Diachronic dimensions of blocking

How morphology shapes the rise of verbal inflection

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

- <u>Background</u>: Pronominal clitics are the primary historical source of agreement markers (cf. e.g. Givón 1976, Lehmann 1988, Corbett 1995).
- <u>Observation I</u>: 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.

- <u>Relevant examples include</u>: 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, Kolmer 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).
- <u>Observation II</u>: Across the world's languages, verbal agreement markers for 1st and 2nd person subjects are much more common than markers 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.

- <u>Relevant examples include</u>: 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.

2. Morphological blocking

- It is a widely observed fact that languages exhibit <u>blocking phenomena</u>, where the existence of one form seems to prevent the use of another form that would otherwise be expected to occur (cf. e.g. Kiparsky 1973, 1982; Aronoff 1976; Anderson 1986, 1992; Kroch 1994; Sauerland 1996; Halle 1997; Giegerich 2001; Embick & Marantz 2006).
- The examples in (3) are instances of so-called lexical blocking where forms listed in the lexicon prevent the use of forms that in principle could be derived by regular morphological processes.

(3) **Lexical blocking** (listed forms block derived forms)
    a. *gave* vs. **gived*   (competing forms are lexically related)
    b. *thief* vs. **stealer*   (competing forms are not lexically related)

- In addition, it is generally assumed that in any given insertion context, only the most specific inflection of a given paradigm may be used (cf. Kiparsky's *Elsewhere Condition*, or the *Subset Principle* of Halle 1997).[1]
- <u>Example from English (verbal inflection)</u>: Although the completely underspecified null suffix /-∅/ would be compatible with the insertion context [3sg.pres.indic.], its use is blocked by the existence of a more specified verbal inflection (/-s/):

(4) **Local blocking** (more specified inflections block use of less specified forms)
    he/she/it run-s vs. **he/she/it run-∅*

- <u>Proposal</u>: Blocking effects are also at work during language acquisition. More precisely, I suggest 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:[2]

(5) *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.

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[1] *The Subset Principle* (Halle 1997)
"The phonological exponent of a Vocabulary item is inserted into a morpheme in the terminal string if the item matches all or a subset of the grammatical features specified in the terminal morpheme. Insertion does not take place if the Vocabulary item contains features not present in the morpheme. Where several Vocabulary items meet the conditions for insertion, the item matching the greatest number of features specified in the terminal morpheme must be chosen."

[2] 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).

- 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 pronominal clitic leads to a situation where the trigger experience contains more than one potential exponent for a given agreement head/morpheme,[3] 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.[4]

3. German/Bavarian

- <u>Background</u>: 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):

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

- 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:

(7) a. 2sg *-s* >>> *-st* (early OHG; *-st* in most mod. varieties of German)
  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?

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[3] As argued for in Fuß (2005), the reanalysis of a pronoun as agreement marker is only possible if a set of independent necessary conditions is met (e.g., the pronominal element 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.).

[4] 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.

[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 Kötzting in the south (cf. Pfalz 1912, Kollmer 1987; Wiesinger 1989, Weiß 1998, 2002).

3.1 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* (< clit. *-(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, erosion of final *-t* in 3pl forms led 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:

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

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.

3.1.1 Analysis: Change driven by blocking effects

- 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:

(8)   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:

(9)   [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:

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

(11)   [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).

3.2 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]

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[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.

[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.

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

Table 3: Agreement paradigms (pres. indic.) for *nëmen* '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:

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

- <u>Problem</u>: 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.

- <u>Possible answer</u>: 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), cf. the paradigms for the verbs *salbôn* 'anoint' (class 2) and *habên* 'have' (class 3):[8]

	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

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[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.

- The development of the new formative /-st/ began in the present indicative (cf. Brinkmann 1931).[9] 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/:

(13) 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.

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

- <u>Claims</u>: 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.
- <u>In favor of a historical explanation</u>: 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):

(14) *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

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[9] 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.

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, Halle 1997, Noyer 1997, Harley and Ritter 2002, Cysouw 2003 among many others; however, see Trommer 2006 for an opposing view).

- 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 [±speaker] and [±hearer]. Within this approach, the interpretation '3rd person' results from the absence of positive values for the features [speaker] and [hearer]:

[+speaker, +hearer]	1st person inclusive
[+speaker, –hearer]	1st person exclusive
[–speaker, +hearer]	2nd person
[–speaker, –hearer]	3rd 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) case.[10]

- 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 potential "new" markers are required to 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 that are explicitly specified for a separate [person] feature, that is, 1st and 2nd person markers. This explains

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[10] 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 -∅, which is completely underspecified for person and number). However, 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 no 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.

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.

- 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.

- <u>Prediction</u>: 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.

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

5.1 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]

	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.

- In addition, clitics are obligatory in 3pl contexts, although the existent agreement ending (*-en*) seems to be distinctive.

- Obligatory clitic doubling in Piattino:

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[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.

(15) 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)

(16) 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. (15) above.

5.1.1 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 4 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]

5.2 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/ła** magn-a (enclitic: magn-e-**ło/ła**)	obligatory
1pl	(a) magn-emo	optional
2pl	(a) magn-è (enclitic: magn-è-**o**)	proclitic optional enclitic obligatory
3pl	**i/łe** magn-a (enclitic: magn-e-**łi/łe**)	obligatory

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

(17) 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

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

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[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.

- Similar to Piattino, the special properties of the distinctive clitics suggests that these elements are presumably better analyzed as agreement marking elements (see 5.2.1 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:
  i. The only homophonous endings are 3sg and 3pl /-a/.
  ii. 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

5.2.1 The inventory of pronominal forms

- Vicentino exhibits a rich inventory of pronominal forms including full tonic pronouns and three different series of clitic pronouns:
  i.   A set of enclitics which attach to the right of the verb in inversion contexts
  ii. A set of proclitics which signal person and number distinctions.
  iii. 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	ło	(e)l	–
3sg.fem	ła	ła	–
1pl	–	–	a
2pl	o	–	a
3pl.masc	ħi	I	–
3pl.fem	łe	łe	–

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	∅	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):

(19) Ti   (a)   no   *(te)   vien   da   Vicensa.
     you   CLIT.2SG   not   CLIT.2SG   come   from   Vicenza
     'You do not come from Vicenza.'

5.2.2 Analysis

- <u>Optionality of the non-distinctive clitic -*a*</u>: 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 (in particular, no new agreement formatives can be coined for 1st person forms, where only the non-distinctive clitic *a* is available).

- <u>3rd person forms</u>: 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: -ło)	-a
3sg.fem	ła (inversion: -ła)	-a
3pl.masc	I (inversion: -łi)	-a
3pl.fem	łe (inversion: -łe)	-a

Table 12: Development of gender and number agreement (3rd person) in Vicentino

- 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.

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[14] Note that the negation *no* accompanies verb movement in inversion contexts:
    (i) No   vien-łe   mia   a   casa   stasera?
        not   come-CLIT.3PL.FEM   PRT   to   home   tonight
        'Are they really not coming home tonight?'

6. 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.

(20) [1, +pl]   ↔   /-an/   (1pl)
      [1, –pl]   ↔   ∅   (1sg)
      [2, –pl]   ↔   /-st/   (2sg)
      [+pl]   ↔   /-ant/   (3pl)
      elsewhere ↔   /-t/   (3sg, 2pl)

(21) [1, +pl]   ↔   /-an/   (1pl)
      [2, +pl]   ↔   /-ts/   (2pl)
      [1, –pl]   ↔   ∅   (1sg)
      [2, –pl]   ↔   /-st/   (2sg)
      [+pl]   ↔   /-ant/   (3pl)
      elsewhere ↔   /-t/   (3sg)

- 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.
- Alternative analysis: 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:

(22) [–speaker, –hearer, +pl]   ↔   /-ant/ (3pl)
      [+speaker, +pl]   ↔   /-an/   (1pl)
      [+speaker, –pl]   ↔   ∅   (1sg)
      [+hearer, –pl]   ↔   /-st/   (2sg)
      elsewhere   ↔   /-t/   (3sg, 2pl)

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

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[15] Alternatively, /-ant/ could be analyzed (more economically) as [–Participant in Speech Event, +pl], adopting the binary person feature system proposed in Halle (1997). However, the fact that the final segment /-t/ shows up only in non-first person contexts (2sg /-st/, 3sg /-t/, 2pl /-t/, 3pl /-ant/) might be taken to indicate that /-ant/ carries a specification for [–speaker] (or, in Halle's system, [+Author in Speech Event].

(23) [+speaker, +pl]   ↔   /-an/ (1pl)
     [+hearer, +pl]   ↔   /-ts/ (2pl)
     [+speaker, –pl]   ↔   ∅   (1sg)
     [+hearer, –pl]   ↔   /-st/ (2sg)
     [+pl]   ↔   /-ant/ (3pl)
     elsewhere   ↔   /-t/ (3sg)

- 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.

(24) [+hearer, +pl]   ↔   /-ts/ (2pl)
     [+speaker, –pl]   ↔   ∅   (1sg)
     [+hearer, –pl]   ↔   /-st/ (2sg)
     [pl]   ↔   /-an/ (1pl, 3pl)
     elsewhere   ↔   /-t/ (3sg)

(25) [+speaker, +pl]   ↔   /-ma/ (1pl)
     [+hearer, +pl]   ↔   /-ts/ (2pl)
     [+speaker, –pl]   ↔   ∅   (1sg)
     [+hearer, –pl]   ↔   /-st/ (2sg)
     [+pl]   ↔   /-an/ (3pl)
     elsewhere   ↔   /-t/ (3sg)

- <u>Open questions</u>: (i) status of negative feature values; (ii) reintroduction of a feature combination that signifies "3rd person".

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 further promoted 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]

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[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 meanings (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 2pl 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'	vegner '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'	vegner 'to come'
1sg	daga	Fassa	possa	vegna
2sg	dai/daghi	Fassi	possi	vegni
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

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[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., Rohlfs 1949: 346f., Savoia 1997: 84).

- The 2pl present indicative and 2pl present subjunctive forms of these irregular verbs are identical in Vicentino.
- <u>Proposal</u>: 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.[18]
- 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).

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[18] Alternatively, we may assume that the reanalysis of enclitics satisfied the Blocking Principle by creating a verb form which is specified for clausal mood, that is, [+interrogative]. Note that this idea is also already present in historical comparative grammars of the Romance languages such as Meyer-Lübke (1894: 367f.) or Rohlfs (1949: 179f.). See also Haiman & Benincà (1992) and Savoia (1997: 85f.).

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