Addressees as applied arguments

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Abstract

It is often assumed that all arguments undergo external merge (EM) inside the thematic domain. Based on this standard assumption, applied arguments are introduced below TP. This work provides cross-linguistic evidence suggesting that not all applied arguments are introduced in this fashion. Instead, it shows that discourse participants such as the addressee is an applied argument introduced in the left periphery. We collect evidence from Meadow Mari (Uralic), Korean (Koreanic), southern dialects of Basque (Isolate), Galician (Romance), Magahi (eastern Indo-Aryan), and German (Germanic). The phenomena involve control constructions, case assignment, clitic realizations, and honorific/formality mismatches. The theoretical implication of this work is that an argument-introducing head, which is commonly assumed to be situated below TP, can be realized in CP.

Contents

1 Introduction

This work addresses the following questions: (i) Can arguments be introduced in the left periphery? (ii) Can the speech act projection (e.g. SAP Haegeman & Hill 2013, cP Portner et al. 2019, and AddrP Miyagawa 2022) often assumed to be in the left periphery be reduced to a projection that already exists elsewhere in the grammar? I argue that the discourse participant, addreessee, is an applied argument in syntax. In addition to high and low Appl(icative)s (Pylkkänen 2008), there seems to be another type of Appl that sits in the left periphery (see also Tsai 2018). Under the current proposal, addressees are introduced by Appl in the CP domain.

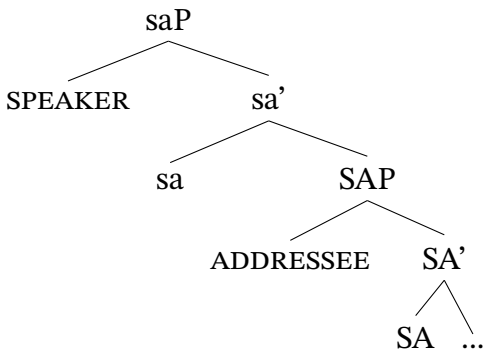
Recent work reports that addressees can: participate in control, receive case, behave similarly to thematic clitics, and reside in embedded and nominal contexts. Drawing evidence from various languages, I show that parallels can be drawn between the speech act domain and the thematic domain. That is, external merge (EM) of an argument is possible in both domains due to the presence of Appl of ApplP. This approach introduces parsimony, since additional labels for the head (e.g. SAP Haegeman & Hill 2013, cP Portner et al. 2019, and AddrP Miyagawa 2022) need not be posited in the left periphery.

The layout of this paper is as follows: Section 3 provides evidence from control constructions in Meadow Mari (Uralic) suggesting that an overt addressee can be a controller of PRO. Section 4 shows evidence that overt addressees can be case-marked in Meadow Mari and Korean (Koreanic). Section 5 draws parallels between thematic and allocutive clitics in southern dialects of Basque (Isolate) and Galician (Romance). Section 6 deals with honorificity and formality mismatches observed in Magahi (eastern Indo-Aryan) and German (Germanic) suggesting that addressees can be represented in matrix, embedded, and nominal contexts. Section 7 concludes.

2 Background

According to Ross (1970), syntactic representations make reference to discourse participants (i.e. the speaker and the addressee). Building on this idea, Speas & Tenny (2003) argue that the pragmatic roles (P-roles) of these participants are built into the syntax.[1] The syntactic projection that governs these pragmatic factors is referred to as the Speech Act Phrase. Speas & Tenny mention that the Speech Act structure in which the speaker and the addressee are realized resembles the argument structure in which thematic arguments are realized. According to Haegeman & Hill (2013), the speech act domain is in fact a complex structure which decomposes into a speaker-sensitive layer (i.e., saP) and an addressee-sensitive layer (i.e., SAP) in the left periphery. According to Haegeman & Hill, saP/SAP resembles the shell structure of vP/VP (see Larson 1988).

(1)



Miyagawa (2017), Portner et al. (2019), and Zu (2013, 2018) claim that the speech act domain is syntactically restricted. Under this assumption, the speech act domain is present only in the matrix clause. To put it in another way, the speech act domain is absent in embedded clauses. It has been claimed in the literature that saP/SAP gives rise to allocutive agreement. Zu (2013) suggests that speech act projections are not embeddable since allocutive agreement is only observed in the root clause. This leads Zu (2013, 2018), for instance, to conclude that

[1] Speas & Tenny (2003) draw parallels between P-roles and theta-roles. For a more recent discussion on this topic, see Akkuş & Hill (2021).

saP/SAP surface only once per a given sentence.

Taking a departure from the analyses mentioned above, Alok & Haddican (2022) among others show empirical evidence from typologically diverse languages (e.g. Galician, Japanese, Magahi, and innovative southern dialects of Basque) suggesting that addressees can be hosted inside embedded clauses. Quite relatedly, Ritter & Wiltschko (2018, 2019) claim that multiple speech act structures can be represented within a single sentence structure. Ritter & Wiltschko (2018, 2019) explore the possibility of encoding speech act projections within the nominal domain. In light of Chomsky (1970) and Abney (1987), Ritter & Wiltschko draw parallels between the clausal and the nominal architectures. Under their analysis, CPs and DPs can each host a speech act-sensitive phrase.

In the following sections, I show that the syntactic distribution of the addressee in the speech act domain can be captured if we assume that discourse participants are introduced by an argument-introducing head. Extending Pylkkänen's (2008) analysis on Appl(icative) Phrases, I propose that an addressee can be introduced by Appl in the matrix/embedded CP domain as well as in the nominal domain.

3 Control constructions

The first piece of evidence suggesting that discourse participants take part in syntax comes from control constructions. Based on the empirical data collected from English and Meadow Mari (Uralic), we gain support that the speaker and the addressee can control PRO similar to how an argument can control PRO.

Using evidence from English control constructions, Landau (2021) argues that the speaker is represented in syntax. According to Landau, there are obligatory control (OC) adjuncts that adjoin to the left periphery. These OC adjuncts can host the speaker as the controller of the adjunct-internal PRO. Consider the following example where Speaker A and Speaker B are having a conversation with each other:

(2) Speech-act(SA)-oriented adverbs (Landau 2021)

a. Speaker A: [PRO_{A} to be honest], there is little to be done.

b. Speaker B: [$\mathbf{PRO_{B/*A}}$ to be honest], it doesn't matter.

In (2), the sloppy reading produced by Speaker B suggests that $\text{PRO}_{\text{B/*A}}$ inside the SA-oriented adverb is obligatory control which requires a syntactic controller, namely Speaker B. Note that the strict reading is ruled out and for that matter $\text{PRO}_{\text{B/*A}}$ cannot refer to anyone else but Speaker B. Hence, the discourse participant, Speaker B, has to be represented in syntax as a controller of PRO. Landau (2021) posits that Speaker B (but the speaker more broadly construed) occupies the specifier of a Speech Act projection above the SA-oriented adverb. This ensures the local c-command relation necessary for Speaker B (the controller) and $\text{PRO}_{\text{B/*A}}$. In this regard, the speaker displays a property that is observed for arguments in general: it can participate in obligatory control. In fact, the idea that the speaker can be introduced as an argument in syntax has been claimed by Tsai (2018). Providing empirical data from Mandarin affective constructions, Tsai (2018) argues that the argument-introducing head, Appl, introduces the speaker (the affectee) in the left periphery.

Empirical evidence that an addressee is introduced by Appl comes from Meadow Mari (Uralic). Burukina (2020, 2022) provides empirical data suggesting that an argument can be externally merged in embedded Spec,CP. Burukina (2020, 2022) points out that this argument is an overt addressee embedded under a speech-act verb such as *kalas* 'to tell'. In Burukina's term, the argument (the overt addressee) bears the 'semantic properties of an obligation holder and a goal of communication.' It is also described as the 'intermediary that receives the original message'. An example is provided in (3).[2] Since there are two arguments with DAT in this example, it is referred to as a 'double dative' construction.

[2]Given our discussion above, a more precise translation of (3) would be: 'Maša told us to tell Petja that (s)he should come'.

(3) Maša mə-lan-na [$_{CP}$ **Petja-lan$_i$** [$_{FinP}$ PRO$_i$ tol-aš] (manən)] kalas-en.
Maša we-DAT-POSS.1PL [$_{CP}$ Petja-DAT [$_{FinP}$ PRO come-INF] COMP] tell-PST2
'Maša told us for Petja to come.' (Burukina 2022)

Note that double datives are prohibited in the matrix clause as shown in (4). This suggests that an additional DAT-marked argument, if there is one, belongs in the embedded clause.

(4) Məj Maša-lan **(*tə-lan-ət)** vurgem-əm nal-ən-am.
I Maša-DAT you-DAT-POSS.2SG clothes-ACC buy-PST2-1SG
'I bought Maša clothes.' / 'I bought clothes for Maša, on her behalf.' (Burukina 2022)

Double datives are also ruled out when the embedded clause hosts a predicate with a finite subjunctive marker as shown in (5).

(5) Maša t-lat [***Petja-lan**/Petja tol-**žo** manən] kalas-en.
Maša you-DAT.2SG Petja-DAT/Petja come-JUS COMP tell-PST2
'Maša told you that Petja should come.' (Burukina 2022)

The restrictions on the double dative constructions suggest that they are possible only when the secondary DAT-marked argument is realized under an embedded infinitival clause as shown in (3). A question arises as to whether the construction involves control or raising. Quite interestingly, double dative constructions do not pass the idiom test which is often used to diagnose control and raising. The idiom chunk *šem pərəs koklaštəna kudal ertəš* roughly translates as 'we quarreled'. The literal interpretation of the phrase is 'the black cat ran between us'. (6) shows that only the literal meaning survives when the idiom is placed under an embedded clause.

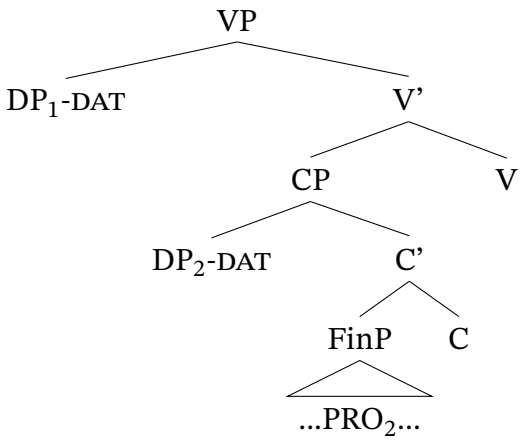
(6) #Maša Petja-lan [šem pərəs-lan koklaštə-na kudal ert-aš manən] kalas-əš.
Maša Petja-DAT black cat-DAT between-POSS.1PL run-INF COMP tell-PST
✓[Lit.] 'Maša told Petja to tell the cat to run between us.'

X [Id.] 'Maša told Petja for us to quarrel.' (Burukina 2022)

Note that idiomatic interpretations are ruled out in control constructions, but not in raising constructions. Hence, (6) suggests that double datives are control constructions. This implies

that PRO has to be the subject of the embedded clause instead of the secondary DAT-marked DP. Burukina (2020, 2022) concludes from her findings that the secondary DAT-marked DP (the addressee) is base generated in embedded Spec,CP. This correctly captures the notion that the secondary DAT-marked DP is the closest argument that c-commands PRO. Hence, it is the controller of PRO.

(7) Tree based on Burukina (2022)



Evidence from Mari adds weight to the claim that an addressee is an argument that participates in control. In fact, Saito (2022) argues that the empirical facts from Mari can be reanalyzed using Pylkkänen's applicative framework. Under this type of approach, the secondary DAT-marked DP is introduced in Spec,ApplP similar to how an applied argument is introduced in syntax. Hence, a parallel can be drawn between discourse participants and applied arguments.

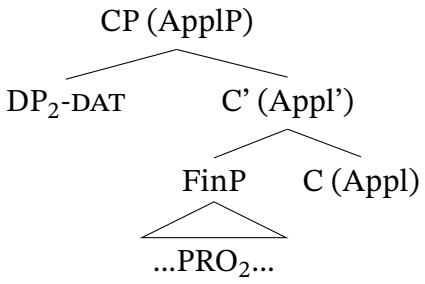
4 Case assignment

One of the most notable properties of DP arguments is their ability to receive case. Based on this assumption, a predication can be established: If an addressee is a DP argument, then the addressee should be eligible for case assignment. Collecting evidence from Meadow Mari and Korean, I show that this prediction is borne out.

Let us return to the empirical facts introduced in section 3. Recall that the DAT-marked

addressee in Meadow Mari undergoes EM in embedded Spec,CP. Burukina (2022) argues that DAT can be assigned to the addressee from C. If we follow Saito (2022) in that a flavor of Appl introduces the overt addressee in Meadow Mari, it is plausible to assume that Appl assigns DAT to the addressee. In fact, this is desirable, since it is often claimed that DAT is assigned to an applied argument by Appl. Consider, for instance, DAT that is associated with indirect objects (IOs) and benefactives. Hence, we observe another property shared between addressees and applied arguments which can be accommodated if Appl introduces *both* types of nominals.

(8)



Additional evidence that addressees receive case from a head in the CP domain is observed in Korean. Korean adopts a case system which displays overt realizations of nominative (NOM), dative (DAT), accusative (ACC), and vocative (VOC). NOM is often associated with the subject, DAT with the indirect object (IO), ACC with the direct object (DO), and VOC with the addressee. (9) illustrates this point.

(9) Yuli-**ya**, Kim-**i** ai-**hanthey** khayikh-**ul** cwu-ess-ta.
Yuli-VOC Kim-NOM child-DAT cake-ACC give-PST-DECL
'Yuli, Kim gave the child a cake.'

Most of these case markers have an honorific counterpart. They are NOM (~HON.NOM), DAT (~HON.DAT), and VOC (~HON.VOC).[3] In (10), all of the arguments are honorified and are in principle eligible for HON-sensitive case assignment. Note, however, that there is no reserved

[3]I emphasize that the *alternation* between VOC~HON.VOC (*ya*~ø) is what matters rather than the overt/null status of the forms. Note that the same type of alternation holds for familiar and formal allocutive markers in southern dialects of Basque (Haddican & Etxeberria 2022).

morphology for HON.ACC even though the DO *halapeci* 'grandfather' can be honorified.

(10) Kamtoknim-**ø**, halmeni-**kkeyse** sensayngnim-**kkey** halapeci-lul
director-HON.VOC grandmother-HON.NOM teacher-HON.DAT grandfather-ACC
sokayha-si-ess-eyo.
introduce-HON-PST-YO
'Director, grandmother introduced grandfather to the teacher.'

A question arises as to why *HON.ACC is absent in the case paradigm as shown in Table 1 (see also Kim & Chung 2015).

NOM	*i~ka*	DAT	*hanthey*	ACC	*(l)ul*	VOC	*(y)a*
HON.NOM	*kkeyse*	HON.DAT	*kkey*	*HON.ACC	N/A	HON.VOC	ø

Table 1: Korean (honorific) case markers

Consider the following examples where HON.NOM, HON.DAT, and HON.VOC are realized in various types of constructions. It is worth mentioning that these HON-sensitive case markers only surface with non-DO arguments.

(11) Halapeci-**kkeyse** wus-usi-ess-ta.
grandfather-HON.NOM laugh-HON-PST-DECL
'Grandfather laughed.' (unergative)

(12) Halameni-**kkeyse** tochak-ha-si-ess-ta.
grandmother-HON.NOM arrive-do-HON-PST-DECL
'Grandmother arrived.' (unaccusative)

(13) Halapeci-**kkeyse** kyengchal-eyuyhay cap-hi-si-ess-ta.
grandfather-HON.NOM police-by catch-PASS-HON-PST-DECL
'Grandfather was caught by the police.' (passive)

(14) Halameni-**ø**, cip-ey ka-sie-yo.
grandmother-HON.VOC house-LOC go-HON-YO
'Grandmother, please go home.' (vocative)

(15) Halmeni-**kkeyse** halapeci-lul an-usi-ess-ta.
grandmother-HON.NOM grandfather-ACC hug-HON-PST-DECL
'Grandmother hugged grandfather.' (transitive)

(16) Kamtoknim-**kkeyse** paywunimtul-**kkey** chima-lul ip-hi-si-ess-ta.
director-HON.NOM actors-HON.DAT skirt-ACC wear-CAUS-HON-PST-DECL
'The director made the actors wear a skirt.' (causative)

(17) Apeci-**kkeyse** emeni-**kkey** khayikh-ul kwuwe-tuli-ess-ta.
father-HON.NOM mother-HON.DAT cake-ACC bake-give.H-PST-DECL
'Father baked a cake for mother.' (benefactive)

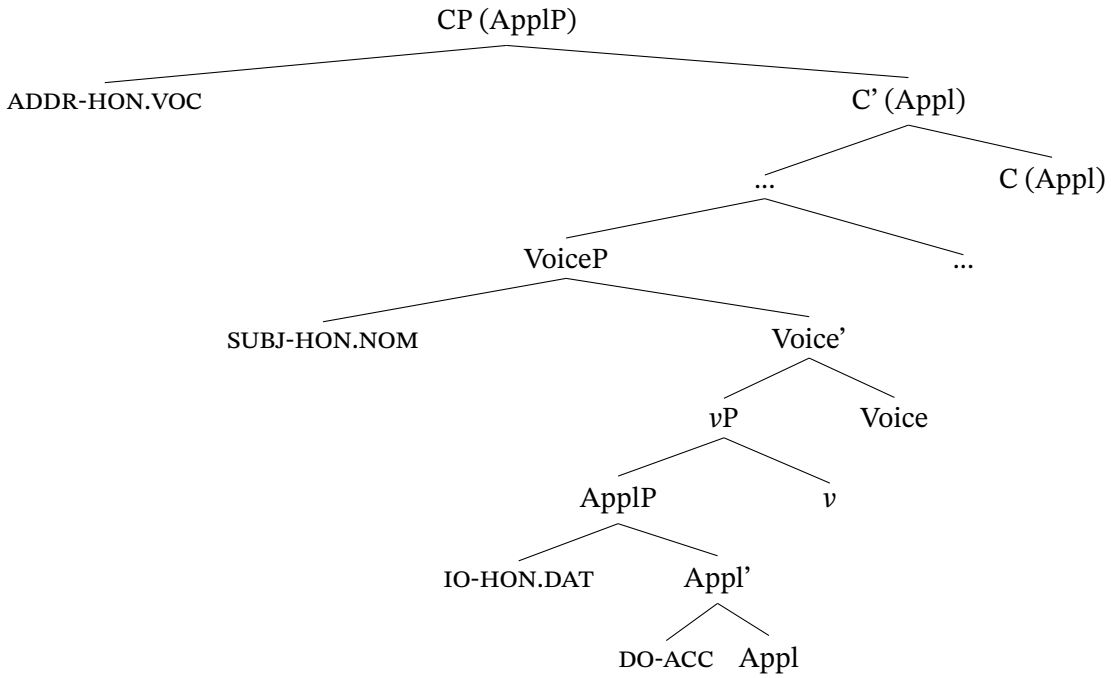
(18) Halmeni-**kkeyse***(-ka) anila Mary-ka John-ul poa-ss-ta.
grandmother-HON.NOM-NOM but.not.be Mary-NOM John-ACC see-PST-DECL
'Mary, not grandmother, saw John.' (case stacking)

Based on (11)–(18), I propose that the HON-sensitive case markers (HON.NOM, HON.DAT, and HON.VOC) are associated with either Voice or Appl. Subjects and IOs are realized in the *specifier* of Voice or Appl whereas DOs are realized as the *complement* of either *v* (in simple transitive constructions) or Appl (in ditransitive constructions).[4] Here, I argue that the specifier of Voice/Appl is privileged for HON-sensitive case assignment. The absence of *HON.ACC on DOs follows accordingly: a DO is not introduced by Voice/Appl in its specifier position. In other words, a DO is not an external or applied argument. The current analysis also provides an account for the presence of HON.VOC on the addressee: the addressee is realized in the *specifier*

[4]I posit that honorified subjects in unaccusatives and passives undergo movement to Spec,VoiceP in order to receive HON.NOM from Voice. Presumably, [HON] on honorified subjects is checked in this position. This type of approach is consistent with Legate's (2003) analysis in that the edge of VoiceP can be a derived position. Legate (2003) argues that the edge of VoiceP (a phase) is an intermediate landing site for constituents undergoing long-distance movement (contra Chomsky 2000). According to Kastner (2016, 2017) and Nie (2020) among others, Voice is categorized into three subtypes: (i) one that always requires a DP in Spec,VoiceP, (ii) one that always rejects a DP in Spec,VoiceP, and (iii) one that is underspecified in terms of whether a DP should be in Spec,VoiceP or not. Here, I assume that unaccusatives and passives in Korean may bear an underspecified Voice. While HON.NOM appears to share some commonalities with inherent case, there is precedence in the literature suggesting that what looks like inherent case can at times behave like structural case. Kayne (2004), for instance, argues that movement is involved in assigning what appears to be inherent case in French transitive causative constructions, namely the prepositional dative *à*. Under Kayne's approach, the prepositional dative case is assigned to a causee via internal merge (IM) rather than EM. This approach bears similarities with the raising to ergative constructions in Shipibo (Baker 2014) and Nez Perce (Deal 2019), where a theme argument raises to Spec,VoiceP and is assigned ergative case.

of Appl in the left periphery. (19) fleshes out the gist of the analysis:

(19)



A central claim here is that the addressee is a part of syntax, just like subjects and IOs, which is eligible for honorific case assignment. More crucially, I highlight that an argument can be introduced *outside* the thematic domain. Under this approach, the head that hosts the addressee is a flavor of Appl in the CP domain.[5] In recent years, the head that introduces the addressee has received different labels: SA of SAP under Haegeman & Hill (2013), c of cP under Portner et al. (2019), Addr of AddrP under Miyagawa (2022). I argue that the head is an applied argument introducing head (Appl) that assigns VOC and HON.VOC to the addressee similar to the Appl that assigns DAT and HON.DAT to the IO. By adopting what is already present in the thematic domain, namely Appl, we maintain parsimony in terms of labeling the head:

[5]Wood & Marantz (2017) propose a unified analysis to Voice and Appl. Under their view, Voice and Appl are labeled as the same head (*i**) whose properties are determined by its surrounding syntactic environment. The current proposal is in harmony with this view.

(20) $\left\{\begin{array}{c}\text{SA of SAP (Haegeman \& Hill 2013)}\\ \text{c of cP (Portner et al. 2019)}\\ \text{Addr of AddrP (Miyagawa 2022)}\end{array}\right\} \leftrightarrow$ Appl of ApplP

Summing up, we have seen that case assignment is possible to overt addressees in Meadow Mari and Korean. I have argued that the head that hosts the addressee is a flavor of Appl, which assigns a case marker. Once again, I wish to highlight that Appl can be realized in both the thematic domain and the speech act domain. Hence, argument introduction as well as case assignment is possible in both domains.

5 Thematic & allocutive clitics

In this section, we observe that the 2nd person thematic clitics and the addressee-denoting allocutive clitics pattern alike in innovative southern dialects of Basque (Isolate) and Galician (Romance). For one, the clitics look alike in terms of their phonological status. If we assume anti-homophony, which is a plausible and even a desirable thing to do for the sake of economy, the difference between the thematic and allocutive clitics cannot be lexically specified. In other words, they would be the same component entering the syntactic derivation. The semantic discrepancies between the two would be attributed to *where* they merge in syntax. Based on this view, I argue that the 2nd person thematic clitics and the allocutive clitics are both associated with the same kind of argument-introducing head (e.g. Appl). Hence, the syntactic surroundings of this head disambiguate whether the clitic at issue is thematic (below TP) or allocutive (above TP). Again, parallels can be drawn between addressees and applied arguments.[6]

[6]Even if a language does not recycle a 2nd person thematic clitic for its allocutive clitic, it does not speak in favor of one approach over the other. After all, the nominals introduced by Appl do not need to be phonologically identical. In fact, they are different in most cases. Nevertheless, they can be introduced by Appl. However, it is interesting when a language does recycle the clitic to refer to the allocutive clitic. This is good evidence suggesting that the mechanism we use to introduce the thematic clitics can be applied to the allocutive clitics.

In southern dialects of Basque, the thematic clitics and the allocutive clitics show common properties. The 2nd person familiar pronoun *hi* in (21) and the covert familiar addressee DP in (22) are both realized with the clitic *-a/na* depending on their gender feature: *-a* denotes 2nd person familiar masculine whereas *-na* denotes 2nd person familiar feminine.

(21) Hi-ri ema-n di-**a/na**-t.
2SG.FAM-DAT give-PRF AUX-2SG.FAM.M/2SG.FAM.F-1SG.ERG
'I have given it to you.' (Haddican & Etxeberria 2022)

(22) Jon ikus-i d-i-**a/na**-t.
Jon see-PRF EXPL-ROOT-2SG.FAM.M/2SG.FAM.F-1SG.ERG
'I've seen John.' (Haddican & Etxeberria 2022)

Moreover, the thematic and allocutive clitics undergo the same type of allomorphy (*-a/na*∼*-k/n*). When the clitics are word-final, they are both realized as *-k/n*: *-k* denotes 2nd person familiar masculine and *-n* denotes 2nd person familiar feminine.

(23) Hi-k egi-n du-**k/n**.
2SG.FAM-ERG do-PRF AUX-2SG.FAM.M/2SG.FAM.F
'You have done it.'

(24) Jon etorr-i d-u-**k/n**.
Jon come-PRF EXPL-ROOT-2SG.FAM.M/2SG.FAM.F
'John has come.' (Haddican & Etxeberria 2022)

The allomorphy rule applies even in contexts where the addressee is overtly expressed as a vocative as shown in (25) (# indicates an intonational break). (25) suggests that the association of the addressee and the allocutive clitic is real.

(25) **Bihotza/laztana/tontoa/motel** # berandu d-u-**k**.
heart/caress/stupid/boy late EXPL-ROOT-2SG.FAM.M
'Sweetheart/honey/dumbass/dude, it's late.' (Haddican & Etxeberria 2022)

Based on their empirical data, Haddican & Etxeberria (2022) argue that these clitics have applicative-like properties in that they are associated with argument introduction. This is very much in line with the current analysis put forward in this work.

The thematic and allocutive clitics in Galician works in a similar fashion as the ones in the innovative southern dialects of Basque (see Alok & Haddican 2022). In (26), *cha* is a portmanteau denoting 2nd person singular familiar dative and 3rd person singular accusative feminine.

(26) Merquei-**cha**
bought.1SG-2SG.FAM.DAT.3SG.ACC.F
'I bought it.' / 'I bought you it.' (Alok & Haddican 2022)

As shown in (27), the portmanteau *cha* can be broken up into the following contents: (i) *che* which denotes 2nd person singular familiar dative and (ii) *a* which denotes 3rd person singular accusative feminine. For the sake of our purposes, we focus on the former, namely *che*.

(27)

cha	→ **che**	+ a
2SG.FAM.DAT;3SG.ACC.F	2SG.FAM.DAT	3SG.ACC.F

When the allocutive clitics are used in a narrative, they involve a request for solidarity/empathy (see Haddican 2019, Huidobro 2022, among others). Crucially, the thematic and the allocutive clitics share the same form *che*.[7]

(28) Xoan cree-(?che) que (**che**) vai chover.
Xoan thinks-2SG.FAM.DAT that 2SG.FAM.DAT it.goes rain
'Xoan thinks that it will rain.' (Haddican 2019)

One other important aspect of *che* is that it is case-marked. Note that the allocutive clitic *che* in (28) is associated with DAT. Recall that applied arguments generally receive DAT as well. This provides further evidence that non-propositional addressees behave like applied arguments. In fact, we have seen that the embedded overt addressee in Meadow Mari also receives DAT. While Korean overt addressees receive VOC, there may be commonalities between DAT and VOC that deserves more attention in the literature. For now, I leave this for future research.

[7] I emphasize that the languages provided in this work are not exhaustive. That is, more languages seem to show similar patterns between their thematic and allocutive clitics and especially those that belong to the Romance family.

6 Honorific & formality mismatches

Applied arguments can be realized inside embedded clauses. For instance, causees and benefactives can surface in finite and non-finite embedded contexts. This is shown in (29) and (30):

(29) a. John said that Mary made **the child** eat the broccoli.

b. John$_1$ promised [PRO$_1$ to make **the child** eat the broccoli].

(30) a. Bill said that Jane baked a cake for **the students**.

b. Bill$_1$ promised [PRO$_1$ to bake a cake for **the students**].

If the idea that addressees behave like applied arguments is on the right track, it is plausible to assume that addressees can be realized in embedded clauses. This prediction is empirically borne out as we will see throughout this section.

Additionally, if we assume that Appl can be realized inside the nominal domain (see Wood & Marantz 2017), one would expect the addressee to be hosted inside the nominal domain as well. Quite interestingly this prediction is borne out as well. Evidence comes from German.

6.1 Addressees in embedded clauses

Meadow Mari, innovative southern dialects of Basque, and Galician allow an overt addressee inside their embedded clauses.[8] As we have already discussed, the DAT-marked overt addressee in Meadow Mari is externally merged in embedded Spec,CP. This is shown in (31), repeated from (3).

[8] A caveat here is that not all languages allow the addressee to be embedded. However, this may be due to independent reasons related to the reduced size of the embedded clause. That is, the syntactic size of the articulated CP is often smaller for the embedded clause than the size of the CP for the matrix clause. Future work remains to be done on how this may relate to the presence and the absence of the addressee in embedded clauses.

(31) Maša mə-lan-na [$_{CP}$ **Petja-lan$_i$** [$_{FinP}$ PRO$_i$ tol-aš] manən] kalas-en.
Maša we-DAT-POSS.1PL [$_{CP}$ Petja-DAT [$_{FinP}$ PRO come-INF] COMP] tell-PST2
'Maša told us for Petja to come.' (Burukina 2022)

In the innovative southern dialects of Basque, the vocative DP along with its allocutive clitic can surface in an embedded context. In (32), the vocative DP *bihotza* 'sweetheart' is linearized between words that are a part of the embedded clause and the allocutive clitic is realized together with the expletive that is also a part of the embedded clause.

(32) Ez zakia-gu [ea bihar, **bihotza**, euria egin-go d-i-**k**-en].
NEG know-1PL COMP tomorrow heart rain do-FUT EXPL-ROOT-2SG.FAM.M-C
'We don't know if tomorrow, sweetheart, it will rain.' (Haddican & Etxeberria 2022)

Recall that the solidarity/empathy-seeking allocutive clitic *che* is realized in Galician. Note that *che* can appear after the complementizer and before the expletive which is a part of the embedded clause. (33) is repeated from (28).

(33) Xoan cree-(?che) [que (**che**) vai chover].
Xoan thinks-2SG.FAM.DAT that 2SG.FAM.DAT it.goes rain
'Xoan thinks that it will rain.' (Haddican 2019)

In addition to the languages covered thus far, Magahi (eastern Indo-Aryan) allows addressees in embedded clauses (Alok & Baker 2018, Alok & Haddican 2022). Alok & Baker (2018) report that Magahi allows honorific mismatch between the matrix and the embedded clauses. This is evidenced by the difference observed for the allocutive agreement markers associated with the matrix predicate and the embedded predicate. In (34), the speaker is talking to an addressee who is equal in social status. In this context, a non-honorific allocutive marker is realized in the matrix clause whereas an honorific allocutive marker is realized in the embedded clause. According to Alok & Baker (2018), the non-honorific allocutive marker is associated with the addressee of the conversation whereas the the honorific allocutive marker is associated with an embedded addressee referring to the professor who is higher in social status than the speaker.

(34) Santeeaa profesar saaheb-ke kah-**au** ki Ram apne-ke dekhl-i-**ain**
Santee professor HH-DAT told-NH.ALOC that Ram you.HH-ACC saw-1.S-HH.AL
ha-l.
be-PRF
'Santee told the professor that Ram saw you(= the professor)' (Alok & Baker 2018)

The honorific mismatch observed in (34) would be difficult to account for if only a single addressee is assumed in a given sentence. This is because an addressee can be either honorified or non-honorified, but not both. However, the honorific mismatch is readily accounted for if multiple addressees are introduced in the derivation. Alok & Baker (2018) and Alok & Haddican (2022) argue that an addressee referring to the professor is present in the left periphery of the embedded clause. Here, the addressee of the conversation is situated in the left periphery of the matrix clause. Since the two addressees assumed in the derivation are independent from each other, one of them can be honorified while the other one is not. This captures the honorific mismatch phenomenon observed in (34). The current analysis that treats addressees as applied arguments accommodates this empirical fact. Applied arguments can surface more than once when a given sentence hosts multiple clauses: for instance one in the matrix clause and one in the embedded clause.

6.2 Addressees in the nominal domain

Parallels between the clausal syntax and the nominal syntax have been highlighted in the previous literature (Chomsky 1970, Abney 1987, among others). Accommodating the idea that there are syntactic projections in the nominal domain that correspond to the projections in the clausal domain, I argue alongside Ritter & Wiltschko (2018, 2019) that syntactic phrases associated with the interlocutors, namely the speaker and the addressee, can be represented in the nominal syntax.

According to Ritter & Wiltschko (In prep.), German 2nd person pronouns exhibit formality mismatch. In (35), a teacher (the speaker) is talking to the student and their parent (the addressees). When referring to the parent, the teacher uses the formal pronoun form *Ihnen*.

When referring to the student, on the other hand, the teacher uses the non-formal pronoun form *dir*. The key point here is that *Ihnen* and *dir* can be used together within the same clause.[9] Note that (35) does not host any embedded clauses.

(35) Ich werde mit **Ihnen** und **dir** zur Direktorin gehen.
I will with you.FRML and you to.the principal go
'I will go to the principal with you (formal) and you.' (Ritter & Wiltschko In prep.)

The mismatch between *Ihnen* and *dir* is not expected if only a single addressee is represented in (35). An addressee can be specified as being either formal or non-formal, but not both. Thus, formality mismatch cannot be captured in any straightforward way under this assumption. An alternative analysis involves representing multiple addressees within a single clause. Recall that Ritter & Wiltschko (2018, 2019) argue that a phrase associated with the addressee can be realized inside a nominal domain as well as the clausal domain. Under this view, the nominal realized as *Ihnen* is associated with a formal addressee, namely the parent, whereas the nominal realized as *dir* is associated a non-formal addressee, namely the student. I provide the following preliminary structure in which the nominals host an independently motivated addressee within their respective domains. XP refers to a nominal-internal phrase that introduces the addressee:

(36) [... [$_{XP}$ ADDRESSEE$_{[+FORMAL]}$ X [***Ihnen***]] ... [$_{XP}$ ADDRESSEE$_{[-FORMAL]}$ X [***dir***]] ...]

Based on our discussion in the preceding sections, it is plausible to assume that X of XP in (36) is a flavor of Appl that introduces an argument. Here, the argument is the addressee. An updated rendition of (36) is provided in (37):

[9]The formality mismatch observed in (35) for German is observed in other Indo-European languages including French (e.g. *tu*∼*vous*). In fact, this type of mismatch appears to be observed in non-Indo-European languages such as Korean (e.g. *ne*∼*tangshin*). Hence, a more extensive cross-linguistic investigation on this issue seems worth pursuing.

(37) [... [$_{\text{ApplP}}$ ADDRESSEE$_{[+\text{FORMAL}]}$ Appl [***Ihnen***]] ... [$_{\text{ApplP}}$ ADDRESSEE$_{[-\text{FORMAL}]}$ Appl [***dir***]] ...]

I note in passing that the argument structure established via ApplP in (37) resembles the structure established via Low ApplP in ditransitive and possessive constructions (see Pylkkänen 2008). In all of these cases, Appl takes a nominal as its complement. Hence, the distribution of the addressee inside the nominal domain seems to overlap with the distribution of IOs and possessors which are arguably applied arguments in syntax. This parallel behavior is desirable under the assumption that addressees are applied arguments.

7 Conclusion

This work has examined whether an applied argument can be introduced above TP. Empirical evidence from various languages suggests that addressees undergo EM in the left periphery. This work has the following implications: arguments can be introduced *outside* the thematic domain and a speech act head in the root clause is associated with Appl which is usually assumed to be *internal* to the thematic domain. The Appl-based approach additionally captures the distribution of the addressees in embedded and nominal contexts. This unified analysis to handling the thematic domain and the speech act domain is parsimonious in that extra assumptions about the EM of addressees need not be posited. Overall, addressees and applied arguments are introduced in a parallel fashion in syntax.

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