

Morphological Blocking and the Rise of Agreement

GGG Stuttgart, 27.05.2006

Eric Fuß, JWG Universität Frankfurt/Main

fuss@lingua.uni-frankfurt.de

1. Two puzzles in the rise and distribution of agreement markers

- Background: Pronominal clitics are the primary historical source of agreement markers (cf. e.g. Givón 1976, Lehmann 1988, Corbett 1995).
- Observation 1: The grammaticalization of inflectional markers does not replace existing formatives in a random fashion. Rather, it can be shown that across languages, the creation of new inflectional material complies with the following generalization:
 - (1) New verbal agreement morphology arises historically only for those slots of the agreement paradigm where the existing verbal inflection is non-distinctive.
- Relevant examples include: various Italian and Rhaeto-Romance dialects (cf. e.g. Spiess 1956, Kuen 1957, Renzi & Vanelli 1983, Linder 1987, Haiman & Benincà 1992, Poletto 1997, Gerlach 2002), Non-Standard French (Wartburg 1970, Ashby 1977, Harris 1978, Auger 1993, Gerlach 2002), a number of German varieties (Wiesinger 1989, Dal Negro 2004, Fuß 2005), Khinalug (North-East Caucasian, Corbett 1991: 123), Kisar (Austronesian, Blood 1992, Siewierska 1999, 2004), Maricopa (Yuman, Siewierska 1999, 2004), and the Papuan language Skou (Donohue 2002).
- Observation 2: Across the world's languages, verbal agreement markers for 1st and 2nd person subjects are much more common than for 3rd person subjects (cf. e.g. Benveniste 1966, Bybee 1985, Mithun 1991, Ariel 2000, Cysouw 2003, Siewierska 2004):
 - (2) *Distribution of person agreement marking*
Cross-linguistically, in languages that exhibit agreement marking on verbs, 1st & 2nd person markers are more widespread than 3rd person markers.
- Relevant examples include: Turkish (no verbal agreement for 3sg, Kornfilt 1990), Turkana (Nilotic, Dimmendaal 1983), Buryat (Mongolian, Poppe 1960), Pashto (no number agreement with 3rd person subjects, MacKenzie 1990), the Australian language Wambaya (no 3sg form, Nordlinger 1998), a number of Tibeto-Burman languages (LaPolla 1992), and many native languages of North America (e.g. the Yuman and Siouan families, Mithun 1991).
- This paper analyzes the generalizations in (1) and (2) as the outcome of blocking effects which operate during language acquisition and block the acquisition of a less specified form if a more specific form is attested in the input (for discussion of blocking/elsewhere effects cf. e.g. Kiparsky 1973, 1982; Aronoff 1976; Anderson 1986, 1992; Kroch 1994; Sauerland 1996; Halle 1997).

- More specifically, I assume that the acquisition (and grammaticalization) of inflectional morphology is governed by the following principle which scans the input for the most specific realization of a given agreement morpheme:¹

(3) *Blocking Principle (BP)*

If several appropriate PF-realizations of a given morpheme are attested in the Primary Linguistic Data, the form matching the greatest subset of the morphosyntactic features included in the morpheme must be chosen for storage in the lexicon.

- The BP is to be understood as an economy principle which applies during language acquisition and guarantees an optimal and non-redundant lexicon (and paradigm) structure.
- The BP is called into service only if the cues provided by the input data are for some reason ambiguous and not sufficient for the acquisition of certain properties of the grammar (similar to structural/syntactic economy principles, cf. e.g. Clark & Roberts 1993, Roberts & Roussou 2003). For example, in cases where the continued phonological erosion of a clitic leads to a situation where the trigger experience contains more than one potential exponent for a given agreement head/morpheme,² the BP is invoked to decide which of the candidates is eventually stored in the lexicon.
- In this way, the BP ensures that the development of new inflectional formatives can affect only weak/underspecified slots of the paradigm, replacing vocabulary items that are not distinctive.³

2. German/Bavarian

- Background: In Bavarian (and a number of other Germanic varieties), new agreement suffixes developed via a reanalysis of subject enclitics that attach to the right of finite verbs in inversion contexts (cf. e.g. Fuß 2005 for details):

(4) XP V_{fin}+subj. clit. ... >>> XP V_{fin}+AGR ...

¹ This formulation of the BP is framed in a realizational model of grammar (such as Distribute Morphology, Halle & Marantz 1993) in which syntactic terminal nodes (called *morphemes*) are associated with phonological exponents in the post-syntactic morphological component (so-called Late Insertion). Possibly, the Blocking Principle can be reduced to general principles governing the procedure of Vocabulary Insertion such as the Subset Principle (Halle 1997).

² As argued for in Fuß (2005), the pronoun must fulfill a whole set of independent necessary conditions before it can be reanalyzed as the exponent of an agreement morpheme (e.g., it must be a phonologically reduced clitic that cannot receive stress, the reanalysis has to satisfy a set of syntactic conditions such as adjacency to the host, etc.).

³ Note that the idea (going back to Gabelentz 1891) that grammaticalization processes are motivated by the need to compensate for the loss of distinctions due to phonological erosion is widely held in the typological literature on grammaticalization, cf. Lüdtke (1980), Hopper & Traugott (1993), Haspelmath (1995), Siewierska (1999), (2004), Ariel (2000), and Lehmann (2002), among others.

- In most cases, this change led to an enlargement of the existing inherited agreement endings (e.g. 2sg *-s+t(hu)* >>> 2sg *-st*).
- This grammaticalization process did not take place in a wholesale fashion, enlarging/replacing all existing agreement endings. Rather, the change is confined to the following contexts:
 - (5) a. 2sg *-s* >>> *-st* (early OHG; *-st* in all mod. varieties of German)⁴
 - b. 2pl *-t* >>> *-ts* (13th century Bavarian; attested in all mod. varieties)
 - c. 1pl *-an* >>> *-ma* (18th century; extension to verbs in clause-final position in e.g. some Lower Bavarian dialects)⁵
- Why?

2.1 Bavarian 2pl *-ts*, 1pl *-ma*

- Observation: The development of the new endings 2pl *-ts*, 1pl *-ma* resolved existing homophony in the verbal agreement paradigm.
- The development of 2pl *-ts* (< clitic *-(ē)s*) began in the 13th century (in Northern and Middle Bavarian, cf. Wiesinger 1989:72f.), resolving homophony of 3sg, 2pl forms:

	Old paradigm	New paradigm
1sg	-∅	-∅
2sg	-st	-st
3sg	-t	-t
1pl	-an	-an
2pl	-t	-ts
3pl	-ant	-ant

Table 1: Verbal agreement paradigms (pres. indic.), 13th century Bavarian

- In the 18th century, final *-t* was lost in the 3pl, leading to homophony of 3pl and 1pl forms in most Bavarian dialects. In some dialects, this was resolved by the development of 1pl *-ma* as a new agreement ending:

⁴ The first instances of 2sg *-st* appear in Franconian and spread later to other OHG varieties. The early OHG manuscripts written in the monastery of Fulda show this change in the process of its development, cf. the *Hildebrandslied* (preserved in an early 9th century copy of the original text dating from the late 8th century), the *Basel Recipes* (around 800), or the *Tatian* (translated around 830-840. This translation was then copied in the second half of the 9th century). Furthermore, it can be shown that the change affected first the present indicative: in the OHG texts of Otfrid von Weißenburg, for example, 2sg *-st* appears frequently with present indicative verb forms, while past tense and optative forms still exhibit the non-enlarged ending 2sg *-s*. See Brinkmann (1931), Moulton (1944), Sievers (1961), Sommer (1994) for details.

⁵ These dialects are spoken in the Bavarian Forest, in an area the boundaries of which are (roughly) marked by Cham in the west, Lam in the east, Furth i.W. in the north and Kötzing in the south (cf. Pfalz 1912, Kollmer 1987; Wiesinger 1989, Weiß 1998, 2002).

	Old paradigm	New paradigm
1sg	-∅	-∅
2sg	-st	-st
3sg	-t	-t
1pl	-an	-ma
2pl	-ts	-ts
3pl	-an	-an

Table 2: Verbal agreement paradigms (pres. indic.), late 18th century Bavarian

- It appears that the reanalysis of clitics as agreement markers is triggered if the change leads to the elimination of syncretism in a previously defective agreement paradigm.

2.1.1 Analysis

- The new agreement suffixes 2pl *-ts*, 1pl *-ma* satisfy the Blocking Principle due to the fact that they are more specified than their respective predecessors:
- 2sg *-t* >>> *-ts*: The fact that the formative */-t/* occurs in 3sg and 2pl contexts indicates that the relevant Vocabulary item is underspecified for [person] as well as [number]. In other words, it represents the elsewhere case that is inserted as the default agreement ending:

(6) elsewhere ↔ */-t/*

- Accordingly, the introduction of 2pl *-ts/* is licensed by the BP since the new form is specified for [person] and [number], resolving the existing homophony between 3sg and 2pl:

(7) [2, pl] ↔ */-ts/*

- 1pl *-an* >>> *-ma*: In 18th century Bavarian, there are only two different plural forms in the agreement paradigm: */-ts/* is inserted in the context [2, pl], whereas */-an/* is used for 1pl and 3pl. Thus, the lexical entry for */-an/* must be underspecified for the feature [person].⁶ In other words, */-an/* is simply the elsewhere case among the plural forms, cf. the following insertion rules:

(8) [2, pl] ↔ */-ts/*
 [pl] ↔ */-an/*

- Again, the potential new realization of 1pl (*-ma*) is more specified than the existing vocabulary item */-an/*, since it is in addition specified for [person]. This state of affairs facilitates the grammaticalization process in question, leading

⁶ If person features are decomposed into a binary system making use of the feature specifications [±speaker] and [±hearer] (see below), then it appears that the form */-an/* may in fact be specified for [-hearer], which characterizes both first and third person forms. However, even under this analysis, the new formative */-ma/* is more specific than */-an/*, since it is in addition specified for [+speaker], and identifies unambiguously 1st person.

to a fully distinctive set of plural agreement markers (see Appendix I for a full set of vocabulary items/insertion rules):

- (9) [1, pl] ↔ /-ma/
 [2, pl] ↔ /-ts/
 [pl] ↔ /-an/

- The BP makes available an explanation of why the changes in question affected only a subset of the agreement markers in the history of Bavarian: The relevant grammaticalization took place only in contexts where the potential new agreement markers were more specified than the existing markers (i.e., realized a greater subset of the morphosyntactic features included in the relevant agreement morpheme).

2.2 2sg -s >>> -st: an apparent problem

- It seems that the development of 2sg /-st/ presents a problem for an account in terms of the BP. Consider the forms listed in Table 3:⁷

	Old paradigm	New paradigm
1sg	nim-u	nim-u
2sg	nim-is	nim-ist
3sg	nim-it	nim-it
1pl	nēm-emês (-êm, -ên)	nēm-emês (-êm, -ên)
2pl	nēm-êt	nēm-êt
3pl	nēm-ant	nēm-ant

Table 3: Agreement paradigms (pres. indic.) for *nēmen* ‘take’, early OHG

- Apparently, the change from 2sg /-s/ to /-st/ did not involve the creation of an inflectional formative that is more specific than its predecessor. Both items seem to realize the same set of morphosyntactic features, cf.

- (10) a. [2, sg, pres.] ↔ /-s/
 b. [2, sg, pres.] ↔ /-st/

- Thus, it appears that the creation of the new ending /-st/ conflicts with the BP, since it apparently does not lead to a more specified form.
- Let’s now consider the following tables:

⁷ Note that the initial vowel in formatives such as *-emês* is actually not part of the agreement suffix, but rather a so-called ‘theme vowel’ that originally served to derive verb stems from roots.

	Present indicative	Present subjunctive
1sg	salbôm	salbo
2sg	salbôs	salbôs
3sg	salbôt	salbo
1pl	salbômês	salbôm
2pl	salbôt	salbôt
3pl	salbônt	salbôn

Table 4: Conjugation of *salbôn* ‘anoint’ (class 2, present tense), early OHG

	Present indicative	Present subjunctive
1sg	habêm	habe
2sg	habês	habês
3sg	habêt	habe
1pl	habêmês	habêm
2pl	habêt	habêt
3pl	habênt	habên

Table 5: Conjugation of *habên* ‘have’ (class 3, present tense), early OHG

- In early OHG, the 2sg endings of many verbs were identical in the pres. indic. and the pres. subjunc., i.e., the 2sg forms were underspecified for verbal mood. In contrast, verbal mood was clearly distinguished in other person/number combinations (apart from 2pl). This is illustrated in Table 4 and Table 5 for the weak verbs *salbôn* ‘anoint’ (conjugation class 2) and the very frequent *habên* ‘have’ (conjugation class 3), which exhibit the characteristic inflections of their respective verb classes.⁸
- The development of the new formative */-st/* began in the present indicative (cf. Brinkmann 1931). This suggests that the development in question was licensed by the fact that the new ending was unambiguously specified for verbal mood (i.e., indicative) in contrast to the earlier formative */-s/*:

- (11) a. [2, sg, pres.] ↔ */-s/*
b. [2, sg, pres., **indic.**] ↔ */-st/*

- Accordingly, the change leading to 2sg */-st/* does not represent a counterexample to the BP. Rather, it proceeded in accordance with the requirement that new inflectional formatives realize a greater subset of morphosyntactic features than their predecessors.
- In a later development, the new ending spread via analogical extension to all verb classes, tenses and verbal moods including the pres. subjunc. This subsequent development blurred the original motivation for the change in question and eliminated the mood distinction in the 2sg.

⁸ Strong verbs and the weak verbs of conjugation class 1 exhibit *-is* and *-ês* for 2sg present indicative and 2sg present subjunctive, respectively. Here, the difference in vowel quality was perhaps not salient enough to differentiate the forms. Furthermore, the difference was presumably further weakened by phonological erosion that affected non-stressed final syllables. Alternatively, one might assume that the change first affected the weak verbs of the conjugation classes 2 and 3 and spread later to other verb classes by analogy.

3. The special role of 1st and 2nd person agreement markers

- Claims: The cross-linguistic dominance of 1st and 2nd person agreement marking results from the way language change (i.e., grammaticalization) proceeds. More specifically, the special role of 1st and 2nd person forms can directly be attributed to the workings of blocking effects during language acquisition (and change) if we adopt certain assumptions about the feature inventory that underlies person distinctions.
- In favor of a historical explanation: The grammaticalization of 1st and 2nd person agreement markers normally predates the grammaticalization of 3rd person forms; even if a full paradigm exists, it can often be shown that 1st and 2nd person are of greater antiquity than 3rd person forms (cf. e.g. Benveniste 1966, Chafe 1977, Mithun 1991):

(12) *Sequence of the development of person agreement marking*

1st and 2nd person markers become bound to the verb before 3rd person markers.

- The special role of 1st and 2nd person in grammaticalization processes has inspired numerous functionalist explanations (cf. e.g. Mithun 1991, Ariel 2000).
- In contrast, a purely formal explanation based on the BP becomes available if we assume that [3rd person] actually constitutes no separate person feature at all. Instead, ‘3rd person’ is analyzed as the result of the absence of (positive values for) the features 1st and 2nd person (cf. Benveniste 1966, Bayer 1984, Halle 1997, Noyer 1997, Harley and Ritter 2002, Cysouw 2003 among many others).
- In a model of person specification that does not include a separate feature for 3rd person, the traditional three-way system is replaced by a binary feature system which only refers to the immediate participants in a speech event, for example [\pm speaker] and [\pm hearer]. Within this approach, the interpretation ‘3rd person’ results from the absence of positive values for the features [speaker] and [hearer]:

[+speaker, +hearer]	1 st person inclusive
[+speaker, –hearer]	1 st person exclusive
[–speaker, +hearer]	2 nd person
[–speaker, –hearer]	3 rd person

Table 6: Binary system of person features

- In this system, ‘3rd person’ is most economically captured by the absence of any person specification in the relevant vocabulary item. In other words, 3rd person forms normally represent the maximally underspecified (elsewhere) cases.⁹

⁹ Note that this generalization is apparently contradicted by English where 3.sg.pres.indic. /-z/ appears to be the only verbal agreement ending. This seems to suggest that the relevant vocabulary item carries a person specification which is absent otherwise (in all other contexts we find the elsewhere case - \emptyset , which is completely underspecified for person and number). However,

- The fact that cross-linguistically, 3rd person agreement formatives arise later (if at all) than markers for 1st and 2nd person can then be attributed to the workings of the BP: if UG requires that “new” markers realize a greater subset of agreement features than existing markers, the development of 3rd person forms is considerably hindered, due to the inherent underspecification of 3rd person forms with respect to the set of person features.
- As a result, the grammaticalization of new 3rd person forms is less likely to be triggered than the development of forms specified for a separate [person] feature, that is, 1st and 2nd person markers. This explains the typological tendency in question, lending further support to the proposal that the acquisition of inflectional morphology is guided by blocking effects that favor more specified over less specified forms.¹⁰
- Prediction: even in a grammar that lacks agreement markers, a true 3rd person marker can only develop if it is specified for some other inflectional feature like [gender], [number] etc.

4. The rise of 3rd person agreement: Northern Italian dialects

4.1 Piattino

- In the Lombardian dialect Piattino, the distribution of subject clitics interacts in interesting ways with properties of the existing verbal agreement morphology (Gerlach 2001, 2002) (boldface signals that the clitic is obligatory):¹¹

see e.g. Halle (1997) for an analysis where 3.sg.pres.indic. /-z/ is analyzed as an inflectional marker that in fact does not realize person distinctions, but rather carries the feature specification [-pl, +pres, +finite]. Ian Roberts pointed out to me an alternative way of analyzing 3.sg.pres.indic. /-z/, in which /-z/ is treated as the non-default ending in a system that makes use only of a two-way default/non-default distinction in the present tense indicative (see Haeberli 2004 for related considerations). Further evidence for an analysis that does not treat “3sg” -s as a true agreement marker comes from research on agrammatism. It has been observed that the speech of Broca-aphasics exhibits an interesting difference between tense and agreement morphology: while tense is heavily impaired, the production and perception of verbal agreement morphology is almost flawless (suggesting that tense and agreement are represented differently in the grammar, cf. e.g. Friedmann and Grodzinsky 2000). Interestingly, however, the difference between tense and agreement is much less clear-cut in the speech of English agrammatics, who seem to produce many agreement errors concerning the use of 3sg -s (cf. e.g. Wenzlaff and Clahsen 2004). This can be taken to indicate that the verbal suffix -s is in fact not an agreement marker, but rather part of the tense/finiteness system, in line with the impairment pattern that is found cross-linguistically.

¹⁰ This reasoning also provides an answer to the question of why new agreement suffixes developed for 2pl and 1pl, but not for 3rd person forms in the history of Bavarian. Note that the latter development would have been equally sufficient to repair a defective paradigm where 2nd (and 1st) person forms were homophonous with 3rd person forms. However, if 3rd person forms are inherently underspecified for person features, they are less prone to be replaced by new, equally underspecified exponents, which explains the fact that the new suffixes developed only in 1st and 2nd person contexts.

¹¹ The correlation between a defective agreement paradigm and the obligatory presence of pronominal clitics has already been noted in traditional work on the history of the Romance languages (including French and various Northern Italian dialects), see Kuen (1957) or Wartburg (1970), for example.

	Clitic + verb	Presence of the clitic
1sg	(a) guardi	optional
2sg	(te) guardesc	optional
3sg.masc	al guarda	obligatory
3sg.fem	la guarda	obligatory
1pl	an guarda	obligatory
2pl	(ve) guardé	optional
3.pl.masc	i guarden	obligatory
3pl.fem	li guarden	obligatory

Table 7: Subject agreement and clitics in Piattino

- The clitics are merely optional in 1sg and 2nd person contexts, where the verbal agreement morphology is still fully distinctive.
- In contrast, subject clitics are obligatory in the context of 3sg and 1pl, where the existing agreement endings are homophonous.
- Obligatory clitic doubling in Piattino:

(13) Nigun/un omen/l'omen/Alessio/lu *(al) guarda.
nobody/a man/the man/Alessio/he CLIT.3SG.MASC watch.3SG
'Nobody/a man/the man/Alessio/he is watching.'
(Gerlach 2002:223)

(14) Noaltri *(an) guarda.
we CLIT.1PL watch.1PL
'We are watching.'
(Gerlach 2002:223)

- Arguments in favor of analyzing the 3rd person and 1pl clitics as agreement markers:
 - i. Obligatory presence (in contrast to the other clitics)
 - ii. Sensitivity to properties of the suffixal agreement morphology.
 - iii. 3rd person clitics can be doubled by quantified expressions like *nigun* 'nobody' (in contrast to Standard Italian where clitic left dislocation of quantifiers is impossible), cf. (13) above.

4.1.1 Analysis

- Gerlach (2002) attributes the obligatory presence of the clitics to the lack of (distinctive) person agreement features on the verb. In other words, subject clitics became obligatory in contexts where the finite verb is underspecified for agreement features, presumably to repair a defective agreement paradigm.

An account based on the BP

- The optional presence of clitics in 1sg and 2sg contexts is in line with the Blocking Principle (the reanalysis of clitics as agreement markers is not called for as long as the existing agreement morphology is fully distinctive).

- 1pl: while the existing agreement ending represents the elsewhere case in the present indicative paradigm, the new agreement formative is clearly specified for both person and number (i.e., [+speaker, +pl]).
- 3rd person forms: at first sight, the obligatory presence of the 3rd person forms is unexpected – in particular if it is assumed that third person forms are inherently underspecified with respect to person features (cf. section 3 above).
- However, from Table 8 it becomes apparent that the grammaticalization process led to the development of gender agreement in the context of 3sg, 3pl.

	New agreement formatives	Old agreement formatives
3sg.masc	al-	-a
3sg.fem	la-	-a
3pl.masc	i-	-en
3pl.fem	li-	-en

Table 8: Development of gender agreement in Piattino

- Due to their specification for gender, the new third person agreement formatives count as “stronger” agreement exponents in line with the BP, even if they do not carry any person specification.¹²

4.2 Vicentino

- Variant of Veneto spoken in and around the northern Italian city of Vicenza.¹³
- Similar to Piattino, the obligatory presence of subject clitics seems to be linked to properties of the existing verbal agreement paradigm (obligatory clitics are marked by boldface, optional clitics are set in brackets).

	Clitic + verb	Doubling/presence of the clitic
1sg	(a) magn-o	optional
2sg	te magn-i (enclitic: magn-i- to)	obligatory
3sg	el/la magn-a (enclitic: magn-e- lo/la)	obligatory
1pl	(a) magn-emo	optional
2pl	(a) magn-è (enclitic: magn-è- o)	proclitic optional enclitic obligatory
3pl	i/le magn-a (enclitic: magn-e- li/le)	obligatory

Table 9: Subject agreement and clitics in Vicentino, present indicative of *mangiare* ‘to eat’

¹² This raises the question of why gender information is accessible in Piattino, while gender distinctions seem to be “invisible” to the grammaticalization of agreement formatives in Bavarian. See Fuß (2005) for an explanation based on the following assumptions: (i) agreement features are organized in a feature geometry where gender features are dominated by the node encoding number information; (ii) lower nodes are only accessible if the presence of higher nodes is robustly signaled by a full paradigm of morphological distinctions.

¹³ I am grateful to Adriana Castagna and Ermenegildo Bidese for much discussion and native speaker judgments on Vicentino.

- (15) a. Da 'ndó vien-*(to) ti?
 where-from come-CLIT.2SG you
 'Where do you come from?'
 b. Ti te vien da Montecio.
 you CLIT.2SG come from Montecio
 'You come from Montecio.'
 c. *Ti vien da Montecio

- (16) a. Da 'ndó vien-*(la) sta dona?
 where-from come-CLIT.3SG.FEM this woman
 'Where does this woman come from?'
 b. Ela *(la) vien da Arzignan.
 she CLIT.3SG.FEM come from Arzignano
 'She comes from Arzignano.'

- Similar to Piattino, the special properties of the distinctive clitics suggests that these elements are presumably better analyzed as agreement marking elements (see 4.2.1 below).
- In contrast, the fact that the non-distinctive clitics are merely optional can be taken to indicate that these are still pronominal elements.
- However, the correlation between defective agreement endings and obligatory presence of subject clitics is less straightforward than in Piattino:
 - The only homophonous endings are 3sg and 3pl /-a/.
 - In all other contexts, the agreement morphology seems to be distinctive. Still, subject clitics are obligatory for all person/number combinations apart from 1st person and 2pl (proclitic) ⇒ Apparent problem for the BP

4.2.1 The inventory of pronominal forms

- Vicentino exhibits a rich inventory of pronominal forms including full tonic pronouns and three different series of clitic pronouns:
 - A set of enclitics which attach to the right of the verb in inversion contexts
 - A set of proclitics which signal person and number distinctions.
 - A non-distinctive proclitic *a* which can be used for various person/number combinations (1sg, 1pl, 2sg and 2pl).

	Enclitics	Proclitics	
		distinctive	non-distinctive
1sg	–	–	a
2sg	to	te	a
3sg.masc	lo	(e)l	–
3sg.fem	la	la	–
1pl	–	–	a
2pl	o	–	a
3pl.masc	li	i	–
3pl.fem	le	le	–

Table 10: Three series of subject clitics in Vicentino

- Systematic differences:
 - A. Only the distinctive subject clitics (i+ii) are obligatory; the non-distinctive clitic *a* (underspecified for person and number) is merely optional.
 - B. The distinctive clitics follow the negation *no*, while the non-distinctive forms precede the negation (similar phenomena can be observed in various other Northern Italian and Rhaeto-Romance dialects, cf. Meyer-Lübke 1894: 101f., Rohlfs 1949: 168ff., Renzi & Vanelli 1983, Linder 1987, Poletto 1997, 1999, 2000).

	ϕ -feature specification	Presence	Placement relative to verb and negation
Enclitics	person/number	obligatory	neg-V-clitic ¹⁴
Distinctive proclitics	person/number	obligatory	neg-clitic-V
Non-distinctive proclitics	\emptyset	optional	clitic-neg-V

Table 11: Diverging morpho-syntactic properties of subject clitics in Vicentino

- The different behavior of the different clitics can be nicely illustrated with examples involving 2sg forms (in the 2sg, all clitic forms are available; as a result up to three different types of pronouns may co-occur):

(17) Ti (a) no *(te) vien da Vicenza.
 you CLIT.2SG not CLIT.2SG come from Vicenza
 ‘You do not come from Vicenza.’

4.2.2 Analysis

- Optionality of the non-distinctive clitic -a: since *-a* is underspecified for both person and number features, it is clearly less specified than the existing (distinctive) agreement formatives. As a consequence, it cannot be reanalyzed as an agreement marker and maintains its status as a pronominal element.
- 3rd person forms: similar to Piattino, the change in question introduces verbal agreement in gender in third person contexts, a trait formerly absent in the grammar of Vicentino. In addition, the resulting 3rd person agreement markers signal number distinctions, in contrast to the existing forms:

	New agreement formatives	Old agreement formatives
3sg.masc	el- (inversion: -lo)	-a
3sg.fem	la (inversion: -la)	-a
3pl.masc	i (inversion: -li)	-a
3pl.fem	le (inversion: -le)	-a

Table 12: Development of gender and number agreement in Vicentino

¹⁴ Note that the negation *no* accompanies verb movement in inversion contexts:

(i) No vien-le mia a casa stasera?
 not come-CLIT.3PL.FEM PRT to home tonight
 ‘Are they really not coming home tonight?’

- Note: while the behavior of the non-distinctive and 3rd person forms is expected from the viewpoint of the Blocking Principle, the obligatory presence (i.e., reanalysis) of second person forms seems to be a problem, since the existing verbal agreement morphology seems to be fully distinctive (cf. Table 9). See Appendix II for an analysis.

5. Conclusion

- The assumption that the acquisition of inflectional morphology is guided by blocking effects (i.e., the BP) which prefer ‘new’ inflections to be more specific than existing formatives provides a unified explanation for
 - i. the observation that the grammaticalization of verbal agreement markers affects only non-distinctive/underspecified forms of the existing verbal agreement paradigm, and
 - ii. the special role of 1st and 2nd person vs. 3rd person in the distribution and development of subject-verb agreement markers cross-linguistically (if we assume that 3rd person forms are inherently underspecified for person features).
- 3rd person agreement markers can (only) develop if the resulting formatives are specified for other morphosyntactic features such as gender or number.

Appendix I: Vocabulary items/verbal agreement marking in Bavarian

- For 13th century Bavarian, the sets of vocabulary items that competed for insertion into the Agr-morpheme (present tense indicative) are as follows. (18) lists the set of items prior to the development of 2pl *-ts*, (19) shows the situation after the change in question has taken place.

(18)

[1, +pl]	↔	/-an/
[1, -pl]	↔	∅
[2, -pl]	↔	/-st/
[+pl]	↔	/-ant/
elsewhere	↔	/-t/

(19)

[1, +pl]	↔	/-an/
[2, +pl]	↔	/-ts/
[1, -pl]	↔	∅
[2, -pl]	↔	/-st/
[+pl]	↔	/-ant/
elsewhere	↔	/-t/

- Problem: While the fact that */-t/* is used for both 3sg and 2pl seems to indicate that it is underspecified for both person and number, the analysis in (18) cannot be correct, since we would expect the plural formative */-ant/* to block the use of */-t/* in the case of 2pl (this was pointed out to me by Wolfgang Sternefeld): due to its number specification, */-ant/* is more specified than */-t/* and should be inserted as the 2pl marker.
- Obviously, a more fine-grained model of person specifications is needed to account for the paradigm found in 13th century Bavarian.
- Making use of the system of person features introduced above, 3pl */-ant/* could be analyzed as [–speaker, –hearer, +pl];¹⁵ this ensures that */-ant/* cannot be inserted in [+hearer] contexts:

(20)

[–speaker, –hearer, +pl]	↔	/-ant/
[+speaker, +pl]	↔	/-an/
[+speaker, –pl]	↔	∅
[+hearer, –pl]	↔	/-st/
elsewhere	↔	/-t/

- The grammaticalization of 2pl */-ts/* gives then rise to the following paradigm:

(21)

[+speaker, +pl]	↔	/-an/
[+hearer, +pl]	↔	/-ts/
[+speaker, –pl]	↔	∅
[+hearer, –pl]	↔	/-st/
[+pl]	↔	/-ant/
elsewhere	↔	/-t/

¹⁵ The fact that the final segment */-t/* shows up only in non-first person contexts (2sg */-st/*, 3sg */-t/*, 2pl */-t/*, 3pl */-ant/*) can be taken to indicate that */-ant/* is also specified for [–speaker].

- The relevant sets of Vocabulary items for 18th century Bavarian are listed below. (21) lists the items prior to the rise of 1pl *-ma*, while (22) shows the resulting paradigm.

(22) [+hearer, +pl] ↔ /-ts/
 [+speaker, -pl] ↔ ∅
 [+hearer, -pl] ↔ /-st/
 [pl] ↔ /-an/
 elsewhere ↔ /-t/

(23) [+speaker, +pl] ↔ /-ma/
 [+hearer, +pl] ↔ /-ts/
 [+speaker, -pl] ↔ ∅
 [+hearer, -pl] ↔ /-st/
 [+pl] ↔ /-an/
 elsewhere ↔ /-t/

Appendix II: Rise of 2nd person agreement prefixes in Vicentino

2sg

- Consider the paradigm of the frequent irregular verb *vegnere* ‘to come’:

	vegnere ‘to come’
1sg	vegno
2sg	vien
3sg	vien
1pl	vegnemo
2pl	vegní
3pl	vien

Table 13: Present indicative of *vegnere* ‘to come’ (Vicentino)

- The 2sg form *vien* is homophonous with the respective third person forms in the present indicative (*tegnere* ‘to hold’ behaves similar).
- Thus, in the context of irregular verbs such as *vegnere* and *tegnere*, the reanalysis of the 2sg clitics could proceed in accordance with the BP, creating a new inflection which is unambiguously specified for 2sg (i.e., [+hearer, -pl]).
- Presumably, the change in question was furthered by the fact that a number of highly frequent irregular verbs signal agreement only via stem vowel alternations (and not via suffixes). Consider Table 14 which lists the 2sg, 3sg and 3pl pres. indic. forms of four frequent irregular verbs.

	dare ‘to give’	fare ‘to do’	nare ‘to go’	savere ‘to know’
2sg	de	fe	ve	se
3sg	da	fa	va	sa
3pl	da	fa	va	sa

Table 14: 2sg, 3sg and 3pl of irregular verbs (present indicative) in Vicentino

- Interestingly, this class of so-called “short verbs” (*Kurzverben*) apparently plays a pioneering role in the grammaticalization of new verbal agreement morphology (cf. Nübling 1995, Dal Negro 2004). Why?
- Tentatively, I suggest that this verb class is affected by the grammaticalization process in question more readily because the learner scans the input for the most salient realization of a given inflectional marker. As pointed out by Nübling (1995: 148), agreement distinctions via stem vowel alternation are much more prone to accidental homophony than other means of agreement marking (i.e., suffixes). In other words, in a situation where the learner has to decide whether the subject clitic or the stem vowel alternation is the primary exponent of 2sg verbal agreement, it is quite likely that he/she will go for the clitic if the latter meets all other necessary requirements for being regarded as a verbal inflection.¹⁶

¹⁶ This hypothesis is also supported by research on the acquisition of inflectional morphology, where it has been observed that children generally prefer to use affixes over other morphological means (such as stem vowel alternations) for marking additional meaning (cf. Clark 1998: 384).

- If this results in a scenario where the reanalysis of 2sg clitics is not only triggered in the context of *vegnere* and *tegnere* (where 2sg is defective), but also with the class of highly frequent verbs such as ‘to go’, ‘to do’ ‘to give’ and ‘to know’, it is quite probable that the change in question catches on and develops into a model of agreement marking which spreads to other verb classes via analogy.

2pl

- Apparently, the reanalysis of the 2sg enclitic *-o* neither leads to the development of an exponent which realizes a greater subset of ϕ -features such as person, number or gender (even the 2pl of short verbs such as *vegnere* is fully distinctive with respect to person and number, see Table 13), nor are there suffixless “short verbs” where 2pl is marked solely by stem vowel alternations.
- However, it appears that the rise of a new 2pl agreement formative can be attributed to the fact that the grammaticalization of the new agreement ending created a form which was additionally specified for verbal mood, distinguishing between present indicative and present subjunctive (similar to 2sg *-st* in OHG, see above).¹⁷ Consider the agreement paradigms for the present indicative and present subjunctive of a selection of four highly frequent irregular verbs in Table 15 and Table 16:

	dare ‘to give’	fare ‘to do’	poder ‘can’	vegnere ‘to come’
1sg	do	fo	posso	vegno
2sg	de	fe	poi	vien
3sg	da	fa	pole	vien
1pl	demo	femo	podemo	vegnemo
2pl	dazi	fé/fazi	podí	vegní
3pl	da	fa	pole	vien

Table 15: Present indicative of four frequent irregular verbs in Vicentino

	dare ‘to give’	fare ‘to do’	poder ‘can’	vegnere ‘to come’
1sg	daga	fassa	possa	vegna
2sg	dai/daghi	fassi	possi	vegna
3sg	daga	fassa	possa	vegna
1pl	demo	fasemo	podemo	vegnemo
2pl	dazi	fazi	podí	vegní
3pl	daga	fassa	possa	vegna

Table 16: Present subjunctive of four frequent irregular verbs in Vicentino

¹⁷ It is a well-known fact that many Northern Italian dialects exhibit a highly syncretic present subjunctive paradigm where most forms are identical to the relevant present indicative forms (cf. e.g. Meyer-Lübke 1890: 225, Meyer-Lübke 1894: 184ff., Rohlf 1949: 346f., Savoia 1997: 84).

- The 2pl present indicative and 2pl present subjunctive forms of these irregular verbs are identical in Vicentino.
- Proposal: the reanalysis in question first affected the pres. indic. of verbs where the existing 2pl pres. indic. and pres. subjunc. forms were identical. The development of the new agreement ending 2pl *-e+o* was licensed due to the fact that the resulting form unambiguously realized verbal mood (i.e., [+indicative]), in contrast to its predecessor.
- By analogy, the new agreement formative later extended to other verbs and moods, which blurred the morphological motivation behind the original change (similar to Old High German where 2sg *-st* spread to the subjunctive as well).

References

- Ariel, Mira. 2000. "The development of person agreement markers: from pronoun to higher accessibility markers." In *Usage-based Models of Language*, S. Kemmer and M. Barlow (eds.), 197-261. Stanford: CSLI.
- Anderson, Stephen R. 1986. "Disjunctive ordering in inflectional morphology." *Natural Language and Linguistic Theory* 4, 1-31.
- Anderson, Stephen R. 1992. *A-morphous Morphology*. Cambridge: Cambridge University Press.
- Aronoff, Mark. 1976. *Word Formation in Generative Grammar*. Cambridge, Mass.: The MIT Press.
- Ashby, William. 1977. *Clitic Inflection in French. An Historical Perspective*. Amsterdam: Rodopi.
- Auger, Julie. 1993. "More evidence for verbal agreement marking in Colloquial French." In *Linguistic Perspectives on the Romance Languages*, W. J. Ashby, M. Mithun, G. Perissinotto, and E. Raposo (eds.), 177-98. Amsterdam: John Benjamins.
- Auger, Julie. 1994. *Pronominal Clitics in Quebec Colloquial French: A Morphological Analysis*. Doctoral dissertation, University of Pennsylvania.
- Bayer, Josef. 1984. "COMP in Bavarian syntax." *The Linguistic Review* 3, 209-274.
- Benveniste, Emile. 1966. *Problèmes de linguistique générale*. Paris: Editions Gallimard.
- Blood, Cindy. 1992. "Subject-verb agreement in Kisar." *NUSA. Linguistics Studies of Indonesia and Other Languages in Indonesia*, vol. 34, 1-21. Jakarta: Badan Penyelenggara NUSA.
- Brinkmann, Hennig. 1931. *Sprachwandel und Sprachbewegung in althochdeutscher Zeit*. Jena.
- Bybee, Joan L. 1985. *Morphology*. Amsterdam: John Benjamins.
- Chafe, Wallace L. 1977. "The evolution of third person verb agreement in the Iroquoian Languages." In *Mechanisms of Syntactic Change*, C. N. Li (ed.), 493-524. Austin: University of Texas Press.
- Clark, Eve V. 1998. "The acquisition of morphology." In *Handbook of morphology*, Andrew J. Spencer and Arnold M. Zwicky (eds.), 374-389. Oxford: Blackwell.
- Clark, Robert and Ian Roberts. 1993. "A computational model of language learnability and language change." *Linguistic Inquiry* 24: 299-345.
- Corbett, Greville. 1991. *Gender*. Cambridge: Cambridge University Press.
- Corbett, Greville. 1995. "Agreement." In *Syntax: An International Handbook of Contemporary Research Vol. 2*, J. Jacobs, A. von Stechow, W. Sternefeld, and T. Vennemann (eds.), 1235-1244. Berlin: Walter de Gruyter.
- Cysouw, Michael. 2003. *The Paradigmatic Structure of Person Marking*. Oxford: Oxford University Press.
- Dal Negro, Silvia. 2004. *The Decay of a Language. The Case of a German Dialect in the Italian Alps*. Frankfurt: Peter Lang.
- Dimmendaal, Gerrit Jan. 1983. *The Turkana Language*. Dordrecht: Foris.
- Donohue, Mark. 2002. "A most agreeable language." Ms., University of Sydney.
- Friedmann, Na'ama and Yosef Grodzinsky. 2000. "Split inflection in neurolinguistics." In *The Acquisition of Syntax: Studies in Comparative Developmental Linguistics*, M.-A. Friedemann and L. Rizzi (eds.), 84-104. Geneva: Longman.
- Fuß, Eric. 2005. *The Rise of Agreement*. Amsterdam: John Benjamins.
- Gabelentz, Georg von der. 1891. *Die Sprachwissenschaft. Ihre Aufgaben, Methoden, und bisherigen Ergebnisse*. Leipzig: Weigel.

- Gerlach, Birgit. 2001. "Optimality aspects of clitic doubling in Romance." In *Clitics et cliticisation*, P. de Carvalho, L. Labrone, F. Lambert, CL. Muller and K. Ploog (eds.), 343-363. Paris: Champion.
- Gerlach, Birgit. 2002. *Clitics Between Syntax and Lexicon*. Amsterdam: John Benjamins.
- Givón, Talmy. 1976. "Topic, Pronoun, and Grammatical Agreement." In *Subject and Topic*, C.N. Li (ed.), 149-188. New York: Academic Press.
- Haiman, John and Paola Benincà. 1992. *The Rhaeto-Romance Languages*. London and New York: Routledge.
- Halle, Morris and Alec Marantz. 1993. "Distributed Morphology and the pieces of inflection." In *The View from Building 20*, S.J. Keyser and K. Hale (eds.), 111-176. Cambridge: The MIT Press.
- Halle, Morris. 1997. "Distributed Morphology: Impoverishment and Fission." In *MIT Working Papers in Linguistics 30: PF: Papers At the Interface*, B. Bruening, Y. Kang, and M. McGinnis (eds.), 425-450. Cambridge, Mass.: Department of Linguistics and Philosophy, MIT.
- Harley, Heidi and Elizabeth Ritter. 2002. "Structuring the bundle: A universal morphosyntactic feature geometry." In *Pronouns – Grammar and Representation*, H. J. Simon and H. Wiese (eds.), 23-39. Amsterdam: John Benjamins.
- Harris, Martin. 1978. *The Evolution of French Syntax. A Comparative Approach*. London: Longman.
- Haspelmath, Martin. 1995. "The growth of affixes." In *Yearbook of Morphology 1994*, G. Booij and J. van Marle (eds.), 1-29. Dordrecht: Kluwer.
- Kiparsky, Paul. 1973. "'Elsewhere' in phonology." In *A Festschrift for Morris Halle*, S. Anderson and P. Kiparsky (eds.), 93-106. New York: Holt, Rinehart and Winston.
- Kiparsky, Paul. 1982. "Word-formation and the lexicon." In *Proceedings of the 1982 Mid-America Linguistics Conference*, F. Ingemann (ed.), University of Kansas.
- Kollmer, Michael. 1987. *Die schöne Waldlersprach*. Bd. I-III. Prackebach: Kollmer (Eigenverlag).
- Kornfilt, Jaklin. 1990. "Turkish and the Turkic languages." In *The Major Languages of Eastern Europe*, B. Comrie (ed.), 227-252. London: Routledge.
- Kroch, Anthony. 1994. "Morphosyntactic variation." In *Proceedings of the Thirtieth Annual Meeting of the Chicago Linguistics Society. Vol. II*, K. Beals, J. Denton, B. Knippen, L. Melnar, H. Suzuki, and E. Zeinfeld (eds.), 180-201. Chicago: Chicago Linguistics Society.
- Kuen, Heinrich. 1957. "Die Gewohnheit der mehrfachen Bezeichnung des Subjekts in der Romania und die Gründe ihres Aufkommens." In *Syntactica und Stilistica. Festschrift für Ernst Gamillscheg zum 70. Geburtstag*, G. Reichenkron (ed.), 293-326. Tübingen: Niemeyer.
- LaPolla, Randy 1992. "On the dating and nature of verb agreement in Tibeto Burman." *Bulletin of the School of Oriental and African Studies* 55.2, 298-315.
- Lehmann, Christian. 1988. "On the function of agreement." In *Agreement in Natural Language*, M. Barlow and Charles A. Ferguson (eds.), 55-65. Stanford: CSLI.
- Lehmann, Christian. 2002. *Thoughts on Grammaticalization*. Second edition. Arbeitspapiere des Seminars für Sprachwissenschaft der Universität Erfurt.
- Linder, Karl Peter. 1987. *Grammatische Untersuchungen zur Charakteristik des Rätoromanischen in Graubünden*. Tübingen: Gunter Narr.
- Lüdtke, Helmut. 1980. "Auf dem Wege zu einer Theorie des Sprachwandels." In *Kommunikationstheoretische Grundlagen des Sprachwandels*, H. Lüdtke (ed.), 182-252. Berlin: de Gruyter.
- MacKenzie, D. N. 1990. "Pashto." In *The Major Languages of Southeast Asia, the Middle East and Africa*, B. Comrie (ed.), 132-150. London: Routledge.
- Meyer-Lübke, Wilhelm. 1894. *Grammatik der romanischen Sprachen. Bd. II: Romanische Formenlehre*. Leipzig: O. R. Reisland.
- Mithun, Marianne. 1991. "The development of bound pronominal paradigms." In *Language Typology 1988: Typological Models in Reconstruction*, W. P. Lehmann and H.-J. Jakusz Hewitt (eds.), 85-104. Amsterdam: John Benjamins.
- Moulton, William. 1944. "Scribe γ of the Old High German Tatian translation." *PMLA* 59:2, 307-334.
- Nordlinger, Rachel. 1998. *A Grammar of Wambaya, Northern Territory (Australia)*. (Pacific Linguistics C-140). Canberra: ANU.
- Noyer, Rolf. 1997. *Features, Positions, and Affixes in Autonomous Morphological Structure*. New York: Garland.
- Nübling, Damaris. 1995. "Kurzverben in germanischen Sprachen. Unterschiedliche Wege – gleiche Ziele." *Zeitschrift für Dialektologie und Linguistik* 62.2, 127-154.

- Pfalz, Anton. 1918. "Suffigierung der Personalpronomina im Donaubairischen." Republished 1983 in *Die Wiener dialektologische Schule. Grundsätzliche Studien aus 70 Jahren Forschung. (Wiener Arbeiten zur germanischen Altertumskunde und Philologie 23)*, P. Wiesinger (ed.), 217-235. Wien: Peter Lang.
- Poletto, Cecilia. 1997. "Pronominal syntax." In *The Dialects of Italy*, M. Maiden and M. Parry (eds.), 137-145. Cambridge: Cambridge University Press.
- Poletto, Cecilia. 1999. "The internal structure of Agrs and subject clitics in the Northern Italian dialects." In *Clitics in the Languages of Europe*, H. van Riemsdijk (ed.), 581-620. Berlin: Mouton de Gruyter.
- Poletto, Cecilia. 2000. *The Higher Functional Field. Evidence from Northern Italian Dialects*. Oxford: Oxford University Press.
- Poppe, Nicholas. 1960. *Buriat Grammar*. Bloomington: Indiana University Publications.
- Renzi, Lenordo and Laura Vanelli. 1983. "I pronomi soggetto in alcune varietà romanze (Subject pronouns in some Romance varieties)." In *Scritti linguistici in onore die Giovan Battista Pellegrini (Linguistic Papers in Honor of G. B. Pellegrini)*, P. Benincà et al. (eds.), 121-145. Pisa: Pancini.
- Roberts, Ian and Anna Roussou. 1999. "A formal approach to 'grammaticalization'." *Linguistics* 37: 1011-1041.
- Roberts, Ian and Anna Roussou. 2003. *Syntactic Change. A Minimalist Approach to Grammaticalization*. Cambridge: Cambridge University Press.
- Rohlf, Gerhard. 1949. *Historische Grammatik der italienischen Sprache und ihrer Mundarten*. Bd. II: *Formenlehre und Syntax*. Bern: A. Francke.
- Sauerland, Uli. 1996. "The late insertion of Germanic inflection." Ms., MIT.
- Savoia, Leonardo. 1997. "Inflectional morphology of the verb." In *The Dialects of Italy*, M. Maiden and M. Parry (eds.), 75-86. London: Routledge.
- Sievers, Eduard (ed.). 1961. *Tatian*. Darmstadt: Wissenschaftliche Buchgesellschaft.
- Siewierska, Anna. 1999. "From anaphoric pronoun to grammatical marker: why objects don't make it." *Folia Linguistica* 33.2, 225-251.
- Siewierska, Anna. 2004. *Person*. Cambridge: Cambridge University Press.
- Sommer, Thomas. 1994. *Flexionsmorphologie des Verbs im althochdeutschen Tatian*. München: Tuduv.
- Spiess, Federico. 1956. *Die Verwendung des Subjektpersonalpronomens in den lombardischen Mundarten. (Romanica Helvetica 59)*. Bern: A. Francke.
- Traugott, Elizabeth and Bernd Heine (eds.). 1991. *Approaches to Grammaticalization*. Amsterdam: Benjamins.
- Wartburg, Walther von. 1970. *Einführung in die Problematik und Methodik der Sprachwissenschaft* (3rd edition). Tübingen: Niemeyer.
- Weiß, Helmut. 1998. *Die Syntax des Bairischen. Studien zur Grammatik einer natürlichen Sprache*. Tübingen: Niemeyer.
- Weiß, Helmut. 2002. "Agr-in Comp and partial pro-drop." Ms., Universität Regensburg.
- Wenzlaff, Michaela and Harald Clahsen. 2004. "Tense and agreement in German Agrammatism." *Brain and Language* 89, 57-68.
- Wiesinger, Peter. 1989. *Die Flexionsmorphologie des Verbums im Bairischen*. Wien, Verlag der Österreichischen Akademie der Wissenschaften.