigms of the type exemplified in (9). It is tempting to suppose that the explanation of this similarity has an areal component: the use of *hoc ille* ‘yes that’ was situated in the so-called *langue d’oil*-area, i.e. more or less the northern half of France, an area neighbouring the part of the Dutch language area where clitics following *ja* ‘yes’ and *neen* ‘no’ are found. Interestingly, the area in which the phenomenon occurred may have been much larger: clitics following answer particles were also found in Middle High German (Simon 2006: 15-16).

Apart from elliptical phrases, other source constructions are conceivable for answer particles to which clitics may attach. One does not have to look far to find cases in which the answer particle derives from a merger of several distinct elements, i.e. a ‘univerbation’. A relevant example is English *yes*, which derives from Old English *gea* ‘so’ + *si* (= ‘be it’; *si* is the 3rd person imperative of *beon* ‘to be’; cf. Bosworth and Toller 1898: 438). Similarly, German *nein* ‘no’ derives from *ne* ‘not’ + *ein* ‘one’ (Kobler 1995). Neither of these patterns contains a clitic, however. In Slovene, object clitics are found in answers, which may be used in their bare form or attach to other clitics, negative particles,... (Dvořák 2003).⁷ An instance of subject clitics following answer particles is found in Arowak, an Arawakan language mainly spoken in Surinam: in Arowak, pronouns are used in almost every *no*-answer. The answers in (12) consist of the morpheme *m(a)* and a pronoun.⁸

(12) Arowak (Van Baarle, Sabajo, and van der Stap 1989): unmarked no-answers to yes/no-questions

manda = not-I
manba = not-you
manla = not-he
mantha = not-she
mangwa = not-we
manha = not-you (plural)
mangna = not-they

Both the elliptical combinations of an answer particle and a clitic, and univerbations in which clitics are attached to non-verbal hosts constitute possible source constructions for the development of non-verbal agreement, provided that the conditions are met in which verbal endings are analogically extended to other clitic contexts than the pre- or postverbal position.

4.2. Analogical extension of agreement markers

4.2.1. Extension of agreement markers

In 4.1 it was stated that pronouns can cliticize to non-verbal constituents. In principle, this is a likely source for non-verbal grammatical agreement: as items that are used together, tend to fuse, there is no reason why these clitics cannot turn into agreement markers in the long run (cf. the Linear Fusion Hypothesis by Bybee 2002; see Krug 1998 for a relevant case study). However, this is not the source of non-verbal grammatical agreement in Dutch and Frisian dialects. Rather, the grammatical agreement markers on complementizers and answer particles are extensions from the position enclitic to the verb. This type of extension, too, seems to be found in other languages. First, analogical extension is necessarily involved in almost every grammaticalization from pronoun to agreement marker, as in grammaticalization in general (Hopper and Traugott 2003: 63-69). Secondly, even fully grammaticalized agreement markers can extend their use to other syntactic environments.

As for analogical extension during grammaticalization, Auger (2003) provides an example from the Picardian dialect spoken in the French Vimeu region. Some French dialects show cliticization of subject pronouns and subject doubling. In some of these varieties, all clauses contain a preverbal subject clitic, to which a semantically richer subject can be added, as shown in (13a). (13b) shows that the use of the preverbal clitic is extended from main clauses to clauses in which subject personal pronouns do not occur, such as subject relative clauses. This exemplifies that the clitic in (13b) can no longer be considered a mere weak variant of a strong pronoun (i.e. it has become a 'special clitic' in Zwicky's 1977 terms, or even an agreement marker).

(13) Extension of preverbal clitics to relative clauses in Picardian dialects (Auger 2003: 6, 12)

- a. *Et pis Adof i riouot.*
and then Adolphe he_{clitic} laugh.IMP.3SG
'And then Adolphe laughed.'
- b. *éch diabe qu' il allouot inl'veu deux piots éfants.*
the devil who he_{clitic} aller.IMP.3SG seize two little children
'The devil who was going to seize two little children.'

Extensions such as shown in (13) form a crucial part of the grammaticalization process observed in French clitics, since they are indicative of, in Lehmann's (1995: 164) terms, an ongoing 'obligatorification'. The grammaticalization process fuses the clitic with the verb;

analogy levels the differences between the syntactic environments in which the grammaticalization process is observed, such as the Picardian main clauses with pronominal subjects (13a), and the environments in which personal pronouns originally did not occur, such as Picardian relative clauses (13b).

An example of analogical extension of fully grammaticalized agreement markers comes from Russian (Dobrushina and Goussev 2005). Russian has a 1pl. imperative, as in (14a), which translates as ‘let’s go’. In contrast to (14a), (14b) is marked twice for plurality: (14b) not only specifies that the subject is a first person plural, but also that the imperative is directed towards more than one addressee (or towards one addressee, expressing an honorific meaning). Thus, it also specifies the number (or honorific status) of the addressee(s). This feature is very unusual in Russian: the *pojđ-ëm-te* construction type is actually the only one in Russian that has double plural marking. In addition, the construction is lexically very restricted. In present-day Russian it is only used with the verb *idti* ‘go’, either the bare form or some of its prefixed forms (Podlesskaya 2006: 279). The *-te*-suffix is originally the 2pl. imperative suffix, which has extended its use from 2pl.-imperatives to give rise to a new type of imperative. Similar extensions are observed in other languages, e.g. in Turkic languages and probably in Bantu as well (see van der Auwera, Schalley, and De Vogelaer to appear).

(14) Extension of agreement markers to imperatives in Russian (Dobrushina and Goussev 2005: 193-194)

- a. *Pojđ-ëm!*
go.IND.PERF.FUT-1PL
‘Let’s go, me and you (singular)!’
- b. *Pojđ-ëm-te!*
go.IND.PERF.FUT-1PL-2PL
‘Let’s go, me and you (plural/honorific)!’

Weiss (1998) provides Bavarian examples of analogical extension of agreement markers. In Bavarian, the particle *gell* ‘right’ can be inflected, as shown in (15). In (15a), the agreement marker *-ns* adds a honorific meaning to the particle; in (15b), *-ts* indicates that the use of *gell* ‘right’ is directed towards more than one addressee.

(15) Agreement of the particle *gell* ‘right’ in Bavarian dialects (Weiss 1998; our glosses)

- a. *gell-ns*
right-2/HON
‘Right, you (honorific).’
- b. *gell-ts*
right-2PL
‘Right, you (plural).’

Agreement of *gell* ‘right’ is also discussed by Simon (2003: 188-189). According to Simon, the agreement markers following *gell* ‘right’ are identical to the ones that are used in the Bavarian imperative paradigm, i.e. paradigmatic zero expresses the second person singular, *-ns* expresses honorificity, and *-ts* expresses the second person plural. In addition, particles such as *gell* ‘right’ share with the imperative the characteristic that they are typically directed towards one or more addressees, which may or may not deserve respect. Hence, the agreement markers are likely to be taken over from the imperative. Historically, the agreement markers *-ns* and *-ts* consist of an ‘old’ agreement marker (3pl. *-n* and 2pl. *-t*) and a

clitic (the *-s* derives from 3pl. *Sie* and the Bavarian 2pl.-pronoun *eß*; cf. Simon 2003: 187-188), which have fused and grammaticalized to become new agreement markers. Also, the particle *gell* ‘right’ probably derives from the verb *gelten* ‘to be worth’ (Schmeller 1872-1877). In principle, the presence of inflection following *gell* ‘right’ may be a relic from its older use as a verb rather than an extension. However, the literature on Bavarian provides other particles which do not have a verbal origin and which can also be followed by an agreement marker (e.g. *há* ‘hey’, *mei* ‘my (god)’; see Simon 2003: 188-189).

4.2.2. Motives for analogy

Although the Picardian dialects, Russian, and the Bavarian dialects indeed show examples of analogical extensions of agreement, the motivation for the analogy differs quite radically in each of the cases. The analogical extension of the Russian 2pl.-marker *-te* is semantically motivated: in the Russian verb system, *-te* marks plurality (or honorificity) in the addressees. This is a distinction that is historically absent in inclusive first person plural imperatives like *pojď-ëm* ‘let’s go’. Adding *-te* to *pojď-ëm* creates the possibility to distinguish between one or two addressees, or between an addressee with/without an honorific status, as in the second person imperatives, which appears to be useful in imperative systems in the languages of the world (see van der Auwera, Schalley, and De Vogelaer to appear for examples). Hence, the extension of *-te* must basically be seen as the extension of a semantic distinction to the inclusive imperative, and the analogical principle at work can be described as ‘similar meaning seeks similar form’. In Bavarian, the same principle seems to be operating: like in the Russian example, the extension of agreement from imperatives to particles creates the possibility to distinguish between one or two addressees, or between addressees with or without an honorific status.

In the Picardian and the Dutch examples, no semantic distinctions are added to the language. Rather, the analogical extensions reduce formal differences between the guises in which a certain linguistic element appears in different syntactic environments, by generalising one form at the expense of other ones: in Picardian dialects, the insertion of *i/il* in relative clauses mirrors the combination of the inflected verb and the clitic in main clauses; in Dutch, the insertion of agreement markers in between answer particles/complementizers and enclitics mirrors the use of agreement markers in between verbs and enclitics. Hence, in Picardian and in Dutch, the analogy seems formally driven: a similar form seeks an even more similar form. In both cases, the guise of a linguistic element is modelled after a very frequent pattern that is used in a similar syntactic environment. The Dutch examples furthermore suggest that the more a target construction resembles the donor construction, the easier the analogy will take effect: the combinations of agreement markers and clitics first spread towards the enclitic position following the complementizer, which occupies the first brace in the Dutch clause, as does the inflected verb. Only in a few dialects with complementizer agreement does the agreement marker also show up following *ja* ‘yes’ and *neen* ‘no’. Apart from these similarities, the Picardian and the Dutch examples differ crucially. In Picardian, the analogical extension of the ‘clitic + verb’-pattern to relative clauses is part of a grammaticalization process that turns pronouns such as 3sg.masculine *il* into clitics and agreement markers. In Dutch, cliticization is observed as well (and, hence, grammaticalization), but the analogy spreads elements which have already grammaticalized a long time ago, viz. the ‘old’ agreement endings, rather than the innovative person markers, the clitics.¹

1. With respect to the innovative person markers, some dialects of Dutch resemble Picardian in that they also allow subject doubling. In Flemish dialects, for instance, phrases are found such as *ze zijn zij thuis* (lit. ‘they are they at home’) or *zijn ze zij thuis* (lit. ‘are they they at home’), in which both the 3pl. clitic *ze* and the strong pronoun *zij* are used. Outside the Flemish dialects, subject doubling is rare or even non-existent. See De Vogelaer & Neuckermans (2002), De Vogelaer (2005) and De Vogelaer (2008) for further discussion.

Cross-linguistic parallels for the formally-driven analogical extension of grammatical agreement endings seem to be rare. But within the Continental West Germanic dialect continuum, even the rarest types of complementizer agreement emerge independently at different places. For the Dutch language area, Map 1 above shows that there are two quite distinct regions with complementizer agreement in clauses with lexical subjects, viz. Flanders in the southwest of the language area, and the east of the Dutch provinces of Gelderland and Overijssel in the easternmost part of the area. This geographical pattern probably indicates that the phenomenon has originated independently in both regions. In addition, complementizer agreement in clauses with lexical subjects is also found in the Bavarian dialects (16).

(16) Complementizer agreement in Bavarian (Schiepek 1899, quoted in Weiss 2005):

... *dá-n* *d' Láit* *hái-en*.
... that-3PL the people hear-3PL
'... that the people hear.'

The observation that non-verbal grammatical agreement originates independently in several Continental West Germanic dialects suggests that the phenomenon can hardly be considered an isolated historical accident. Rather, it looks as if the rarity of non-verbal agreement results from the rarity of some of the conditions that trigger its emergence. First, and quite trivially perhaps, a language must have grammatical agreement markers before it can extend them. This precondition is already quite rare. Second, the language must show cliticization of subject pronouns. Third, there must be similarities between the donor construction and the target construction. Among the Germanic languages with grammatical agreement, Continental West Germanic shows a stronger tendency towards cliticization than other languages, and, only in Continental West Germanic do verbs and complementizers show a comparable syntax, in that both occupy a similar position in the clause (the 'left brace'), and both can be followed by clitics. In addition, there is morphological similarity, as complementizers closely resemble monosyllabic verbs.

5. Conclusion

Continental West Germanic dialects have grammatical agreement, which is a rarum in itself. In some varieties, this rarum extends to other classes than verbs, viz. complementizers and the answer particles *ja* ('yes') and *neen* ('no'). Grammatical agreement of such non-verbal constituents, both of complementizers and answer particles, is a rarissimum, which is, in addition, relatively rare in Continental West Germanic as well. We have proposed a pathway for the emergence of non-verbal grammatical agreement, which correlates the phenomenon with cliticization. The rise of post-verbal clitics in Continental West Germanic facilitates a number of analogical extensions: first, the use of agreement markers is extended to other clitic contexts, viz. the enclitic positions following complementizers and answer particles. Second, the use of agreement markers following complementizers is extended even further, to clauses with strong pronominal and lexical subjects.

In section 4, the question was raised why the relevant phenomena are rarissima: it may be that the relevant diachronic processes are rare, but the rarity of non-verbal agreement may also result from the rarity of some of the conditions that trigger its emergence. We have argued for the second of the two possible answers. Indeed cross-linguistic parallels can be found for each of the processes that have played a role in the rise of grammatical agreement of non-verbal constituents, including analogical extension of agreement markers. It appears that there are different circumstances that may motivate such an analogy. In Continental West Germanic, the analogy is formally driven rather than semantically driven.

Notes

1. Gunther De Vogelaer works at Ghent University as a Postdoctoral Fellow of the Flemish Research Foundation (FWO); Johan van der Auwera teaches English and General Linguistics at the University of Antwerp. We would like to thank the audience at the RaRa-conference in Leipzig for their helpful comments, as well as Magda Devos and Horst Simon for discussing some of the ideas in this paper with us. Our gratitude also goes to everyone involved in the gathering and the transcription of the SAND-data, on which this paper is based (see also below).
2. Note that the terminology in Siewierska (2004) differs from Siewierska (1999). In Siewierska (1999), the term 'grammatical agreement' refers exclusively to the use of agreement markers which are obligatorily accompanied by an overt controller, whereas the notion has a broader meaning in Siewierska (2004). There, all co-occurrences of an agreement marker with an overt local controller are labelled 'grammatical agreement'. Agreement markers which cannot occur without an overt controller are called 'syntactic agreement markers' (cf. Siewierska 2004:126). Hence, clauses such as Spanish *tu tienes los ojos verdes* 'you have green eyes', in which the subject pronoun *tu* is present but can be dropped, represent grammatical agreement according to Siewierska (2004), but not according to Siewierska (1999). We will adopt the terminology from Siewierska (1999).
3. But Bavarian shows a similar phenomenon, viz. agreement of particles such as *gell* 'right'. See section 4.2.
4. In most structural accounts of complementiser agreement, the differences between complementisers and inflected verbs are not even mentioned, let alone explained. One exception is Van Koppen (2005), who tries to account for the fact that in some complementiser agreement dialects the phenomenon only occurs in some grammatical persons. There is no attempt to explain the different behaviour of nouns vis-à-vis pronouns, however.
5. Neither De Schutter nor De Meersman distinguishes between clauses with a nominal subject and clauses with a pronominal subject, let alone between clauses with a strong and a weak pronominal subject. For our purpose, the most relevant figure would be the proportion of main clauses (declarative, interrogative, etc.) with an enclitic subject pronoun vis-à-vis the proportion of main clauses with a proclitic subject.
6. Cysouw (2005:32) even discusses a number of examples of languages where a situation as in Dutch, in which simple clitics incidentally lean to the 'wrong' side of their host, has given rise to so-called 'ditropic clitics' (Embick & Noyer 1999:291). Ditropic clitics are clitics depending structurally and functionally of a host on their one side, but attaching phonologically to the constituent on their other side. Truly ditropic clitics, i.e. special clitics in the sense of Zwicky (1977) showing no regularity at all in their choice of a (phonological) host, appear to be rare (Cysouw 2005). But in comparison to Cysouw's (2005) examples the Dutch clitics show only minor peculiarities in the type of phonological hosts that may be selected, viz. their occurrence following the answer particles *ja* 'yes' and *neen* 'no'. Hence the Dutch clitics belong to a class of elements of which the ditropic clitics are only a (probably very small) subset. Other, comparable examples are the French articles *le* 'the (sg.masc.)' and *les* 'the (plural)' which cliticise to prepositions (e.g. *à* 'to' + *le* > *au*; *de* 'from' + *le* > *du*) and English auxiliaries cliticising to subject pronouns rather than to main verbs (e.g. *I'll go*).
7. Dvořák (2003) also discusses examples of languages in which the unmarked ways to express the meaning *yes* or *no* is basically an inflected verb. For instance, in Portuguese and in Welsh, (inflected) verbs are used rather than particles in answering polar questions. Apart from object clitics, Slovene also commonly uses inflected verbs. Thus, it appears to be quite natural that answers to polar questions contain person markers.
8. However, *m(a)* has a wider productivity than the meaning *no*; for instance, it can be used as a so-called 'privative morpheme', by and large meaning *without*. This privative meaning might also be its origin. De Goeje (1928) provides the example of *m-akosi* 'to be blind', which is derived from *m(a)* and *akosi* 'eyes'.

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