Inner/Outer Politeness in *Central Māgadhan Prākrit* Languages: Agree as Labeling[1]

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Abstract

Although most of the languages to be discussed in this paper are at one time or another have been considered dialects of Hindi, they are all genetically unrelated to Hindi as they originate from *Māgadhan Prākrit* (the Eastern branch of Middle Indo-Aryan) whereas Hindi originates from *Saurasenī Prākrit* (the Central branch of Middle Indo-Aryan). The languages to be discussed in this paper are Maithili, Magahi, Angika and Kurmali, out of which the first two have been studied to some extent but not the latter two, I will designate this group collectively as *Central Māgadhan Prākrit* (CMP). Within the Māgadhan group of Eastern MI languages, what distinguishes these languages from other languages of the Eastern group as well as from the Central Middle-Indic languages is their agreement system. All these four languages show what is called Multiple Agreement Phenomenon (MAP). Furthermore, the pattern of agreement is seen to be crossing rather than nesting.

These languages add to their uniqueness further by showing a rare phenomenon of Addressee/ Allocutive Agreement phenomenon (AAP), where politeness also has a later, wider dimension. I will argue that what connects the two is the feature of honorificity. The feature of honorificity that controls MAP is seen as a matter of the *v*P domain, whereas the full-blown expressivity of AAP is a matter of a higher head responsible for speech act. Though the paper ends up arguing for the position that MAP/ AAP requires two different types of Agree, the general claim that the paper makes is that CMP languages have potentially two agreement slots, both of which are morphologically overt.

More abstractly, by way of examining honorificity, I will claim that morphological agreement is a way of identifying a Phase, and that the Agree operation is for the purpose of labeling and since labeling drives interpretations, Agree is best seen to serve the C-I interface. Less abstractly, the fact that a "crossing" rather than a "nesting" pattern of agreement is obtained in multiple agreement languages studied in this paper (V-AGR$_{SUBJ}$-AGR$_{NON-SUBJ}$), points towards an unexpected sequence of Agree, which can be termed as "Top-2". However, it is shown that Top-2 fails the PIC and cannot capture the case facts. I will therefore propose that a notion of top-down "minimal Agree" be considered to account for the facts obtained in these languages, which is claimed to be yet another way of resolving a possible labeling problem with a {XP,YP} sequence (cf. Chomsky, 2013).

1. The Proposal in Brief

On the one hand, this paper is about manifestation of politeness being of two different types, one is housed in the lower (vP) domain and the other is more like adding something more to the sentence as a whole, with the whole sentence being under its scope. On the same line as 'duality of semantics', this state of affairs can be imagined as a 'duality of discourse/ pragmatics'; however, the data from the languages studied in this paper clearly show that this duality is represented empirically, that is, syntactically. The later, 'higher' level of politeness will be shown as a matter of a 'Speech Act' head which takes the whole CP under its scope. I implement this duality in syntax by employing two different types of Agree relations and further claim that these Agree relations are also a result of the process of labeling as per the labeling algorithm in line with Chomsky (2013); the fact that the latter can handle such a duality, makes a strong case for a proposal that Agree is labeling.

In particular, after introducing the two mains bits of data points, namely, multiple agreement and allocutive/ addressee agreement, prevalent in these languages, the paper proposes that these interesting empirical phenomena are but a reflection of how agreement in general is sensitive to what constitutes a phase; with politeness marking as an exemplar the paper therefore shows that these two types of agreement are played out at different zones of the clausal architecture, namely, at the phasal levels vP and CP. In terms of theoretical issues, the paper

demonstrates that although the 'outer' addressee agreement can be accounted for by referring to a Speech Act head scoping over the whole clause, the two possible ways of dealing with multiple agreement, namely, intervention based Agree and cyclic Agree, both fail on account of not being sensitive to what is a Phase; the paper shows that these two types of Agree also do not pass a Labeling Algorithmic account. Finally, an account is provided which makes use of cyclic Agree but in a standard Top-down direction, which not only accounts for the sequence of the agreement morphemes in these languages, but also passes the Labeling Algorithm.

The paper is organized as follows. The next section (section 2) discusses first the justification for the denomination *Central Māgadhan Prākrit* in the contexts of the languages taken up for study as well as present the data on multiple agreement in the four languages of the group. This is followed by a descriptive introduction to the phenomenon of multiple agreement in section 3 with an eye to distinguish these from cases of clitic agreement. In section 4, the rare phenomenon of Addressee/Allocutive agreement in these languages is discussed, followed by a short section summarizing the data in section 5. Finally, section 6 presents a detailed account of the two agreement phenomena in these languages with the theoretical demonstration of the 'Agree as labeling' thesis, whereas section 7 is specifically devoted to an agree-based account of MAP. Section 8 concludes the paper by raising questions about the status of Agree and labeling.

2. Central Māgadhan Prākrit (CMP) Languages

Let us begin with some of the crucial historical facts about these group of languages in order to contextualize this study and also to justify the designation of this group that is being coined here. The core issue is that these languages are historically different from the more well-known languages like Hindi, of which, these languages have often been thought of as dialects. However, historically there was at least one variety, if not a group of languages, in the middle Indic period which was pushing towards the north and according to Hoernle became the major language of the north at that point:

> These circumstances seem to disclose the fact that sometime in the remote past the Māgadhan Prākrit must have reached up

to the extreme western frontiers and been the only language
of North India; but that in course of time it gradually receded
more and more towards the South and East before the advancing
tide of the Saurasenī Prākrit tongue, leaving, however, here and
there in the deserted territories traces of its former presence.

<div align="right">(Hoernle, 1880, p xxxi-ii)</div>

It appears perfectly justifiable to consider the Western Hindi
and Eastern Hindi as being as completely distinct languages.

<div align="right">(Hoernle, 1880, p ix)</div>

Therefore, it is important to see the history of this group of languages
from the east in the context of the paper as well as in any study of
Indo-Aryan languages in general. Grierson is therefore not far off at
well in expressing the following, which can be considered a guiding
principle for initiating research in this area:

It is therefore Prākrit languages of ancient India to which we
must look for the origin of the modern Indo-Aryan
vernacular.   (Grierson, 1886 [2005])

With this much background, let us turn next to the term I have coined
to designated these group of languages.

Since Prākrit is that important language of the east that the
languages to be studied in this paper are considered to have been
derived from, consider the following map (in Fig. 1) to understand
the position of Prākrit in time and space, where the X and the Y axes
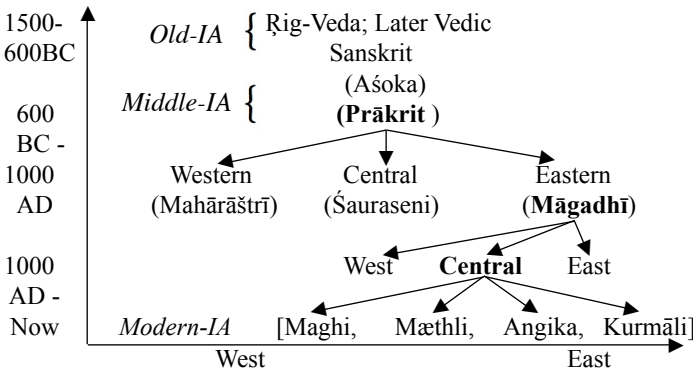represent respectively space (geography) and time.

Fig. 1: Māgadhan languages in time and space

As can be seen in Fig. 1, Prākrit (in bold) is situated in the middle-IA period, namely, 600 BC to 1000 AD, known as the Ashokan[2] period; whereas in terms of space it is firmly located in the east. However, the three recognized varieties of Prākrit spread across the space divide as western, central and eastern, are Mahārāštrī, Śauraseni, and Māgadhī, respectively. Major languages derived from these three Prākrits are Marathi/ Gujarati, Hindi/ Punjabi, and Maithili/ Bangla, respectively. It is the eastern group we focus on for the present study, within which, there is a further spatial division in terms of western, central and eastern. Among the modern IA languages representing these later divisions (around 1000 AD), Assamese (Oxomiya), Bangla and Odiya clearly constitute the eastern group, whereas the varieties Awadhi and Bhojpuri may be considered to constitute the western group. Geographically placed between these two out groups is the central group that we focus our attention on. The languages picked out of this central group for this study are traditionally written as Magahi, Maithili, Angika and Kurmali but the vernacular versions are as shown as in Fig. 1. The coinage "Central Māgadhan Prākrit" is now justified from the point of view of the time and space of the languages under study as an archi-term encompassing all the languages spoken in this area.

The genetic divergence between the Central and the Eastern branch of Prākrit (not Māgadhī though) is visible in obvious morphological and syntactic differences. For example, using the *-b-* (eastern) and the *-g-* (central) infix for the future; using *–l* (eastern) and *-a* (central) for past tense; using *–(kă)ra*[3] as the genitive in the eastern languages and varied forms in the central ones; using the affix *-ē* for locative in the eastern rather than a variety of post-positions as in the central ones. The eastern languages also use the oblique form of the genitive to form nominative plurals, use roots *ho, aha, rah, ach* as substantive verbs, past tense of the transitive use active, agreement inflection to the past base (e.g. base: *dēkh-l* 'see-PST' > *dēkh-l-am* 'see-PST-1' in Bangla), and finally, show difference between (in) transitive in 3rd person only (e.g. *dekh-al-ak* 'seen-PST-3' > *cal-al-a* 'walk-PST-3' Maithili).[4]

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[2] Named after King Ashoka who reigned from 268 - 232 BC.

[3] A remnant of the eastern *–ra* shows up in the pronominal forms in the descendents of the the central variety, namely, Hindi; e.g., *merā/ hamārā* for 'mine/ ours', etc.

[4] This distinction is however disappearing in Bangla: *dekh-l-o* 'see-PST-3' and *col-l-o* 'walk-PST-3'.

Demographically, the languages to be taken up for the present study, namely, Maithili, Magahi, Angika and Kurmali, are spoken in various districts of the states of Bihar and Jharkhand and their Ethnologue[5] figures are as follows:

LANGUAGE	SPEAKERS
Maithili	25,204,005
Magahi	20,362,000
Angika	725,000
Kurmali	37,000

Table 1: Languages and Number of Speakers (Ethnologue)

2.1. CMP and the Munda Languages

The phenomenon that is to be discussed in this paper, namely, multiple agreement phenomenon or MAP, is found within the Indian sub-continent in Munda (Austro-Asiatic) languages, which are claimed to have something like MAP. The following is an example from Santali:

(1)   uni   dɔ   am-ak'-kan-a-e
      3SG TOP **2SG**-GEN-COP-FIN-**3SG:SUBJ**
      'He is yours.'   (Ghosh, 2008)

Note that in (1), the verb carries agreement markers for both the arguments. The fact that the Māgadhan languages listed in Table 1 all have MAP may indicate a possible contact situation where the substratum Munda languages influence these languages in terms of MAP (as conjectured in Chatterji 1926). Given that some of the languages spoken in areas adjoining the CMP geographical region are in fact Munda languages (like Mundari, Santali, Korwa, etc.), this is a reasonable thesis. However, (1) is quite different from the examples listed later of MAP in the Māgadhan languages in incorporating full pronominals into the verbal structure, which therefore behave more like clitics. The same phenomenon seems to occur in at least another language of the Indian sub-continent, namely, Kashmiri where the auxiliary has pronominal clitics incorporated:

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[5] https://www.ethnologue.com/ visited March, 2013.

(2)   a. tse   vIchi-th-as   bI
         You-erg saw-2sg-1sg   me-abs
         'You saw me.'

      b. bI   chu-s-an-ay   su   tse   hava:lI   kara:n
         I-nom aux-**1sg-3sg-2sg** he-acc you-dat hand over doing
         'I am handing him over to you.'

                                          (Wali and Koul, 1997 in Manetta 2006:8)

There are other important points of differences too; these are briefly discussed in the following.

(a) <u>Clitics are forms of pronominals</u>: For example, the following table shows Mundari Agreement Markers/ Pronominals. Note that the clitics and the pronominals are quite similar, which is not the case in the CMP languages since in the latter, the agreement markers are not clitics and are quite different from pronominals; for example, in (17a), the pronominals for 'he (hon.)' and 'you (non-hon.)' are respectively, *o* and *tora*, whereas the agreement marker carrying the 3Hon+2Non-hon fused morpheme is *thunh*. The following table provides the agreement markers (clitics) in Mundari:

	SG	DL	PL
1st Inclusive	-ñ/ -añ	-laŋ/ -alaŋ	-bu/ -abu
1st Exclusive	---	-liŋ/ -aliŋ	-le/ -ale
2nd	-m/ -am	-ben/ -aben	-pe/ -ape
3rd	-el-il-eʔ/-lʔ/-aeʔ	-kin/ -akin	-ko/ ako

Table (2): Mundari agreement markers

(b) <u>Optionality of agreement marking</u>**:** Optionality of object marking is noticed in Sora (a South Munda language) in the following example where *gudeŋ* "call" is not marked with (either subject or) object clitic, but in the CMP languages, such agreement cannot be optional:

(3)   iɛr-ai-ɛn-a   tiki aninji gudeŋ-le
         go/come-CLOC-N.SFX-GEN after they   call-PST
         'After he came, he called them.'

                                          (Anderson and Harrison, 2008:330)

(c) <u>Bi-personal verb forms are not the norm</u>: Note first that either the subject (in (4a) with an intransitive verb) or both the subject and the object (as in (4b) with a causativized form of the same intransitive verb) is marked in the following, (4) being an example of a pro-clitic split that I will come to immediately below; also the subject agreement clitic (*ko* and *eʔ* in bold) climbs on to the Locative in (4a) and the causative subject in (4b), respectively, whereas the object clitic is incorporated into the verb in (4b) here:

(4) a. hon-ko   ote-re=**ko**   dub-ke-n-a
        child-PL   ground-LOC=3PL:SUBJ sit-COMPL-INTR-IND
        'Children sat on the ground.'

     b. Sona hon-ko=**eʔ**   dub-ke-d-**ko**-a
        Sona child-PL=**3SG:SUBJ** sit-COMPL-TR-**3PL:OBJ**-IND
        'Sona made the children sit.'

                                   (Mundari, Osada 2008:121)

Although Sora is a south Munda language not ever in contact with languages in Bihar, the interesting phenomenon of the 1st / 2nd plural subject showing up as a circumfixal, discontinuous morpheme (shown here in dotted lines) is worth mentioning, as in (5a,b). Sora also has a rare instance of a "bi-personal" verb form, that is, whenever there is another argument in the sentence with a different person feature, the verb is marked for both (as in (5c)). However, whenever the object is 2nd sg., the second part of the earlier discontinuous morpheme is replaced by a clitic representing that argument (as in (5a')); however, marking both the arguments in the verb is not the norm.

(5) a. ənlɛn **a**‧g i ʔy-t‧**ay**   →   a'. **a**-tiy-t-**am**
        we   1/2PL-see-NPST-1   1PL-give-NPST-[1>]2
        'We see.'   'We give you.'

     b. amben **a**-giʔ-t-**ey**
        you   1/2PL-see-NPST-2/3
        'you (PL) see.'

     c. əʔ-gij-lɛ-**be**-**ji**
        NEG-see-PST-1PL-3PL
        'We didn't see them.'

                       (Sora, Anderson and Harrison, 2008:328-330)

Note thus that both in (4b) and (5a,a',b), the verbal forms are marked with only one argument clitic (object and subject, respectively), bi-personal verbal form of agreement, as in (5b,c) are not the norm. Again, this single argument agreement marks a departure from the multiple agreement we notice in CMP languages.

(d) Pro-clitic split: As noted above, Munda languages have pro-clitics which often split across the verb and a pre-verbal word; for example, the subject clitic in the following is on the object and the object clitic is on the verb, shown here in bold:

(6)   a. pusi-kin seta-ko=**kin**   hua-ke-d-**ko**-a
           cat-DL dog-PL=3DL:SUBJ bite-COMPL-TR-3PL:OBJ-IND
           'The two cats bit the dogs.'

       b. seta -kin pusi-kin=**ko**   hua-ke-d-**kin**-a
           dog-PL   cat-DL=3PL:SUBJ   bite-COMPL-TR-3D:OBJ-IND
           'The dogs bit the two cats.'
                                                     (Mundari, Osada 2008:108)

    Examples here again show that the verb carries only a single clitic agreement morpheme (the object), different from CMP languages as pointed out in relation to (c) above, apart from the fact that the phe-nomenon of pro-clitic split is also specific only to Munda languages with cliticization rather than CMP languages.

(e) Presence of applicative suffixes: Applicatives are employed to mark indirect objects: in Santali and Mundari, the indirect object is marked with an applicative morpheme, -a in the first case and –ma in the latter with the verb:

(7)   a. dal-**a**-ŋ-a-**e**
           strike-APPL-1SG:OBJ-FIN-3SG:SUBJ
           'He strikes/ will strike for me.'   (Santali: Ghosh 2008: 55)

       b. am seta-ko=**ñ**   om-a-**ma**-ta-n-a
           2SG dog-PL=1SG:SUBJ give-BEN-APPL-2SG-PROG-INTR-IND
           'I am giving the dogs to you.'
                                                     (Mundari, Osada 2008:122)

The presence of an applicative head cannot be found in the CMP languages. We therefore conclude this section by saying that the languages included in the study are justified and the nature of the phenomenon to be discussed in quite different from clitic/ pronominal agreement found in other surrounding languages.

3. Multiple Agreement Phenomenon

In this section I initiate the description of the phenomenon of Multiple Agreement that is to form the data backbone for the study. MAP is shown in only a few languages of the world, like some Bantu languages of East Central Africa (Swahili), Mayan languages of Central America (Mam), Southern Tiwa (a Tanoan language spoken in New Mexico), etc.; the following are some of the examples from the published sources on these languages:

Southern Tiwa:
(8)   Ka-musa-wia-ban
       1sg.a.**2sg**-cat-give-past
       'I gave the cat to you.'   (Heck and Richards, 2007)

Mam:
(9)   ma   tz'-ok   **n**-tzeeq'-n-**a**
       Asp   2s.ABS-dir1s.ERG-hit-dis-1s/2s
       'I hit you.'   (England, 1983)

Swahili:
(10) Juma **a**-li-**m**-busu   Fatuma
       Juma he-PAST-her-kiss   Fatuma
       'Juma kissed Fatuma.'   (Vitale, 1981)

As is obvious, MAP involves two agreement slots, namely, AGR_1 and AGR_2. That is, apart from agreeing with the subject NP, the verb may agree with another non-subject NP, which could be the DO, the IO, the genitive NP within the DO or the subject. Note also that at least for Mam, we clearly see that the pronominal forms are quite distinct from the agreement markers, making this a phenomenon associated with MAP as pointed out in Section 2.

Having shown the phenomenon of multiple agreement in the world's languages, let us now look at the data from the four languages chosen for the study in each of the subsections below.

3.1. Kurmali

Kurmali is different from the other three languages in showing gender agreement as well (though only in the 3rd person) in addition to number and person agreement. However, in multiple agreement cases the masculine-feminine distinction is neutralized though the neuter distinction is retained. Honorificity too works differently in this language; unlike many languages, for example, Hindi which has *aap* '2.SG.HON' or *ve* '3.SG.HON', Kurmali pronominals do not mark honorificity, but rather the plural pronominal forms like *haamre* 'we', *tohre* 'you.PL', and *okhre* 'they' are used to mark the same. When this happens, the verb agrees with the pronominal, which is always in plural. When the honorific subject is in 3rd person and a proper name is to be used, *okhre* is used with it (optionally), as in (11), which uses a 3.PL pronoun to mark honorificity. In a way, this marks Kurmali out to be an outlier due to its differing strategy of politeness marking and its gender agreement (see (12)). In (11) the proper name subject *Panchanan* is intended to be honorific, but the honorificity is captured through a 3.PL pronominal form, namely, *okhre*. Thus although there is no honorific marker with the verb, the agreement of the pronoun shows up in the verb. It is also the case that in many languages of the region, plurality does carry the politeness effect. The following Kurmali data is from Mahto (1989):

(11) Panchanan   okhre   kaahaa ge-l-aa?
      P.H   3.pl.NOM   where   go-PAST-3.pl
      'Where did Panchanan go?'

(12) a. Mohan   tej   hek-e
         M.3sm   intelligent be.PRS.3sm
         'Mohan is intelligent.'

      b. Sonia   tej   hek-ii
         S.3sf   intelligent be.PRS.3sf
         'Sonia is intelligent.'

   c. kitaab-ṭaa bes   hek-ei
      book-CLA good be.PRS.3sn
      'The book is good.'

As opposed to Maithili, in Kurmali, the agreement morphemes for subject and non-subject are isolable, the following is an example of MAP with a transitive verb:

(13) Mohan-e   to-ke   dekh-l-o-u
      M.3sm-NOM   you-D/A   see-PAST-3s-2s
      'Mohan saw you (sg.).'

Note that the agreement path here is crossing, as will be the case in others languages. If we draw a line from 3s to Subject and 2s to Object, respectively, they will cross each other, giving rise to what is being identified here as a crossing rather than nested pattern of agreement. However, given the checking theory (or Agree), crossing rather than nesting has to do more with what is expected to be the agreement marker "closest" to the verb; in a bottom up derivation, the object morpheme is expected to be the closest, with checking/ Agree with the lower cycle having taken place first. The following shows that Case marking on a DP is a requirement for agreement, exactly opposite of what we find in Hindi/ Urdu where default agreement (3sm) obtains when both the subject and the object are case marked:

(14) a. Mary-ne   aam-ko   khaa-y-a   Hindi
       M.3sf-ERG   mango-A/D   eat-PRF-3sm

    b. Mohan-e   aam-ṭaa-ke   khaa-l-e-i   Kurmali
       M.3sm-NOM   mango-CLA-A/D eat-PAST-3s-3s
       'Mohan ate the mango.'

The ditransitive pattern can be seen in the following, although this example as such cannot be used to decide between crossing versus nested, other data from Mahato (1989) confirm a crossing pattern. Since looking at more unambiguous data involves looking at the Genitive DP agreement where facts are much more complicated in Kurmali, I will not discuss them here, see Mahato (1989) for details.

(15) tor   beṭa-ṭaa-y   okhar   beṭii-ṭi-ke
      you.2s.GEN   son-CLA-NOM   3p-GEN daughter-CLA-A/D
      ek-ṭaa   kitaab   de-l-e-i
      one-CLA   book.3sn-ACC   give-PAST-3s-3s
      'Your son gave a book to their daughter.'

To conclude this section, we note that Kurmali has isolable inflections showing agreement in person/honorificity-number and gender, though only in 3ʳᵈ person; in the domain of ditransitives, the IO takes preference over the DO in agreeing with the verb. Furthermore the verb agreement show crossing rather than nested pattern.

3.2. Maithili

Maithili shows agreement in person and honorificity, the inflectional affixes on the verb vary according to tense and transitivity, and are called 'primary' affixes by Yadav (1996):

	I PERSON	HH[6]	MH	NH		H	NH
PRESENT	-i	-i	-əh	-e/-ẽ		-əith	Ø/-əik
PAST	əhũ/-i	əhũ/-i	-əh	-e/ẽ	**TR**	-əinh	-ək
						(-əith)	
						(-əithinh)	
						-əkhinh	
					INTR	-ah	Ø
						(-əith)	
						(-əithinh)	
						-əkhinh	
FUTURE	Ø/-əik	Ø/-əik	-əh	-e/-ẽ		-ah	Ø/-əik
						(-əithinh)	

Table 3: Person and Honorificity markers in Maithili (Yadav 1996)

These affixes are seen in action in the following example:

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[6] Here HH, MH, and MH denote "High Honorific," "Middle Honorific," and "Non-Honorofic," respectively.

(16) a. əhã   ja   rəhəl   ch-i
        You.H   go   PROG   AUX-PRES.2H
        'You are going.'

    b. tõ   am   kha rəhəl   ch-əh
        You.MH   mango eat   PROG   AUX-PRES.2MH
        'You are eating a mango.'

    c. tõ   am   kha rəhəl   ch-e
        You.NH   mango eat   PROG AUX-PRES.2NH
        'You are eating a mango.'

However, with a human object, Maithili shows another slot for agreement, called 'secondary' agreement, by Yadav (1996); however, unlike some of the other languages of the group, the inflections are not individually identifiable:

(17) a. o   tora   dekh-əl-thunh
        He.H   you.NH.ACC/DAT   see-PAST-(3H+2NH)
        'He(H) saw you(NH).'

    b. həm hun-ka   dekh-əl-iəinh
        I   3.H-ACC/DAT   see-PAST-(1+3H)
        'I saw him(H).'

    c. tõ   hun-ka   dekh-əl-hunh
        you.NH 3.H-ACC/DAT   see-PAST-(2NH+3H)
        'You(H) saw him(H).'

Note that as per the description (in the glosses), therefore, the agreement pattern with the verb is crossing rather than nested. However, since in Maithili (though not in the other languages to be described in subsequent sections) the agreement morpheme is of a composite nature, one may question this identification. However, both Yadav (1996) and Jha (1985) before him mention that whenever "two personal terminations are to be employed, the personal termination of the nominative is placed before that of another case" (Jha 1985: 476). Thus, in Yadav (1996), as can be inferred from the table below, the glosses of the various forms are to be read as <Subj+Obj> template. For example, if we have 3H subject and 2NH object (as in

(17a) above), *(ə)thunh* is one of the possible forms with the possible gloss of 3H+2NH. If we now draw a line from 3H to Subject and 2NH to Object, respectively, they will cross each other, giving rise to a crossing rather than nested pattern of agreement.

This is a strikingly different property of MAP in these languages which is not found in other languages showing MAP (see examples (8)-(10)).[7] The table below summarizes the verb endings:

OBJECT / SUBJECT	3H	3NH	2H	2MH	2NH	I
3H	əkhinh	əkhinh	əinh	əkhunh	əkhunh	əinh
	əthinh	əthinh	(0)	əkhuhunh	əkhuhunh	
	əkhihinh	(əinh)		əthunh	əthunh	
	əthihinh			əthuhunh	əthuhunh	
	(əkəinh)					
	(əinh)	0				
3NH	əkəinh	əkəik	0	əkəh	əkəuk0	
	(əinh)	(əik)		(əh)	(əuk)	
2H	iəinh	iəik	-	-	-	0
		0				
2MH	əhunh	əhək	-	-	-	0
	əhəh	əhəh				
2NH	əhunh	əhik	-	-	-	0
1	iəinh	iəik	0	iəh	iəuk	-
		(0)		io		

Table 4: Composite agreement markers for past tense in Maithili
(Yadav 1996: 174)

The crossing pattern of agreement we noted earlier in connection with (13) is also visible in the examples that we take up in this subsection, which show agreement with a genitive DP.

(18) a. həm mohan-ək guru-ke   dekh-əl-iəinh
          I   M.-GEN   teacher-ACC/DAT see-PAST-(1+3H)
          'I saw Mohan's teacher.'

---

[7] Except in the case of (9) where we seem to get a crossing order as well, with the difference that the subject and object agreement markers are on either side of the verb unlike in the CMP languages. That is, in case of Mam, it seems that the verb form does not provide us a clue as to which marker is the "nearest" one; whereas that is not the case in CMP languages.

b. həm mohan-ək kukur-ke   dekh-əl-iəinh
   I   M.-GEN   dog-ACC/DAT   see-PAST-(1+3H)
   'I saw Mohan's dog.'

Note that the agreement pattern in case of subject Genitive DP is
crossing rather than nested. That is the composite agreement marker
-*iəinh* shows that the nearest marker to the verb is the subject rather
than honorificity of the "subject" of the object DP [*mohan-ək guru/
kukur*], namely, *mohan*. Note also that the honorificity of the object
DP ('teacher'/'dog' in (18)) does not matter in the verbal agreement,
where the agreement is with the "subject" of the DP, i.e., *Mohan*.

   Within the ditransitive structure, the overtly Accusative/ Dative
marked NP (IO) agrees with the verb apart from the subject agree-
ment occupying the AGR_1 slot giving us a crossing path given a dual
base hypothesis (Bhattacharya and Simpson, 2011), as shown below:

(19) a. o   hun-ka   kitab dəit   ch-əthinh
        He.H he.H-A/D book give.IMPRF   AUX.PRS-(3H+3H)
        'He gives him a book.'

     b. həm hun-ka   toh-ər   kitab de-l-iəinh
        I   3H-A/D   2NH-GEN book give-PAST-(1+3H)
        'I gave him your book.'

     c. tõ   həm-ər kitab hun-ka   de-l-hunh
        you.NH I-GEN book he.H-A/D   give-PAST-(2NH+3H)
        'You gave my book to him.'

We thus conclude for Maithili that although the affixes are unanalyz-
able, given the glosses as they are, the verbal agreement pattern is
crossing. Furthermore, agreement is in composite person-number
and honorificity, and within the domain of the ditransitive, the IO is
preferred for agreement over the DO, just like in the case of Kurmali.

3.3. Magahi[8]

Let us now look at Magahi, which shows agreement with person only. However, unlike Kurmali and like Maithili, it also has honorificity agreement in addition. The subject inflections for intransitive can be isolated as follows (based on (Manindra) Verma, 1991:126):

PERSON	HONORIFICITY	AGR
I	Ø	-i
II	+	-a
II	-	-e
III	+	-thin
III	-	-ai

Table 5: Subject agreement for intransitive intransitive

The examples below from intransitive predicates depict these sets of agreement markers:

(20) ham/tu/u   ai-l-i/-e/-ai
      I/you/he.NOM   come-PAST-1/-2/-3
      'I/you/he came.'

(21) a. tu   ai-l-a
         You.H.NOM   come-PAST-2.H
         'You(H) came.'

      b. u   ai-l-thin
         he.H.NOM   come-PAST-3.H
         'He(H) came.'

Magahi, like all the other three languages of CM group shows MAP, and like Kurmali (but unlike Maithili), the inflections for subject and non-subject agreements on the verb are isolable. The following table presents the isolated morphemes where the infix –a- has been identified as an 'Object Marker' following (Sheela) Verma (1985):

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[8] For the purpose of this paper, I have only made use of published sources and have not re-checked the data presented there. However, as far as Magahi is concerned, some initial fieldwork done recently reveal that there is a substantial variation among the current speakers with respect to the data presented here. The Magahi data therefore requires re-checking in the future.

SUBJECT	OBJECT	VERB			
		AGR$_1$	OM	AGR$_2$	HON
I	III	-iy-	-a-	-i-	-n
I	III	-iy-	-a-	-i	
I	II	-iy-	-a-	-u-	[+round]
I	II	-iy-	-a-	-u	
III	II	-k(Ø)-	-a-	-u-	[+round]
III	II	-k(Ø)-	-a-	-u	
III	III	-k(Ø)-	-a-	-i-	-n
III	III	-k(Ø)-	-a-	-i-	

Table 6: Magahi MAP (based on Sheela Verma, 1985)

In Table 6, the shaded part (rows 3 and 5) undergo a phonological rule to end up as –*o*. Note also that Sheela Verma identifies an Object Marker (OM) among the morphemes of Magahi and [+Round] as an honorific feature; however, since this OM remains constant, it is not clear what role it plays in the grammar. The analysis to be presented later in section 6, will not be dependent in any way on the presence of the OM. The phenomenon of multiple agreement as in the other languages is shown below:

(22) a. ham un-kaa   kah-l-iy-a-i-n
           I   3.H-A/D   tell-PAST-1-OM-3-H

      b. ham ok-raa   kah-l-iy-a-i-Ø
           I   3.NH-A/D tell-PAST-1-OM-3-NH
           'I told him.'

      c. ham to(h)-raa   kah-l-iy-o
           I   2.H-A/D   tell-PAST-1-3H

      d. ham to-raa   kah-l-iy-a-u- Ø
           I   2.NH-A/D tell-PAST-1-OM-2-NH
           'I told you.'

      e. u   to(h)-raa   kah-l-k-o
           He   you.H-A/D   tell-PAST-3-2H

      f. u   to-raa   kah-l-k-a-u- Ø
           He   you.NH-A/D tell-PAST-3-OM-2-NH
           'He told you.'

g. u   un-kaa   kah-l-k-a-i-n
   He   he.H-A/D   tell-PAST-3-OM-3H

h. u   ok-raa   kah-l-k-a-i- Ø
   He   he.NH-A/D   tell-PAST-3-OM-3-NH
   'He told him.'

As we can clearly notice, MAP in Magahi also has a crossing pattern as in the other two languages.

Finally, for Magahi, the agreement pattern within ditransitives, like its sister languages, shows preference for IO agreement, or a case marked NP rather than the one without any case marking (a requirement which is exactly opposite to that in Hindi as pointed out in (14)), following a crossing pattern:

(23) a. ham ok-raa   paisaa de-l-iy-a-i-Ø
         I   he.NH-A/D   money   giv-PAST-1-OM-3-NH

    b. ham un-kaa   paisaa de-l-iy-a-i-n
         I   he.H-A/D money   giv-PAST-1-OM-3-H
         'I gave him money.'

We can therefore conclude for Magahi that in unmarked transitive sentences, it shows a crossing MAP agreement pattern as in the other languages. Furthermore the inflection is isolable (like Kurmali but unlike Maithili) and they agree in Person/honorificity-number (as in Kurmali), with the IO preceding the DO in agreeing with the verb, as in the other two languages so far.

3.4. Angika

Angika is the least discussed in the literature, although, Grierson (1887) describes a language spoken in the Bhagalpur area that is a form of Maithili influenced by Bangla (the Mithila-Bengali language, MB). I wish to contend that this is either Angika as it was spoken in the 19th Century or a dialect of it. Based on field work and a table like that of Magahi can be constructed for Angika as follows (based on Kumar, 2011):

SUBJECT	OBJECT	VERB	
		AGR$_1$	AGR$_2$
I	I/III (H/NH)	-iy-	-ai
I	II (H)	-iy-	-hõ
I	II (NH)	-iy-	-au
III	I	-ak-	-ai
III	II (H)	-ak-	-hõ
III	II (NH)	-ak-	-au
III	III (H/NH)	-ak-	-hĩ/-ai

Table 7: MAP in Angika

The examples are as follows where we again see crossing pattern for MAP:

(24) a. hammẽ   hun-ka/ ok-raa   dekh-al-iy-ai
         I   3.H-A/D/ 3.NH-A/D   see-PAST-1-3H
         'I saw him (H/NH).'

      b. huni/wẽ   ham-raa   dekh-al-ak-ai
         3.H/3NH   1-A/D   see-PAST-3-1
         'He saw me.'

      c. huni/ wẽ   to-raa   dekh-al-ak-ho
         3.H/ 3.NH 2.H-A/D   see-PAST-3-2H
         'He saw you(H).'

      d. huni/ wẽ   to-raa   dekh-al-ak-au
         3.H/ 3.NH 2.NH-A/D   see-PAST-3-2NH
         'He saw you(NH).'

In ditransitives, as expected, the agreement is with the IO:

(25) hammẽ mohan-rā   mastar-ka/kuta-waa   dekh-al-iy-ai
      I   M.-DAT   teacher-A/D/dog-ACC   see-PAST-1-3
      'I saw Mohan's teacher/ the dog.'

(26) wẽ   hun-kar   kitaab ham-rā   del-ak-ai
      He(NH)   he(H)-GEN   book   I-DAT   give-3-3
      'He(NH) gave his(H) book to me.'

Again, as expected, we obtain a crossing pattern here. Thus we conclude for Angika that it obtains a crossing pattern for MAP in transitive sentences. Agreement inflections are isolable and they agree in Person/ honorificity-Number, with IO preceding over DO in agreeing with the verb.

Having looked at 4 CMP languages, we obtain the following interesting syntactic typological patterns:

	Maithili	Magahi	Angika	Kurmali
MAP	Crossing	Crossing	Crossing	Crossing
Ditransitive	Crossing	Crossing	Crossing	Crossing

Table 8: Intra-Language Differences

What the table reveals is that in MAP and in ditransitives,[9] we obtain a crossing pattern of agreement where the 1st agreement slot is occupied the subject agreement marker and the 2nd is variously occupied by a non-subject argument. This, then can be considered as the diagnostic for MAP in CMP languages.

4. Addressee Agreement

In this section, I move on to the last bit of data that interests us, namely, the Addressee/Allocutive Agreement Phenomenon (AAP). As pointed out in the introduction AAP also seems to capture politeness, like MAP. The question that arises is, why do languages have these two strategies for politeness? I would suggest that these two types of politeness are of fundamentally different nature and that the grammar of the language makes it clear that they are manifested differently.

We have seen so far that all the four languages of the Māgadhan languages under study form a distinct group different from other languages of the same group as well as closely related (and more dominant) languages like Hindi, in terms of showing MAP. As noted, these languages add to their uniqueness further by showing the rarer phenomenon of AAP.

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[9] In independent research (reported in Bhattacharya, 2011, 2013) I have found that the pattern in Genitive/ Dative Subject DP agreement is mostly nested rather than crossing, casting doubt on the subjecthood status of such case-marked DPs. However, a detailed discussion of the patterns found in those examples is beyond the scope of this research and is reserved for the future.

In the Māgadhan languages, Basque-like Allocutive agreement (see below) is a distinctive character of the agreement phenomenon. This was reported by Verma (1991) for Magahi, followed by Davison (1999). Note that the usual agreement is suspended in favor of AAP in the following:

(27) a. ham   ai-l-i   →   ai-l-i-**o**   ⌐——————▶ ??(H)
         I.NOM come-PAST-1   come-PAST-1-2H

     b. u   ai-l-ai   →   ai-l-Ø-**au**   ⌐——————▶ ??(NH)
         he   come-PAST-3   come-PAST-3-2NH

The secondary agreement inflection here (2H and 2NH, respectively, in a. and b. above), besides the subject agreement marker (for 1st and 3rd person subjects, respectively, in a. and b. above), depends on the status of the Addressee. Examples with transitive predicates follow where the honorificity of the DO is irrelevant:

(28) ham ok-raa/ un-kaa   dekh-al-i-o/   dekh-al-i-au
      I   3.NH-DAT/3.H-A/D see-PAST-1-2H/ see-PAST-1-2NH
      'I saw him.'

In (28) the secondary agreement morpheme on the verb, i.e. –*o* or –*au* denote the honorificity degree of the addressee, not the object. Also note that the Addressee agreement inflection is nothing but the 2nd person inflection marker. AAP standardly takes place in Maithili and Angika too, the following is an example from Angika:[10]

(29) huni ok-raa dekh-al-ak-hin → dekh-al-ak-**hõ**
      3(H) he-A/D see-PST-3-3   see-PAST-3-2H
      'He saw him.'

This example shows that optional AAP takes place in the version to the right of the arrow where the object agreement morpheme is affected, and is replaced by the person marker for the addressee. Thus the addressee component never affects the subject.

   The Maithili examples are as follows (all partially adapted from Bicket, Bisang, and Yadava 1999):

---

[10] However, this has not been reported for Kurmali in Mahto (1989)

(30) a. ghar   dekh-l-iaik
      house   see-PAST-1+3
      'I saw the house (belonging to a person).'

    b. ghar   dekh-l-iainh
      house   see-PAST-1+3H/HH
      'I saw the house (belonging to a person of high status).'

(31) ham okra   maar-l-iah
    I   2NH.DAT beat-PAST-1+2MH
    'I beat him[NH] (who is related to you[MH]).'

Note that in (30b), the person of high status is not present in the sentence but still the verb carries a marker of deference. Similarly, in (31) the marker of 2MH is the addressee and not either of the arguments present in the sentence.

    In one analysis, Bickels *et al* (1999), these markers are a result of representation in language of social hierarchy underlying evaluation of people's "face" and social solidarity defining the degrees of "empathy" to which people identify with others. The pragmatic-semantic effects of AAP will be discussed further in section 6.

    This phenomenon has been identified as Allocutivity in Basque linguistic tradition and is shown by the following example, where the dotted arrow clearly captures the 'oddness' of the phenomenon, namely, that the verb seems to carry an agreement morpheme of a person that does not seem to appear in the clause itself:

(32) Lagunak   ni   ikusi n-ai-k-Ø   ┈┈┈┈▶
    friend.ERG   me.ACC   seen 1s.ABS-Pr.AUX-2sm-3s.ERG
    'The friend saw me.'

                                        (Oyharçabal, 1993)

Based on this, Miyagawa (2010) claims that politeness marking in Japanese is a form of Allocutive agreement and follows Harada (1976), who calls them as "Performative Honorifics."

5. Summary of the Data

Summarizing the data conclusions very briefly, we note the following:

(1)   agreement can be:
      a. fused Person-Number + HON, or
      b. Person/HON-Number + Gender (Kurmali)

(2)   We also saw that all the languages show MAP, the inflections
      may be:
      a. Isolable (Kurmali, Magahi, Angika), or
      b. Not (Maithili)

(3)   All languages show IO > DO in ditransitives

(4)   Addressee Agreement (Maithili, Magahi, Angika)

6. Accounting for AAP and MAP

Before the analysis is presented, let us try to situate AAP within the paradigms of grammar we are familiar with. The idea of treating the meaning of an S as consisting of Content and Force is an old one. Furthermore, connected to this is the notion of Speech Act (SA) which assumes that sentences perform action. As far as AAP is concerned, this paper makes the claim that like Tense/ Finiteness at S-level, SA provides a "3-dimensional," out-of-the-sentence pegging in the discursive world. Thus, whereas the inner honorificity brought about through MAP, in some sense, expresses the speaker's attitude towards the arguments present in the sentence, the outer addressee component brought about by AAP expresses the speaker's attitude towards the whole sentence; in short, *v*P and CP politeness, respectively.

This seems to be the case in Japanese as well:

(33) a. Sam-ga **o**-warai-**ninat**-ta   [argument]
         Sam-NOM subj.hon-laugh-subj.hon-PAST
         i. 'Sam laughed.'
         ii. 'The speaker honors Sam.'

b. Mary-ga ringo-o tabe-**mashi**-ta   [performative]
   Mary-NOM apple-ACC eat-perf.hon-PAST
   i. 'Mary ate the apple.'
   ii. 'I respect you.'   (Potts and Kawahara, 2004)

Here, in (33a) the second meaning associated with the sentence can be termed the 'argument' meaning, due to the use of the subject honorific markers; honorifics seem to add a layer independent of the sentential content. In (33b), however, the second layered meaning seems to be disconnected from the surface meaning altogether; here, honorificity is associated with some aspect of the propositional content of the sentence. They seem to establish a dimensional relationship with either some arguments of the sentence and the speaker or with the sentence as a whole, the latter is the true meaning of "a way into the world". This is what the addressee component seems to be doing, it is more than an illocutionary act, it is a performative act and honorifics seem to bind these two things in languages, the sentence and speaker's attitude towards it.

In order to deal with multiple agreement in CMP languages, two issue are faced, namely, the crossing pattern of agreement – which is a reflection of the *procedural* aspect of agreement in these languages, and the occurrence of addressee agreement. Note that the binary-valued features to account for persons, like [±AUTHOR] and [±PARTICIPANT] (of Noyer, 1992 and others) cannot account for either honorificity of arguments for MAP and the addressee component in AAP. There have been other exciting accounts that might feasibly apply to the issue at hand, for example, a series of papers by Béjar and Rězáč (2009), Rězáč (2003) and Nevins (2011) on split feature phenomenon in Georgian, Intelmann, Basque, etc.—initiated in the generic work by Anagnostopoulou (2005); by Sigurdsson (2003) on three varieties of T (based on Reichenbachian categories); by Nevins (2008) on impoverishment rules and repair operations that study mismatch between Syntax and Phonology.

However, all of these works – though based on agreement properties of languages with different agreement phenomena from what we are looking at here (namely, MAP and AAP) – are trying to capture the deeper underlying notion of passing up and down a feature across the inner/ outer domain of the clause. The analysis that I am outlining here not only does capture this phenomenon but also makes the crucial claim that politeness may be a deeper property of languages

which shows up in the lower, verbal domain symbolically, in ex-
pected ways, namely, in the form of agreement markers on the verb.
However, politeness also has a later, wider dimension with the role
of "releasing" the clause into the real world of discourse. And that
this transition is also captured in some languages, morphologically
in the form of Allocutive agreement affixes.

6.1. Accounting for AAP through Speech Act

There is a model available that tries to accommodate this "outside-
the-sentence" dimension of the clause in terms of the existing symbolic
system, that of Speas and Tenny (2003), which provides a Speech
Act (sa here) head that embeds the clause:

(34)   SaP
              (Speaker)   sa
                          sa   sa*
                    (Utterance Content-UC)   sa*
                             C
                                  sa*   (Hearer)
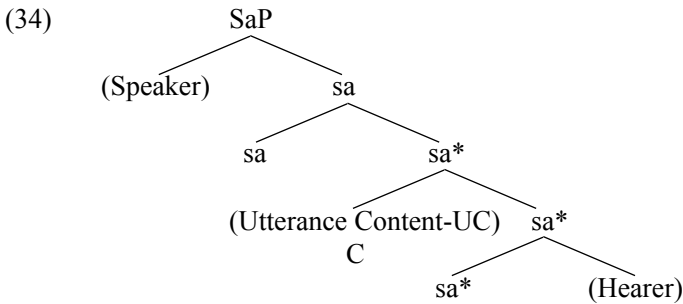
The structure here is based on Hale & Keyser's (1993) idea that Lexical
Conceptual Structures (LCS) emerge out of three basic structural rela-
tions like head-complement, head-spec, and head-external argument.
However, since the head moves to check a feature with the external
argument, it creates a shell structure as above. Here, the Speaker is
the AGENT, UC is the THEME, and the Hearer is the GOAL of the
speech act head. Thus, the sa head has three arguments with these
specific pragmatic or P-roles, lined up as in (34).

Given the nature of the AAP, a Probe responsible for such agree-
ment must be found at C—the domain of discourse-like properties.
This is based on the observation in Oyharçabal (1993), reported in
Miyagawa (2010) that allocutive agreement is found only in root
clauses without a lexical C, which led the former to propose that
such agreement is related to C, even though it is pronounced in T.
Thus we can consider the UC theme of (34) to be the CP over which
the saP super-structure is built, as in (35) below.

Within a familiar Probe-Goal system of Agree, we would also expect a Goal for such an addressee oriented Probe. However, the nature of the agreement is such that there is no overt DP present which can act as the Goal. Given the structure in (34) of Speas and Tenny, I assume that there is a null DP representing the Hearer,[10] on to which the relevant agreement morpheme is copied as a result of Agree. This also implies that given that we are dealing with a speech act phenomenon, it is required that the Probe must itself raise up to the highest sa head from where to scope over the clause (especially the addressee/ hearer) by establishing an Agree relation. I will also assume that all of C's features are not transferred to T (as is otherwise required), and given the special nature of Probe$_{ALLOC}$ it remains at C and is passed up finally to the higher sa, though C shares its φ-features with T, which T-agrees with the subject and the Probe$_{ALLOC}$ from sa agrees with the nearest NP in its C-command domain, i.e. the null Hearer DP. Note that this analysis is not strictly multiple Agree, as we are dealing here with 2 Probes and 2 Goals. The derivation is sketched below:

(35)

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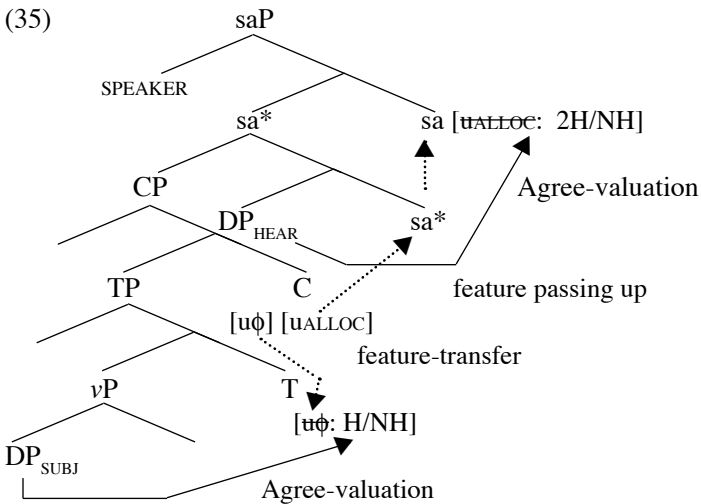
[10] Note that this may be construed as in Miyagawa (2010) except that he does not consider the Goal to be a null DP, the Goal is simply the Hearer in that work.

At the Pragmatic-Syntax interface (of Speas & Tenny), [~~uALLOC~~:2H/ NH] is spelled out as –*o*/*au* in Magahi or –*ho* in Angika or –*ainh*/ *iah* in Maithili, whereas [μφ: H/NH] is pronounced as –*i*/∅ in Magahi, –*ak* in Angika, and –*i* in Maithili in the examples (28), (29), (30b) and (31), respectively.

6.2. Accounting for MAP through Standard Agree

In this section, I will deal with MAP, and show that two possible available technologies are both faulty when it comes to account for MAP in CMP languages. First of all, there are basically two ways of dealing with multiple agreement: (i) intervention based locality, which implies variation in Agree; and (ii) Cyclic agree (Řezáč 2003; Béjar 2003), where Agree proceeds bottom-up, cyclically, which implies variation in the lexicon.

The first possibility would be to adopt a standard analyses of Agree, noting in addition that the ordering of the agreement affixes reveal the sequence of Agree relations, namely, the sequence of arguments/ non-arguments accessed; in other words, preferential Goal access. Given that the subject agreement marker is nearest to the verb, the sequence of the Agree relation must also reflect this. But what kind of syntax must one need to satisfy this morphology, where the subject agreement is nearer to the verb than the object agreement? Differential goal access is a possible solution, there is one probe and two goals and all the φ-features are matched with one goal that is the subject and then the honoroficity feature due to its different nature of featural property from the rest of the features of the probe, accesses the object later on and we obtain exactly the desired sequence of the agreement affixes. This is shown in (36):

(36)

$$\text{vP} \qquad \text{T [uPER][uNUM][uGEN][u\textbf{HON}]}$$

DP
[Φ]   VP   v

DP   V
[HON]
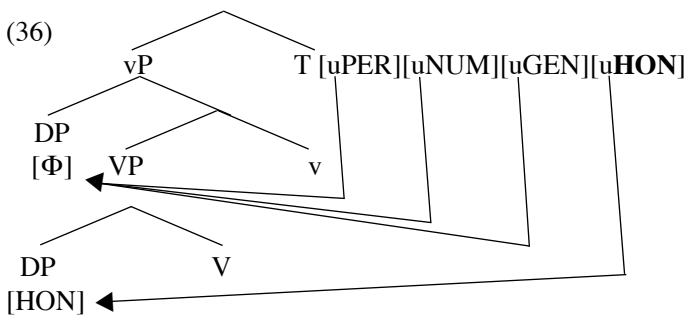
=> V-AGR$_{\text{SUBJ}}$ - AGR$_{\text{OBJ}}$

I assume that like the PCC effect related analyses based on An-agnostopoulou (2005), the lower argument is less featurally specific than the higher argument. Thus the [HON] feature in T remains unvalued after the first Agree relation between the Probe and subject Goal values the φ-features minus the [HON] features on the T, and is subsequently valued by the lower argument – the "odd" sequence of the agreement affixes reflects the access-sequence of Goals. This explains the crossing pattern we notice in MAP.

However, this analysis is problematic. I will now discuss two problems briefly in the following subsection.

6.2.1. The Problem with Intervention Based Agree with PIC and Case

The intervention based locality or the preferential goal access method of Agree, ignores a very basic fact, that the phases have to be spelled out. That is, by the time a *v*P is completed, the VP has to have been transferred. Similarly, by the time the derivation reaches C, when the features are transferred to T (as proposed for analysis of AAP in (35)), the VP has been spelled out. An intervention-based Agree is thus problematic since the VP with its internal argument is not there by the time T probes down; i.e. valuing of the [uHON] feature by the Object DP (as assumed in (36)) is simply not possible. In short, a Top-Down standard Agree violates the PIC (Phase Impenetrability Condition, Chomsky, 2000).
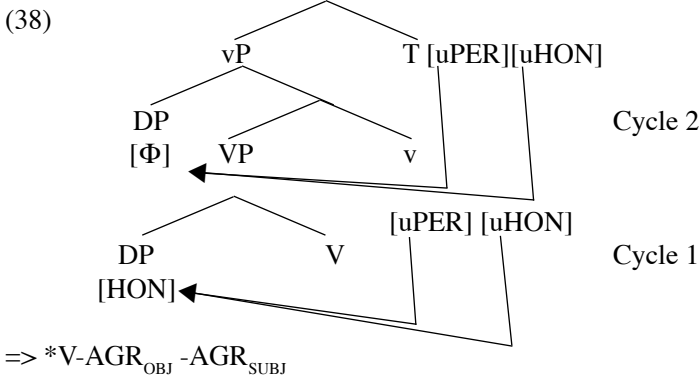
The second problem has to do with case. As noted, by the time the T probes down, the *v*P Phase is completed (since the derivation is bottom up) and VP of the *v*P has been transferred to the interpretive components, making it inaccessible for Agree. Thus the Agree arrow going from [uHON] to the DP_{OBJ} in (36) should not be possible as that DP is inside the VP and therefore inaccessible. In terms of Case, since we are here dealing with pronominal agreement (and not clitics, as shown in section 4), the DPs themselves need to get Case. The subject DP can get its case valued as a result of φ-Agree from T, but the object DP cannot get its case valued as a result of the suggested HON-Agree from T. There are two further possibilities: (i) since *v* is supposed to value ACC on the object as a result of φ-Agree from *v*, and since given the system proposed no φ-Agree is possible from any head other than T, it can be stipulated that *v* only does an old-style case Agree and values ACC on the object. However, this

would mean unnaturally separating Case from agreement; and (ii) keeping with the standard Agree mechanism, v does carry φ-features and at some stage v → T ensures AGR_{OBJ}. However this will result in the following configuration, making both (i) and (ii) undesirable:

(37) $[_T[_v V \text{ v-}AGR_O] \text{ T-}AGR_S] \rightarrow$ $* \text{V-}AGR_O\text{-T-}AGR_S$

6.3. MAP through Cyclic Agree

Cyclic Agree (CA) of Řezáč (2003) and Béjar (2003) makes sense from this point of view; since in CA derivation proceeds in a bottom-up fashion, a Phase is completed as an Agree cycle is complete.[12] Thus in CA, the VP agreement is done first and then the derivation proceeds to do the inflectional subject agreement, by definition therefore, CA will obtain a bottom-up agreement pattern; namely, that the object agreement marker will be nearer to the verb than the subject agreement marker. This is shown in the following (using a reduced set of features for the purpose of illustration):

(38)

vP   T [uPER][uHON]

DP   Cycle 2
[Φ]   VP   v

[uPER] [uHON]

DP   V   Cycle 1
[HON]

=> *V-AGR_{OBJ} -AGR_{SUBJ}

Although CA thus gets the case facts right, valuing ACC/DAT on object DP in Cycle 1 and NOM in Cycle 2, it gets the agreement wrong, since for reasons not clear, in these languages, the morphemes are sequenced top-down. Thus in these languages what we see is really "Top-2", the verb is always immediately followed by the subject agreement morpheme and then the other agreement morpheme(s)

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[12] A more detailed version of Cyclic Agree will be presented in section 7, where the exact steps of CA will be outlined; also see Note 16 in this connection.

follow, whether indirect object or DO (if no IO). This is a problematic corner that the analysis has pushed itself in, where the language data demands top-2, i.e., we need V-AGR$_{SUBJ}$-AGR$_{OBJ}$, but bottom-up CA cannot produce this order. Only a Top-Down standard Agree can do this, but it is far more problematic as we have seen above due to a violation of the PIC and because it cannot get the case facts right. With respect to CA, additionally, it will be shown in section 7 that it faces problems on account of the Labeling Algorithm of Chomsky (2013).

Before moving on further, note that the analysis sketched out for AAP in (35), based on a Speech Act Probe feature, a PIC violation as pointed out above is not committed. In fact, the derivation sketched for AAP predicts that the second Agree between sa (to which the Allocutive Probe has raised) *should not* be able to access the object domain (within VP) and therefore should not be able to carry object agreement features on the verb. This is exactly what the data for AAP showed (see (28) through (31)), the moment there is an addressee whose honorificity is important, the object agreement simply disappears and the addressee agreement takes over; the reason is PIC, the object DP inside the VP is not there to agree with, whereas DP$_{HEAR}$ is.

7. Agree as Labeling: Analyzing MAP

Finally in this section, I will sketch out an analysis at the end that avoids the problems noted in the previous section with regards to standard top-down Agree and cyclic Agree, based on new work in the domain of Agree. Recall that it was mentioned that Agree is for labeling, an idea based on Chomsky (2013), where, among other things, movement seems to be for labeling reasons. For example, EPP is now a result of labeling requirements. Labeling on the other hand is needed for interpretive reasons, for example, how is predication formed—a matter the C-I interface needs to know. What I wish to claim is that we need morphology to figure out where the phases are, where the so-called big chunks are. That is also the reason why we have agreement as well. So the 2-layered politeness theory that I am proposing, shows that we have *v*P politeness which is involved with the subject agreement in these languages and CP politeness or addressee agreement at the CP domain—incidentally both phases, as standardly assumed. Seen from this renewed perspective, politeness layers (or "Pragmatic Duality" as mentioned earlier a the beginning of section 6) are really about identifying the Phases (*v*P and CP).

To come back to the idea of Agree as labeling, let us consider the Labeling Algorithm (LA) of Chomsky (2013), where labels are assigned on the basis of the LA operating at the time of transferring a phase, labels are not a part of the "transformational" part of the grammar; neither Merge nor the computational system really needs labels. When Merge applies to α and β to form a new object $\gamma = \{\alpha, \beta\}$, LA can be considered to apply as follows:

(39)[13]   (i) For $\{H, ZP\}$, minimum search finds the head H, and labels the projection as H;

        (ii) For $\{XP, YP\}$, there are two possibilities:

            (a) raise one of the phrases so that the category remaining decides on the label

            (b) find the 'most prominent' category shared between the two and label accordingly

Agree in this analysis in some strange way, serves the purpose of the C-I interface. When an XP moves for labeling reasons (as required for (39iia), we can now infer that it is agreement that decides when such a movement may stop. Agreement between XP which values [uF] on YP, takes place by sharing feature [F]; [F] can be the label of $\{XP,YP\}$ (as per (39iib))—this looks like the third way of avoiding ambiguity of $\{XP,YP\}$ since here it is not enough that they share a feature but rather that they have been treated under an operation (Agree) to share [F]. The input to LA is the whole Phase not just the part that is transferred (the complement domain). In effect, then, it is agreement (through Agree) that stops movement, because through agreement, we arrive at a label. In a strange way thus, agreement is serving the purpose of the C-I interface, since labeling is for the purpose of interpretation.

As an example, take the case of the English T, which is too weak to label the projection, so it needs to have something move to it and (re-)merge, in other words, EPP. Now ϕ-Agree between the subject DP and the T/ T', provides ϕ-label to the projection of T. The EPP effect can therefore be seen as a result of two factors: vP needs to be vacated for labeling (i.e., to disambiguate $\{XP,YP\}$), moving the subject out, and the T needs to be labeled. This seems like a perfect match, however, I will show that this is not so.

[13] I leave out here any discussion of labeling the $\{H, H\}$ set, refer to Chomsky (2013) for details

Earlier, we have noted how a purely top-down, intervention-based Agree is problematic, although we did not find cyclic Agree to be similarly problematic, it too obtained for us a bottom-2 Agree sequence (V-AGR$_{OBJ}$-AGR$_{SUBJ}$), whereas the data demands that we have top-2 (V-AGR$_{SUBJ}$-AGR$_{OBJ}$). Let us run through the analyses of AAP and MAP, respectively, in (35) and (36)/(38), from the point of view of LA and examine if they stand the test.

First, let us go back to the derivation of AAP as sketched in (35) and see if a labeling algorithm based account will work for it, for Agree as labeling to work, it is essential that that derivation too is accounted for from the perspective of LA. In the structure, it can be seen that LA will successfully label VP (as VP), *v*P (as *v*P) and TP (as <φ,φ>).[14] Next, when C is merged with this structure, CP is also labeled (as CP) due to the unique head C. This CP can be considered to have been computed in a separate workspace and is later embedded in the saP structure in [Spec,saP]. However, when such a Merger takes place, we have a case of {XP,YP} yet again since we obtain {CP, {DP$_{HEAR}$, saP}}, which would lead to an expected labeling problem. Since no further raising can take place, we can look for a common feature shared between CP and saP as per (39iib), we find [ALLOC] to be a common feature and label the projection as <ALLOC, ALLOC>, which is a desired consequence since such a label would unambiguously indicate *readying* the clause for discourse, requiring perhaps a similar label for an expression to be embedded in a discourse. Note crucially that finding [ALLOC] to be the common feature is nothing but Agree itself. Thus AAP cases successfully reduce to Agree as labeling. The relevant parts of the AAP derivation as per the LA is shown as follows, the rest of the process remains the same:

(40)

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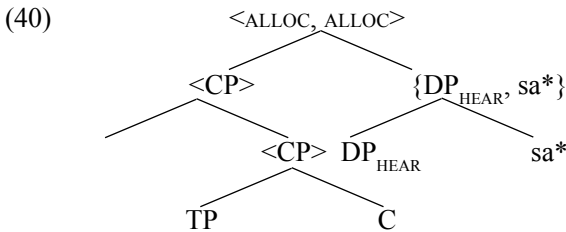
[14] The T is labeled <φ,φ> as a result of the base-generated subject moving to internally Merge with T, so that {NP, {v, VP}} can be labeled, and both the raised NP and T sharing a feature, namely φ, between them. Note that therefore, labeling here is according to the clause (39iib) of the LA.

Thus we find that as far as the derivation sketched for AAP is concerned, it goes through the labeling algorithm. With regards to CA, it would seem to be problematic from the point of view of LA. This can be demonstrated by considering LA to be applying to the stage where the external argument merges with the *v*P as follows, giving rise to an {XP,YP} situation:

(41)   ??
                          ╱   ╲
                    Subj   *v*P
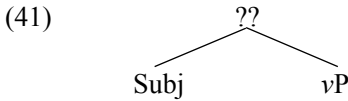
In Chomsky's system, the subject DP will need to move out at this stage so that the projection (marked "??") can be labeled unambiguously as *v*P,[15] otherwise the minimal search will be ambiguous (see Epstein *et al*, 2014). From this point of view, if cyclic Agree were to operate in the *v*P phase, it will fail since the subject DP is not there in the *v*P anymore. To elaborate, consider the exact steps of CA in Rězáč (2003) and Béjar & Rězáč (2009), unlike in section 6.3, where only a first impression of CA was provided. In the first step, probing happens in the c-command domain of the probe when the probe is merged. A second opportunity for Agree arises when the specifier is merged with the projection of the already probed structure. By Chomsky (2000), the label of the already probed structure will be the probe itself and will contain the unvalued features of the probe as well, which are then valued by the subject DP merged as a sister. However, by LA, for reasons of labeling, the merged sister is not there by the time the second cyclic expansion takes place, failing Agree. Thus, in addition to the fact that CA would derive the wrong order of affixes as *V-AGR$_{OBJ}$-AGR$_{SUBJ}$, it is also problematic from the LA point of view; there seems to be a clash between the requirements of LA and CA. I will revisit this immediately below.

With respect to the derivation for MAP presented in (36) we noted that neither an intervention based Agree nor cyclic Agree can account for the MAP in the cases we have presented in this paper. The proposal that I now wish to explore is along the following lines, which takes LA into consideration. This proposal utilizes the notion of Top-Down Minimal Agree within a cycle with the steps illustrated as follows:

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[15] Note that the DP moves also for another reason, namely, to contribute to the labeling ease for the projection of T, the latter being a weak element to label (in English); in other words, EPP.

(42) Steps of "Minimal Agree":

Step 1: *v* probes Subj in *v*P to label *v*P – the subject has not moved out of the vP as labeling does not require it yet[16] (see further below). Unlike Béjar and Řezáč (2009), here, although it is a case of cyclic Agree, since it operates within a cycle, it is top-down rather than bottom-up; [no Case, only agreement, we get [*v*.V.AGR$_{SUBJ}$]

Step 2: *v* probes Obj in *v*P; [agreement and case], we get [DP$_{ACC}$- *v*.V.AGR$_{SUBJ}$.AGR$_{OBJ}$]

Step 3: *v*P is spelled out and the complement is transferred;

Step 4: subject case in the next Phase; [case, no agreement], we get [DP-$_{NOM}$-DP$_{ACC}$- *v*.V.AGR$_{SUBJ}$.AGR$_{OBJ}$]

This system responds to the need that if Agree takes place, it cannot overrule spelling out of Phases. For this reason, the system proposed here is termed "Minimal Agree", that is, Agree is like an algorithm which is minimal, looking at a minimal chunk, i.e. within a Phase. Note that the derivation sketched out here is a true case of multiple Agree as one Probe agrees with two Goals, and we obtain the desired sequence of the agreement morphemes, namely, V-AGR$_{Subj}$-AGR$_{Obj}$, the case-agreement on the other hand is obtained through two separate Probes, as is standard. The derivation is sketched out below:

(43)

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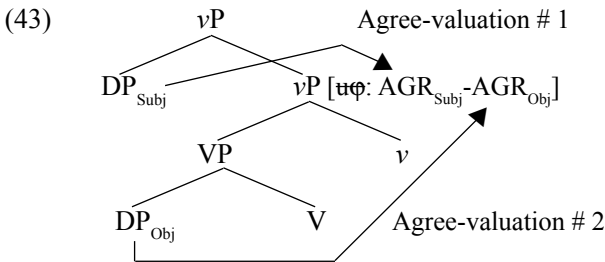
[16] In Béjar and Řezáč (2009), as pointed out in this section, this happens as a second chance for probing at the merger of a specifier. When the specifier is merged, it is merged as the sister of the head projection containing the probing feature and therefore in its C-command domain. However, in standard cyclic Agree, second Agree is possible only when the first goal contains a subset of features on the Probe and the second goal contains a superset of first Goal's features.

Like in the case of AAP, here too, we need to check if this deriva-
tion will withstand the application of LA in order to test the Agree
as labeling concept. If we equate Agree with labeling, at least for
the cases of {XP, YP} configurations, we encounter a problem when
the Subject is merged with the vP. According to LA, the projection
should be labeled as vP since the Subject is going to move up to T
later. So we cannot establish an Agree relation at this stage with the
subject (as criticized earlier but as required by Agree-valuation # 1
shown in (43)), but can only label. This is as a result of the expected
clash between LA and cyclic Agree pointed out above. Is there a
way out? I suggest that we depart from Chomsky's LA here and
propose that the Subject cannot move out until there is something
that attracts the subject up. However, T's features are only available
(via feature-transfer) after the C is merged. And since in a bottom-
up derivation we cannot ensure at this stage the merger of C, we
suggest that there is both Agree and labeling at the point of subject
merger and the label, given the same algorithm as in (39iib), is $<\phi,$
$\phi>$ since v is endowed with [uϕ] and the DP_{Subj} also has [ϕ]. After T
is merged, the resulting projection is too weak to label on its own
and something needs to move up to it, so the subject moves to T and
we get a $<\phi, \phi>$ label at the TP level. Note that both these cases of
labeling (of the vP and the TP) are are cases of Agree, fulfilling the
Agree as labeling criterion.

8. Conclusion

From the early days of Agree (for example, from Chomsky 2000
onwards), it was seen as something which is language specific.
However, from the ensuing discussion from the intervening decade
and a half, it is no longer clear whether Agree is language specific
or is specific to FL as a part of the general cognitive mechanism.
The issue really boils down to whether Agree is the first or the third
factor of language design. Arguably, if it involves search in some
form, it is a third factor principle. As opposed to Agree, projection
(or labeling) has been a matter of Phrase Structure Grammar (see
Chomsky 2013), though it is a theory-internal notion. On surface
therefore there is no prima facie reason to equate Agree with Label-
ing. However, if we consider both to be invoking some third factor
principle, then there is at least language design based rationale to

equate the two. In this paper, I have tried to raise an empirical issue of accounting for the "wrong" order of agreement morphemes in a group of languages which show both the phenomenon of multiple agreement and allocutive agreement. And by way of this accounting, I have found that both an intervention based Agree and Cyclic Agree to be inadequate for establishing multiple Agree in these languages. The resolution proposed in this paper arises out of a combination of top-down and bottom-up mechanism for Agree. In the process, it has been necessary to show that such a combinatorial Agree must operate within a Phase, that is, through a process of minimal search. As result of this proposal, it became clear that Agree *is* labeling as far as labels for {XP,YP} cases are concerned.

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