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The Syntax of Address

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Abstract of the Dissertation

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This dissertation examines the role of the addressee in syntax, focusing on nominals that refer to addressees: vocatives (calls and addresses) and imperative subjects. Beginning with Moro (2003), generative analyses of vocatives have proposed that they are associated with functional projections at the left edge of or above CP. Such analyses are unable to account for the existence of mid-sentential addresses. I propose that vocatives (specifically addresses) are merged into the specifier of a functional projection, AddrP, which is located in the topic field of the CP domain (specifically between the highest TopP and FocP). This position correctly reflects that mid-sentential vocatives delineate an information structure boundary between old information (topics) and new information (focus). I show that the derivation of mid-sentential vocatives is sensitive to syntactic islands, supporting their treatment in the narrow syntax. I also propose that AddrP bears an allocutive feature, which in some languages is realized as non-argument

addressee agreement in the inflectional domain. I next turn to the internal structure of vocatives, starting by rebuking the claim that vocative case is a variant of nominative. I propose that vocative is an inherent case associated with an additional layer of functional structure. This layer surfaces in adjective initial vocatives in Italian, Romanian and Slavic, which I argue are the result of N-to-D movement of the nominalized adjective. I also propose a new condition for predicting the distribution of overt imperative subjects in English, based on the observation that they require the presence of a non-null set of contextually defined alternatives. Finally, I examine the claim that vocatives are parenthetical, and consider the consequences of such a statement. I find that a subset of other elements which are described as parenthetical also mark information structure boundaries, and may also be associated with a functional projection in the topic domain of CP.

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Chapter 1

Introduction: Calls, Addresses, and Imperative Subjects

Address is, arguably, the most fundamental function of language. All forms of communication, linguistic or otherwise, exist expressly for the addressee, without whom communication would serve no purpose. Despite the basic, self-evident nature of its role in language, address has somehow been traditionally relegated to extra-linguistic or non-syntactic domains. In the past decade or so there has been a small but marked surge in generative treatments of address, beginning with Moro's 2003 analysis of vocatives. The primary goal of this thesis is to add to this growing body of literature and challenge one of the most consistent claims that has been made therein: that vocatives are associated with a functional projection outside, or at the very left edge of, the CP domain.

Moro (2003) proposed that vocatives are located in the specifier position of a functional head, Voc°, which directly dominates Force°. This proposal was the first of a number of compatible analyses, namely Hill 2007, Stavrou 2009, Espinal 2010, Haegeman & Hill 2012, Hill 2013, 2014. The work of Hill (2007, 2013, 2014) notably refines Moro's analysis by proposing that both vocatives and the CP are the internal arguments of a functional pragmatics

domain. Despite dramatic theoretical differences in these analyses, all of the proposals mentioned above are in agreement that vocatives are very high in the syntactic domain, potentially associated with the highest functional projection able to host lexical material. This claim is worrisome, because it completely dismisses a feature of vocatives that has been noted for centuries: They are able to occur at varying positions in the clause. The famous line, *Et tu, Brute?* is underivable in the most rigid of these proposals, while mid-sentential vocatives like *Pizza, Charlie, is my favorite* are underivable in even the most flexible.

The analysis presented here is largely informed by the distribution of mid-sentential vocatives. I show that mid-sentential vocatives mark an information structure boundary between old and new information, and are sensitive to syntactic islands. These observations suggest that the functional projection vocatives are associated with must be in the CP domain, specifically between the highest TopP and FocP (based on the hierarchy of functional projections argued for in Rizzi 1997, 2004).

This dissertation contextualizes the above described proposal by drawing a detailed picture of the syntax of address. This includes all addressee referring nominals, which subcategorize into three groups: calls, addresses, and imperative subjects. This chapter serves to show the ways in which these groups pattern differently and similarly, and provide a foundation for the discussion in the rest of the dissertation. Chapter 2 proposes a condition on overt imperative subjects which describes their distribution in English, enabling their distinction from calls and addresses, from which there is no morphological distinction. In doing so, it also adds to existing literature on imperatives which have thus far failed to accurately describe the

distribution of overt imperative subjects. Chapter 3 turns to the internal structure of addresses and calls, which have several characteristics which make them distinct from argument DPs. The analysis of mid-sentential vocatives outlined above in this introduction is presented in Chapter 4, while Chapter 5 examines additional evidence for the syntacticization of vocatives in the form of allocutive agreement; non-argument addressee agreement which has been shown to exist in at least twelve languages. In Chapter 6, I explore the potential consequences this analysis has for other elements which have, like vocatives, been described as parenthetical. I find that this analysis extends straightforwardly to a subset of this class.

1.1.   Calls, Addresses and Imperative Subjects

Before entering into this discussion, it is necessary to first carefully define the term *vocative*, as it is the primary object of study in this dissertation. Vocatives have often been defined by two characteristics, outlined below in 1.

1) *Characteristics of vocatives*
   a. reference to addressee
   b. non-argument status

Upon careful reflection, however, these characteristics may apply to three distinct syntactic entities which have been independently described in the literature.

2) *Calls*
   a. **Paul**! Where have you been?
   Addresses
   b. So, **Paul**, how are you?
   Imperative Subjects
   c. **Paul** fetch the blankets and **Jessica** start a fire.

Zwicky (1974) was the first to note the distinction between *calls* and *addresses*. He writes that "Calls are designed to catch the addressee's attention, addresses to maintain or emphasize contact between the speaker and the addressee." In this chapter, I will argue that both calls and addresses can be described as vocatives on the basis of their internal structure and relation to functional structure. In Section 4.5, I will propose that the difference between calls and addresses is whether they are used as stand-alone CPs (calls) or whether they are accompanied by other overt phrasal material.

It has long been noted that overt imperative subjects, shown in (2c), are distinct from vocatives, the distinction first being made by Downing (1969) and subsequently widely adopted. It is nonetheless necessary to include imperative subjects in the current discussion because they are frequently difficult to distinguish from addresses and calls. In this chapter, I will show that imperative subjects differ from addresses both in their internal structure and in their structure with respect to the phrase.

This chapter assesses calls, addresses, and imperative subjects with respect to the following characteristics: prosody, morphology and form, reference, structural position, and function. The results of this discussion will support the following taxonomy of addressee-referring nominals:

3) Addressee Referring Nominals:
   a. Second person arguments
   b. Imperative subjects
   c. Vocatives
      i. Calls
      ii. Addresses

In this dissertation, I will assume the following structures for overt imperative subjects,

calls, and addresses:

> 4) Structural positions of addressee referring nominals:
>   a. *Overt Imperative Subjects:*
>   Canonical subject position
>   b. *Addresses:*
>   Specifier of AddrP, in the CP topic domain
>   c. *Calls:*
>   Specifier of AddrP, in a CP with no other lexical material

I will follow convention in differentiating between calls, addresses, and imperative subjects orthographically. Calls will be offset by an exclamation point, addresses by commas, and imperative subjects not at all (see example 2). Having carefully established and defended definitions of calls, addresses, and imperative subjects, in Section 1.7 I will present a roadmap of the rest of the dissertation.

1.2. Prosody

One of the most often-cited characteristics that distinguishes vocatives from nominal arguments is that they are prosodically set apart from the utterance (Hjelmsev 1935, Downing 1969, Zwicky 1974, Ashdowne 2002, Jensen 2003, Zanuttini 2008). An in-depth prosodic analysis of addressee referring nominals is beyond the scope of this dissertation, however a brief discussion will serve to help the reader internalize the distinctions discussed in the following sections and better read the examples therein.

Prosody plays a very important role in our use of vocative phrases. Calls, addresses and subjects of imperatives sit on a scale of prosodic integration with the host clause. This is

represented in (5).

5) Prosodic independence   Prosodic integration
    calls   >   *addresses*   >   *subjects of imperatives*

The scale in (5) takes the following prosodic factors into consideration:

6) Characteristics of Prosodic Integration:
    a. offset by pauses
    b. intonational contour
    c. prosodic phrasing

Downing (1969 pg. 577) notes "distinctive, separate comma intonation" in vocatives as opposed to imperative subjects, which is also cited in Jensen (2003). Within vocatives, Zwicky (1974) notes that calls are set apart from the phrase by a greater pause than addresses, while Göskel & Pöchtrager (2013) show that calls have distinctive, independent, prosodic contours which addresses lack. Indeed, calls, can take on near sentential intonational contours - think of Marlon Brando yelling out "Stella!" in *A Street Car Named Desire*, Fred yelling "Wilma" on *The Flinstones* or children calling out "Marco!" and "Polo!" in a game of Marco Polo.

1.3. Morphology and Form

The most significant factor for classifying addresses and calls together as vocatives is that they are both able to bear morphological vocative marking. I have yet to encounter a language with overt vocative morphology that does not apply it to both calls and addresses. Example (7) shows

this lack of distinction in Georgian:[1]

7) a. k'ac-o,   ʒaɣl-i   uxeš-i=a   (address)
       man-VOC dog-NOM mean-NOM=is
       'Man, the dog is mean'
    b. k'ac-o!   ʒaɣl-i   uxeš-i=a   (call)
       man-VOC dog-NOM mean-NOM=is
       'Man! The dog is mean'

Example (7a) superficially differs from (7b) only in prosodic integration, however, the

contexts for their uses are also distinct. The address in (7a) can be used when the speaker and

addressee are already in conversation, while the call in (7b) is used to identify the addressee or

draw his attention.

1.3.1. Imperative Subjects

Some languages with vocative morphology, however, do not apply it to overt imperative

subjects, which instead appear in the nominative case. Georgian systematically uses nominative

case for certain overt imperative subjects (as will be discussed in greater detail in Chapter 2),

while in Latin and Ancient Greek such constructions are rare, but attested.

8) bič'-eb-i   c'a-di-t   saxl-eb-ši, gogo-eb-i da-rči-t!   *Georgian*
    boy-PL-NOM PREV-go.IMP.2SG-PL house-PL-in girl-PL-NOM PREV-stay.IMP.2S-PL
    'Boys go home, girls stay!'

                                                        (=(19) Abuladze & Ludden 2013)

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1. Unless otherwise noted, I am indebted to Mamuka Tartarashvili for the Georgian data in this dissertation. All errors are my own.

9) audi   tu Populus   Albanus   *Latin*
   hear.IMP you people.NOM Alban.NOM
   'You Alban people listen!'

                                    (Livy i, 24, 7 via Keith 1908; gloss and translation my own)

10) he   prokne,   ekbaine   *Ancient Greek*
    the.NOM Procne.NOM come forth.IMP
    'Procne come forth'

                                    (Aristoph. *Birds* 665 via Keith 1908; gloss and translation my own)

Examples (8 - 10) show instances of overt nominative imperative subjects. In each case,

the form is unambiguously nominative; in (8) and (9) alternative vocative forms exist (*bič'-eb-o,*

gogo-eb-o; Popule Albane), and in Ancient Greek the article is incompatible with vocative case,

though for this particular name the vocative case ending is syncretic with the nominative.

Syncretism between the nominative and vocative is the subject of much discussion in Classical

research, however in section 3.1.2 I will show that no systematic cross-linguistic syncretism

exists. Note, moreover, that in cases where distinct forms exist, nominative morphology is never

present on addresses or calls, as illustrated in the following examples from Georgian (which can

be compared to the licit form in example (7).

11) a. *k'ac-i   ʒaɣl-i   uxeš-i=a
       man-NOM dog-NOM mean-NOM=is
       Intended: 'Man, the dog is mean'
    b. *k'ac-i!   ʒaɣl-i   uxeš-i=a
       man-NOM   dog-NOM mean-NOM=is
       Intended: 'Man! The dog is mean'

Distinguishing between an overt imperative subject and an address accompanying an

imperative can be very challenging. Take, for example, the following sentence in Latin:

12) Lugete,   o Veneres   Cupidines-que
    mourn.PL.IMP o venus.VOC.PL cupid.VOC.PL=and
    'Mourn, O Venuses and Cupids'

(Catullus 3)

The construction shown in (12), in which a vocative cooccurs with an imperative, is far

more common in Latin than the nominative construction shown in (9). There are two possible

analyses of vocative marked nouns co-occurring with imperatives in languages like Latin: 1)

overt imperative subjects are normally marked with vocative morphology 2) overt imperative

subjects are nominative, but are highly restricted, and their function is taken over by vocative-

marked addresses. The analysis I present of overt imperative subjects in Chapter 2 does not take

a decisive stance on the issue, though the analysis of English overt imperative subjects does

show that they are subject to certain restrictions.

For now, it will suffice to make the following observation about the distribution of

morphology in addressee-referring nominals:

13) *Morphology in addressee-referring nominals*
    a. In languages with overt vocative morphology, it is consistently applied to
       addresses and calls equally
    b. In some cases, overt imperative subjects may appear in nominative case

We have seen that the distribution of vocative morphology supports the classification of

addressee-referring nominals proposed in (3). Calls and addresses both appear with vocative

morphology and never nominative case, while imperative subjects can, in some instances, bear

nominative case. We will now turn to distinctions in the forms of addresses and calls.

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1.3.2. Distinctions between addresses and calls

Zwicky (1974) points out a wide variety of lexical restrictions on addresses in English. He demonstrates that all addresses may be used as calls, but not all calls are possible addresses, as can be seen in example (14) and (15) below.

14) a. Hey whatsyourname, give me that boat hook!
    b. *What I think, whatsyourname, is that we ought to take the money and run.

15) a. Cabby, take me to Carnegie Hall.
    b. *I don't think, cabby, that the Lincoln Tunnel is the best way to go to Brooklyn.

(adapted from Zwicky 1974 pg. 790-791)

It's perfectly acceptable to hail someone as *whatsyourname, cabby, ice cream man, surgeon* or *pediatrician* (14a, 15a). These terms, however, cannot be used in an address context (14b, 15b). A number of them fall into the class of occupational terms, and thus identify the referent as a member of a set of {ice cream men}, {cabbies}, {surgeons}, etc.[2]

Similar restrictions exist in other languages. Floricic (2010), for example, shows that in

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2. Based on a small set of data, it seems that English occupational terms which can be used as titles may also occur as addresses, while those which cannot can only be calls.

   i.   a. Senator Gillibrand, Doctor Zhivago, Professor Xavier, General Patton, Reverend Mitchell
        b. I think, Senator/Doctor/Professor/General/Reverend, it's time to retire for the evening.

   ii. a. *Assistant Professor Davis, *Physician Artemis, *Pediatrician Parles, *Surgeon Johnson, *Cabby Banta, *Barista Ciappa
        b. *I think, Assistant Professor/Physician/Pediatrician/Surgeon/Cabby/Barista, it's time to retire for the evening.

   In (i) we can see that those occupation terms which can be titles (ia) can also be used as addresses (ib). In (ii), on the other hand, those that cannot be titles (iia) are also impossible as addresses (iib). Some exceptions to this generalization are farmer and president, which can be titles (Farmer John, President Obama) but not addresses on their own (president requires another title - Mr. President). Additionally, terms for lawyers seem to stray from this generalization. In court, lawyers are often addressed as Counsel, but this is not normally a title (*Counsel Fitzsimmons) and alternatively the term attorney is occasionally used as a title (Attorney Fitzsimmons) but never as an address alone. These could possibly be idiomatic uses.

Catalan and Italian certain names may be shortened, but this short form can only be used as a call.

16) Maria / Marí   Alessandro / Alessà   *Catalan*
    Esteve / Esté   Fabio / Fa

17) Antonio / [an'tɔ]   Sandro / [sa]   *Italian*
    Theresa / [te'rɛ]   Silvia / [si]

The short forms to the right of the full form names can be used in the contexts for calls, and are illicit in an address context.

It turns out, however, that at least one construction exists which is possible as an address but not a call. Meibauer & d'Avis (2010) point out that evaluative vocatives in German (parallel to *you fool* in English), are possible addresses, but impossible as calls (18).

18) #Du Trottel! Dein Auto wird abgeschleppt
   "You fool! Your car is being hauled off!"

It is most likely the case that the restrictions on calls and addresses shown in this section do not reflect differences in the internal structure of call and address DPs, but rather fall out of the pragmatics of their use. Calls are used to get the attention of the addressee, and therefore must be contain some way for the addressee to identify himself. Occupations like *cabby* and *ice cream man* fulfill this function, while generic calls like *whatsyourname* alert all the hearers that one of them is the addressee (often to be confirmed physically by gesture or eye contact). Evaluative vocatives (like that in 18), on the other hand, are asserting a trait about the addressee that she is not assumed to know about herself. Corver (2008) formalizes this intuition in his analysis of evaluative vocatives as predicative structures, assigning the addressee (*you*) to the set (*idiot*). It is therefore unsurprising that evaluative vocatives cannot be used as calls, as they

normally do not identify traits that the addressee easily identifies herself by.

The restrictions on addresses seem to be based on the degree of social information the vocative contains. Addresses, remember, serve to establish or reestablish the relationship between the speaker and the addressee. The address, therefore, must have sufficient social information to carry out this role. For example, titles may relay respect (*Doctor, Mr. McMullen, Prof. Finer*), disparaging names may relay disdain (*jerk, asshole, bitch*), pet names may relay closeness (*honey, sweetie, baby*), in group terms may relay inclusion (*dude, punk, bro*) etc. Names that are strictly identificational (*cabby, ice cream man, you over there*) may simply lack sufficient social information to be a meaningful address.

We have seen in this section that English addresses are subject to certain lexical restrictions that do not apply to calls, and certain short-form names in Catalan and Italian are possible calls but not addresses. Alternately, evaluative vocatives such as *you fool* can be used as addresses but not calls. I have suggested that these restrictions are derived from the pragmatics of addresses and calls, rather than structural differences (which will be discussed in more detail in Section 4.5). Combined with the fact that, in languages with overt vocative morphology, it applies to both calls and addresses, I conclude that they have the same internal structure, which will be discussed in Chapter 3.

1.4. Reference

One of the greatest distinguishing characteristics between vocatives and imperative subjects is

whether they are required to refer to the entire set of addressees or whether they may pick out a subset. I will argue that calls and addresses must refer to the entire set of addressees, while overt subjects of imperatives may refer to a subset of the addressees.

1.4.1. Addressees are a Subset of Hearers

It is crucial to note the distinction between *addressees* and *hearers*. The set of addressees is a subset of hearers, and must be defined on semantic rather than pragmatic grounds. The set of addressees is the subset of hearers to whom the speech act is directed. Speakers may, of course, purposefully convey meaning to hearers, but this indirect communication does not make that hearer an addressee. Take, for example, the following situation: A woman sits near an open window in a French café. At a nearby table, without access to the window, a man sits with his young daughter. He looks at his daughter and loudly says,

19) *Ma cheri, as-tu   froid? Il commence à fait   froid ici, je   crois.*
     my dear   have 2.SG cold   it begin   to make.3SG cold here 1.SG think.1.SG
     'My dear, are you cold? It's beginning to get cold in here, I think.'

The intended result is that the non-addressee hearer, the woman sitting by the window, close the window. Though she is intended to hear the utterance, she is not an addressee. I chose to represent the above scenario in French to illustrate, in case of any doubt, that hearers who are not addressees (i.e. the woman by the window) have no grammatical relation to the speech act. Indeed, both the address (*ma cheri*) and the second person pronoun in (19) are singular, referring only to the addressee (the daughter) and not to the non-addressee hearer. This distinction is very

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important for the discussion of reference restrictions in vocatives.

1.4.2. The Reference of Calls

It is often stated that the role of vocatives is to identify the addressee, and yet of the three types of vocative phrases listed in (2), calls seem to best fit this description. In keeping with this role, calls must pick out the complete set of addressees. Example (20) shows infelicitous attempts to identify a subset of addressees with a call.

20) a. #Addressed to Leda and Melissa:
    "Leda! You guys need to chase the ball!"
  b. #Addressed to a coed group of children:
    "Boys! It's time for everyone to warm up!"

It is impossible to understand the examples in (20) as being addressed to a group larger than that which is identified by the call. In (20a), the only possible interpretation is that Leda is somehow responsible for both she and Melissa chasing the ball (either she is supposed to urge Melissa to, or Melissa is already fulfilling her duty and only Leda needs to change her actions). The same facts hold for (20b), which cannot be understood as being addressed to the whole group (though either may be intended to reach the non-addressee hearers, as in example 19).

1.4.3. The Reference of Addresses

Similar facts hold of addresses. We can see that example (21) exhibits the same pattern we saw for calls in (20).

21) a. #Addressed to Leda and Melissa:
      "You guys should be more aware of when to chase the ball, Leda"
   b. #Addressed to a coed group of children:
      "You know how important our warm ups are, boys"

In (21a), it is impossible to understand both *Leda* and *Melissa* as the addressees. *Melissa* may be a hearer, but it is clear that the utterance is meant for *Leda* alone, suggesting that either she is in control of the ball chasing, or that only *Leda* needs to adjust her awareness, not *Melissa*.[3] Thus, like calls, the entire set of addressees must be referenced in an address.

1.4.4. The Reference of Imperative Subjects

Restrictions on overt imperative subjects is the primary subject of investigation in Chapter 2. Nonetheless, in this section I will briefly highlight the fact that, unlike addresses and calls, imperative subjects regularly refer to a subset of the addressees, as first noted in Downing (1969).

Recall from section 1.3 that some languages mark imperative subjects with nominative case, which is never true for vocatives. Using examples from those languages in order to clearly see that the nominal in question is an imperative subject and not a vocative, we find that subsets of the set of addressees are possible referents of imperative subjects.

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3. There is a second possible reading of (21a) in which both Melissa and Leda are the addressees, but Leda is highlighted as an addressee, perhaps as an afterthought (or a feigned afterthought). This reading is marked prosodically by a substantial pause before the address as well as focus-like intonation on the address itself.

22) Maista-kaa   joku   keitto-a   *Finnish*
    Taste-IMP-2PL someone-NOM-3SG soup-PART
    'Someone taste some of the soup'

                                                                        (=(23) Jensen 2003)

23) chelsu-ka   kakey-ey ka   *Korean*
    Chelsu-NOM store-to   go.IMP
    'Chelsu (as opposed to others) go to the store.'

24) ppalkan-os-ul   ip-un   salamtul-i   ilena   *Korean*
    red-clothes-ACC wear-REL people-NOM stand.up.IMP
    'The people wearing red clothes stand up.'

The existential quantifier in the Finnish example in (22) must refer to an indefinite subset

of the set of addressees. Indeed, existential imperative subjects are completely illicit when

spoken to a single addressee. In the examples from Korean in examples (23) and (24), it is

understood that the referents of the imperative subjects are subsets of the set of addressees. That

is, in (23) it is clear that *Chelsu* is not the only addressee, and example (24) is clearly addressed

to people wearing non-red clothes as well as people wearing red clothes. The same effect can be

seen in English, where we find that indefinites and existentials are possible imperative subjects,

but are not possible addresses[4]:

25) a. A senator from California stand up immediately!   (imperative subject)
    b. *A senator from California, we should vote yes tonight.   (address)

26) a. Someone help grandma!   (imperative subject)
    b.*I think grandma's fallen down, someone.   (address)

27) a. Nobody touch the computer!   (imperative subject)
    b.*Nobody, the computer is very valuable.   (address)

In this section, we have seen once again that calls and addresses pattern together in terms

of reference: both, with few exceptions, must refer to the entire set of addressees. This fits in

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4. '*Someone*' seems to be an appropriate call in English, despite being indefinite: *Someone! Grandma's fallen!* I
suspect that these cases contain an implicit imperative: *Someone* [*hear me*]/[*help me*]!

with the pattern we saw in section 1.3 which showed that while calls and addresses must both bear vocative morphology (in languages where its applicable), imperative subjects may bear nominative case. In the following section, we will use what we have seen in the past two sections to assess the structural position of calls, addresses, and imperative subjects in English.

1.5. Structural Position

In sections 1.3 and 1.4, we saw that certain nominals, whether by pragmatic or grammatical constraints, are only possible as one kind of addressee referring nominal. For example, we saw that certain occupational terms and generic calls are only possible as calls, e.g.: *cabby, ice cream man, whatsyourname.* We also saw that indefinites and existentials are only possible as imperative subjects, e.g.: *a senator from California, someone.* In this section, these nominals will be used to determine constraints on the positions of calls, addresses and imperative subjects with respect to the *host phrase* in English. I use the term *host phrase* as neutral term for the utterance, sentence, or clause with which the addressee referring nominal cooccurs. We will see that calls are obligatorily utterance initial, imperative subjects must be preverbal, and addresses may occur initially, finally, or mid-sententially. Additionally, although only one call and address are possible per host phrase, they are able to co-occur. This fact will be the cornerstone of my argument that they are structurally as well as pragmatically distinct constructions.

1.5.1. Ordering restrictions on addressee referring nominals

Calls must occur sentence initially, possibly for discourse purposes. Therefore, English nominals which are only possible as calls are restricted to the initial position:

> 28) a. Whatsyourname! Kick the ball (*whatsyourname)!
>   b. Ice cream man! I'm dying (*ice cream man) for a scoop of pistachio (*ice cream man).

Hill (2014) claims that all English vocatives may be accompanied by the particle *hey* or a variant thereof. It seems, however, that *hey* only accompanies calls, as it is also restricted to the initial position:

> 29) a. Hey (whatsyourname)! Kick the ball (*hey)!
>   b. Hey man, how's it going (*hey man)?

The pragmatic functions of calls discussed in section 1.4.2 all presuppose that there is no immediately preceding discourse, or at least that the following statement is not dependent upon it. Subordinating adverbs, which depend on previous discourse, are therefore incompatible with calls.

> 30) a. But/however/anyway/equally, sir, we're all ready to go.   (address)
>   b. *Cabby! But/however/anyway/equally, we're all ready to go.   (call)

Example (30) above illustrates two very important features of vocatives. First, as discussed above, calls are not only obligatorily sentence initial, but they are obligatorily discourse initial, hence their incompatibility with subordinating adverbs. Secondly, we see in (30a) that the address may appear between the subordinating adverb and the rest of the sentence. Indeed, Zwicky (1974) notes that addresses may appear in a wide variety of positions: initial (31a), final (31b) or mid-sentential (31c-g).

31) a.   My friend, you gotta buy this car!
    b.   Henry will probably storm out of the apartment, June.
    c.   ?She beat, my friend, everyone who challenged her at chess.
    d.   I'm afraid, sir, that my coyote is nibbling on your leg.
    e.   You know, man, this reindeer soup is really delicious.
    f.   You must realize, honey, that we can't keep meeting like this.
    g.   According to my records, imbecile, you don't belong in this class.

(Zwicky 1974)

Having shown that indefinite DPs like *somebody* and *nobody* are possible subjects of imperatives but not addresses, we can use them to distinguish positions for subjects of imperatives from those of addresses. We find that while addresses may appear in a range of positions, subjects of imperatives may only appear preverbally in English.[5]

32) a.   (Nobody) help me (*nobody) with the dishes (*nobody).
    b.   (Grandma) help me (?grandma) with the dishes (grandma).

In (32a), *nobody* may only be the subject of the imperative, and as such it is restricted to the preverbal position. *Grandma*, on the other hand, interpreted as an address, may appear preverbally, within the clause, or clause finally. I take this as further evidence confirming that there is a unique preverbal position for subjects of imperatives (as has already been argued by Jensen 2003, Portner 2004, and Zanuttini 2008, et al.), and furthermore that non-preverbal addresses in imperative clauses are not syntactically imperative subjects.

Additional support for this position comes from pronoun distribution. It has been well established that 3rd person quantificational subjects of imperatives may antecede 2nd or 3rd person pronouns (Zanuttini 2008).

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5. Thanks to Raffaella Zanuttini for pointing out that in Belfast English this generalization does not hold (Henry 1995, pg 47):
       i. Read it you to me.
       ii. Read you it to me.

33) Everybody$_i$ gather your$_i$/their$_i$ weapons.

Unlike subjects of imperatives, however, addresses can never be coreferent with 3rd person pronouns, even in imperative clauses.

34) a. Gather your$_i$/*their$_i$ weapons, everybody$_i$.
    b. Everybody$_i$, it's time to gather your$_i$/*their$_i$ weapons.

Example (34) shows that only a subject of an imperative (34a), and not an address (34b) is able to antecede a 3rd person pronoun.

In sum, we have seen that calls are obligatorily discourse initial, addresses can occur initially, mid-sententially and finally, and, in English, imperative subjects are restricted to a pre-verbal position. In the following section I will show that these restrictions correspond to structural positions through evidence from iterativity.

1.5.2. Iterativity

In this section, I examine the distribution of multiple and co-occurring addressee referring nominals. The following generalizations seem to hold for English:

35) a. calls, addresses, and imperative subjects may co-occur
    b. calls, addresses, and imperative subjects may be composed of multiple nominals, listed or conjoined
    c. if an address is composed of multiple nominals, they must be adjacent.

These facts suggest (but certainly do not prove) that calls, addresses, and imperative subjects are associated with three unique structural positions, a claim that will be strengthened throughout this dissertation. Let us begin with the first point, that calls, addresses, and imperative

subjects may co-occur.

36) Aiden! You be quiet now, sweetheart.

In (36), the call, *Aiden*, identifies and/or gets the attention of the addressee. The second person pronoun serves as the subject of the imperative[6], and the address, *sweetheart*, reinforces the relationship between the speaker and the addressee (in this case, likely softening the blow of the imperative predicate).

If members of the set of addressees are to be identified individually or by subgroups, multiple calls, addresses, or overt imperative subjects may be used. As we have just seen that calls and overt imperative subjects are positionally restricted, it is no surprise that multiple ones are likewise restricted to the same position (i.e. they must be adjacent).

37) a. Debbie and Jessie! Over here is where you can set up.
    b. Debbie! Jessie! You guys played a great show!

38) Debbie and Jessie load the bass amp, Cait and Eamon work on the drums.

Since addresses are able to appear in various positions with respect to the host clause, however, one might imagine that addresses might be able to be split throughout the host clause. This turns out to not be the case. Whether listed or conjoined, they must be adjacent.

39) a. You guys did a great job today, ladies, Coach.
    b. Kim, Liz, you both had excellent ball handling today.
    c. *Ladies, you guys did a great job today, Coach.
    d. *Kim, you both, Liz, had excellent ball handling today.

40) a. This was an excellent turnout today, ladies and gents.
    b. Kim and Liz, you both had excellent ball handling today.

In (39a-d) we can see that the addressees may be enumerated, but they must be listed

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6. See section 2.4 for a discussion of second person pronouns as overt imperative subjects.

adjacently.[7] Note that when listing the addressees, only those hearers enumerated are included in the set of addressees. For instance, if a male assistant coach is a hearer of (39a), he cannot be interpreted as an addressee. The same restriction applies to coordinated addresses, seen in (40).

1.6. The Functions of Addresses

The functional roles that calls and subjects of imperatives play in the phrase are relatively apparent - calls can alert or identify the addressee, and subjects of imperatives identify the individual(s) whom the speaker intends to carry out the task identified by the predicate. I will now turn to a hypothetical situation in order to examine the functions of addresses.

41) So, Paul, how are you?

Imagine that the speaker of (41) and Paul are the only people in the room and that they have been engaged in conversation for a few minutes. Sentence (41) is perfectly natural, despite the fact that the identity of the addressee is contextually apparent. Why include this seemingly excessive content? Addresses vary wildly in their pragmatic and functional use, but the one overarching characteristic they share is to provide information about the addressee, and/or his or her relationship to the speaker. This information can be either pragmatically or grammatically encoded, as summarized in (42).[8]

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7. It is very interesting to note that addresses and calls seem to be the only DPs in English which may be listed without final coordination. I am not prepared to offer an explanation for this at the moment, but I suspect that it is related to their deictic nature.

8. A web-video on the website Buzzfeed by Darragh & Lam (2015) pokes fun at the number of meanings a single

42) a. Pragmatically encoded information
    - addressee relevance
    - description/evaluation
   b. Grammatically encoded information
    - gender
    - number
    - relationship to speaker

1.6.1. The Relevance of the Addressee

Addresses may be used to draw in the attention of the addressee or let him know that the

utterance has particular relevance to him. Consider the following sentence:

43) Some players are just in it for the social. It's important to care about the game, too,
    Paul.

Here, the inclusion of the address, '*Paul,*' can be used to highlight the relevance of the

utterance to the addressee in various ways, depending on the context. A few possible

interpretations are schematized in (44).

44) a. It is important to s (speaker) that h (hearer) know p.
    b. S believes p has particular relevance to h.
    c. S believes h's actions or beliefs are incongruous with p.

---

address can take on when context, intonation, and gesture are varied. Using the address 'girl', they proscribe 28 different interpretations, culminating in a full conversation using only the address 'girl'. A small sampling is shown below in (i-ix).

i. "Hello."	ii. "How are you?"
iii. "Thank you."	iv. "F*ck you." [sic]
v. "You're crazy."	vi. "Tell me everything."
vii. "Yes."	viii. "No."
ix. "Stop."	

My impression of these examples is that the context, intonation, and gesture are providing the content of the interpretation, while the address itself continues to convey the relationship between the speaker and the addressee (in that moment).

We can apply any of these interpretations to (43) given the right context. If the speaker is passionate about the utterance in (43), she may feel that it is something everyone should know, even if Paul himself is not a sportsman (44a). If Paul is a beginning player, and the speaker is more experienced, she may highlight the personalization of this advice to the addressee with an address (44b). Finally, the address can function to suggest that Paul is one of the players who cares more about the social than the game (44c).

1.6.2. Descriptive addresses

Next, the choice of address can provide information about the addressee which is relevant to the phrase.

45) a. I won't drive with you, **you fool**!
understood: "You are a fool to think that I'd drive with you"
b. You ought to learn to share, **you ball-hog**.
understood: "You ought to learn to share the ball because you are hogging it"

46) a. I'm surprised you go anywhere without an umbrella, **Mr. Seattle**.
understood: "I'm surprised you go anywhere without an umbrella since you're from Seattle (where rain is frequent)"
b. Seems to me, **Ms. I'll-never-score**, that you just need more confidence.
understood: "It seems to me that you don't score because you believe you'll never score"

Addresses such as those in (45) are known as *evaluative vocatives* (Corver 2008), but fall into a larger class of what I will call *descriptive addresses* which include addresses without the 2nd person pronoun such as those in (46). These have the quality of providing or highlighting information about the speaker's view of the addressee. Although they are syntactically optional,

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they make a meaningful semantic contribution similar to an adjunct phrase.

1.6.3. Relationship Establishment

The interpretative possibilities of addresses discussed in 1.6.1 and 1.6.2 are pragmatic uses of addresses, but these interpretations are not grammatically encoded. Meibauer & d'Avis (2010), Hill (2013) and Haegeman & Hill (2013) suggest that the address establishes or reinforces the relationship between the speaker and the addressee. This seems to be on the right track. First, the choice of address term alone can serve to establish the speaker's view of this relationship. Every single time an address is used, it illustrates the relationship between the speaker and the addressee, even in languages like English which lack detailed honorific systems.

Formal, Polite	Sir, Mr. President, Your Honor, Professor Finer
Informal, Positive face	buddy, dear, bro, [nicknames] [pet names]
Informal, Neutral	Paul, mom, auntie
Informal, Dismissive	chick, kid
Pejorative	asshole, jerk, bitch

Table 1

The function of establishing or reinforcing the relationship between the speaker and the addressee lies at the core of the interpretation of addresses. It will play a prominent role in the proposed featural make-up of the Addr head in Chapter 5.

1.7. Roadmap

Thus far in this chapter we have seen that calls, addresses, and subjects of imperatives pattern

sufficiently distinctly to support the taxonomy shown in (3) and repeated below:

> 47) Addressee Referring Nominals:
>   a. 2nd person arguments
>   b. Imperative Subjects
>   b. Vocatives
>   i. Calls
>   ii. Addresses

Of the large number of distinctions that have been brought up in this Chapter, I would

like to briefly summarize those which will be of the most importance throughout the rest of the

dissertation. These are listed below in

> 48) *Overt Imperative Subjects*
>   a. may occur in nominative case
>   b. may refer to a subset of the set of addressees
>   c. are restricted to a preverbal position in English
>
> 49) *Addresses*
>   a. occur in vocative case
>   b. must refer to the entire set of addressees
>   c. may occur pre-, mid-, or post-sententially
>   d. establish or reinforce the relationship between the speaker and addressee(s)
>
> 50) *Calls*
>   a. occur in vocative case
>   b. must refer to the entire set of addressees
>   c. are restricted to an utterance initial position
>   d. identify or get the attention of the addressee(s)

We see that in some respects, calls and addresses pattern together and distinctly from

imperative subjects. The primary exception being their structural position: calls are obligatorily

utterance initial, while addresses can be initial, final, or mid-sentential. Having established these

facts as a basis for further discussion, in this section I will take a moment to outline the contents

of the rest of this dissertation.

Chapter 2 is dedicated to describing the distribution of overt imperative subjects in

English. The purpose of this chapter is twofold. First, it is to gain a better understanding of why

imperative subjects cannot freely be overt. Secondly, but equally importantly, it is to aid in the

study of vocatives by determining concrete criteria for identifying overt subjects of imperatives,

so as to disambiguate them from vocatives. I show that existing analyses (Downing 1969,

Beukema & Coopmans 1989, Potsdam 1996) fail in empirical coverage, and propose a

descriptive condition to accurately capture the distribution of English overt imperative subjects:

51) *OSI Condition*
Imperative subjects may be overt in the presence of a non-null set of contextually
defined alternatives

This condition is based on the observation that imperative subjects are never overt when

there is a one to one correspondence between the set of addressees and the set of potential tasks,

in which case an address or call might be used in its place. That is, we say, '*Bree, clean your*

room' (using an address) rather than '*Bree clean your room'* (overt imperative subject) when the

set of addressees is {*Bree*} and the set of tasks is {*clean x's room*}. It is tempting to construe

these constraints as being solely pragmatic in nature, however it seems that they are likely

syntactic, as some languages seem to be more restricted in their use of overt imperative subjects

than others.

Having established guidelines for identifying what is NOT a vocative in Chapter 2, in

Chapter 3 I turn to the vocative DP itself. This chapter covers a number of prominent issues

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regarding the internal structure of vocative nominals, beginning with the oldest: vocative case. I

rebuke the longstanding view that vocative case is an aberration of nominative case by showing

that there exists no cross-linguistic connection between the two. I next turn to the apparent

paradox of the inherent definiteness of vocatives and their frequent incompatibility with definite

articles. I follow Bernstein (2008)'s analysis that D is the locus of person features, and the

definite article is its 3rd person form. Finally, Chapter 3 also addresses a more modern issue in

the vocative DP: adjective-initial vocatives. Following Hill (2013) and Slocum & Taylor (2010),

I argue that adjective-initial vocatives in Italian, Romanian and Slavic provide evidence for the

existence of an additional layer of functional structure in vocative DPs. I depart from previous

analyses, however, in taking the word order in adjective-initial vocative DPs to be the result of

N-to-D movement of the nominalized adjective.

In Chapter 4 I turn to the relationship between vocatives and the host clause. The

majority of the chapter focuses on addresses, as their relationship to the host clause is the most

complex (remember that calls are obligatorily utterance initial). I challenge the standing

assumption since Moro (2003) that addresses are associated with a functional projection above or

at the left edge of CP. Instead, I propose that addresses are in the specifier of a functional

projection AddrP, which is located in the topic domain of CP. I show that this proposal is able to

account for the interaction between mid-sentential addresses and information structure. Taglicht

(1984) notes that mid-sentential vocatives mark the boundary between a *marked theme* and the

rest of the sentence. I show that this intuition is reflected in the present proposal, in which mid-

sentential addresses are derived through phrasal and remnant movement to topic and focus

positions in the CP domain. This proposal predicts that we should not find addresses between any

elements of syntactic islands, as their derivation would necessarily involve movement out of that

island. The results of a 128 person judgement survey show that this prediction is borne out.

Finally, in Chapter 4, I touch briefly on the syntactic status of calls. I suggest that, given the

morphological identity between calls and addresses, calls are likely structurally identical to

addresses, but used independently.

One of the most prominent arguments against the analysis presented in Chapter 4 (or any

generative analysis of vocatives) is that vocatives are extra-syntactic. In recent years, this

argument has been refuted with evidence from allocutive agreement; second person non-

argument verbal agreement (Hill 2014, Haegeman & Hill 2014). This agreement pattern, most

often discussed in Basque and Japanese (Oyharçabal 1993, Miyagawa 2012), mirrors the

relationship-establishment of addresses discussed in 1.6.3, expressing either solidarity or respect.

In Chapter 5, I suggest that allocutive agreement is likely associated with the same functional

projection as addresses. A range of allocutive data exist, showing that this phenomenon extends

far beyond Basque and Japanese, including a non-argumental second person clitic in several

Romance and Slavic languages (Huidobro 2014). I review several existing generative analyses of

allocutivity, but conclude that an analysis which relies on AddrP is more straightforward and has

more empirical coverage. I propose that Addr° is host to unvalued an allocutive feature which

probes to agree with a functional category in the inflectional domain (the exact category likely

varies across languages). This analysis is able to account for a broad range of data, and is

additionally compatible with the analysis of addresses proposed in Chapter 4.

Finally, in Chapter 6, I explore potential consequences of the analysis presented in Chapter 4. Vocatives have long been classified with parentheticals, but analyses of parentheticals are few and far between, and not widely adopted. The question that naturally must arise, then, is whether a similar analysis might apply to other elements in this category. In this chapter, I take a systematic approach to examining characteristics of so-called parentheticals, finding that the term has been applied to a diverse group of syntactic elements. I find that a subset of parentheticals pattern with addresses in delineating a boundary between old and new information. These parentheticals, however, still vary greatly in their structural independence from the host clause. I show, however, that these difference are predicted by an analysis, like that for addresses proposed in Chapter 4, which associated them with a functional projection in the topic domain of CP.

Chapter 2

Overt Imperative Subjects

One of the most striking and universal characteristics of imperatives is that their subjects may be null, even in those languages which require overt subjects in other clause types (Zhang 1990). Equally fascinating, however, is that when imperative subjects are expressed overtly, they are constrained by poorly understood restrictions.

1) a.   You stop that!
   b.   Someone tackle him!
   c.   Everyone raise a glass!
   d.   Girls line the field, boys grab the cones.

2) a.   *Girls line the field!
   b.   *James tackle him!

The examples in (2) are perfectly well formed if '*girls*' and '*James*' are pronounced and interpreted as vocatives, but are impossible as imperative subjects (Downing 1969, Beukema & Coopmans 1989). The distinction between overt subjects of imperatives (OSIs) and vocatives is subtle enough in languages without a nominative/vocative distinction that most analyses of OSIs also include discussions of vocatives in order to develop a working taxonomy (for example, Downing 1969, Potsdam 1996, Jensen 2003, Zanuttini 2008). Such a taxonomy is equally

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important for the study of vocatives, and this chapter is devoted to improving our current understanding of the restrictions on OSIs. Syntactically, I assume that OSIs occupy the canonical subject position, though this assumption is not crucial for the arguments put forward in this chapter.

In Chapter 1 we saw a series of characteristics that distinguish OSIs from vocative phrases. They are summarized briefly in (3) below.

3) Overt Subjects of Imperatives (OSIs)
    a. may be indefinite
    b. have a fixed position within the imperative clause in English
    c. are (or may be) nominative
    d. may refer to a subset of the set of addressees
    e. may be antecedents of 3rd person pronouns elsewhere in the clause
    f. license NPIs

These characteristics, however, are not useful for explaining why certain OSIs are impossible, such as those in (2). Inconsistent data has led to insufficiencies even in descriptive accounts of the restrictions on OSIs, and so, in this chapter, I attempt to clarify the contexts in which imperative subjects are overt. I propose the following condition to reflect the restrictions on the presence of OSIs:

4) *OSI Condition*
    Imperative subjects may be overt in the presence of a non-null set of contextually defined alternatives

The condition in (4) is primarily descriptive. I do not here attempt to provide a complete syntactic or semantic analysis of the restrictions on overt imperative subjects. The intention in this chapter is to describe the situations in which imperative subjects may be overt in order to better disambiguate them from vocatives.

The OSI Condition in (4) can be understood through two generalizations (though they are reflections of the same restriction). These generalizations are shown below in (5).

5) a. Imperative subjects may be overt if they refer to a proper subset of the set of alternative protagonists
    b. Imperative subjects may be overt if the imperative predicate is a proper subset of the set of alternative predicates

The generalizations in (5) help us to describe the fact that the non-null set of contextually defined alternatives invoked in (4) may range over imperative protagonists or imperative predicates. The term *protagonist* here refers to any individual who could potentially carry out or experience the task by the imperative. Though the condition applies identically in each case, it is useful to consider each case independently.

The major accounts of restrictions on imperative subjects are discussed in section 2.1, where we see that there is a need for an account with more empirical coverage. In section 2.2 I define the set of *potential protagonists*, a crucial concept for identifying the interpretive restrictions on imperative subjects. In sections 2.3 and 2.4 I discuss the OSI condition as it relates to the set of alternative protagonists (2.3) and the set of alternative tasks (2.4), and provide cross-linguistic evidence that these intuitions are substantiated. Though most of the imperatives discussed in this chapter are second person, the OSI Condition does not exclude the possibility that overt 1st and 3rd person imperatives subjects should be possible as well. In 2.5, we see that this possibility is borne out in Korean (1st person) and Attic Greek (3rd person). I adopt the Jussive head of Zanuttini, Pak & Portner (2012) to account for the distribution of 1st and 3rd person jussives. Though the OSI Condition could be argued to be pragmatically derived, in Section 2.6 I show data from Bosnian/Croatian/Serbian (BSC) that suggest that the OSI

Condition may, in fact, have syntactic roots.   Finally, in Section 2.7 I explore a formal

implementation of the OSI condition in the form of an exhaustivity operator (EXH) à la Fox

(2007).

2.1. Past Proposals

Three major proposals have been made to describe and/or account for the set of possible OSIs in

English. I offer a brief survey of them below.

6) Downing (1969):
   The subject of an imperative must stand in a subset relation to the addressee

7) Beukema & Coopmans (1989):
   Imperative subjects are quantificational or '*you*'

8) Potsdam (1996):
   An imperative subject is unrestricted in form and reference

In this section I argue that the characterizations of OSIs briefly summarized in (6-8) are

empirically insufficient. Downing (1969) and Beukema & Coopmans (1989) both make

important observations about the kinds of DPs that are commonly found as OSIs, but fail to

include all possible OSIs in their accounts. Downing (1969) observed that OSIs are often

(proper) subsets of the set of addressees, which I will adopt as a natural class of OSIs. His

description, however, excludes second person pronominal OSIs and '*everyone*,' shown below in

(9) and (10), respectively.

9) a.   You be quiet!
   b.   You feed the dog!

10) a.   Everyone chase the ball!
    b.   Everyone stand still!

Though it's possible to interpret the second person pronoun in (9) as a subset of the set of addressees, it is in no way required. The examples in (9) can easily be addressed to a single addressee, and the subjects in (10) all denote an individual or group that is identical to the full set of addressees, offering substantial counterexamples to Downing's (1969) generalization.[9]

Potsdam (1996) offers definite OSIs as counterexamples to Beukema & Coopmans claim that all OSIs are quantificational or 'you,' shown below in (11).

11) a.   The oldest of the girls in this group sing a folk song!
    b.   The boys in the corner stand up!
    c.   The man with the list come here!
    d.   Those near the front wait until the others have left.

                                                            (=(87) Potsdam 1996)

12) a.   *Wait until the others have left, those near the front.
    b.   *Stand up, the boys in the corner.

13) a.   [The oldest of the girls in this group]$_i$ sing her$_i$ favorite song!
    b.   [The man]$_i$ with the list raise his$_i$ hand!

The subjects in (11) can't be considered quantificational but are clearly OSIs according to the criteria in (3). They are unacceptable sentence finally (12), unlike addresses, and they are able to corefer with third person pronouns (13). Thus ruling out Beukema & Coopmans's account of OSIs, we are left with the claim in Potsdam (1996) that OSIs are unrestricted in form and reference. This claim is challenged by two kinds of data, however. First, there is the oft cited ungrammaticality of bare DPs as OSIs (Downing 1969, Zanuttini 2008) shown in (14), and

---

9. Potsdam (1996) offers a different counterexample to Downing (1969), in the form of OSIs which refer to a superset of the addressees, like those in (iii):

  iii. a. You and your men be on guard for anything suspicious!
       b. You and William do the cooking and I'll provide the wine.
       c. You and them make a deal! I'm out of this.

                                                      (=(91) Potsdam 1996)

second is the impossibility of first or second person pronominal OSIs shown in (15).

14) a.   *Paul do the dishes.
    b.   *Girls come here.

15) a.   *I do the dishes.
    b.   *He do the dishes.

The ungrammaticality of the sentences in (14) is context dependent. If the subjects are focused or contrastive, they are possible (these cases will be discussed in Section 2.3.2). However, in a neutral context in which *Paul* is the only addressee, (14a) is ruled out (though a vocative is still possible: *Paul, do the dishes*).

Clearly, some restriction must exist on OSIs in order to rule out examples such as those in (14 - 15). In Section 2.3 I will return to sentences like those in (14) and (15), and argue that their ungrammaticality does not reflect a ban on bare DPs as OSIs, but rather on the OSI denoting a set identical to, or excluding, the set of *potential protagonists* (to be defined in the following section). Thus I will argue that there is a restriction on the denotation of overt OSIs, rather than on the form.

2.2. The Set of Potential Protagonists

In this section, I attempt to define the set of alternative protagonists that can license an OSI in accordance with the OSI condition in (4). I begin by examining in further detail the OSIs identified by Downing (1969) as subsets of the set of addressees. To fully characterize the class, however, we must consider rather than the set of addressees, the set of *potential protagonists*.

The set of potential protagonists is the contextually defined set of individuals who could potentially carry out or experience the task denoted by the imperative, from which the subject is selected. In (16) I define the set of potential protagonists which will be used to assess imperative subjects throughout this chapter.

16) *Set of potential protagonists*
    The set of potential protagonists minimally consists of the set of addressees, and maximally may include any individuals the addressees are in a control relationship with and the speaker. It is contextually defined.

The set of potential protagonists is crucial for identifying the set of alternative protagonists. If the set of potential protagonists is identical to the subject, then the set of alternative protagonists is null, and cannot license an OSI as per the OSI condition. If, however, the subject is a proper subset of the set of potential protagonists, then the set of alternative protagonists is non-null, and an overt OSI is possible. The following sections applies this idea to the OSIs discussed in the introduction to this chapter.

2.2.1. The Control Relationship

I adopt the socially defined idea of control proposed by Hamblin (1987) and defined in Potsdam (1996). Potsdam argues that if the OSI is not a member of the set of addressees, then the addressee must be in a Control Relationship with said OSI. His definition of control is pragmatic rather than grammatical, and is defined below in (17).

17) *Control Relationship* (Potsdam 1996:236)
    x is in a control relationship with *y* if *x* has potential control over *y* in some domain *z* (where *z* may range over social, military, political, economic, discourse or other situations)

Potsdam discusses in detail cases in which non-addressees can be potential protagonists, a selection of which are shown in (18) and (19) below.

18) *You and William* do the cooking and I'll provide the wine!

19) *YOUR soldiers* build the bridge, General Lee!

<div align="right">(=(91b), (94c) Potsdam 1996)</div>

20) B company deploy on the escarpment, Lieutenant.

<div align="right">(Hamblin 1987:53)</div>

The subject may be composed of both an addressee and its controllee (as in example 18), or the controllee alone (19, 20). The presence of the possessive pronoun in (19) makes the control relationship overt, but it is not necessary (20).

There is no reason to believe that the *controllees* are automatically members of the set of alternative subjects. They seem, rather, to be brought into the set contextually. This is evident when we consider the interpretation of (21).

21) Everyone bring a gift on Saturday!

If the set of addressees in (21) is {*Santa Claus, Mrs. Claus, Rudolph, Blitzen*} there is no inherent understanding that all of the elves working at the North Pole are also to bring a gift on Saturday, despite the fact that there is a broad understanding that *Santa Clause* (and potentially *Mrs. Claus*) is in a control relationship with the elves. They must, instead, be either overtly referred to or contextually salient, as in (22).

22) A: Are the elves coming with you to the party on Saturday?
    SC: They sure are!
    A: Well you guys bring gifts then!

In (22), *the elves* are brought into the context by speaker A's initial question, and are then

salient members of the set of alternative protagonists in the subsequent imperative.

2.2.2. The Speaker as a Potential Protagonist

That the speaker must also be part of the set of potential protagonists is somewhat less clear, because the speaker is never expressed as an imperative subject as such. Nevertheless, the speaker is active as a potential protagonist in two ways 1) it acts as a point of contrast for the subject and 2) it is the subject or a member of the subject set in promissive and exhortative constructions, which are closely related to imperatives.

Like controllees, the speaker is not automatically a member of the set of potential protagonists, but rather must be brought in contextually. The speaker can be brought into the context either by himself (23) or by the interlocutor (24):

23) I'm too tired to take out the trash; you do it.

24) A: Can you take out the trash?
     B: I'm tired; you do it.

In both (23) and (24), the presence of the overt OSI 'you' falls under the first generalization for overt OSIs as listed in (5): it is a proper subset of the set of potential protagonists, which, in this case, is composed of {*speaker, set of addressees*}.

Mauck et al. (2005), Pak, Portner & Zanuttini (2008), and Zanuttini, Pak & Portner (2012) argue in great detail that imperatives, promissives, and exhortatives are closely related constructions, varying only in the person features that they are associated with. If this is the case, they should also have access to the same set of potential protagonists. Imperatives operate on the

addressees and their controllees, promissives on the speaker, and exhortatives on a set inclusive of the speaker and the addressee.

2.3. OSIs and the Set of Potential Protagonists

In this section, I walk us through examples containing OSIs which refer to a proper subset of the set of potential protagonists. I show that these subjects may take a much broader range of form than has been previously argued, including bare nominals and second person pronouns. Whenever possible, this data is correlated to languages with an overt morphological distinction between nominative and vocative case to show that these subjects are not vocative phrases.

2.3.1. Existential Quantifiers and Indefinite DPs

To begin, I consider the case of existential quantifiers and indefinite DPs as overt OSIs. These are quite common cross-linguistically. Here I present an array of examples from five languages of four distinct language families. Georgian, Latin, Finnish and Korean all have morphological nominative and vocative case, and express existential quantifier subjects of imperatives in nominative or, in the case of Georgian, ergative.[10],[11]

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10. I am indebted to Yunju Suh, Jisung Sun and Jiwon Yun for the Korean data and judgements in this chapter. All errors are my own.

11. Note that in examples (26-28), taken directly from the sources indicated, the imperative forms are glossed as a second person. Following Zannutini, Pak & Portner (2012) I take the imperative to be the second person form of the Jussive phrase (which is also present in promissive and exhortative constructions). Under this analysis, imperatives are correctly glossed as second person. Elsewhere in the dissertation, however, I use the theory neutral gloss 'IMP' without any person marking.

Existential quantifiers

25) Someone catch the ball!

26) vinme-m   da-u-dzaxe-t   ekim-s!   *Georgian*
   someone-ERG PREV-R-call.IMP.2S-PL doctor-DAT
   'Someone call a doctor!'

                                                             (=(18) Abuladze & Ludden 2013)

27) Aperi-te   aliquis   *Latin*
   open-IMP-2PL someone-NOM-SG
   'Someone open'

                                                    (Plautus, Mercator 131 via Jensen 2003)

28) Maista-kaa   joku   keitto-a   *Finnish*
   Taste-IMP-2PL someone-NOM-3SG soup-PART
   'Someone taste some of the soup'

                                                                         (=(23) Jensen 2003)

29) a. Nuwkuwnka nalul   topa cuwe   *Korean*
        someone   1.SG-ACC help give.IMP
        'Someone help me!'
    b. *Nuwkuwnka-ya nalul   topa cuwe
         someone-VOC   1.SG-ACC help give.IMP

Indefinites

30) a. A member of the away team raise your hand!
    b. A person over 6 feet come pull down this shade!

31) khi-ka   180cm nem-nun   salam-i   blind-lul   che   *Korean*
   height-NOM 180cm exceed-REL person-NOM blinds-ACC close.IMP
   'A person over 180cm close the blinds'

Existential quantifiers and indefinite DPs can both serve to range over a subset the set of

potential protagonists.[12] I will focus on the English examples for elaboration. Both (25) and (30)

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12. It is well attested in the literature that imperative subjects may be either Agents or Experiencers. Interestingly, however, in the case of indefinites, the subject is normally an Agent and not an Experiencer. In (iv) below the examples of imperative predicates which select an Experiencer for an external argument.

   iv. a.   Feel better!
        b.   Be careful!

are infelicitous when spoken to a single addressee, and yet the subject of the predicate is a single individual. For example, the task denoted by the imperative predicate in (30b) requires only one individual as an agent, and yet the sentence is infelicitous if the set of potential subjects consists of only one individual. In that context and indefinite such as 'a person over 6 feet' must be a proper subset of the set of potential protagonists, leaving a non-null set of alternative protagonists.

2.3.2. Definite Expressions

In addition to the indefinites explored in the previous section, OSIs may be definite (contra Beukema & Coopmans 1989), provided that they denote a proper subset of the set of potential protagonists. In task distribution, subjects are selected from the set of potential protagonists and assigned a task, giving rise to a context in which we would expect to find OSIs. This prediction is borne out, and like existentially quantified imperative subjects, these subjects have nominative

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c.   Be flattered!
d.   Have fun!

The predicates shown above are infelicitous with indefinite/existential subjects.

v.   a.   #A member of the away team feel better!
      b.   #Someone be careful!
      c.   #A person over six feet be flattered!
      d.   #Someone have fun!

This result is expected when we consider the pragmatics of selecting an indefinite imperative subject. In examples (25) and (30), importance is placed on the completion of the task designated by the imperative; the identity of the intended agent is of little consequence. Takahashi (2004) points out that imperatives perform a variety of discourse functions, among them advising and well-wishing. We can see that all of the imperatives listed in (iv) are of this nature. The pragmatics of advice and well-wishes necessitate that the task involved be for the benefit of the Agent/Experiencer. Because of this, importance cannot be placed on the task being completed, but rather on the subject completing the task, and so we can expect the infelicity seen in (v).

case in some languages with Nom/Voc distinctions (Georgian is shown below).[13]

Task distribution

32) a. James line the field, Steve put up goal posts, Peter grab the cones.
    b. Girls line the field, boys grab the cones.

33) bič'-eb-i   c'a-di-t   saxl-eb-ši, gogo-eb-i da-rči-t!   *Georgian*
    boy-PL-NOM PREV-go.IMP.2SG-PL house-PL-in girl-PL-NOM PREV-stay.IMP.2S-PL
    'Boys go home, girls stay!'

                                                              (=(19) Abuladze & Ludden 2013)

Task distribution using bare nominal subjects of sequential imperatives, shown in (32),

has long been noted in the literature (Rupp 1999, Jensen 2003, Zanuttini 2008), often as the lone

case when bare nominals are possible as imperative subjects. Indeed, it has been claimed that

bare nominal imperative subjects are only possible OSIs if they are followed by another clause,

as they are in (32) but that they are impossible in isolation (Downing 1969, Zanuttini 2008), for

example (34).

34) a. *John close the door, will you?
    b. *Boys be quiet!

                                                              (=(31a, 33a) Zanuttini 2008)

What is special about listed imperatives such as those in (32) is simply that they create a

context in which each subject is necessarily a proper subset of the set of potential protagonists.

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13. Not all languages with a Nom/Voc distinction use nominative with subjects of imperatives. BCS, for example,
does not allow nominative subjects in the task distribution construction. Task distributions may be made with
multiple addresses (i) but not with nominative imperative subjects (ii) (Ivana LaTerza, *p.c.*). This data will be used in
section 2.6 to show that the presence of OSIs is grammatically rather than pragmatically determined.

  i.   Dejane,   naseckaj luk, Milane,   operi   tiganj, Bobane,   uključi   rernu.
       Dejan.VOC, chop.IMP onion, Milan.VOC, wash.imp pan,   Boban.VOC turn.on.IMP oven
       'Dejan, chop the onions, Milan, wash the pan, Boban, turn on the oven.'

  ii. *Dejan,   naseckaj luk, Milan,   operi   tiganj, Boban,   uključi   rernu.
        Dejan.NOM, chop.IMP onion, Milan.NOM, wash.imp pan,   Boban.NOM turn.on.IMP oven

Contra Downing (1969), simplex imperatives may have overt bare nominal subjects so long as they are clearly a subset of potential protagonists. Frequently, it is the case that they are contrastive, like the OSIs in the English examples below in (35).

35) a. A: Should Peter line the field?
        B: No! James line the field.
    b. A: The girls are grabbing the cones.
        B: No! Girls put up the goal posts.
    c. A: Can you take home the jerseys?
        B: You do it, my washing machine is broken.

In (35) we see three exchanges containing simplex imperatives with bare nominal subjects. In order for these to be licit, it must be the case that speaker A not be identical to the subject of the imperative in speaker B's response. For example, the set of addressees of speaker B's response in (35a) minimally is {*speaker A, James*}. Note that, as discussed in section 2.2.2, the speaker can also be a member of the set of potential protagonists. In B's response in (35c) the set of potential protagonists is {*speaker A, speaker B*} because speaker B has been made salient as potential protagonist.

So what does it mean to be an alternative protagonists of an imperative? It seems that alternative protagonists of the imperative are excluded from the performance of the task denoted by the imperative predicate. For example, in the exchange in (35a), the alternative protagonists, such as speaker A, are to understand two things: a) that James should line the field and b) that none of the other addressees should line the field. This additional information is understood through the Gricean Maxim of Quantity. This is the crux of the contrast between (35a) and a corresponding exchange in (36) which uses an address instead of an OSI.

36) A: Should Peter line the field?
    B: No! James, line the field.

Speaker B switches addressees in (36). "No!" is addressed to speaker A, but "James, line the field" is addressed to *James* (though speaker A is likely a hearer). The exchange in (36) does not carry the additional information that speaker A should not line the field, as it is addressed to *James* alone.

Again, we can turn to languages with overt Nom/Voc distinctions to see the interpretive distinction correlate with a grammatical one.

37) a. manaova enti-mody ianareo zanaka/ankizy!   *Malagasy*
    do.IMP   homework 2PL   child
    'Children (as opposed to others) do the homework!' picks out the group of children
    from the larger set of addressees
  b. manaova enti-mody ianareo anaka/rankizy!
    do.IMP   homework 2PL   child.VOC
    'Do the homework, you children!'[14]

                                               (=(32), (34b)Potsdam (2010))

38) a. chelsu-ka   kakey-ey ka   *Korean*
    Chelsu-NOM store-to   go.IMP
    'Chelsu (as opposed to others) go to the store.'
  b) chelsu-ya   kakey-ey ka
    Chelsu-VOC store-to   go.IMP
    'Chelsu go to the store.'

As can be seen in the glosses of (37), taken directly from Potsdam (2010), the interpretive difference between an overt subject of an imperative (37a) and a vocative (37b), lies in the relationship between the denotation of the subject and the set of alternative protagonists. In (37a), the children are a proper subset of the set of potential protagonists, while in (37b) the children and the set of potential protagonists are referentially identical. Speakers of Korean

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14. Potsdam (2010) lists both *zanaka* and *ankizy* as 'child' and uses both in his examples.

likewise report that nominative imperative subjects are used to address a proper subset of the set of potential protagonists, as shown in example (38), and moreover that using the nominative instead of the vocative has the effect of excluding other potential protagonists from the task denoted by the imperative. In Malagasy and Korean, as opposed to English, this distinction can be made with nominal morphology, and thus is not subject to the more subtle contextual differences seen in English between (35a) and (36).

2.3.3. Modified DPs

We have seen that bare nominals may be OSIs under conditions which ensure that they are interpreted as a proper subset of the set of potential protagonists, namely with task distribution, and in contrastive focus. Modified DPs may also serve to pick out subsets of the set of potential protagonists.

> *Modified DPs*
>
> 39) a. People wearing red go to the left side of the field.
>   b. Players without mouthguards stop playing immediately!
>   c. Those on the bleachers be careful of the stairs!
>   d. The boy in the try zone back up!

The nature of modification is to select subset(s) from a larger set. The sets identified by the subjects in (39) imply that their referents are proper subsets. For example, identifying "*people wearing red*" in (39a) implies that the set of potential protagonists consists of minimally {*people wearing red, people not wearing red*}.

The intuition described above is further clarified if we turn to Korean, in which we can

see an overt distinction between modified vocatives and modified imperative subjects, such as in

(40).

40) a. ppalkan-os-ul   ip-un   salamtul-**i**   ilena   *Korean*
      red-clothes-ACC wear-REL people-**NOM** stand.up.IMP
      'The people wearing red clothes stand up'
   b. ppalkan-os-ul   ip-un   salamtul-**a**   ilena
      red-clothes-ACC wear-REL people-**VOC** stand.up.IMP
      'People wearing red clothes, stand up'

The imperative with a nominative subject, (40a) presupposes the existence of people not

wearing red in the set of potential protagonists, and is thus infelicitous if all members of the set

of addressees are wearing red due to presupposition failure. In addition, Jiwon Yun (*p.c.*) points

out that the exclusion of people not wearing red clothes is part of the assertion in (40a). (40b), on

the other hand, neither presupposes that people not wearing red are part of the set of potential

protagonists nor that they, if present, are necessarily excluded.

2.3.4. The Universal Quantifier

In this section I offer an analysis of the OSI '*everyone*,' shown in example (42) below. These

examples appear to present a puzzle for the OSI Condition ((4), repeated below in (41)) because

they refer to a improper subset of the set of potential protagonists, leaving a null set of alternative

protagonists.

41) *OSI Condition*
    Imperative subjects may be overt in the presence of a non-null set of contextually
    defined alternatives

42) a. Everyone$_i$ raise his$_i$ hand!
    b. Everyone grab a ball!

It seems that these examples are actually quite similar to the cases we've seen in this section in that they concern exhaustive subsets of the set of potential protagonists. That is to say that (42b) is interpretively equivalent to (43) in a context in which the set of potential subjects is {*Ricky, Devin, Mark*}.

43) Ricky grab a ball, Devin grab a ball, Mark grab a ball.

Due to the distributive nature of the universal quantifier, it is able to express (43) in shorthand as (42b). Raffaella Zanuttini (*p.c.*) points out that this analysis predicts that '*everyone*' cannot be combined with an imperative collective predicate, and indeed they are marginal in this context.

44) a. ?Everyone surround the castle!
    b. ?Everyone lift the piano!

45) a. Everyone! Surround the castle!
    b. Everyone! Lift the piano!

Collective predicates require that the individuals denoted by a plural subject act as a unit. They cannot be interpreted distributively as can be seen by the ungrammaticality of (46).

46) *Ricky surround the castle, Devin surround the castle, Mark surround the castle.

Collective predicates are not entirely ruled out with 'everyone' as an OSI, as this analysis would predict. This may be due to the possibility of interpreting 'everyone' as a call, which, as seen in (45), is perfectly grammatical.

In this section we have seen a wide variety of overt subjects of imperatives: existential

quantifiers, indefinites, bare noun phrases, modified noun phrases, and even the universal quantifier. What they all have had in common is that they denote proper subsets of the set of potential potential protagonists, as defined in (16), which entails a non-null set of alternative protagonists. As per the OSI condition, repeated below in (47), the non-null set of alternatives is correlated with the potential overtness of the imperative subject.

47) *OSI Condition*
Imperative subjects may be overt in the presence of a non-null set of contextually defined alternatives

Note, however, that the OSI condition does not specify that the set of alternatives must specifically be alternative protagonists. Indeed, in the following section we will see that OSIs also correlate with a non-null set of contextually defined alternative tasks.

2.4. Imperative Predicates as Subsets of the Set of Tasks

Up to this point, every overt subject of an imperative has referred to a proper subset of the set of potential subjects. Overt pronouns are robustly grammatical as subjects of imperatives, highlighted in (48) (repeated from 35c) and (49) below.

Overt Pronoun

48) A: Can you take home the jerseys?
B: **You** do it, my washing machine is broken.

49) a. **You** be quiet!
b. **You** paint the fence!

Like bare nominals, overt pronouns can be contrastively focused, shown in (48), and the context can bring the speaker into the set of potential protagonists as a point of contrast. The

imperative subjects in (49), however, may also be used when the speaker is not a member of the set of potential protagonists. At first glance, these imperatives seem to be identical to those with null subjects, seen in (50) below.

50) a. Be quiet!
    b. Paint the fence!

Null imperative subjects have been widely discussed in the imperative literature for a number of reasons, but with two interesting phenomena most often highlighted: a) they are universal (Zhang 1990) and b) they license second person anaphors (Jensen 2003, Mauck & Zanuttini 2005, Zanuttini 2008). Because of these two characteristics, they are often claimed to be null second person pronouns (Beukema & Coopmans 1989, Mauck & Zanuttini 2005, Zanuttini 2008). While this is likely the correct analysis, it does not entail that sentences (49) and (50) are functionally identical. So, what does the overt pronoun add to the imperative in (49)? It seems they are present when the predicate denotes a task which is a proper subset of a set of contextually defined potential tasks (which consequently results in a non-null set of alternative tasks). This description is based on the following intuition: the overt imperative subjects in (49), indicate that it is less important that the task be completed than that the subject be the agent/ experiencer of the task. Let's say that the set of salient potential tasks in (49) is {*be quiet, be loud, run amok*}. The presence of the overt imperative subject is correlated with selecting one of these tasks and entailing the exclusion of the others.

The set of potential tasks must be defined contextually. The idea of alternative tasks is, in the most general sense, always available, but bringing them into the set of potential tasks indicates that they are being specifically excluded by the assertion that another task was selected

for the subject. So, the set of potential tasks is most likely composed of a) tasks that the subject is in the process of doing or is likely to do in the present context and b) tasks that the speaker wants the subject to do. In this way, using the overt pronoun has the effect of asserting that the subject should exclude all other tasks.

> For consideration let's take the following contrast:
>
> 51) A: I'm all out of onions for tonight
>   B: Well I'm gonna play some video games
>   A: No, you go buy some onions!
> 52) A: I'm going to the store, do we need anything?
>   B: #You go buy some onions!

In (51), the contextually defined set of potential tasks is minimally {*play video games, buy onions*}, so the imperative denotes a proper subset of the set of potential tasks, leaving a non-null set of alternative tasks. In (52), however, the set of potential tasks is {*go to the store*, *buy onions*}. The task {*go to the store*}, however, is entailed by the task {*buy onions*}, and therefore {*buy onions*} is not a proper subset of the set of potential tasks, leaving a null set of alternative tasks and rendering B's imperative in (52) infelicitous.

2.5.   Imperatives and second person

In Section 2.1, we briefly showed that non-second person pronouns are illicit OSIs in English. The examples are repeated here in (53) below:

> 53) a.   *I do the dishes.
>   b.   *He do the dishes.

In this work I assume the presence of a Jussive head accounts for the person restrictions associated with OSIs. The Jussive head been proposed and applied in a series of work by Miok Pak, Paul Portner and Raffaella Zanuttini (Pak, Portner & Zanuttini 2008, Zanuttini 2008, Zanuttini, Pak & Portner 2012). Their proposal succeeds in uniting the analyses of imperatives, promissives, and exhortatives, which they argue are realizations of different person features on a functional projection, Jussive°. The relevant aspects of their proposal are briefly outlined in (54).

54) Claims concerning the Jussive head:
    a. The Jussive head is present in all and only jussive clauses.
    b. The Jussive head has person features that are valued and interpretable:
        i. All and only imperatives contain a Jussive head with a second person feature. This feature is the reason why imperatives place a requirement on the addressee.
        ii. All and only exhortatives contain a Jussive head with first person features inclusive of the addressee. This is why exhortatives place a requirement on the speaker and the addressee.
        iii. All and only promissives contain a Jussive head with first person features. This is why promissives place a requirement on the speaker.
    c. The Jussive head is not endowed with other φ-features, or with a case feature.
    d. The Jussive head is an abstraction operator that binds the argument it agrees with.
                                 (=(17) Zanuttini, Pak & Portner 2012)

This proposal interacts with the OSI Condition in interesting ways. Note that the set of potential subjects, as defined in section 2.2, may contain first, second, and third person individuals:

55) *The set of potential subjects may contain:*
    a. the speaker: 1st person
    b. the set of addressees: 2nd person
    c. controllees of the addressee(s): 3rd person

The OSI Condition is fulfilled id an overt subject denotes a subset of the set of potential agents, which could be a first or third person individual. Though these are not possible in

English, in other languages they are, and they are expressed as promissives, exhortatives, and third person imperatives. Examples from Korean and Attic Greek are given below in (56 - 57).

56) a.   Cemsim-ul sa-la.   *2nd person imperative*
          lunch-ACC buy-IMP
          'Buy lunch!'
    b.   Cemsim-ul sa-ma.   *Promissive*
          lunch-ACC buy-PRM
          'I will buy lunch.'
    c.   Cemsim-ul sa-ca.   *Exhortative*
          lunch-ACC buy-EXH
          'Let's buy lunch.'

                                          (=(2) Zanuttini, Pak & Portner 2012)

57) labéto   toùs   híppous   *3rd person imperative*
    grab.PRES.IMP.3.SG the.ACC.PL horse.ACC.PL
    'Let him/her grab the horses."

Zanuttini, Pak & Portner (2012) do not mention 3rd person imperatives, but they fit naturally into their paradigm, and would be the expected outcome of a Jussive head with third person features. Obviously, the compatibility of the Jussive head with first and third person features varies parametrically by language, but the full range of possibilities is expressed cross-linguistically. By adopting this approach, the Conditions on OSIs do not have to be redefined to ensure the person features of the subject be second person, as these restrictions are caused by the compatibility of first and third person features on the Jussive head in a given language.

2.6. Pragmatics or Syntax?

In this chapter, I have provided evidence for the accuracy of the OSI Condition in covering English overt imperative subject distribution. In this section, I will discuss whether these

conditions are motivated via pragmatics or syntax.

The pragmatic explanation would propose that when the subject is a subset of the set of addressees it is necessary to pronounce the subject to prevent contextual ambiguity. Let's take example (58) in a context in which the intended agent is *Jason* and the set of potential agents is {*speaker, Jason, Cait, Albert*}.

58) Take out the trash!

In English, there are two ways convey to *Jason* that he is the intended subject of (58). The speaker can 1) use an imperative subject (*Jason take out the trash!*) or 2) narrow the set of addressees to only include {*Jason*}. This can be done by using an address (*Jason, take out the trash!*) or using gesture, eye-contact, etc. Narrowing the set of addressees to the intended agent, however, has interpretive effects. Namely, it is no longer entailed that the other members of the set of addressees are excluded from the task denoted by the imperative predicate. Thus, in order to express the notion that the task has been mapped onto *Jason* alone we must use an imperative subject in English.

This line of reasoning could be applied to all of the cases discussed in Section 2.3 for English, Korean, and the other languages mentioned so far in this chapter. The pragmatic argument, however, seems to fail in cross-linguistic coverage. In BCS, for example, OSIs are highly restricted, beyond the predictions of the OSI Condition:

59) a. *Visoki čovek,   dođi   ovamo i   povuci ove roletne.   *BCS*
       tall   man.NOM, come.IMP here   and pull.IMP these shades
       'A tall man come here and pull these shades'
   b. *Dejan,   naseckaj luk, Milan,   operi   tiganj, Boban,
       Dejan.NOM, chop.IMP onion, Milan.NOM, wash.IMP pan,   Boban.NOM
       uključi   rernu.
       turn.on.IMP oven
       'Dejan chop the onion, Milan wash the pan, Boban turn on the oven.'

Unlike English and Korean, BCS addresses may refer to subsets of the set of addressees.

Take, for instance, the example repeated here as (60).

60) Jovane,   izbaci đubre   a   ti   Milane   nemoj.   *BCS*
    Jovan.VOC take.out garbage and you Milan.VOC not.AUX
    'Jovan take out the garbage and you, Milan, don't.'

Task distribution like that in (60) would contain nominative imperative subjects in

English, but in BCS we find addresses in vocative case. Note that it is necessary that *Milan* is an

addressee to both imperative predicates in order to have access to the elided predicate in the

second imperative.

Assuming that English, Korean, and BCS operate under similar pragmatics of address,

the pragmatic account should not predict the variation in imperative subjects seen between

them.[15] BCS and Korean, in particular, both make a morphological distinction between

nominative and vocative cases, and we could expect BCS to use addresses in a similar manner.

As we have seen, this is not the case.

In the following section, I sketch the beginnings of a potential formal implementation of

the OSI Condition that would allow this condition to vary cross-linguistically in its application

and potentially even degree to which it applies in various languages.

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15. By "pragmatics of address" I am referring to the pragmatics of identifying an addressee, not to the identification
of social hierarchies in address, which clearly differs between the languages.

2.7. Exhaustivity

The OSI condition on OSIs proposed in this chapter is strongly reminiscent of an exhaustivity condition. In this section, I describe the exhaustivity operator of Fox (2007) and show how it could apply to the capture the generalization made in the OSI condition. Though I will not formalize this approach here, it is a promising avenue for future research.

Exhaustivity is grounded in the Gricean Maxim of Quantity and Scalar Implicature, which requires that the speaker make the strongest claim that she knows to be true. Fox (2007) proposes a covert exhaustivity operator which to applies to sentences to derive the interpretations of the Free Choice effect in disjunctives[16].

The exhaustivity operator EXH asserts the truth of the proposition it quantifies over and the falsehood of a formally defined set of alternatives. It is defined below in (61).[17]

61) $[[Exh]] (A)(p)(w) \Leftrightarrow p(w) \& \forall q \in NW(p,A): \neg q(w)$
$NW(p,A) = \{q \in A: p \text{ does not entail } q\}$

(Fox 2007)

EXH combines with a set of alternatives (A) and a proposition (p) and asserts that the proposition is true, and that all non-weaker alternatives are false. Non-weaker alternatives are defined as those alternatives to the proposition which are not entailed by the proposition.

The application of this operator to imperatives is not self-evident, of course, as

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16. Klinedinst & Rothschild (2011) propose a similar operator to account for the variation in the interpretation of questions embedded under non-factive verbs such as *tell* and *predict,* and Rooth (1992) uses similar concepts in alternative semantics to derive the interpretation of focus.

17. EXH applied to a set of alternatives to proposition p in world *w* is equivalent to a proposition p in world *w* where for all propositions q which are members of the set of non-weaker alternatives to p, q is false in that world.

imperatives lack truth conditions. It must instead be the fact that EXH introduces a world in which the proposition entailed by the imperative is true, and then entails that all non-weaker alternatives in that world are false.

Let us examine how this operator might apply to an OSI with a non-null set of alternative protagonists. The set of non-weaker alternatives may draw from the contextually defined set of potential protagonists. Let us consider a case in which the set of addressees is {*John, Paul, Ringo*}. If the subject and any controllees are not contextually brought in, the set of potential protagonists will be identical to the set of addressees. In this context, let us consider the following imperative:

62) John buy some beer.

Under this proposal, the OSI in (62) is only licit if EXH has been applied to it. EXH introduces the possible world in which the proposition *John buys some beer* is true. It also entails that all non-weaker alternatives are false. In this case, we can can calculate all possible non-weaker alternatives, since we know the set of potential protagonists:

63)

Paul	
Ringo	
Paul and Ringo	
John and Paul	buy(s) some beer
John and Ringo	
John, Ringo and Paul	

The application of EXH to (62), entails the truth of the entailed statement *John buys beer*

and the falsehood of those alternatives in (63).

Now let us turn to those imperatives discussed in Section 2.4 in which the relevant alternatives are tasks rather than protagonists. Let us consider the example in (64).

64) You sit down!

If the set of contextually defined potential tasks is {*sit down, run amok*}, then the only alternative task is {*run amok*}. Again, EXH introduces the possible world in which the proposition *You sit down* (declarative) is true. It also entails that all non-weaker alternatives, in this case, *you run amok,* are false. An interesting question for the application of this operator to the present puzzle is why, when the operator is scoping over a set of predicates, overtness of the subject should be licensed. I will make no proposal here, but will vaguely speculate that it is related to the role of focus in alternative semantics.

If an operator like EXH is indeed responsible for the distribution of OSIs in English, the cross-linguistic variation discussed in Section 2.7 could be reduced to lexical variation and the availability of EXH in that language (like BCS). I leave the semantic and syntactic implementation of such a proposal to future research.

2.8. Summary

In this chapter I have addressed the longstanding puzzle of the restrictions on overt imperative subjects. These restrictions are not on the form of subject, but rather on its interpretation. Imperative subjects are overt under the following conditions (repeated from (4)):

65) *OSI Condition*
   Imperative subjects may be overt in the presence of a non-null set of contextually defined alternatives

I have proposed that this condition accurately describes the distribution of OSIs in English. Through the definition of a set of contextually defined alternatives, we are able to describe and predict when OSIs are permitted in English, a generalization which has thus far in the literature not been successfully proposed. I have also pointed in a direction for a future formal semantic analysis of the OSI condition, which would lead to greater explanatory power.

Chapter 3

The internal structure of vocative phrases

The term 'vocative' was first used by classical grammarians to refer specifically to the morphological case in Latin, counterparts of which are found in a number of languages (Ancient Greek, Sanskrit, Georgian, and Korean, to name a few). In this dissertation, however, I follow the modern assumption that vocatives are a universal phenomenon, and I use the term to describe any DP used as an address or call, as was detailed in Chapter 1. This chapter will be devoted to discussing the form of vocative DPs. For the most part, addresses are identical to calls, though certain restrictions apply to addresses as opposed to calls, as we saw in Chapter 1. As far a I can determine, the analysis in this chapter applies to both addresses and calls. I will begin by reviewing some cross-linguistic morphological characteristics of vocatives. They can be distinguished from argument DPs in one or more of the following ways:

Vocative forms
1) a. distinct morphology
   b. the absence of otherwise present morphology or determiners
   c. and/or the adjective-initial order in languages that typically have N-Adj order
   d. some degree of prosodic independence from the host clause

I also show that addresses take part in DP-internal adjectival agreement. These well-known and highly regular morphological characteristics provide the background for proposing that addresses are syntactically integrated into the phrase structure, which I will do in Chapter 4.

The major claims concerning the internal structure of vocative DPs discussed in this chapter are as follows:

2) *Vocative DPs*
   a. Are valued with inherent vocative case, which is distinct from nominative case
   b. D in vocative DPs has 2nd person φ features, which spell out as $\varnothing$
   c. Vocative DPs have an additional layer of functional structure
   d. So-called adjective-initial vocatives are the result of N-to-D movement of a nominalized adjective

In Section 3.1, I refute the claim that vocative case is a variant of nominative case, a myth that has been propagated through classical scholarship. Next, in Section 3.2, I discuss the relationship between vocatives and definiteness, and make the claim, citing Bernstein (2008), that vocative D has 2nd person φ features (and, more generally, that D is the locus of person). Finally, in Section 3.3, I discuss so-called adjective initial vocatives, which bring the greatest insight into the structure of the vocative DP. In some languages (Romanian and Italian, for example), certain adjectives may precede nouns and even determiners in vocatives, when those same constructions are impossible as argument DPs. Hill (2014) and Slocum (2010) have both offered accounts of these constructions, and from them I adopt the claim that vocative DPs have a layer of functional structure that argument DPs lack. I diverge from their accounts, however, in proposing that the initial adjective in these constructions has been nominalized and has undergone N-to-D movement (a process which is independently known to occur in these languages.

3.1. Vocative Case

In many languages, addresses and calls are morphologically marked with what has been traditionally called vocative case. Much of the early scholarship concerning vocatives featured contentious views on whether or not the morphological marking on vocatives can be accurately classified as a "case." From a generative perspective, this question is important when considering how the DP becomes valued for case. One possibility is that so-called vocative case is an aberration of another case, such as the nominative. This has been one of the primary arguments in the camp against considering the vocative a case, stemming from the frequent syncretism between nominative and vocative nominal forms in Latin and Greek. In this section, I provide an overview of the vocative case debate, before discussing a 30 language survey of vocative morphology. In this survey, I find no cross-linguistic evidence for a special connection between nominative and vocative morphology, and none of the languages surveyed show full syncretism between the vocative and any other case. Given these results, I conclude that vocative morphology is not a variant of any other case.

3.1.1. The Vocative Case Debate

In the 4th century BCE, the Sanskrit grammarian Panini wrote the seminal work *Ashtadhyayi*, in which he carefully described 3,959 rules of Sanskrit grammar. Notably absent from this grammar was any mention of the vocative, despite the fact that Sanskrit has a morphologically distinct

case (Cardona 1998). It wasn't until the 2nd century BCE that the vocative was formally

described in the Greek grammar of Dionysius Thrax. Despite the delayed notice, the vocative

was accepted as a case for the next millennium, until the tide turned again toward excluding the

vocative from the nominal case paradigm, most notably championed by Hjelmsev (1935), but

also Humbert (1954), Fink (1972) and Vairel (1981).

The majority of the arguments against considering vocative morphology a case can be

summarized in three points, shown below in (3).

3) *Reasons for not considering the vocative a case*
   a. The vocative is a variant of the nominative (Hjelmsev 1935, Humbert 1954)
   b. Vocative morphology is person morphology, not case (Fink 1972)
   c. The vocative does not mark a relation of a nominal to a head (Hjelmsev 1935, Vairel 1981, Blake 1994)

Before we examine these arguments more closely, it is necessary to evaluate the

relevance of such a distinction (case vs. other morphological marking) for a generative approach

to the syntax of vocatives. Case plays a pivotal role in generative syntax via the *visibility*

condition which requires that nominals be case marked in order to be visible for theta marking

(Chomsky 1986). Since vocative morphology appears exclusively on nominals that are not

linked to the thematic grid of the verb, vocative marking does not seem relevant to the visibility

condition. In the minimalist framework, however, nominals enter the derivation with an unvalued

case feature which must be valued during the course of the derivation with either structural or

inherent case. We can, therefore, ask whether vocative morphology bears the relevant features to

value the nouns unvalued case features. The alternative possibility is that vocative morphology

does not really exist, but is instead a variant of some other case, like the nominative, which

values the noun's case features. In the following section I evaluate this possibility, and show that it is unfounded.

3.1.2. The Myth of Nominative/Vocative Syncretism

It has been widely reported in the literature that vocative case is frequently syncretic with nominative case (Buck 1937, Blake 1994, Moro 2003). This idea has been propagated through Classical scholarship, which closely relates vocative and nominative cases through the weight placed on syncretism.

Latin and Greek exhibit partial syncretism between the nominative and vocative cases. Although case syncretism is often the result of phonological changes resulting in accidental homophony, the frequency of the supposed "syncretism" between vocative and nominative in Latin and Ancient Greek has led researchers to posit that there is some deeper connection between the two. Hjelmsev (1935) writes that the vocative is a "variety" of the nominative[18], while the Kühner–Stegmann Latin grammar (1914), as translated in Ashdowne (2007), states that "The vocative is the case form of calling or address. It is in fact nothing other than the nominative, but without any relation to the predicate and outside any organic association within a sentence. ... It is not a necessary special case form".

The observation that a high percentage of Greek and Latin words have identical forms in the nominative and vocative is descriptively correct. The suggestion, however, that this

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18. I use the term "variety" as a translation of the French *variété*. *"Le vocatif et l'ablatif sont conçus, d'une façon peu claire, comme des variétés du nominatif et du datif respectivement."* (Hjelmsev 1935: 26)

correlation is telling of a systematic universal connection between the two is misleading and problematic. In a survey of 30 languages exhibiting some degree of morphological case marking, I found no instances of full syncretism between the nominative and vocative cases when the nominative was marked with overt morphology. In 12 languages, both the nominative and vocative are morphologically unmarked, while another 12 have overt morphology for at least one. Six languages exhibit partial syncretism between the vocative case and another overtly marked case (or sometimes two). Latin and Russian exhibit partial syncretism with the nominative case, while Hindi and Somali exhibit partial syncretism with an oblique case. Arabic and Modern Greek have partial syncretism with both the nominative and an oblique case. Table 1 summarizes the above findings:

Vocative/Nominative marking	*Languages*	*Example*
Both unmarked	Aymara, Quechua, Armenian, Finnish, Hungarian, Turkish, Nobiin, Brahui, Garo, Mongolian, Ojibwe, Pitta-Pitta	Finnish: *cala* fish.NOM/fish.VOC
Distinct marking	Korean, Japanese, Georgian, Turkana, South Ometo, Khoekhoe, Swahili, Pitjantjatjara, Lak, Tamil, Telugu, Pali	Georgian: *k'ac-i* *k'ac-o* man-NOM man-VOC
Partial syncretism	Arabic, Modern Greek, Latin, Russian, Hindi, Somali	Latin: *domin-us* *domin-e* master-NOM master-VOC *princep-s* *princep-s* leader-NOM leader-VOC

Table 1

Though in many languages both nominative and vocative nouns are unmarked, it does not

follow that this reflects a deep connection between the two, since in instances with overt

morphology they are never fully syncretic. Instead, it may be more useful to ask independently

why vocatives are often unmarked and why nominatives are often unmarked (see section 3.2.2

for discussion).

Note that when languages have overt vocative morphology, it partakes in adjective

agreement like case morphology does. Examples of adjective agreement are illustrated below in

Latin and Georgian:

4) iucund-issim-e   Calv-e   *Latin*
   delightful-SUPERL-VOC Calvus-VOC
   'O most delightful Calvus'

                                                                                        (Catullus 14)

5) romel-i   saat-i=a,   lamaz-o   kal-o?   *Georgian*
   which-NOM hour-NOM=be beautiful-VOC woman-VOC?
   'What time is it, beautiful woman?'

Let us return to the question posed in Section 3.1.1 about the role of vocative morphology

in generative grammar. Given that nominals must be valued for case before spell out, can

vocative morphology fill that role? We have seen that it is insufficient and inaccurate to consider

vocative morphology a variant of the nominative or any other case. It also should be noted that

vocative morphology does not co-occur with other case morphology in any of the 30 languages

surveyed. It must be concluded, then, that vocative morphology is able to satisfy the case

requirements of a noun, although at this point it is not clear how Case is valued on the vocative

DP. We will, however, return to (3c) (repeated here as 6c), the relation of the vocative case

morphology to a syntactic head, below.

In Section 3.1.1 I presented three arguments that vocative morphology is not a case, they

are repeated in (6) below:

6) *Reasons for not considering the vocative a case*
    a. The vocative is a variant of the nominative (Hjelmsev 1935, Humbert 1954)
    b. Vocative morphology is person morphology, not case (Fink 1972)
    c. The vocative does not mark a relation of a nominal to a head (Hjelmsev 1935,
        Vairel 1981, Blake 1994)

Up to now, I have only addressed the first argument. Though I believe the discussion in

this section is already sufficient to establish that the vocative is a case, addressing the second and

third points will lead to greater insight into the nature of the vocative. In the next section, I will

discuss the nature of second person in relation to vocative phrases. The third argument, on the

other hand, serves as the basis for the discussion in Chapter 4.

3.2.   Definiteness and person in vocative DPs

The most often claimed structural difference between address and argument DPs is that the

vocative is not, in fact, a DP but a bare NP (Szabolcsi 1987, Longobardi 1994, Stavrou 2009 (for

Greek)). This argument is based largely on the previously mentioned observation that vocatives

tend to lack articles.[19] Longobardi (1994) uses this correlation to propose that the category D is

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19. Bošković (2003) and Despić (2011) have independently argued that languages which lack definite articles do not
project DPs. Substantial counterarguments are put forth in LaTerza (2014), one of which is also applicable to
vocatives. LaTerza shows that BCS, a language which lacks definite articles, still shows selectional dependency
between Ds and relative clauses. Smith (1964) noted that English has selectional restrictions between Ds and relative
clauses. *Unspecified* Ds (*any, all* etc.) are only compatible with restrictive relative clauses, *unique* Ds (∅, with
proper names) are only compatible with non-restricted relative clauses, and *specified* Ds (a, the, ∅) are compatible
with both:

    i.   a) Any book (*,) which is about linguistics is interesting.
             b) John *(,) who is from the South hates cold weather.

associated with argumenthood. Substantial counter-evidence has been put forth that vocatives are full DPs, such as the fact that addresses do sometimes occur with definite articles (Romanian[20], French[21]) as well as relative clauses and demonstrative pronouns (Crisma 1997; Moro 2003). If addresses are full DPs, then a new explanation must be found for the frequent incompatibility of addresses and definite articles. Table 2 shows a sample of how languages pattern with respect to the definite article in vocatives, including those in which definite articles can be used with proper names.

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c) They pointed to a dog (,) who was looking at him hopefully.

(Smith 1964, p38 via LaTerza 2014)

Vocatives, like proper names, are only compatible with non-restrictive relative clauses:

ii.   a. Our father *(,) who art in heaven hallowed be thy name.
       b. I'm so glad to see you, darling *(,) who I love

The restrictions shown in (ii) are parallel to those in (i) which have been argued to be dependent on the presence of a D category. Thus, we find additional evidence that D is present in vocatives, despite frequently being unpronounced.

20. Interestingly, in Romanian, a vocative definite article may occur with proper names, but the non-vocative definite article is not possible with them (Hill 2007).

    i.   Ionel-ule   ii. *Ionel-ul
       Ion-the$_{VOC}$ Ion-the$_{DEFAULT}$

21. Moro (2003) writes that while there is some variation in acceptability, most French grammars proscribe that articles be present in plural vocatives and absent in singular vocatives.

	Language	Argument	Addresses/Calls
	Italian	*il ragazzo* the boy	*ragazzo*
	English	the boy	boy
No definite article in vocatives	Arabic	*el rasul* the messenger	*rasul*
	Greek	*o ɟannis* the John	*ɟannis*
	German	*Der Heinz* the Heinz	*Heinz*
	Venetian	*ła Marìa* the Maria	*Marìa*
Definite articles in vocatives	French	*les filles* the girls	*les filles*
	Romanian	*prieten-ul* friend-the_{DEFAULT}	*prieten-e* friend-the_{VOC}

<div align="center">Table 2</div>

The examples shown in Table 2 are not meant to accurately portray the proportion of languages which allow definite articles in vocatives to those which do not. Though I am not aware of any broad cross-linguistic study on the matter, languages which omit articles in the vocative seem to greatly outnumber those which permit them. Bernstein's (2008) proposal for the DP presents an interesting explanation for this correlation. Bernstein (2008) argues that D° is the locus of person features in the DP, and that articles are a realization of third person features.[22] Indeed, the similarity (and occasional identity) between definite articles and third person

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22. Hill (2013) independently claims that definite articles check [definite] and [3rd person] features on D°, while determiners in the vocative (as in Romanian) check [2nd person], but not [definite], as she claims vocatives enter the derivation with a interpretable and valued [definite] feature.

pronouns in Romance has long been noted (e.g. Postal 1969). She then applies this analysis to vocatives, arguing that in the vast majority of languages, definite articles are incompatible with vocatives because vocatives are second person. This proposal will be adopted here, and discussed in further detail in the following section.

3.2.1. Vocatives and Second Person

The link between vocatives and second person is sufficiently clear that it led Fink (1972) to propose that person is a third dimension in nominal morphology in Latin. That is to say that suffixes which are normally thought to express case and number also express person. For example, he argues that *-us* in *amic-us,* which is normally thought to have the features [nominative] and [singular], also has the feature [-2nd person]. The vocative, he goes on, is 2nd person and syncretic in all cases. The paradigm he presents for second declension nouns is shown below in Table 3.

	Singular		Plural	
	1st & 3rd	*2nd*	*1st & 3rd*	*2nd*
Nom.	amicus	amice	amici	amici
Gen.	amici	(amice)	amicorum	(amici)
Dat.	amico	amice	amicis	amici
Acc.	amicum	amice	amicos	amici
Abl.	amico	amice	amicis	amici

Table 3

Fink (1972) defends this proposal with data from apposition. Normally, appositive nouns

appear in the same case as the noun they modify, but vocatives may be appositive to any case.[23]

7) a.   Polliceor   hoc   vobis   patr-es   conscript-i
      promise.1.SG.PRES this.ACC.SG you.DAT.PL father-VOC.PL conscripted-VOC.PL
      'I promise this to you, O Conscript Fathers'

    b.   Quae   te-cum   Catilina   sic   agit
      REL.FEM.SG.NOM you.ABL.SG-with Catalina-VOC.SG thus move.3.SG.PRES
      'She who thus moves with you, Catalina'

(Cicero, *In Cat.* I 15-18, via Fink 1972; translation and gloss my own)

In the examples above, vocatives are argued to be appositive to dative and ablative second person pronouns, respectively. This analysis has little to say, however, about cases in which a vocative occurs with no second person argument, such as in (8) below:

8) cupio,   patres   conscripti,   me   esse clementem
    desire.1.SG.PRES father-VOC.PL conscripted-VOC.PL me.ACC.SG. be.INF merciful.ACC.SG
    'I desire, O Conscript Fathers, to be merciful'

(Cicero, *In Cat.* I 2.4)

The intuition expressed in the analysis of Fink (1972), that there is a deep connection between vocatives and second person, is clearly on the right track. The implementation, however, is more problematic. If this proposal were correct, we could expect that in some languages these the rampant syncretism seen in Table 3 would not occur, and we would find different forms for genitive vocatives and accusative vocatives, for example. We might also expect to see some similarity in form between second person verbal agreement and vocative morphology, but neither of these expectations are empirically supported.

I here follow Bernstein (2008) in taking D to be the locus of the second person features

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23. Fink (1972) finds no cases in which a vocative is appositive to a genitive pronoun, as possessive pronouns are generally used in their place. For this reason, genitive vocatives appear in parentheses in Table 3.

on the vocative, rather than the vocative morphology itself. This idea, however, does not automatically explain why a large number of languages spell out second person determiners as null. One could imagine a case in which second person determiners took a different form from third person determiners, perhaps based on second person pronouns. Such constructions do, in fact, exist, as is pointed out in Bernstein (2008):

9) You (kids)! Come here!

(=(20d) Bernstein 2008)

Unlike definite determiners, however, I know of no language that requires the presence of a second-person article or determiner before vocatives.[24] The question remains, then: if vocatives are DPs rather than NPs, which they seem to be, then why is second person D null in so many languages? Though I will not formalize an answer to this puzzle here, I believe the answer lies in the deictic nature of vocatives (and second person), which I discuss in the following section.

3.2.2. Vocatives are Ostensive

The relationship between deixis and definiteness is well addressed in the literature. Lyons (1999) identifies two kinds of deictic definiteness: *ostention*, or directing the hearers attention toward a referent, and *deixis* in the sense of making proximal-distal distinctions. Lyons writes that "Ostension in its simplest form is reference to entities present in the physical situation of the utterance, and this is the basis of all other uses of definite determiners." Since vocatives refer to

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24. Some languages, like Old Irish, require pre-vocative particles, but I know of none which show syncretism with second person morphology or pronouns.

the addressee, who is present in the situation of the utterance (whether physically or not) they are

necessarily ostensive.

Interestingly, other ostensive nominals can also appear without definite articles in

contexts such as written instructions.

10) Preheat oven to 350° F. If using cedar plank, lightly oil and heat in middle of oven 15
minutes; or lightly oil a shallow baking pan large enough to hold salmon.

(*Gourmet*, November 1997)

In example (10), taken from a recipe for Cedar Planked Salmon, *oven*, *plank*, *middle* and

salmon are all definite; their referents are all part of the discourse. Nevertheless, they appear

without definite articles, even though singular count nouns like *oven* and *plank* are required to

appear with an article. I take the lack of determiner to be associated with the kind of definiteness

we find in instructions, namely, ostensive. This may also be a clue to the frequent lack of

morphological marking on vocatives, as seen in Section 3.1.2. It is also worth pointing out that

non-ostensive deictic elements occur with other forms of reduced overt functional material. Days

of the week, for example, only optionally occur with prepositions:

11) a. We play against Monmouth county on Saturday.
    b. We play against Monmouth county Saturday.

Similarly, some deictic expressions such as *today, now, here, there* have grammaticalized

without prepositions. When vocatives are viewed in the context of other deictic expressions, the

frequent lack of overt determiners is in line with a broader pattern.

In this Chapter I have so far painted a picture of vocatives as DPs who are valued for case

via inherent vocative case. I have adopted the proposal from Bernstein (2008) that D is the locus

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for person, and most overt definite determiners are third person. This leaves open the question of why vocatives lack overt determiners in so many languages, rather than having separate second person forms. Informally, I believe this is related to the ostensive nature of vocatives.

3.3.   The Structure of Vocative DPs

Thus far in this chapter we have discussed two ways that vocative DPs differ from argument DPs: overt morphology and the absence of determiners. This section will investigate a third distinction which surfaces as a DP-internal word order alternation. In Italian, Romanian, BCS and Russian, certain adjectives (like *dear*) uncharacteristically appear to the left of nouns and possessive pronouns in vocatives. In Italian, the adjective *caro,* 'dear' can even appear to the left of the definite article. [25]

12) a. O caro   il mio   ragazzo,   esci   di   qui.   *Italian*
        O dear.MSC.SG the my.MSC.SG boy.MSC.SG leave.IMP from here
        'My dear boy, leave here.'

                                                                  (=(5f) Moro 2003)

   b. Il mio   caro   ragazzo   mi ha telefonato
     the my.MSC.SG dear.MSC.SG boy.MSC.SG me aux phoned.MASC.SG
     'My dear boy called me.'

   c. *Caro   il mio   ragazzo   mi ha telefonato
      dear.MSC.SG the my.MSC.SG boy.MSC.SG me aux phoned.MASC.SG

   d. *O il mio   caro   ragazzo   esci   di   qui.
      O the my.MSC.SG dear.MSC.SG boy.MSC.SG leave.IMP from here

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25. Thanks to Tanya Scott and Roman Botnik for the Russian data in this section, Ivana LaTerza for the BCS data, and Andrea Fedi for the Italian data, unless otherwise noted. All errors are my own.

13) a. Dragi moj prijatelj-u, kako si?   *BCS*
        dear   my   friend-VOC how AUX
        'My dear friend, how are you?'
    b. Moj dragi prijatelj je   otišao u prodavnicu
        my dear   friend aux went in store
        'My dear friend went to the store'
    c. *Dragi moj   prijatelj je otišao u prodavnicu
          dear   my   friend   aux went in store

14) a. Dorogoj moj mal'čik, sxodi v magazin.   *Russian*
        dear   my boy   go.IMP to store
        'My dear boy, go to the store.'
    b. Moj dorogoj mal'čik sxodil   v magazin.
        my dear   boy   went.PST.PRF to store
        'My dear boy went to the store'
    c. ??Dorogoj moj mal'čik sxodil   v magazine
          dear   my boy   went.PST.PRF   to store
        'My dear boy went to the store'

In Romanian, adjectives may occur to the left or the right of nouns, but the leftmost element

bears the definite article enclitic. In vocatives, however, the adjective may appear to the left of

the article-bearing noun:

15) a. drag-ul   prieten   (argument)
        dear-the.DEF friend
    b. prieten-ul   dragă   (argument)
        friend-the.DEF dear
    c. dragă prieten-e   (vocative)
        dear   friend-the.VOC

Not all adjectives participate in this alternation. In Italian and BCS it seems to be restricted to

correlates of *'dear.'* In Romanian, the list is slightly more broad, including adjectives such as

dragă 'dear', *stimat* 'beloved', and *scump* 'sweet/dear.' In Russian, it includes adjectives such as

dorogoj 'dear', *xorošo* 'good', and *krasivyj* 'beautiful'. I will call these *vocative adjectives*.

It is important to note here that the string Adjective > Demonstrative > Noun is not an

attested word order amongst the world's languages (Greenberg 1963) and has been argued to be underivable (Cinque 2005). The pattern seen above is robust and unusual, deserving adequate attention.

In this section I will show that the above described pattern offers great insight into the internal structure of vocative DPs. I adopt a version of the structures proposed in Hill (2014) and Slocum & Taylor (2010), hinging on the idea that vocative DPs include a functional layer that argument DPs lack. I depart from the analyses of Hill (2014) and Slocum & Taylor (2010) in the derivation of the adjective-initial structures shown in (12a), (13a), (14a) and (15c). I propose that the adjectives in question have been nominalizes, and that given the structure of vocative DPs this pattern emerges naturally from these structures via N-to-D movement, which has independently been argued to be present in Romanian and Italian.

3.3.1. Hill 2014

In this section, I briefly outline the analysis of the internal structure of vocatives proposed in Hill (2014). She argues that vocatives are not DPs but rather VocPs. Voc° is a functional head with the features [inter-personal] and [2nd person], which takes as its complement a [+N] phrase, which can be satisfied by a pronoun, a bare noun, an adjective or a DP.

This analysis is built around the inclusion of vocative particles. The primary empirical evidence for including the particles in VocP is that they are subject to an adjacency constraint. Vocative particles cannot be separated from the vocative, even by other particles which normally

occur freely throughout the clause.[26] In (16 - 18) I show examples from Hill (2014) coming from

Umbundu, Romanian and Greek.

16) (we) epa (*we) a   (*we) Pedro, enda pi (we).   *Umbundu*
    PRT VOC PRT VOC PRT Pedro come here PRT
    'C'mon Pedro, come here.'

17) a. (ei) măi (*ei) Ioane,   (ei), unde te   duci?   *Romanian*
      PRT VOC PRT Ion.VOC PRT where REFL go.2SG
      'Ion, where do you go?'
  b. *?măi fii atent   băiete!
     VOC be careful boy.VOC
    Intended: 'Watch out, my lad!'

18) a. (e) vre (*e) Gianni, ti   kanis eki?   *Greek*
     PRT VOC PRT John.VOC what do   there
     'John, what are you doing there?
  b. *Vre, prosexete, pedja!
     VOC be.careful kids.VOC
    Intended: 'Be careful, kids!'

                                              (Hill 2014 pg. 72-3)

Based on the data shown here in (16 - 18), Hill concludes that vocative particles and

vocatives form a single constituent, namely, VocP. Moreover, she shows the relationship between

vocative particles and vocatives to be hierarchical, as vocative particles may precede but not

follow vocatives:

19) măi Ioane,…. / *Ioane   măi,…   *Romanian*
    VOC Ion.VOC,   Ion.VOC VOC

20) vre Jani,… / *Jani vre…   *Greek*
    VOC Jani   Jani VOC

---

26. Hill (2013) notes that, with a sufficient intonational break, other particles can intervene between the vocative
particle and the vocative in Romanian:

  i. (ei) măi, (ei), Ioane, (ei), unde te   duci?
     PRT VOC PRT   Ion.VOC PRT where REFL go.2SG
     'Ion, eh, where do you go?'

Hill takes these cases to be instances of two separate VocPs.

Note that (16 - 18), show two kinds of particles. Romanian and Greek have only free morpheme particles, but Umbundu has both free (*epa*) and proclitic (*a*) vocative particles. This fact also features prominently into Hill's structure for vocatives, which is sketched below in (21).

21)

```
                    VocP
                   /    \
          free particles   Voc'
                          /    \
                       Voc      DP/NP
                  bound particles   pro/'John'
```
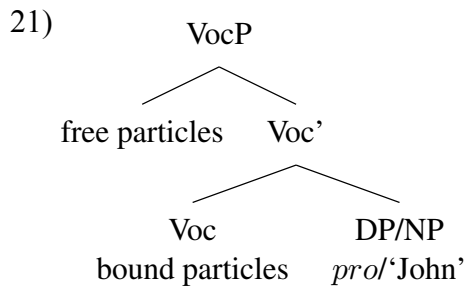
Hill (2014) argues that free vocative particles such as *măi* in Romanian, *vre* in Greek and *epa* in Umbundu occupy the specifier of VocP. Phonologically bound particles, such as Umbundu's *a*, are realizations of Voc°. The complement of VocP must have the feature [+N], and can take the shape of a DP, NP, pronoun or adjective.

In regards to the adjective-initial vocatives we saw in examples (12a), (13a), (14a) and (15c), Hill makes two crucial observations: In Romanian, these adjectives cannot be modified by intensifiers (22) and are in complementary distribution with vocative particles (23):

22) a. foarte stimat/   mai stimat
        very   beloved more beloved
    b. *foarte/mai stimați cititori!
        very/more beloved readers

23) (*Măi) stimate cititorule
        voc   beloved reader-the.voc

(Hill 2014 pg.52)

Based on these facts, Hill concludes that these vocative adjectives are no longer adjectives but have grammaticalized as free vocative particles, and are therefore located in Spec,

VocP.

In the following section, I will present an alternative analysis proposed for the internal structure of vocatives in Slocum & Taylor (2010). It shares two main features with the analysis of Hill (2014): a) that vocative phrases have a layer of functional structure that argument DPs lack, and b) that the adjective in adjective-initial vocatives is at no stage of the derivation a constituent with the vocative NP.

3.3.2. Slocum & Taylor 2010

The bulk of Slocum & Taylor (2010) is dedicated to solving the adjective order puzzle currently under discussion. Their analysis proposes a structure of vocative DPs with several similarities to that proposed by Hill (2014), however it does so in the framework of Larson (2009, 2014). Larson (2014) articulates a view of the DP as analogous to the VP in its projected functional structure. Under such a view, the D head is equivalent to V in selection of arguments, in checking of case, and projection of a shell structure: dP. The theory is born from intuitions stemming from Generalized Quantifier Theory, namely the concept that D is universally a quantifier and takes both SCOPE and RESTRICTION arguments. These are formalized in Larson's system as thematic roles parallel to agent and theme roles in the verbal domain. Additional "oblique" arguments (such as modifiers, or adjective phrases) are composed similarly, parallel to verbal arguments like GOAL or BENEFICIARY etc.

24) θ roles and Thematic Hierarchy for V and D

V: θ_{AGENT}   > θ_{THEME}   > θ_{GOAL}

D: θ_{SCOPE}   > θ_{RESTRICTION}   > θ_{OBLIQUE}

(Larson 2014 pg. 411)

This system is implemented under the feature checking theory of Pesetsky & Torrego (2007), which demarcates a four-way distinction among feature specifications: a feature F can be either valued (F_{val}[ ]) or unvalued (F[ ]), and either interpreted (*i*F[ ]) or uninterpreted (*u*F[ ]). Full Interpretation requires that a feature be interpreted and valued. Unvalued features act as probes into their c-command domains, and stop probing once they have entered into an Agree relation with a valued instance of the same feature. Once two occurrences of a feature Agree, they constitute a single instance of the feature, which is notated with a bracketed index. This system can be used to describe both Case checking and theta-role checking.

Semantically, Slocum & Taylor (2010) take the vocative D to be that quantifier that takes as its SCOPE the (pragmatically appropriate) set of possible addressees and takes as its RESTRICTION that individual to whom the utterance is directed. Syntactically, the restriction argument may be a full dP (the idea of a D selecting a DP complement rather than an NP complement is familiar from analyses of partitive structures). A structure in which D has selected an NP argument is predicted to order differently relative to its modifiers than a structure in which D has selected a dP argument, and indeed that is what we find in Italian and Romanian.

It is important to note that we only find the definite article in Italian vocative DPs in the

presence of '*caro'*. It is otherwise impossible, as illustrated in (25) below.[27]

    25) a. O ragazzo mio!
       b. *O il mio ragazzo!
       c. *O il ragazzo mio!

    Slocum & Taylor stipulate that the vocative case definite determiner is $\emptyset$, while '*il*' is default case. Under this assumption, the presence of the definite article in (12a), repeated below in (26a), requires explanation.

    26) a. O caro   il mio   ragazzo, esci   di qui.   *Italian*
          O dear.MSC.SG the my.MSC.SG boy.MSC.SG leave.IMP from here
          'My dear boy, leave here.'

                                        (=(5f) Moro 2003)
       b. Il mio   caro   ragazzo mi ha telefonato
         the my.MSC.SG dear.MSC.SG boy.MSC.SG me aux phoned.MASC.SG
         'My dear boy called me.'
       c. *Caro   il mio   ragazzo mi ha telefonato
          dear.MSC.SG the my.MSC.SG boy.MSC.SG me aux phoned.MASC.SG
       d. *O il mio   caro   ragazzo, esci   di qui.
          O the my.MSC.SG dear.MSC.SG boy.MSC.SG leave.IMP from here

    Remember that the adjective *caro* is special in that it can appear in these constructions where most other adjectives cannot. Slocum & Taylor take this to indicate that the Vocative value of the dP comes from a Vocative case value on *caro* itself. This idea finds support in the fact that *caro* is often used independently as a vocative in Italian and that it has direct analogues with the same properties in other languages (as was seen in 13 - 15). Specifically, they analyze the alternation between the address *caro il mio ragazzo* (12a) and the argument *il mio caro ragazzo* (12b) as reflecting different levels of modification enabled by the former's additional structure, as shown in (27) below.

---

27. Thanks to Raffaella Zanuttini and Aniello De Santo for the judgements on the examples in (25). All errors are my own.

27)

$$\text{dP}$$

Tree structure:
- dP
  - pro
  - d'
    - d
      - d
        - D_j Ø
        - d_k
      - d iK[3]
    - dP
      - AP_i
        - *caro* uK$_{\text{VOC}}$[3]
      - d'
        - t_k
        - DP
          - dP
            - *il mio ragazzo* iK$_{\text{DEF}}$[17]
          - D'
            - t_j
            - t_i

(= (23) Slocum & Taylor 2010)

Let's examine the structure in (27) in more detail. K here is being used as shorthand for Case. D is the site of interpretable but unvalued case feature (i.e. it has iK[ ]). D selects an OBLIQUE AP argument and a RESTRICTION dP argument. The dP argument is already valued with interpretable default case. The DP projects (or is selected by) little-d, and D raises to little-d, bringing its unvalued case feature to the complex head. Slocum and Taylor stipulate *caro* is a special adjective in that it bears valued but uninterpretable vocative case. It raises to a position above the RESTRICTION dP argument *il mio ragazzo*. The unvalued complex d head then probes and enters into an agree relation with the adjective (the numbers are arbitrary).

So long as *caro* is able to value the vocative case on d, the restriction dP may be valued with either vocative case or default case, resulting in the following alternation:

28) a.   caro$_{\text{VOC}}$ [il mio ragazzo]$_{\text{DEFAULT}}$
    a.   caro$_{\text{VOC}}$ [ragazzo mio]$_{\text{VOC}}$

When *caro* is not present, the restriction dP must check vocative case on d$_{VOC}$, which is why *il mio ragazzo* is an impossible vocative.

The same analysis outlined above is also applied to the Romanian data we saw in example (15), repeated below:

29) a. drag-ul   prieten   (argument)
         dear-the.DEF friend
     b. prieten-ul   dragă   (argument)
         friend-the.DEF dear
     c. dragă prieten-e   (vocative)
         dear   friend-the.VOC

They argue that in (29c) the adjective *dragă* is an oblique argument of the vocative dP, while *prietene* is the restriction dP. One might expect, then, to see the same case alternation to exist for (29c) as we saw in Italian in (28). Unfortunately, it is difficult to determine whether this prediction is borne out, as the tendency in modern colloquial Romanian is to use the nominative/ accusative forms for vocatives instead of the distinct forms.

3.3.3. A modified analysis

When stripped of differences in framework, the primary difference between the analyses of Hill (2014) and Slocum & Taylor (2010) is the status of the vocative adjectives found in adjective-initial vocatives. In this section, I argue that vocative adjectives are nominal, and their initial placement in vocative phrases is due to head movement of the nominal adjective to the higher head of the vocative functional layer. I adopt the structure used in Slocum & Taylor (2010), in

which case the movement can be driven by the very same needs that drive N to D movement in

argument DPs as well as to reflect the semantic properties of vocative DPs.

Romanian has commonly been argued to exhibit N to D movement (Grosu 1988, Giusti

1994) in definite DPs, which have enclitic articles. Longobardi (1994) independently proposed N

to D in Italian for proper nouns. Consider the alternation shown below in (30):

30) a. Il   mio Gianni ha finalmente telefonato
       the my Gianni has finally   called up
    b. Gianni mio ha finalmente telefonato
       Gianni my has finally   called up

<div align="right">(=(26a,c) Longobardi 1994)</div>

Longobardi (1994) proposed that the word order seen in (30b) is derived by movement of

N (*Gianni*) to D to check the strong +Referential feature on D. This alternation only occurs with

proper names, which he argues is because they are inherently *object-referring* (i.e. specific).

Specifically, he writes that "+R is universally checked iff the D is interpreted as being in a chain/

CHAIN containing an object-referring expression (in the sense clarified in the text, i.e., a

pronoun or a proper name)." (Longobardi 1994 pg. 659).

Whether they contain a proper name or not, there is good reason to claim that all

vocatives are object-referring in the sense of Longobardi (1994). This is closely tied to their

ostensive nature, as discussed in Section 3.2.2. So, we should expect the same requirements that

drive the N to D movement in Italian proper names to also apply to Italian vocative phrases. Note

that the phenomenon in question in this section is adjective-initial vocatives, not noun-initial. As

has already been mentioned, however, these vocative adjectives do not behave like other

adjectives. Hill (2014) considers them particles, while Slocum & Taylor (2010) claim that they

can check vocative case like a noun. In both Romanian and Italian, vocative adjectives may be

modified by possessive pronouns, without a head noun:

31) a. scumpa   mea   (fetiţă); dragul   meu   {prieten/Dan}   *Romanian*
       sweet-the.FSG my.FSG girl.DIM dear-the.MSG my.MSG friend/Dan
       'my sweet girl'; 'my dear friend/Dan'

                                                                (Hill 2014 pg. 34)
    b. caro mio!   *Italian*
       dear my
       'My dear!'

This seems to indicate that vocative adjectives are nominals rather than particles. In

addition, note that the examples in (31) all show signs of N to D movement: in Romanian, the

vocative adjectives appear with the article enclitic, and in Italian it is left of the possessive

pronoun. If we can assume the following three points, the analysis of adjective-initial vocatives

becomes relatively straightforward:

32) Vocative phrases have a layer of functional structure that argument DPs lack

33) Vocative adjectives are nominal in so far as that they may appear as substantives and
    they can check formal features and have second person features

34) Nominalized vocative adjectives can merge into the higher functional layer referred
    to in (32)

35) Second person features on definite determiners spell out as Ø

The analysis of *caro il mio ragazzo* that is the result of the assumptions in (32 - 35), of is

shown below in (36).

36)

```
                              dP
                            /    \
                         pro      d'
                              /        \
                           d              DP
                        /     \         /      \
                      d         d      dP        D'
                            uK_VOC[3]         /    \
                   /    \        il mio     t_i    NP
                 N_j     D_i     ragazzo            |
                caro      Ø      iK_DEF[17]         t_j
              iφ_2nd[14]  iφ_2nd[14]
              iK_VOC[3]
```

In (36) above we see the result of the proposed analysis. D enters the derivation with unvalued φ features and selects an NP complement, *caro*, which bears valued second φ features and a vocative case feature, and raises to D under N to D movement. D also selects a restriction argument, the full dP *il mio ragazzo*, which already bears interpretable and valued inherent default case. The DP projects (or is selected by) little d, which bears unvalued case features. The complex head N+D raises to d and values d's case features. The complex head N+D+d now bears valued and interpretable inherent 2nd person and vocative case features.

Turning to Romanian, we should note that this analysis also predicts the two facts that led Hill (2014) to argue that vocative adjectives are particles. The data is repeated below:

37) a. foarte stimat/ mai stimat
       very   beloved more beloved
    b. *foarte/mai stimați cititori!
       very/more beloved readers

38) (*Măi) stimate cititorule
     VOC   beloved reader-the.VOC

<div align="right">(Hill 2014 pg.52)</div>

Under the analysis that adjective-initial vocatives are derived by head movement of the nominal adjective, we should expect that they cannot be modified by intensifiers (37b), as they are not phrasal, and moreover that they should not be modified by adverbs, as they are nominal rather than adjectival. As for their complementary distribution with vocative particles, seen in (38), I suspect that the vocative particles are not in the specifier of the vocative D, but are rather realizations of D when valued with second person φ features. Under this view, we should expect that in the presence of a vocative particle, the vocative adjectives should not be impossible, but should rather remain in-situ in the vocative phrase. This is indeed what we find:

39) măi fetiț-o   dragă
    you girl-the$_{voc}$ dear
    'My dear girl!'

<div align="right">(=21a, Hill 2007)</div>

If the free particles are realizations of vocative D, a different account must be found of bound particles, particularly for a language like Umbundu which can have both concurrently. One possibility is that these particles are associated with the lower DP, like the article in Italian's *caro il mio ragazzo*. More investigation into the nature of the Umbundu vocative DP is necessary for any conclusive analysis.

The analysis presented here predicts that in languages without N to D movement, such as English, vocative adjectives will remain in-situ. This prediction is, indeed, borne out:

40) a. Sandra dear, how are you?
    b. Marlin darling, it's been too long!

41) a. *Sandra dear went to the store.
    b. *Marlin darling left on Friday.

While post-nominal adjectives are highly restricted in English, *dear* and *darling* are able to appear post-nominally. Like *caro* in Italian, vocative adjectives have a very special status in English vocatives. For example, they can stand alone as vocatives while other adjectives cannot (unless they are interpreted as a nickname or pet name), or with a possessive pronoun:

42) a.   Dear, how are you?
    b.   Darling, it's been too long!
    c.   My dear, how are you?
    d.   My darling, it's been too long!

43) a.   *Smart, how are you?
    b.   *Funny, it's been too long!
    c.   *My smart, how are you?
    d.   *My funny, it's been too long!

This suggests that English vocative DPs have the same additional layer of structure as has been argued for here and in Hill (2013) and Slocum and Taylor (2010), but lack movement of vocative adjectives to vocative D.

In this section I have so far failed mentioned BCS and Russian, which show the same pattern of adjective-initial vocatives, repeated here in (44-45):

44) a. Dragi moj prijatelj-u, kako si?   *BCS*
       dear   my   friend-VOC how AUX
       'My dear friend, how are you?'
    b. Moj dragi prijatelj je   otišao u prodavnicu
       my   dear   friend aux went in store
       'My dear friend went to the store'
    c. *Dragi moj   prijatelj je   otišao u prodavnicu
        dear   my   friend   aux went in store

45) a. Dorogoj moj mal'čik, sxodi v magazin.   *Russian*
    dear   my boy   go.IMP to store
    'My dear boy, go to the store.'
  b. Moj dorogoj mal'čik sxodil   v magazin.
    my dear   boy   went.PST.PRF to store
    'My dear boy went to the store'
  c. ??Dorogoj moj mal'čik sxodil   v magazine
     dear   my boy   went.PST.PRF   to store
    'My dear boy went to the store'

The presence of the functional category D in Slavic has been wildly disputed in recent years, largely due to the lack of overt articles in most of the language family (Despic 2011, Boskovic 2003, et al.). Progovac (1998) and LaTerza (2014), however, have put forth a wide variety of arguments that despite the lack of overt articles, BCS has the category D. Entering into this debate is beyond the scope of this dissertation, however, in light of the analysis presented in this section, the date in (44 - 45) might be evidence in favor of the presence of D in Slavic.

3.4. Summary

This chapter has been a brief tour of the three main superficial distinctions between vocative and argument DPs: vocative case, the absence of overt definite articles, and adjective-initial vocatives. Through investigation into these areas of deviance, we have emerged with the following picture of the internal structure of vocative DPs:

    Characteristics of vocative DPs
46) a. Vocative DPs are valued with inherent vocative case
   b. The vocative D bears the feature [2nd person]
   c. Vocative DPs have an additional functional layer that argument DPs lack

The first of these conclusions feeds into a centuries-old debate over the place of vocative

morphology in the case paradigm. I have shown that this debate was fueled largely by the idiosyncratic characteristics of Latin and Greek (partial syncretism with the nominative) and does not reflect a larger cross-linguistic perspective on vocative morphology.

In Section 3.2 I examined the relationship between definiteness, second person and the vocative. What is most novel in this discussion is that I have suggested a link between the ostensive nature of vocatives and their frequent lack of a definite article. I have shown traces of a pattern linking ostensive deictic material to a lack of functional structure. Though I propose no formal account of this link, the observation adds an interesting clue to a longstanding puzzle.

Finally, in this chapter I have shown that the seemingly bizarre pattern of adjective-initial vocatives in Romanian and Italian is the result of two already present mechanisms in these languages: N to D movement, and the ability of a D to select a DP (c.f. partitive constructions).

Chapter 4

The Syntax of Addresses

Though vocatives have been recognized as a syntactic category for millennia, until the work of Moro (2003) little to no attention had been paid to their syntactic integration with the clauses they appear in. Moro (2003) took a cartographic approach to the mapping of the vocative, as have the majority of those who have followed in his wake (Mauck & Zanuttini 2005, Hill 2007, Stavrou 2009, Espinal 2010, Haegeman & Hill 2012, Hill 2013, 2014). The analysis proposed in this chapter will continue in the cartographic tradition, however it will depart from the bulk of the existing work in its attention to, and derivation of, mid-sentential addresses.

We saw in Chapter 1 that addresses, compared to calls and overt imperative subjects, have relatively unrestricted placement with respect to their host clauses:

1) a. James, sometimes winners have to lose.
   b. Sometimes, James, winners have to lose.
   c. Sometimes winners, James, have to lose.
   d. Sometimes winners have to lose, James.

Past analyses of addresses have focused on the clause initial position (1a), and

occasionally on the clause final position (1d) (Hill 2014), but none have proposed an adequate treatment of the mid-sentential positions seen in (1b-c). Stavrou (2009) and Espinal (2010) claim that mid-sentential addresses are parenthetical, a proposal that will be thoroughly discussed (and not entirely refuted) in Chapter 6. Moro (2003), Hill (2007, 2013, 2014) and Haegeman & Hill (2012), on the other hand, have nothing to say about examples such as those in (1b-c). Only the analysis proposed in Mauck & Zanuttini (2005), is able to derive some mid-sentential addresses, by allowing topics to precede them.

The analysis here can be seen as an extension of and more detailed argument for the proposal outlined in Mauck & Zanuttini (2005). I argue, in fact, that all material which precedes addresses has undergone topicalization. Specifically, I propose that addresses are located in the specifier of a functional projection Addr°, which is located in the exploded CP domain of Rizzi (1997, 2004), as in (2) below. I further propose that mid-sentential addresses such as those in (1b, c) are derived in one of two ways, described in (3).

2) ForceP > TopP$_1$ > AddrP > FocP > TopP$_2$ > FinP

3) *The derivation of mid-sentential addresses*
   a. phrasal topicalization to the specifier of TopP$_1$
      as in: [$_{TopP1}$ The barn$_i$ [$_{AddrP}$ John [$_{FinP}$ t_i has got to be painted]]]
   b. phrasal focus movement to the specifier of FocP followed by remnant topicalization to the specifier of TopP$_1$.
      as in: [$_{TopP1}$ [$_{TP}$The barn should be painted t_i]$_j$ [$_{AddrP}$ John [$_{FocP}$ this year$_i$ [$_{FinP}$ t_j]]]]

In this chapter, motivation for this analysis comes from mid-sentential addresses in English: their existence, foremost, and their inability to linearly interrupt syntactic islands. In Chapter 5, additional evidence will be drawn from allocutivity. Allocutivity is the presence of

morphology or clitics which agree with the addressee in one or more of the following features:

number, gender, solidarity, and/or respect (Antonov 2015). It has been broadly connected to

vocatives (Hill 2013, Haddican 2015, Haegeman & Hill 2014) and in Chapter 5 I will show that

the present proposal is well suited to account for it.

The major claims concerning the relationships between addresses and the host clause

proposed in this chapter are as follows:

4) *Addresses and the host clause*
   a. Addresses are vocative dPs in the specifier of a functional head Addr°
   b. Addr° is located in the topic domain of CP
   c. AddrP is restricted to root clauses
   d. Mid-sentential addresses are derived through information structure driven phrasal
      and remnant movement above and below AddrP
   e. Calls are addresses with no other lexical material in the CP

In Section 4.1, I formally propose the analysis sketched in (2) and (3), highlighting its

strengths over the analysis presented in Moro (2003). In Section 4.2 I compare the derivation of

mid-sentential addresses in the current proposal to how such cases might be treated under an

analysis like that presented in Hill (2014). The present proposal is not the first to argue that

information-structure driven movement is responsible for the derivation of syntactic objects with

seemingly free word order, and in in Section 4.3 I briefly discuss two analyses which have made

use of this technique for independent phenomena.

This proposal makes very clear predictions for the distribution of addresses with respect

to syntactic islands. The presence of an address in between elements of a syntactic island would

necessarily be the result of phrasal or remnant topicalization out of that island, which should

result in ungrammaticality. In Section 4.4, I present the results of a 128 participant scalar

grammaticality judgement survey which shows that these predictions are borne out, and that there is a distinct (and statistically significant) difference in grammaticality between sentences such as (5a) and (5b).

5) a. (0.9) My dad likes to chill *after working all day,* **Jason**, *at the post office*
    b. (5.1) My dad likes to chill, **Jason**, *after working all day at the post office*

The number in parentheses before the examples in (5) indicates the average rating of naturalness they were given on a scale of 0-10. The presence of an address between elements of the adjunct island [*after working all day at the post office*] (5a) was considered less grammatical than the mid-sentential address before the adjunct (5b). This effect was seen in subject islands, adjunct islands, coordinate structure islands and wh-islands.

Finally, in section 4.5 I include some brief remarks about the syntax of calls, before concluding in section 4.6.

4.1. AddrP

Various proposals have been put forth in the literature either arguing or assuming that addresses are associated with a unique functional projection (Moro 2003, Portner 2004, Mauck & Zanuttini 2005, Hill 2007, Stavrou 2009, Espinal 2010, Haegeman & Hill 2012, Hill 2013a, 2013b). These proposals, with the exception of Mauck & Zanuttini (2005), are crucially unable to account for the distribution of mid-sentential addresses. In this chapter, I provide new evidence for a proposal along the lines of that presented in Mauck & Zanuttini (2005), and show how such an account is able to derive and predict the interpretation of mid-sentential addresses.

I will begin by discussing two proposals, Moro (2003) and Hill (2014), which both argue that addresses are located above the CP domain, a position which has been adopted in a large portion of the very scarce literature on the subject (Stavrou 2009, Espinal 2010, Haegeman & Hill 2012). We will see, however, that these proposals cannot account for the distribution of addresses in English.

4.1.1. Past Analyses

Hill (2014) builds upon work by Speas & Tenny (2003) who propose a Speech Act Projection (SAP), essentially encoding some aspects of pragmatics in the syntax. The Speech Act head is a three place predicate which takes the speaker as the agent of the speech act, the utterance content (ForceP) as its theme and the hearer as its goal.

6)
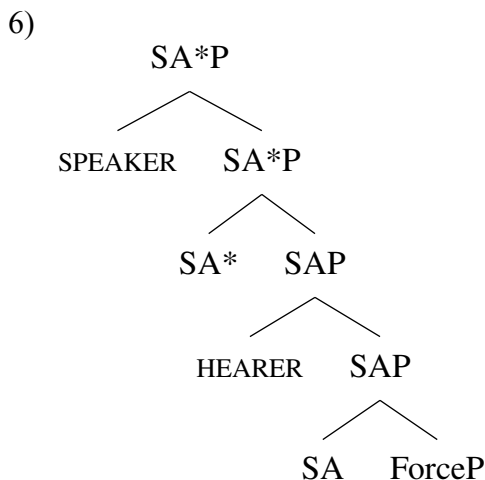
Hill expands upon this framework and proposes that the vocative (which conflates both addresses and calls) is a functional domain (RoleP) which is merged in the hearer role as the goal

of the Speech Act head. Though in many ways very different, this proposal is compatible with

Moro (2003)'s account of the vocative, in which he concludes that a Vocative Phrase must be

located in the specifier of a functional projection above ForceP. Moro draws this conclusion on

the basis of ordering restrictions between vocatives and other functional categories proposed to

be projected above T. He uses Rizzi's 1997 proposed hierarchy of functional heads in left

periphery, outlined below:

7) Force° > (Top° > Foc° > Top° >) Fin° ...

(Rizzi 1997)

Moro finds that vocatives are preferred to the left of phrases which are argued to be

associated with Top°, Foc°, and Force° in Italian.

8) a. O Maria, I   ragazzi, li   aiuta Gianni.   VOC >> TOP
        o Maria the boys   them helps Gianni
     b. ?I   ragazzi, o Maria, li   aiuta Gianni.
        the boys   o Maria   them helps Gianni
        'Maria, the boys, Gianni helps them.'

(=(12) Moro 2003)

9) a. O Maria, I   RAGAZZI, Gianni aiuta, non i   conigli.   VOC >> FOC
        o Maria, the boys   Gianni helps not the rabbits
     b.*I   RAGAZZI, o Maria, Gianni aiuta,   non i   conigli.
        the boys,   o Maria, Gianni will help not the rabbits
        'Maria, THE BOYS Gianni will help, not the rabbits.'

(= (13) Moro 2003)

10) a. Gianni pensa, (o) Maria che Pietro abbia letto un libro.   VOC >> FORCE
        Gianni thinks   o Maria   that Pietro has   read a book
     b. *Gianni pensa che, (o) Maria Pietro abbia letto un libro.
        Gianni thinks that   o   Maria Pietro has   read a book
        'Gianni thinks, Maria, that Pietro has read a book.'

(= (17) Moro 2003)

Example (8) shows that vocatives are degraded to the right of topic phrases, while (9)

shows that they are impossible to the right of focused phrases. Example (10) shows that

vocatives are only possible to the left of the complementizer *che*, which Rizzi (1997) argues to

be the lexical realization of Forceº. Based on these results, Moro (2003) concludes that vocatives

must be associated with a functional projection above Force°.

4.1.2. The Present Proposal

If we examine similar structures in English, we find somewhat different results. It is clear that

vocatives display restricted ordering with respect to some objects in the CP domain. I will

evaluate whether these restrictions indicate that there is a single location for vocatives in the

functional hierarchy, and find additional evidence that they are associated with a functional head,

Addr°.

I will restrict this discussion to addresses, as I have already pointed out that calls are

obligatorily utterance initial, and will discuss them briefly in Section 4.5. Like Italian, English

addresses are strongly preferred to the left of focused phrases. They seem to be marginally

possible to the right as well, but only when offset by very heavy pauses.

11) a. John, it's FOOTBALL that I hate, not rugby.   ADDR > FOC
    b. ??It's FOOTBALL, John, that I hate, not rugby.

The data in (11) suggest that if a unique position for addresses exists in the left periphery,

it must be located above Focº, and therefore also above the lower Topº as well. We expect, then,

that vocatives should be possible to the left of topics, and this prediction is born out:

12) John, at Starbucks, everyone drinks sweet drinks.   ADDR > TOP

Additionally, however, we find that addresses are possible to the right of topics, unlike in

Italian.

13) a. At Starbucks, John, everyone drinks sweet drinks.   TOP > ADDR
    b. The ball, boys, is your best friend -- protect it with your life.

Indeed, contrary to the conclusions drawn in Moro (2003) based on the data shown in (8),

Mauck & Zanuttini (2005) show that Italian does not so clearly favor the order Addr > Top when

one considers a larger range of topics. In the case of hanging topics, as the one seen below in

(14), there is a preference for the vocative to follow the topic. This preference becomes much

sharper when the the hanging topic co-occurs with a resumptive noun phrase or pronoun (15).

14) a. ?Signor Rossi, quella proposta mi sa   che non ne parla più   nessuno.
      Mr. Rossi, that   proposal me seems that neg of-it talks anymore nobody
      'Mr. Rossi, as for that proposal, I fear that nobody talks about it anymore.'
    b. Quella proposta, Signor Rossi, mi sa   che non ne parla più   nessuno.
      that   proposal, Mr. Rossi, me seems that neg of-it talk anymore nobody
      'As for that proposal, Mr. Rossi, I fear that nobody talks about it anymore.'

15) a. Fiori,   Maria, mi piacciono le camelie.
    Flowers, Maria, to me please   the camelias
    'As for flowers, Maria, I like camelias.'
    b. * Maria, fiori, mi piacciono le camelie.

                       (=(33-34) Mauck & Zanuttini 2005)

In the above examples we see a preference for addresses to follow hanging topics. We

appear to have come across a transitivity failure. Addresses may follow topics, and topics must

follow complementizers, but addresses may not follow complementizers. And indeed, like in

Italian, we find that addresses in English are illicit to the right of the indicative complementizer

that.

16) a. I think, Paul, that Congress will pass the bill.   ADDR > FORCE?
    b. *I think that, Paul, Congress will pass the bill.

There are two problems with this generalization. First, it is not clear whether the address

in (16a) is a part of the upper or lower clause, so it is unclear whether we are learning anything

about the left periphery of the lower clause or not. Moro seems to assume that the address is in

the CP of the embedded clause, in which case he is making the implicit assumption that

embedded CPs, like matrix CPs, contain a VocP. I will continue with the term AddrP, to reflect

the subcategorization which we saw evidence for in Chapter 1.[28] It seems, based on the

distribution of multiple addresses, that AddrP can exist only in the matrix CP. The existence of

multiple AddrPs, one can only imagine, would allow for multiple addresses. Ashdowne (2002)

shows that this is not, in fact, possible. Note, first of all, that there is no restriction on referring to

the addressee multiple times. Calls and addresses may co-occur (somewhat) freely (as was

discussed in Section 1.5.2).

17) Mary! (my dear) how are you (my dear)?

It is impossible (or at least extremely degraded), however, to include multiple addresses

in the same sentence, even if they have the same referent. The contrast in grammaticality of (18a-

b) may be due to the temptation to construe the initial address as a call in (18a).

18) a. ?Mary, how could you think I would betray you, my dear?
    b. *How could you think, Mary, that I would betray you, my dear?

The idea that vocatives are associated with root clauses is not new. It is a built-in feature

of any analysis that locates addresses in the Speech Act domain (Hill 2007, 2014, Haegeman &

Hill 2013) and is also in line with recent work on allocutivity (particularly Miyagawa 2012)

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28. Mauck & Zanuttini (2005), use 'AddresseeP' as the phrase which hosts vocatives in its specifier position.

which has been argued to be associated with vocatives (an idea which will be supported in Chapter 5).

Embedded CPs must lack an AddrP, and consequently example (16) does not show that AddrP must be above ForceP. Based on the presence of topics to the left of addresses, it is clear that AddrP must be located below the highest TopP and above FocP. Therefore, I propose the following hierarchy for the exploded CP:

19) Force° > (Top° > **Addr**° > Foc° > Top° >) Fin° …

This is not unlike the conclusion reached in Mauck & Zanuttini (2005). Though they do not provide a detailed hierarchy, they conclude that vocatives should be associated with a functional projection located in the topic domain, as we see in (19).

4.2. The Derivation of Mid-Sentential Addresses

In the preceding section I sought to amend the trend in the literature toward treating addresses as elements associated with a functional head higher than ForceP or even outside of the CP domain entirely. All of these accounts have been intended to capture generalizations about clause initial (or at least left-peripheral) addresses. In a corpus study of Latin vocatives, using the works of Plautus, Terence and Cicero, Ashdowne (2007) found the following breakdown of Latin vocative positions:

Absolute	57	5.9%
Sentence-initial	200	20.6%
Sentence-medial	430	44.3%
Sentence final	283	29.2%
TOTAL	**970**	

Table 1

Table 1, adapted from Ashdowne (2007 pg. 68), shows that nearly 45% of all of the vocatives in the corpus described occurred mid-sententially. This data clearly shows that mid-sentential vocatives are not fringe cases, and should figure prominently in any account of vocative syntax.

4.2.1. Hill 2014

These mid-sentential vocatives, which must all be addresses, are a considerable problem for the most prominent current analyses of vocatives. The hierarchy proposed in (19) is the best equipped to handle mid-sentential addresses, as it is the only one which contains a phrasal host to the left of AddrP (TopP). In this section, I will address the analysis developed in Hill (2007, 2013, 2014), focusing on Hill (2014) which provides the most detailed discussion of the analysis. I will show that Hill (2014), like Moro (2003), is ill equipped to handle mid-sentential addresses, which the analysis proposed in Section 4.1.2 is able to do.

Remember that for Hill (2014), vocatives are associated with a pragmatic domain that takes both CP (ForceP) and VocP as arguments. Her analysis is diagrammed below in (20).

20)
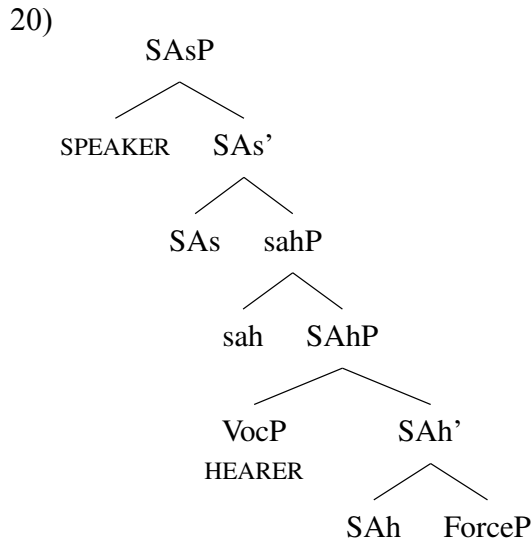
This proposal is compatible with Moro (2003) in that they share the assertion that the functional projection which hosts vocative phrases dominates ForceP, and for that reason has equal difficulty deriving mid-sentential addresses. Hill (2014) makes no attempt to provide an analysis of mid-sentential addresses, however she does provide a proposal for mid-sentential vocative particles, which could potentially be extended to addresses. I will provide a brief sketch of this analysis below, before providing novel data to show that this cannot be the correct path.

Hill (2014) argues that in Romanian, the SAh° (Speech Act hearer head) may be realized as the particle *hai/haide*, which she claims is a semantically underspecified verbal particle which inflects for person and number. She describes its primary distribution as follows:

21) (i) it combines with an imperative verb, as in (22a, b), or with the subjunctive
surrogate for the imperative, as in (22c, d). in (22), *hai* has an injunctive function,
enhancing the imperative reading.
(ii) it is followed by a 'that'-indicative clause, as in (23), where it takes an evaluative
or evidential reading. the complementizer 'that' may be optional, hence, it appears
in brackets in (23), but its presence is preferred.[29]

(pg. 138, Hill 2013b)

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29. To avoid confusion, Hill's original numbering in this quote has been changed to correspond to the numbering in this document.

22) a.   Hai/haide du-te! /   mănâncă!
           hai   go.IMP.2SG-REFL/ eat.IMP.2SG
           'Go!'/'Eat!'
    b.   Hai/haideți duceți-vă! //   *haideți du-te!
           hai   go.IMP.2PL-REFL   hai.2PL go.IMP.2SG-REFL
           'Go!'
    c.   Hai/haide să   te   duci
           hai   SUBJ REFL go.2SG
           'You better go'
    d.   Hai/ haideți să vă   duceți.// *haideți să te   duci
           hai   SUBJ REFL go.2PL   hai.2PL SUBJ REFL go.2SG
           'You better go'

23) a.   Hai/ haide (că) eşti   nemaipomenit
           hai   that are.2SG unbelievable
           'You are really unbelievable.'
    b.   Hai/ haideți (că) sâneți   nesimțiți
           hai   that are.2PL not.feeling.MASC.PL
           'You are really inconsiderate'
    c.   Hai/haide/haideți (ca) avem   timp.
           hai   that have.1PL time
           'We do have time (it is obvious to me).'

                                                      (pg.138-9, Hill 2013b)

Part of the motivation in Hill (2013b) for analyzing *hai* as speech act head is the fact that it is a main clause phenomenon, i.e., it cannot be embedded, as is shown in (24). The particle can, however, be preceded by a topic, as is seen in (25).

24) *a declarat/scris (că) hai (că) va   veni.
       has declared/wrote that hai that will come
       intended: 'he declared/wrote that, ok, he will come.'

                                                      (pg. 147, Hill 2013b)

25) a. desenele   animate, hai că   sunt grozave.
        drawings.the animated hai that are awesome
        'the cartoons, they are really awesome.'
      b. la mare, hai să   mergem altădată.
         to sea   hai SUBJ go.1PL   other.time
         'to the sea, let's go some other time.'

                                                          (pg. 170, Hill 2013b)

Hill (2013b) argues that examples such as those in (25) are derived by movement of the topic into the specifier of the speech act hearer shell phrase (sahP). The derivation is sketched below in (26):

26)
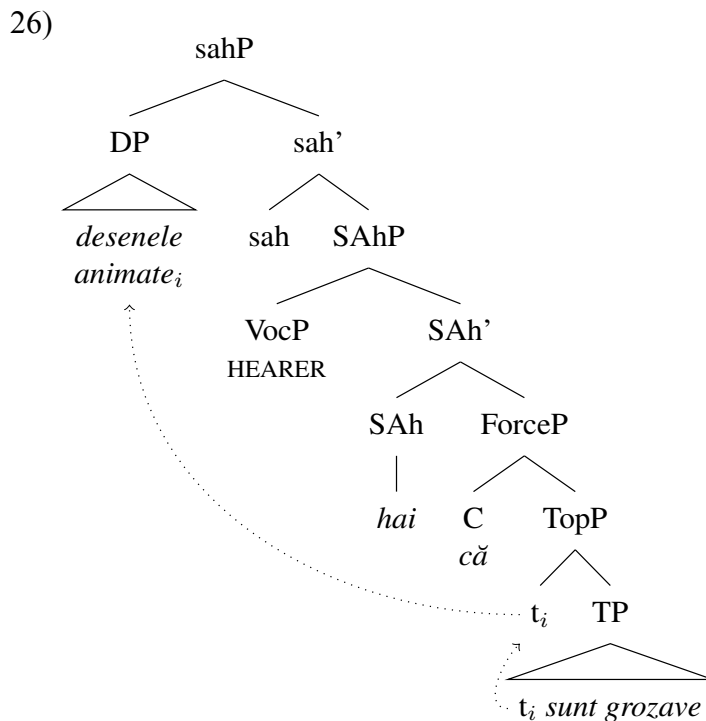
Though this analysis is not explicitly extended to mid-sentential addresses, it seems to be the only possible approach for such a proposal. It is problematic on both interpretive and empirical grounds. To begin, let's consider the interpretive effects of such movement. The pragmatics domain, for Speas & Tenny (2003), grammaticizes the pragmatic roles (SPEAKER and

HEARER, for example) and determines the form of the speech act. So we must ask, what is the interpretive effect of moving a topic into this domain? What is the motivation for such a movement? Hill (2014) says that (25a) "emphasizes the reason for evaluation, locating the relevant DP in front of *hai*". This description does not sound distinct from the description of a simple topic.

In addition to interpretive questions concerning this analysis, I will present novel data showing that it makes incorrect predictions about Romanian word order. In (27) below, I show again the functional hierarchy proposed in Hill (2013b).

27) a. SAsP > sahP > SAhP > ForceP

Recall that *hai* is a realization of sah°, and VocP is in Spec, SAhP. They are thus structurally adjacent, and are also predicted to be linearly adjacent. This is not the case. In (28), we see that *tomorrow* may intervene between *hai* and vocatives, where there is no structural position in the proposal presented above to do so.[30]

28) Hai mâine,   Ioane,   să   mergem la magazin.
    hai tomorrow John.VOC SUBJ go.1PL   to store
    'Tomorrow, John, let's go to the store.'

I take example (28), as well as, the interpretive questions raised above, as evidence that the analysis presented in Hill (2014) is not an appropriate approach for addresses, particularly in light of their presence mid-sententially.

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30. I am grateful to Sabina Matyiku for the data presented in (28). All errors are my own.

4.2.2. Addresses and Information Structure

Taglicht (1984) noted that vocatives[31] may mark the boundary between a *marked theme* and the rest of the sentence. For Taglicht, a marked theme is old information (perhaps a topic) that is grammatically marked, meaning that some process has taken place to show that it is old information, like fronting (topicalization), or the presence of an "intrusive element" such as a vocative or a disjunct. Take, for example, (29).

29) That shed, **my dear,** will have to be painted.

(=(8) Taglicht 1984; emphasis mine)

In this section I show that this intuition can be formalized in the present proposal. I follow Taglicht (1984) in arguing that the location of addresses in the sentence is semantically meaningful in that it marks the edge of the focus domain; the material to the left being either background information or a contrastive topic, and the material to the right being new information. Consider the following exchanges.

30) *Jessica*:   I think we should stay in tonight.
    Paul: a. I, Jessica, want to go to a movie.
                   b. #I want to go, Jessica, to a movie.

31) *Jessica*:   I want to go home.
    Paul: a. I, Jessica, want to go to a movie.
                   b. I want to go, Jessica, to a movie.

In the first scenario, Jessica and Paul want to do different things. Jessica wants to stay home, while Paul wants to go to a movie. The only part of their utterances that they are sharing is

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31. Taglicht includes vocatives in a class of "disjuncts" which he claims pattern together in this way. These other elements, which might also be called parentheticals, are discussed in Chapter 6.

that they are expressing their perspectives, and Paul is contrasting his perspective with Jessica's

(30a). It would be infelicitous for Paul to contrast that he wants to go somewhere, because

Jessica wants to stay, as is attempted in (30b). On the other hand, in (31), both Paul and Jessica

have a desire to go, it is only their desired destination that differs. Therefore, Paul can respond as

in (31a), contrasting himself to Jessica, or as in (31b), contrasting his desire to go to Jessica's

desire to go. In the felicitous responses, materials preceding the address are contrastive topics.

Note that it is important to read these examples with contrastive intonation before the address.

The present analysis reflects the information structure of the sentences in (30-31) in the

derivation of the mid-sentential addresses. In (32) and (33) below, I show the derivations of (31a)

and (31b), respectively.

32)

```
                    TopP
                   /    \
                 DP      Top'
                 /\      /   \
                /  \   Top   AddrP
               I_i        /      \
                        DP        Addr'
                       /\        /    \
                      /  \     Addr    …
                   Jessica            \
                                       TP
                                      /  \
                                 t_i want PRO to go
                                     to a movie
```
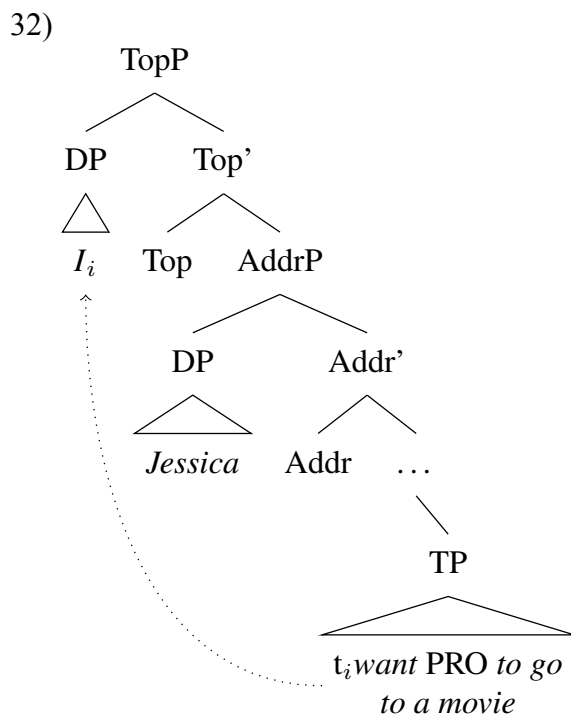
In the above derivation, the subject, *I*, undergoes movement for topicalization to the

highest TopP. In the context given in (31), this is contrastive topicalization of the subject, resulting in a mid-sentential address. The derivation of the second response, however, involves both focus movement and topicalization.

33)
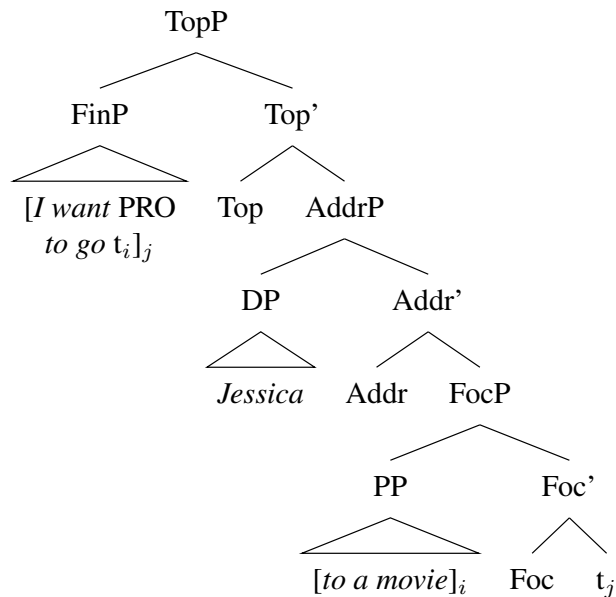
In (33), we see that the PP, *to a movie*, undergoes phrasal movement to spec, FocP. In both (31a) and (31b), *to a movie* is new information, but in (31b), as shown in (33), it has additional emphasis from the focalization, which can be heard in the prosody as emphatic intonation. Next, the old information, the remnant FinP, moves to spec, TopP, leaving the address to linearize in between the two. The remnant FinP is old information - it is clear from the context that both Paul and Jessica want to go somewhere, and the response in (31b), as shown in (33), places more emphasis on the difference between their desired destinations (*to a movie* vs. *home*) than on the differences between the speakers, which is seen in (31a).

This analysis predicts that in the presence of topicalization, addresses should only be able

to directly precede or follow the topic (precede if the topicalized phrase moves to the specifier of the lower TopP, follow if it moves to the specifier of the higher TopP). This prediction is borne out:

> 34) a.　　*[Sweet drinks]$_i$ everyone, Kim, drinks t_i at Starbucks.
> 　　b.　　*[The red barn]$_i$ John painted t_i, Marlin, last year.
> 　　c.　　*[Carrots]$_i$ I've always, Mom, loved t_i.

The examples in (34) are correctly predicted to be underivable under the analysis presented here. For elaboration, I will focus on (34a). The object, *sweet drinks* undergoes topicalization to the specifier of the TopP above AddrP, from which position it will linearize before the address, *Kim*. Given, however, that there is no other information-structure functional projection above AddrP, the subject, *everyone*, has nowhere to raise to that would lead to the word order seen in (34a). The same problem is encountered in the derivations of each of the examples in (34).

Setting aside this analysis, the sentences in (34) also serve to reinforce the descriptive claim that mid-sentential addresses lie at the boundary between new and old information. This idea will be explored in greater detail in Chapter 6.

4.2.3. Addresses and Complementizers

Recall from Section 4.1 that addresses are ungrammatical following complementizers of subordinate clauses. The relevant data is repeated in (35) below.

> 35) a. I think, Santina, that Congress will pass the bill.
> 　　b. *I think that, Santina, Congress will pass the bill.

Corresponding data from Italian was the primary motivation for Moro's 2003 claim that VocP must be hierarchically superior to ForceP. As was discussed, this argument is only valid under a view in which subordinate clauses are equipped with AddrP.

Nevertheless, under the current analysis of mid-sentential addresses presented above, the reason for the ungrammaticality of (35b) not immediately clear. It's derivation under the present proposal is sketched below in (36).

36) [TopP[FinP *I think that* t$_i$]$_j$ [AddrP *Santina* [FocP [TP*Congress will pass the bill*]$_i$ t$_j$]]]

Under this proposal, the embedded TP raises to the specifier of the matrix FocP, followed by remnant movement of the matrix TP to the specifier of the highest TopP. Several explanations could account for the ungrammaticality of this sentence. First, note that is bears a striking resemblance to so-called that-trace effect phenomenon, as illustrated in (37).

37) *An amendment$_i$ which they say that t_i will be law next year.

(Bresnan 1977)

The presence of the complementizer in a subordinate or relative clause results in ungrammaticality if the subject of that clause has been extracted (leaving the complementizer adjacent to the wh-trace). Likewise, in (36) the embedded complementizer is immediately followed by the trace of the embedded TP. Though of course the structures of (36) and (37) are considerably different, it's possible that the root of the ungrammaticality is the same. This possibility is leant credibility by the fact that in both cases, the effect is lessened by the presence of an adverb between the complementizer and the trace.

38) I think that next year *t*, Santina, Congress will pass the bill.

39) An amendment which they say that, next year, *t* will be law.

(Bresnan 1977)

The grammaticality of the sentences is greatly improved by the presence of an adverbial phrase between the complementizer of the embedded clause and the trace of the embedded TP (38) or subject (39).

The parallels between sentences like those in (35) and the classic *that-trace* effect examples are striking, but because of structural differences between the examples they do not lead to an immediate explanation for the ungrammaticality of (35b). Instead, it is much more likely the result of the inability of TP to move or stand in isolation without C, as noted in Chomsky (2008). In this case, of course, since C is a cover term for the CP domain, one must ask exactly which functional category fulfills this requirement. It seems that even the lowest member of the CP domain, FinP, will suffice to ensure that TP does not undergo topicalization bare.

The existence of mid-sentential addresses shows that the functional head they are associated with must be located within the CP domain in order to allow remnant and phrasal movement to target higher functional heads. For now, I will continue to motivate and test this proposal, beginning in the following section by showing that similar approaches have been employed for other syntactic elements with variable positions with respect to the clause.

4.3. S-adverbs, particles and information structure

This is by no means the first analysis to derive the surface order of constituents through this

manner. Similar accounts have sprung up covering a wide variety of phenomena, starting with

Kayne 1994. In this section I will examine two such analyses: Slioussar 2007, addressing

adverbs placement, and Willson 2005, 2007's account of the Marshallese question particle. In

both cases, it was found that the position of elements which exhibit (somewhat) free distribution

with respect to the host clause correlates with the information-structure in predictable ways. Like

the analysis of mid-sentential addresses presented here, both Slioussar (2007) and Willson (2005,

2007) rely on information-structure driven phrasal and remnant movement around the adverb or

question particle to derive its mid-sentential position.

In Russian, the unmarked sentence structure is S Adv V O, however the adverb may also

appear at the end of the sentence. In this case, the adverb is interpreted as being more salient than

everything to its left.

40) Vanja   čitaet knigi   medlenno.
    V.NOM reads book.PL.ACC slowly
    'Vanya reads books slowly.'

(= (2.13) Slioussar 2007)

Slioussar (2007) argues that adverb final sentences are derived through phrasal movement

driven by Information Structure. She takes adverbs to be functional heads projected above *v*P

which bear an edge feature. A sample derivation is presented below.

41) S V O Adv

TP
  TP
   T AdvP
        AdvP
      Adv   vP
          S   vP
               v+V   VP
                    t_i   O
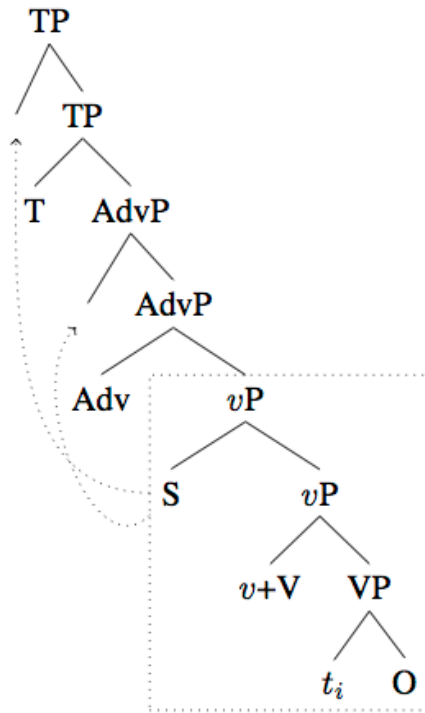
In (41), the adverbial head's edge feature attracts *v*P, leaving the adverb linearly sentence-final. For Slioussar, the movement of the complement to the specifier creates a configuration in which everything is merged above the adverb and the adverb is then interpreted as being most salient. Slioussar also suggests that linear adverb order may be affected by remnant movement for Information Structure.

Wilson (2005, 2007) proposes a similar approach for the Marshallese question particle, *ke,* which, like addresses, can appear in a variety of positions in the clause, as seen in (42) below.

42) Herman e-n   **(ke)** bajjik **(ke)** kōmmon **(ke)** pade eo   **(ke)** ñan ir **(ke)**?
    Herman 3s-should Q   just   Q   make   Q   party DET.S Q   for 3PL Q
    'Should Herman just throw the party for them?'
                                                                    (=(1) Willson 2005)

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Willson's analysis closely parallels that which I have proposed for mid-sentential addresses. She argues that the question particle is the head of Interrogative Phrase, and does not undergo movement. Instead, she accounts for the position of *ke* by proposing phrasal and remnant movement for Information Structure. I will provide two sample derivations below to illustrate the proposal.

Sentences in which the question particle is mid-sentential are derived by phrasal movement to Spec, FocP, followed by remnant movement (for Wilson it is the subject agreement phrase) to spec, TopP.

43) *Herman e-ar   **ke** lukkuun kōnan men   in mour?*
    Herman 3S-T(PAST) Q really   love   thing of life
    'Did Herman really love animals?'

(= Willson 2005 (28))

44) [[$_{AgrSP}$Herman e-ar t_i]$_j$ Topº [$_{IntP}$ **ke** [[$_{INTENSP}$lukkuun kōnan men in mour]$_i$Focº [t_j t_i]]]]

The yes-no question in (43) has the structure shown in (44).[32] The INTENSP, containing all of the lexical material that linearizes to the right of the question particle, moves to spec, FocP, below IntP, to check a focus feature. This is followed by movement of the remnant AgrSP to spec, TopP, deriving the surface order seen in (43).

When the sentence particle is in the final position, Willson argues that AgrS moves, intact, to the specifier of the TopP above IntP, deriving the final position of *ke*, shown in (45) with the derivation sketched in (46).

---

32. The bracketing structure shown in (44) is adapted from a tree diagram in Willson (2005) page 10, abstracting away from some aspects of the derivation that are not relevant to the present discussion.

45) Re-kar   kauteij ri   ukkure ro   **ke**?
    3PL-T(past) honor one.who play   the.PL.HUMAN Q
    'Did they honor the players?'

<div align="right">(=(44) Willson 2007)</div>

46) [[_{AgrSP}Re-kar kauteij ri ukkure ro]_i Topº [_{IntP} **ke** t_i]]

Evidence for the topicalization of the AgrSP comes from the contexts in which a sentence

final question particle might be used. For this example, Willson writes, "a question like (44)[45]

is most appropriate when there had been discussion of whether the players were honored."

The analyses presented in Slioussar (2007) and Willson (2005, 2007) set a precedent for

how linguistic objects with unfixed positions can be treated in generative syntax. Additionally,

they both suggest that the position of these objects is not random, but rather correlates with

differences in information structure. Both these analyses, and the information structure relation,

support the analyses of addresses presented in this dissertation.

4.4.   Mid-Sentential Addresses and Islands

The analysis of mid-sentential addresses presented in Section 4.2 predicts that the presence of

mid-sentential addresses should be subject to the same constraints as movement for topic and

focus, since I have argued that the mid-sentential presence of addresses is derived by

topicalization and, in some cases, movement for focus. Because this analysis does not place

vocatives in situ but always in CP, a sentence with a vocative "within" an island is underivable.

This analysis predicts that islands cannot be linearly interrupted by a vocative, as the derivation

of an island-interrupting address would necessitate topicalization or focus movement of some

constituent out of that island.

47) a. The owner left early [because he has to work tomorrow]
    b. *Tomorrow$_i$, the owner left early [because he has to work t_i]
    c. [Because he has to work tomorrow]$_i$, the owner left early t_i.

48) a. *?The owner left early because he has to work, Jason, tomorrow.
    b. ?The owner left early, Jason, because he has to work tomorrow.

49) [$_{TopP}$ [$_{TP}$ The owner left early because he has to work t_j]$_i$ [$_{AddrP}$ Jason [$_{FocP}$ tomorrow$_i$ [$_{FinP}$ t_i]]]]

50)
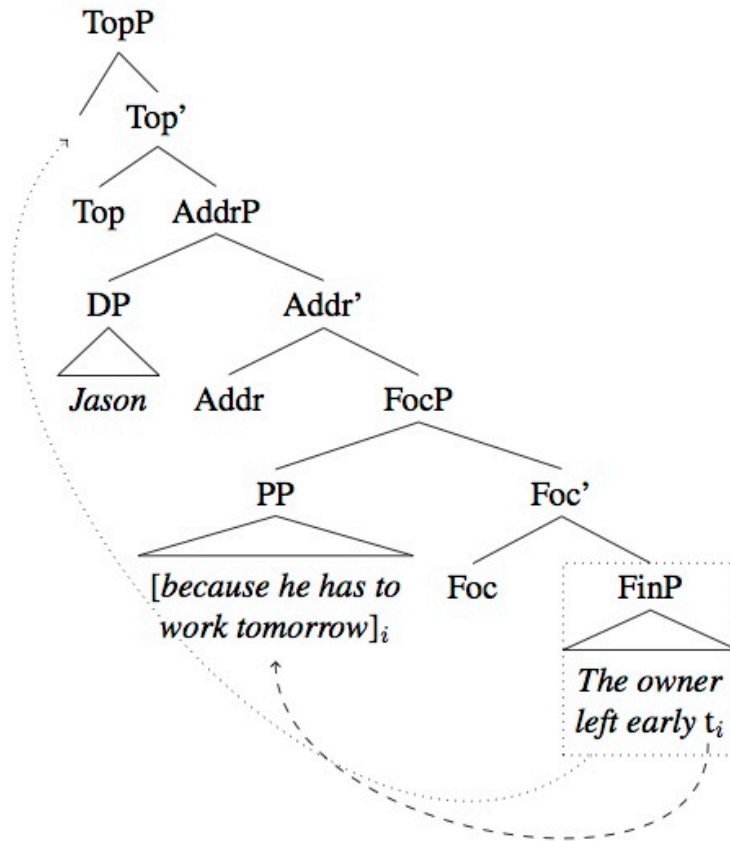
Example (47b) shows the impossibility of moving a modifier out of the adjunct clause

[*because he has to work tomorrow*]. This is exactly the movement that is required for the

derivation of the sentence in (48a), as shown in (49). The present analysis of mid-sentential

addresses, therefore, predicts (48a) to be ungrammatical. Example (48b), on the other hand, is

derived by movement of the entire adjunct to Spec, FocP, as is shown in (50). This movement is

perfectly licit (as is seen in 47c) and thus (48b) is predicted to be grammatical. The contrast

between the grammaticality of the sentences in (48) is distinct, but not stark enough to base this

proposal on. For this reason, I have appealed to judgements other than my own to determine their

comparative grammaticality.

In this section, I describe the results of a 128 participant scalar grammaticality judgement

survey targeted at sentences like those in (48). The results show that sentences with addresses

which interrupt adjunct islands (48a), subject islands, coordinate structure islands, and *wh-*

islands are rated worse than the same sentence with mid-sentential addresses outside of an island

(48b). The method and participants of the survey are described in section 4.4.1, before turning to

the results in section 4.4.2 and a discussion in section 4.4.3.

4.4.1. The Survey

The goal of this survey was to compare the grammaticality of addresses which interrupt syntactic

islands to mid-sentential addresses outside of syntactic islands. A sample of the stimuli is shown

below in Table 1.

	Condition A: Address Interrupts Island	**Condition B:** Address Outside Island
Subject Island	*The winner*, **Jason**, *of the race* finished in less than 10 minutes.	*The winner of the race*, **Jason**, finished in less than 10 minutes.
Adjunct Island	I always wore my seatbelt *after my mother,* **Jason***, got in an accident*.	I always wore my seatbelt, **Jason**, *after my mother got in an accident*.
Coordinate Structure	The farm had *a goat and,* **Jason***, three sheep*.	The farm, **Jason**, had *a goat and three sheep*.
***Wh*-Island**	Steve forgot *how to change his bike tire,* **Jason***, by himself*.	Steve was thrilled to change his bike tire, **Jason**, by himself.

Table 1

In Table 1, islands are shown in italics, and addresses in boldface for the ease of presentation here, but all stimuli were presented in normal face in the study. Condition A stimuli contain addresses linearly interrupting syntactic islands (predicted to be ungrammatical by the present proposal), while Condition B stimuli contain mid-sentential addresses outside of syntactic islands (predicted to be grammatical). The survey tested four types of syntactic islands: subject islands, adjunct islands, coordinate structures, and wh-islands. Note that the *wh*-island stimuli are the only island type in which the addresses are tested in the same linear position in the clause. These examples are important because they rule out the possibility that what we're observing is an effect of constituency rather than island violations. In the *wh*-cases, the constituency of the linear strings to the right and the left of the address are identical; the only difference being the presence of a *wh*-word in the embedded complementizer (creating the island effect). This will be discussed further below. If the processes shown in (49a) and (49b) are responsible for the derivation of the sentences in conditions A and B respectively, the following hypothesis will be borne out:

51) *Hypothesis 1*: Sentences in Condition A are significantly less natural than those in Condition B.

As was discussed in the previous section, mid-sentential addresses are derived by movement for information structure, which is inherently dependent on context. The stimuli in Conditions A and B are all provided without context, and therefore even those which are expected to be grammatical (Condition B) should be degraded, being deprived of the proper context for their use. In order to encourage the subjects to consider their relative grammaticality rather than absolute grammaticality, two additional conditions were added: sentences which are expected to be perfectly grammatical (Condition C), and sentences which are expected to be completely ungrammatical (Condition D), as shown below in Table 2.

Condition A: address interrupts island	*The winner,* **Jason**, *of the race* finished in less than 10 minutes.
	I always wore my seatbelt *after my mother,* **Jason**, *got in an accident.*
	The farm had *a goat and,* **Jason**, *three sheep.*
	Steve forgot *how to change his bike tire,* **Jason**, *by himself.*
Condition B: mid-sentential address outside island	*The winner of the race*, **Jason**, finished in less than 10 minutes.
	I always wore my seatbelt, **Jason**, *after my mother got in an accident.*
	The farm, **Jason**, had *a goat and three sheep.*
	Steve was thrilled to change his bike tire, **Jason**, by himself.
Condition C: initial address	**Jason**, *the winner of the race* finished in less than 10 minutes.
	Jason, I always wore my seatbelt *after my mother got in an accident.*
	Jason, the farm had *a goat and three sheep.*
	Jason, Steve was thrilled to change his bike tire by himself.
Condition D: address mid-DP	The winner of the race finished in less than *10,* **Jason**, *minutes.*
	I always wore *my,* **Jason**, *seatbelt* after my mother got in an accident.
	The farm had *a,* **Jason**, *goat* and three sheep.
	Steve forgot how to change *his bike,* **Jason**, *tire* by himself.

Table 2

Conditions C and D were used set the parameters of the scale. Initial addresses are universally acceptable, and therefore all sentences in Condition C are expected to be rated as highly natural. In the present analysis, no movement for information structure is needed to derive

initial addresses, so they are expected to be acceptable in an out of the blue context.[33] Addresses

are strongly ungrammatical, however, inside DPs.[34] Even Georgian, a language with a large

degree of scrambling, disallows addresses to linearize between adjectives and the nouns they

modify. Example (52) shows that an address in Georgian can be initial (52a) or preverbal (52b),

but cannot intervene between the adjective and the noun (52c). In English, this is similarly

impossible, and the sentences in Condition D are therefore expected to be rated as highly

unnatural.

> 52) a. k'ac-o   čem-i   lamaz-i   ʒaɣl-i   uxeš-i-a
>   man-VOC my-NOM beautiful-NOM dog-NOM mean-NOM-is
>   'Man, my beautiful dog is mean.'
>
> b. čem-i   lamaz-i   ʒaɣl-i   k'ac-o   uxeš-i-a
>   my-NOM beautiful-NOM dog-NOM man-VOC mean-NOM-is
>
> c. *čem-i   lamaz-i   k'ac-o   ʒaɣl-i   uxeš-i-a
>   my-NOM beautiful-NOM man-VOC dog-NOM mean-NOM-is

The facts described above give rise to the second and third hypotheses of this study:

53) *Hypothesis 2:* Sentences in Condition C are natural.

54) *Hypothesis 3:* Sentences in Condition D are unnatural.

Two other conditions were tested in this study. Remember from Table 1 that wh-islands

are the only island type in which the addresses are tested in the same linear position in the clause.

To additionally test the effect of linear order, Condition E placed addresses in sentences which do

not contain islands, but which contain the same linear string of words as found in mid-adjunct-

island stimuli from Condition A.

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33. Initial addresses are compatible with topicalization and focalization, as movement to Spec, FocP or the lower TopP will linearize to the right of the address.

34. In Table 2, unlike in the other conditions, the italics in Condition D indicate the DP which is interrupted by the address.

	Condition A	Condition E
Adjunct Island	I always wore my seatbelt *after my mother,* **Jason**, *got in an accident.*	I think my mother, **Jason**, got in an accident.

<div align="center">Table 3</div>

As can be seen in Table 3, Condition E contains sentences with the same constituents adjacent to the address interrupting the adjunct islands, but in main clauses, for example: "*I think my mother, Jason, got in an accident*" to be compared to "*I always wore my seatbelt after my mother, Jason, got in an accident.*" These sentences were only possible to construct in the case of adjunct islands. By evaluating the results of Condition E compared to Condition A, we are able to test an additional hypotheses made with the same motivation as Hypothesis 1:

55) *Hypothesis 4:* Sentences in Condition A are less natural than those in Condition E.

Finally, this study also tested the grammaticality of island violations independent of addresses. Subject island violations, Coordinate Structure Constraint violation, and *wh*-island violations were tested in Condition F.

	Condition A	Condition F
Subject Island	*The winner,* **Jason**, *of the race* finished in less than 10 minutes.	*Of which race* did *the winner t* finish in less than 10 minutes?
Coordinate Structure	The farm had *a goat and,* **Jason**, *three sheep*.	*Three sheep* the farm had a goat and *t*.
Wh-Island	Steve forgot *how to change his bike tire,* **Jason**, *by himself*.	*Change his bike tire* is what Steve forgot *how to do t*.

<div align="center">Table 4</div>

In Condition F, as shown in Table 4, the chunks of syntactic islands are shown in italics, with traces indicated. Again, this is for ease of reading here, and does not reflect the presentation

in the study. According to the present proposal, the sentences in Condition A are derived by movement out of islands that should result in ungrammaticality equal to that of the obvious island violations in Condition F. This leads us to the last hypothesis of this study:

56) *Hypothesis 5:* Sentences in Condition A and F are equally unnatural.

The survey was distributed online, attracting 142 participants, 128 of whom were self-reported native English speakers. All results from non-native English speakers were discarded. Participants were asked to evaluate each sentence on a scale of 0-10, 0 being completely unnatural and 10 being completely natural. They were given one example of a completely natural sentence (*Hey, Jason, how are you?*) and one example of a completely unnatural sentence (*How are, Jason, you?*) and explicitly asked to pay attention to how the sentence sounds rather than what the sentence means, e.g. that the sentence "*Pigs can fly*" should be rated as equally natural as the sentence "*Birds can fly.*" They were also told that all sentences would be spoken to a man named Jason.

Each of the four types of island violations had five stimuli for Condition A, B, C, and D. Additionally, there were 5 stimuli in Condition E, and Condition F tested 5 stimuli each for subject island violations, Coordinate Structure Constraint violation, and wh-island violations, for a total of 100 items. One subject island sentence was discarded due to a typing error, reducing the total number of items to 96. The items were divided into 5 groups, containing each sentence in only one condition, and four items from each condition. Participants were randomly assigned to a group, resulting in each item being judged by between 7-43 participants.[35]   See Appendix A

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35. The survey software randomly assigned participants to groups resulting in very unequal group sizes: 29, 43, 32, 17 and 7.

for the complete set of items and results.

4.4.2. Results

Hypotheses 2 & 3

Conditions C and D serve to set the boundaries of the rating scale. The sentences in Condition C (with initial addresses) were constructed to be completely natural, and they were correspondingly rated very high, at an average of 9.29 (SD 0.53). Sentences in Condition D, on the other hand, were constructed to be extremely unnatural, and they were correspondingly rated very low, at an average of 0.76 (SD 0.84). These numbers serve to tell us that in the most general terms, participants were using the rating scale in the expected ways, and provide context for the results that follow.

Hypothesis 1

Hypothesis 1 is the most crucial for this analysis. It states that should the proposed derivation of mid-sentential addresses shown in section 4.2 be accurate, addresses interrupting islands (Condition A), should be less natural than those outside islands (Condition B). This is shown to be true for every class of syntactic island tested.

	Condition A: Address Interrupting Island	Condition B: Address Outside Island	Sig.
Subject Island	3.45 (SD 0.47)	5.79 (SD 1.26)	p < 0.002
Adjunct Island	2.70 (SD 1.51)	6.25 (SD 0.90)	p < 2^{-16}
Coordinate Structure	2.86 (SD 2.03)	5.34 (SD 1.12)	p < 2^{-8}
Wh-Island	3.54 (SD 1.67)	4.54 (SD 1.59)	p < 0.02

Table 5

In a two tailed unpaired t-test, a statistically significant difference was found between the ratings of the sentences in condition A and those in condition B in all classes.

Hypothesis 4

The ratings of adjunct island sentences in condition A and condition E are presented below in Table 6.

	Condition A: Address Interrupting Island	Condition E: Address Outside Island	Sig.
adjunct islands	2.70 (SD 1.51)	4.49 (SD 1.60)	p < 2^{-5}

Table 6

In a two tailed unpaired t-test, a statistically significant difference was found between the ratings of the sentences in condition A and those in condition C in class 2. Class 2 condition C items were rated an average of 4.49, slightly lower than the range seen in Condition B (Table 5). This result is in line with Hypothesis 1, and further illustrate that linear order cannot be held accountable for the differences in grammaticality seen between Conditions A and B.

Hypothesis 5

The results of a comparison between Condition A, stimuli with addresses inside an island, and Condition F, stimuli with island violations, is shown below in Table 7.

	Condition A: Address Interrupting Island	Condition F: Extraction from Island	Sig.
Subject Island	3.45 (SD 0.47)	2.81 (SD 1.32)	$p < 0.2$
Coordinate Structure	2.86 (SD 2.03)	1.85 (SD 1.80)	$p < 2^{-5}$
Wh-Island	3.54 (SD 1.67)	1.22 (SD 1.06)	$p < 4^{-8}$

Table 7

No statistically significant difference was found between the presence of addresses interrupting subject islands (Condition A) and extraction from subject islands (Condition F), as was predicted by Hypothesis 5. Extraction from coordinate structures and wh-islands, however, was found to be less natural than the presence of an address in the corresponding structures in Condition A at a statistically significant level.

4.4.3. Discussion

In Table 5 and Table 6 we can note that rating averages for Conditions A, B, and E all fall between 2.70 and 6.25, nowhere near the extremes that we saw above in conditions C and D. These results are expected, however, when we consider these sentences according to the analysis proposed in section 4.2.

Let's consider more carefully the sentences in Condition B which are expected to be grammatical, like those in (57):

57) a.   *The winner of the race*, **Jason**, finished in less than 10 minutes.
    b.   I always wore my seatbelt, **Jason**, *after my mother got in an accident.*
    c.   The farm, **Jason**, *had a goat and three sheep*.
    d.   Steve was thrilled to change his bike tire, **Jason**, by himself.

I argued in section 4.2 that these sentences are derived by either phrasal topicalization (57a, c) or phrasal focus movement followed by remnant TP topicalization (57b, d). These operations are driven by context and have a noted prosodic effect. Both context and prosody were absent from the survey in question, and so we should expect that their ratings to be lower than they might be spoken naturally in an appropriate context.

Additionally, it appears that the sentences in Condition A are rated higher than is predicted by this analysis. One explanation might be to consider the role of linear order in structure preservation. A range of proposals have suggested that otherwise illicit movements are possible if linear order is preserved. These include "Representation Theory" (Williams 1998), "Shape Preservation" (Müller 2000) and "Cyclic Linearization" (Fox & Pesetsky 2005). Fox & Pesetsky (2005) propose that "'Escape hatch effects' are, if we are correct, an artifact of the role played by phases in *linearization* of the terminal elements of syntactic structure. These effects are thus a consequence of the mapping between syntax and phonology." In this context, it means that even though an island violation is created in the derivation of the sentences in Condition A, the fact that the linear order of the constituents in the island is preserved lessens the effect of the violation. It is interesting to note that the results of the Condition A test are not definitive on either side. We know from the ratings of the Condition C and D stimuli that the survey methodology was capable of eliciting sharp judgements, but the average ratings in condition A fall around 3. We can compare those with the sentences with non-shape preserving extraction

from islands by looking at the results of Condition A and Condition F, repeated here for convenience.

	Condition A: Address Interrupting Island	Condition F: Extraction from Island	Sig.
Subject Island	3.45 (SD 0.47)	2.81 (SD 1.32)	$p < 0.2$
Coordinate Structure	2.86 (SD 2.03)	1.85 (SD 1.80)	$p < 2^{-5}$
Wh-Island	3.54 (SD 1.67)	1.22 (SD 1.06)	$p < 4^{-8}$

Table 8

What I take from the results shown in Table 8 is that the linearization of the elements in syntactic islands is playing a role in our interpretation of the island violations, but not a straightforward one. Additional study which takes prosody and context into account could find more precise results for these differences. Anecdotally, I can report that one participant commented that he or she gave higher ratings to sentences "...if I could tell what it was trying to say." If this was a widespread strategy, it may be that the sentences in Condition A fell into the category this participant described. I leave the nuances of these results to future study.

4.4.4. Conclusions Drawn from the Study

The analysis proposed in section 4.2 for the derivation of mid-sentential addresses finds support in the results of this scalar grammaticality judgement survey. The analysis predicts that addresses should be degraded when interrupting syntactic islands, as the derivation of mid-sentential addresses is a result of the information-structure driven movement of the constituents surrounding the address. The present survey found that the average ratings of sentences

containing addresses in syntactic islands fell between 2.70 and 3.54 on a scale of 0-10, while ratings of sentences containing mid-sentential addresses outside syntactic islands fell between 4.54 and 6.25, a difference that is statistically significant at $p < 0.02$.

4.5. Some Remarks about the Syntax of Calls

The distribution of calls is exceptionally straightforward: they are obligatorily utterance initial, as was shown in Chapter 1. This restriction can be thought of as evidence for two opposing stances - that they either must, or must not, be treated in the narrow syntax. It is clear that their distribution is closely tied to their pragmatic use; if a call is used to ensure the attention of the addressee, for example, then any material preceding the call will be wasted. In this way calls are much more like interjections than addresses are, and interjections have often been considered exterior to syntax. Some attempts have been made, however, to account for the distribution of interjections by syntactic means (Haegeman 1984) and it may be worthwhile to investigate what a syntactic theory could bring to our understanding of calls (or vice versa).

One appealing possibility is that Hill's (2013b) analysis of vocatives should, in fact, be applied restrictively to calls. This would entail that calls, and not addresses, are associated with some high (CP external) addressee projection, such as the one proposed in Hill (2013b), using the Speech Act Phrase of Speas & Tenny (2003). If this were the case, though, the wide-spread morphological identity between calls and addresses (discussed in Section 1.3) would remain a mystery. Recall from Chapter 1 that calls and addresses differ largely in function and

distribution, and that these characteristics have a plausibly causative relationship. The function of a call is to get the attention of the addressee, and so any phonological material uttered before the call is presumably lost on the addressee - forcing calls to appear exclusively in an initial position. Furthermore, they are not only sentence initial, but also utterance initial, as was shown by their incompatibility with subordinating adverbs. For these reasons, it seems more plausible that calls are rather independent CPs with an address as the only lexical material. This proposal straightforwardly accounts for their morphological identity with addresses, as they would be syntactically identical as well.

The lexical differences between calls and addresses discussed in Chapter 1 (for example, the incongruity of *cabby* as an address) can be explained pragmatically. Calls are used to get the attention of the addressee, and therefore must be a name by which both the speaker and the addressee can identify the addressee. Addresses, on the other hand, express or reflect the relationship between the speaker and the addressee, and should therefore be subject to different lexical and pragmatic restrictions.

4.6. Summary

This chapter has achieved three goals: 1) to show that addresses must be treated as syntactic objects with syntactic effects, 2) to show that addresses are associated with a CP-internal functional projection and 3) to show that the derivation of mid-sentential addresses is driven by movement for information structure. These claims have been motivated by the existence of mid-

sentential addresses and their sensitivity to islands. I showed that previous analyses of addresses, which associated them with a functional projection above the CP domain are unable to account for the distribution of mid-sentential addresses. Therefore, I proposed that, following Mauck & Zanuttini (2005), addresses must be associated with a CP-internal functional projection in the topic domain. This analysis allows for the derivation of mid-sentential addresses, which obey the predicted island constraints, as was illustrated though a large scale grammaticality judgement survey in Section 4.4.

Chapter 5

Allocutivity

Vocatives eluded syntactic treatment long after other nominals largely because scholars found no evidence of their syntactic integration with the host clause (Hjelmsev 1935, Levinson 1983, Blake 1994, et al.). More modern accounts of vocatives have shown that the existence of allocutive morphology in Basque provides just that evidence (Hill 2013, Haegeman & Hill 2014, Haddican 2015). Allocutivity, as defined by Antonov (2015), is "the linguistic encoding (in certain sociopragmatic and syntactic circumstances) of a non-argumental addressee in some or all main clause predicates." In this chapter, I begin with a brief typology of allocutivity. I include in the discussion both verbal allocutive agreement (sections 5.1.1 and 5.1.2), and also *Solidarity Allocutive Datives* (SADs) (Huidobro 2014); dative non-argument second person clitics that convey solidarity between the speaker and addressee. I show that both phenomena have clear links to addresses, and propose that they should be associated with the same functional projection and feature set.

Having surveyed the breadth of the phenomenon, I turn to existing analyses of allocutivity in section 5.2.; Miyagawa (2012) and Haddican (2015) which primarily treat Basque

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allocutivity, and Huidobro (2014) which focuses on Solidarity Allocutive Dative clitics. In examining these analyses, I find that none has significant advantages which are incompatible with the view of addresses proposed in Chapter 4: that there exists a functional projection AddrP in the topic domain of CP. I go on to propose that Addr° enters the derivation with an allocutive feature which, in languages which express allocutivity, enters into an agree relation with a functional head in the inflectional domain.

5.1. Introducing Allocutivity

In generative syntax, treatment of allocutivity has been limited to Basque (Oyharçabal 1993, Miyagawa 2012, Haddican 2015) and Japanese (Oyharçabal 1993, Miyagawa 2012). However, in a typological study by Antonov (2015), allocutivity is shown to be a more common phenomenon than previously believed. In addition to two dialects of Basque and Japanese, Antonov identifies five other unrelated languages which exhibit similar patterns. In this section, I provide a brief survey of what is currently known about allocutivity. Section 5.1.1 details allocutive agreement in Basque and Japanese, which have been studies most extensively, while section 5.1.2 gives an overview of allocutive morphology in other, lesser known languages, including Telugu, which has previously not been included in studies of allocutivity. Finally, in section 5.1.3 I include in the discussion SADs, which, following Huidobro (2014), I believe are also instances of allocutivity. After having presented the data, I make the case that allocutivity shares fundamental similarities to addresses.

5.1.1. Allocutive Agreement in Basque and Japanese

Souletian Basque has recently attracted attention in the vocative literature due to its robust system of allocutive agreement, first described and analyzed in Oyharçabal (1993). In Souletian Basque, matrix verbs exhibit both subject agreement and non-argument addressee agreement. That is to say that the verb agrees with the addressee in gender and number, even when the addressee is not an argument of the verb. In addition, there is a further distinction on the basis of formality vs. informality.

> 1) a. *To a male friend*
>   Pettek   lan   egin   di**k**
>   Peter.ERG work.ABS do.PERF AUX-3.S.ABS-**2.S.C.MSC.ALLOC**-3.S.ERG
>   'Peter worked'
>   b. *To a female friend*
>   Pettek   lan   egin   di**n**
>   Peter.ERG work.ABS do.PERF AUX-3.S.ABS-**2.S.C.FM.ALLOC**-3.S.ERG
>   Same translation
>   c. *To someone higher in status (formal)*
>   Pettek   lan   egin   di**zü**
>   Peter.ERG work.ABS do.PERF AUX-3.S.ABS-**2.S.F.ALLOC**-3.S.ERG
>   Same translation
>   d. *Plural addressee*
>   Pettek   lan   egin   dü
>   Peter.ERG work.ABS do.PERF AUX-3.S.ABS-3.S.ERG
>   Same translation
>
> (=(5) Miyagawa 2012)

Example (1) shows the same sentence said to four different (sets of) addressees. (1a) is used with a close, singular, male addressee, (1b) with a close, singular, female addressee, (1c) is used to show deference to a singular addressee, and (1d) with plural addressees. As can be seen, overt allocutive agreement only appears when the addressee is singular, and it is obligatory

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(Oyharçabal 1993). The gloss shows clearly that the addressee is not interpreted as having any

thematic role -- the only information conveyed is the relationship between the speaker and the

addressee, the addressee's gender and number.

In Eastern dialects of Basque, allocutive agreement is restricted to main clauses

(Oyharçabal 1993), but for some speakers of Western dialects, it is possible in restricted cases.

These facts are shown below in (2 - 3).

2) a. Ez dakinat   [zer   gertatu   den]
   NEG know.1E.ALLO_FEM what.NOM happened 3A.AUX.COMP
   'I don't know what it is'
   b. *Ez dakinat   [zer   gertatu   dunan]
   NEG know.1E.ALLO_FEM what.NOM happened 3A.AUX.**ALLO_FEM.**COMP
   Same translation

                                                           (=(27) Oyharçabal 1993)

3) %Esa-n d-i-k   [etorr-i   d-u-**k**-ela]
   say-PERF EPENTH-ROOT-2SG.FAM.MASC come-PERF EPENTH-ROOT-**2SG.FAM.MASC**-C
   'He/she/it said it he/she/it has come.'

                                                           (=(8) Haddican 2015)

These facts feature prominently in the analyses of Oyharçabal (1993) and Miyagawa

(2012), but are less critical to the analyses of Haddican (2015). They will be discussed more

thoroughly in section 5.2.

Another interesting restriction is the absence of allocutive agreement in the presence of a

2nd person argument, shown below in (4).

4) a.   (Nik   hi)   ikusi   haut
           (1S.ERG. 2.S.C.ABS) see.PRF AUX-2.S.C.ABS-1.S.ERG
           'I saw you'
   b.   (Zuek   ni)   ikusi   naizue
           (2.P.ERG 1.S.ABS) see.PRF AUX-1.S.ABS-2.P.ERG
           'You saw me'

                                                           (=(6) Miyagawa 2012)

This fact seems to be isolated to Basque - no other language in which allocutivity has been discovered has exhibited such a restriction (Antonov 2015). It is crucial, however, to the analysis of allocutivity in Miyagawa (2012), which is discussed in section 5.2.1.

Oyharçabal (1993) extends his analysis of allocutivity in Basque to Japanese performative honorifics. This connection was maintained and reinforced by Miyagawa (2012). Japanese is well known for having an articulated system of honorifics, but it is specifically verbal politeness markers which have been identified as being examples of allocutivity. Like Basque allocutivity, these politeness markers are realized on the verb and express the relationship between the speaker and addressee. Unlike Basque, however, they do not encode the gender or number of the addressee(s). In the example below in (5), the morpheme *-mas-* is included when the speaker wishes to convey respect to the addressee. Its exclusion, on the other hand, conveys a less formal relationship (5b).

> *Formal*
> 5) a. Peter-wa hataraki-mas-i-ta.
>   Peter-TOP work-MAS-PAST
>   'Peter worked'
>   *Colloquial*
>   b. Peter-wa hatarai-ta.
>   Peter-TOP work-PAST
>   'Peter worked'

                                                                 (=(14) Miyagawa 2012)

The preceding are the most commonly cited examples of and facts about allocutivity. We are discovering, however, that these instances only scratch the surface of the phenomenon. In the following section I review those other cases of allocutivity to get a better sense of which patterns are typical of allocutivity and which may be language specific.

5.1.2.   Allocutivity in Other Languages

In this section, I provide an overview of some less-studied examples of allocutivity, beginning with so-called 'vocative suffixes' in Telugu, which have not previously been associated with allocutivity. Next, I summarize the findings of Antonov (2015), comparing the various cases of allocutivity we've seen.

   While Japanese marks only the more formal context, Telugu's allocutivity paradigm marks formality, solidarity, and gender. Examples are shown below in (6).[36]

6)   *Neutral*
   a. Venkayya annam vaṇḍaeḍu
      Venkayya rice   cook.PST
      'Venkayya cooked rice'
   Masculine addressee, colloquial
   b. Venkayya annam vaṇḍaeḍu-**raa**
      Venkayya rice   cook.PST-ALLOC.MASC
      same translation
   Feminine addressee, colloquial
   c. Venkayya annam vaṇḍaeḍu-**amma/-ee**
      Venkayya rice   cook.PST-ALLOC.FEM
      same translation
   Informal/intimate[37]
   c. Venkayya annam vaṇḍaeḍu-**ooy**
      Venkayya rice   cook.PST-ALLOC
      same translation
   Polite
   d. Venkayya annam vaṇḍaeḍu-**ṇḍi**
      Venkayya rice   cook.PST-ALLOC.POL
      same translation

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36. All Telugu examples in this chapter are inspired by data in Miller (2013) and Krishnamurti & Gwynn (1985) but constructed with the help of Sumanth Inukonda. All errors are my own.

37. Krishnamurti & Gwynn (1985) report that *ooy* may be used with both male and female addressees. Sumanth Inukonda (*p.c.*) prefers it to be used with male addressees or a group of mixed gender.

As suggested by the neutral utterance shown in (6a), the allocutive morpheme[38] is always

optional. While it varies by gender, the primary information conveyed is the relationship between

the speaker and addressee. As stated by Krishnamundi & Gwynn (1985) "The vocative

clitics...carry complex sociolinguistic meanings and their usage cannot be reduced to a few

simple rules." This is likely true of even the simplest honorific systems, as exemplified by my

personal inability to master the binary *tu/vous* distinction in French after twenty years of study

and practice (much to the bemusement of my French speaking family). I will nonetheless attempt

a simplified explanation of the Telugu allocutive system here. The masculine form, *-raa*, can be

used affectionately or dismissively by adults toward male children. Between strangers, it can take

on a pejorative tone, but it can convey solidarity between friends. Conflicting accounts exist for

the corresponding feminine forms, *-amma* or *-ee.* Sumanth Inukonda (p.c.) reports that while

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38. Telugu allocutive markers have been referred to both as verbal suffixes (Miller 2013) and as clitics
(Krishnamurti & Gwynn 1985). According to Miller (2013), they can appear with verbless utterances, such as
particles (i), suggesting that they may not be verbal suffixes.

    i. a. eemit-raa   b. kaadu-raa
       Q.PART-ALLOC.MASC   no-ALLOC.MASC
       'What?!'   'No!'

It is also unclear whether allocutive agreement is compatible with verbal disjunction (verbal conjunction seems to be
uncommon or impossible in Telugu). If it is compatible, however, it will only appear on the second disjunct.

    ii. Venkayya uritadu (*raa) leka etakottadu (??raa)
     Venkayya ran   or   swam
     'Venkayya ran or swam'

These data suggest that the allocutive marker could be a sentence particle masquerading as verbal morphology in a
verb final language. One piece of evidence against this hypothesis, however, is that it remains with the verb under
verbal focus, such as below in (iii).

    iii. *naku nachindi-raa*   *aa*   *chepa*
     I   liked-VOC.MASC that fish
     'I LIKED that fish'

If Telugu allocutivity markers are indeed sentential particles, the solution to this problem may provide insight into
the relationship between allocutivity and the CP domain.

they function like *-raa* from adults to children, they are primarily pejorative between adults. Krishnamundi & Gwynn (1985), on the other hand, write that *-amma* can be polite or affectionate. The most polite form, *-ṇḍi*, does not distinguish between genders. None of the forms make number distinctions.

These facts contribute to the growing understanding that allocutivity is a more widespread phenomenon than previously thought. Antonov (2015) describes verbal allocutive agreement in Pumé (isolate; Venezuela), Nambikwara (isolate; Brazil), Mandan (Siouan; North America), Beja (Cushitic; Northeast Africa) and Korean, as well as Japanese and Basque. Below I offer examples from Antonov (2015) of some of the less well known cases.

7) *To a male addressee*   *Pumé*
   a. (kɔdɛ´) bagura=rekode
      1SG   run.PRS=1SG.ALLOC:M
      'I am running'
   To a female addressee
   b. (kɔdɛ´) bagura=kɛ´
      1SG   run.PRS=1SG.ALLOC:F
      Same translation

                                                                          (=(12) Antonov 2015)

8) *To a male addressee*   *Nambikwara*
   a. ʔwã³ -na¹ -tu¹ -wa²
      come-1SG.EVID-FUT-IMPERF.ALLOC:M
      'I will come'
   To a female addressee
   b. ʔwã³ -na¹ -tu¹ -ʔa²
      come-1SG.EVID-FUT-IMPERF.ALLOC:F
      Same translation

                                                                          (=(16) Antonov 2015)

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9) *To a male addressee*   *Beja*
    a. rihja=heːb=a
       see.PST.3SG-1SG.ACC-ALLOC:2SG.M
       'He saw me'
    To a female addressee
    b. rihja=heːb=i
       see.PST.3SG-1SG.ACC-ALLOC:2SG.F
       'He saw me'

(=(16) Antonov 2015)

The allocutive data patterns across languages in which it is attested is summarized below in Table 1, adapted from Antonov (2015) Table 4 pg. 24. Telugu has been added here for comparison.

	Gender	Number	Solidarity	Respect
W. Basque	yes	yes(SG)	yes	no
E. Basque	yes (familiar)	yes (SG/PL?)	yes	yes (polite)
Pumé	yes	no	no	no
Nambikwara	yes	no	no	no
Mandan	yes	no	no	no
Beja	yes	no	no	no
Japanese	no	no	no	yes
Korean	no	no	yes	yes
Telugu	yes (familiar)	no	yes	yes

Table 1

Through the data presented and discussed in this section (and summarized in Table 1) we begin to see a pattern of allocutivity emerge. Because of the relatively small number of languages so far identified as exhibiting allocutivity, it is difficult at this point to understand the meaning behind these emergent patterns, like the apparent infrequency of addressee number agreement. From this data, we might also conclude (as pointed out in Antonov 2015, and supported by the data from Telugu) that signifying respect is incompatible with indicating gender.

Maybe the most important generalization to be grossed from the additional allocutive data is reinforcement of the fact that the presence of allocutivity in subordinate clauses is indeed very rare and restricted. In very limited cases, allocutivity may be found in dependent clauses in Basque and Japanese, but they seem to be the outliers. All of the other languages surveyed in Antonov (2015) restrict allocutivity to matrix clauses.

In the next section, I present a subtype of 2nd person dative clitics which have been argued to be related to allocutivity. These, with the data presented in this section, will help our understanding of allocutivity.

5.1.3. Solidarity Allocutive Datives

Following Huidobro (2014) and Antonov (2015), I take *solidarity allocutive datives* (SADs) to be another instantiation of allocutive agreement. SADs are dative second person clitics which refer to the addressee regardless of whether the addressee is an argument of the verb. In examples (10-13), I show data from Huidobro (2014) showing SADs in Romance, West and South Slavic languages.[39]

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39. Examples (11-13) are based on examples in Huidobro (2014) but have been modified and plural addressee examples have been added. (13a) is directly from Huidobro (2014). Many thanks to my Slovak, Czech and BCS informants, including Ivana LaTerza and Matej Zachoval. All errors are my own.

10) *Singular addressee: informal*

   a. Marcháron**che**   todos pra   América   *Galician*
      they-left-**you.ALLOC.SG** all   for   America
      'They all left for America, you know.'

   Plural addressee: informal

   b. Marcháron**vos**   todos pra   América
      they-left-**you.ALLOC.PL** all   for   America
      'They all left for America, you(pl) know.'

   Formal

   c. Imos**lle**   ós   figos, don Andrés!
      we-go-**you.ALLOC.POL** to-the figs,   Mr. Andrés
      'We are going to steal figs, Mr. Andrés.'

                                                 (Huidobro 2014)

11) *Singular addressee: informal*   *Czech*

   a. Ty   jablka   **ti**   jsou   tak krásný!
      these.PL.NOM apples-PL.NOM **you.SG.DAT** are.3SG so beautiful-NOM
      'These apples are so great, you know.'

   Multiple addressees: informal

   b. Ty   jablka   jsou   **vám**   tak krásný!
      these.PL.NOM apples-PL.NOM are.3SG **you.PL.DAT** so beautiful-NOM
      Same translation

   Single or multiple addressees: Formal

   c. Ty   jablka   **Vám**   jsou   tak krásný!
      these.PL.NOM apples-PL.NOM **you.DAT.POL** are.3SG so beautiful-NOM
      Same translation

12) *Singular addressee: informal*   *Slovak*

   a. To   **ti**   je úžasné!
     that **you.SG.DAT** is terrible
     "That's terrible, you know!"

   Multiple addressees: informal

   b. To   **vám**   je úžasné!
     that **you.PL.DAT** is terrible
     Same translation

13) *Singular addressee: informal*   *BCS*
    a. Bezalkohokno pivo **ti**   je kao sex sa   samim sobom
       non-alcoholic beer **you.SG.DAT** is like sex with yourself-INST
       'Non-alcoholic beer is like sex with yourself, you know.'
    Multiple addressees: informal
    b. Bezalkohokno pivo **vam**   je kao sex sa   samim sobom
       non-alcoholic beer **you.PL.DAT** is like sex with yourself-INST
       Same translation

Example (10) shows the post-verbal SAD clitic in Galician, while the examples in (11-13) show the SAD clitics in Czech, Slovak and BCS. Only in Czech do we find a formal version of the SAD.[40] The SAD is optional, not thematically related to the clause in which it appears, and has no understood predicate. Huidobro (2014) glosses SADs as 'you know' for lack of an appropriate translation in English. Like many of the allocutive morphemes described in sections 5.1.1 and 5.1.2, Huidobro (2014) describes SADs as conveying solidarity between the speaker and the addressee. In support of this view, Ivana LaTerza (*p.c.*) reports that SADs in BCS are only used in informal contexts and have the function of making the speaker "closer" to the addressee.[41]

Having seen now the breadth of phenomena that have been described as allocutivity, we can take a step back to make some generalizations. In all cases, allocutivity is the presence of a grammatical element which is directly dependent upon the addressee, either agreeing with the addressee in gender and/or number, or marking the relationship between the speaker and addressee in formality or solidarity. On this basis, it seems natural to include SADs in the class of allocutivity, following Huidobro (2014). I thus amend Table 1 shown at the end of section

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40. It's possible that the polite form of the dative clitic is also possible in Slovak, but my research was inconclusive.

41. Czech speakers had varied views of exact contribution of the allocutive clitic, all falling within the realm of something that could be described as *solidarity*, for instance "...emotions, evaluation, contact, involvement..", "...informal, friendly, accessible" and even some expectation that the addressee will agree with the speaker.

5.1.2 to include SADs below.

	Gender	Number	Solidarity	Respect
W. Basque	yes	yes(SG)	yes	no
E. Basque	yes (familiar)	yes (SG/PL?)	yes	yes (polite)
Pumé	yes	no	no	no
Nambikwara	yes	no	no	no
Mandan	yes	no	no	no
Beja	yes	no	no	no
Japanese	no	no	no	yes
Korean	no	no	yes	yes
Telugu	yes (familiar)	no	yes	yes
Galician	no	yes	yes	yes
Czech	no	yes	yes	yes
Slovak	no	yes	yes	no
BCS	no	yes	yes	no

Table 2

The link between allocutivity and vocatives has been clear to many of those studying either phenomenon (Hill 2013b, Haegeman & Hill 2014 for vocatives and Krishnamurti & Gwynn 1985, Huidobro 2014 and Haddican 2015 for allocutivity). As was discussed at length in Chapter 1, we know that there are three categories of nominals which refer to the addressee: subjects of imperatives, calls and addresses. If we look at the data presented in this section, it seems that the obvious link is between addresses and allocutivity. They do not merely identify the addressee (that would be the role of a call), they go farther and tell us something about the addressee, and even about the relationship between the speaker and the addressee. In the case of languages which convey solidarity or respect with their allocutive marking this is done in a binary fashion, but I would stake the claim that no vocative can be used in any language without betraying some information about the relationship between the speaker and addressee. In addition, distributional facts support their association. In Section 4.1.2 I argued, based on the distribution of addresses, that AddrP be restricted to main clauses. Allocutivity seems to, with

few exceptions, be similarly restricted. Before formalizing the relationship I propose between AddrP and allocutivity, I will first survey existing analyses of allocutivity, specifically those which make an explicit connection between allocutives and vocatives.

5.2.   Existing Analyses of Allocutivity

Allocutive agreement has not had substantial analytic attention in syntactic literature. Of the above listed phenomena the most work has been done on Basque allocutivity. In this section, I will discuss two existing analyses of Basque allocutivity that are most relevant for the present discussion: Miyagawa 2012 and Haddican 2015, followed by Huidobro's 2014 analysis of SADs. With each discussion, I will identify their strengths and weaknesses, as well as their compatibility with the present account of addresses. An adequate analysis of allocutivity should achieve these goals:

> 14) a. syntactically convey the relationship between allocutivity and the addressee
>   b. be compatible with a plausible analysis of addresses
>   c. predict the distribution of allocutive morphology/clitics

We will see that while Miyagawa's proposal satisfies some of these requirements, it also leaves relevant questions unanswered; crucially the presence of the allocutive morphology/clitic on the auxiliary verb in Basque. Haddican's proposal, on the other hand, has greater descriptive strength, but leaves significant questions to be answered about the relationship between allocutivity and addresses.

5.2.1. Miyagawa 2012

Miyagawa's 2012 analysis of Basque allocutivity has likely been the most influential in the field since Oyharçabal's initial 1993 discussion.[42] Following Oyharçabal, Miyagawa claims that allocutive agreement is borne by C, based largely on the complementary distribution of allocutive agreement and the presence of an overt complementizer. Miyagawa's proposal, however, adopts the Speech Act phrasal domain proposed by Speas & Tenny (2003) (for a brief description, see section 4.2.1, page 101). Just as Hill (2007, 2013) Haegeman & Hill (2013, 2014) adopted the HEARER argument of the Speech Act Phrase as the natural host for vocatives, Miyagawa likewise associates this phrasal position with allocutive agreement, as it is similarly dependent on the hearer (or addressee).

Miyagawa argues that the main clause C bears an allocutive probe, which can be valued either by a second person argument, or by the sa HEARER. Recall, from section 5.1.1, that allocutive agreement is incompatible with 2nd person arguments. If no second person argument is found, however, the probe raises to sa where it is valued by HEARER which has second person, gender and politeness level, resulting in allocutive agreement. This is shown in (15) below.

---

42. An in depth discussion of the analysis presented in Oyharcabal (1993) is not presented here because for the purposes of the present discussion, it has the same relevant strengths and weaknesses as the analysis in Miyagawa (2012).

15)

saP
SPEAKER   sa
CP   sa
C' saΦ_ALLO PROBE   HEARER
C   TP
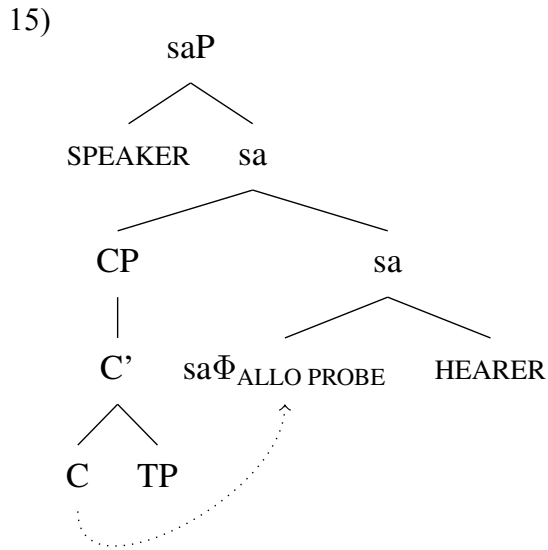
This analysis has some strengths. First, it successfully brings the addressee into the syntactic derivation (as the HEARER), satisfying the condition listed in (14a). This analysis also successfully restricts allocutivity to main clauses, as the saP is argued to only exit in root clauses. This restriction, however, may be too rigid for dialects in which allocutive agreement does appear in subordinate clauses (as discussed in section 5.1.1).

This analysis also predicts the complementary distribution of allocutive agreement and second person arguments, but it is not entirely clear that such a prediction is necessary or even desirable. For one, Miyagawa's analysis may not be able to account for the fact that allocutive agreement is only blocked by the presence of a second person argument, not second person adjuncts, as shown below in the contrast between (16) and (17).

16) a. (Nik   hi)   ikusi   haut
     (1S.ERG. 2.S.C.ABS) see.PRF AUX-2.S.C.ABS-1.S.ERG
     'I saw you'

   b. (Zuek   ni)   ikusi   naizue
     (2.P.ERG 1.S.ABS) see.PRF AUX-1.S.ABS-2.P.ERG
     'You saw me'

                                                     (=(6) Miyagawa 2012)

17) a.*hirekin   etorri naiz
     thou.COM come 1S.A.AUX
     'I have come with thee'

   b. hirekin   etorri nauk   /naun
     thou.COM come 1S.A.AUX.ALLO$_{MASC}$/1S.A.AUX/ALLO$_{FEM}$
     'I have come with thee'

                                                       (=(4) Alberdi 1995)

In (16) (repeated here from (4)), we see that, as Miyagawa (2012) predicts, in the presence of a second person argument, no allocutive agreement is present on the verb. When a second person is present in an adjunct, however, allocutive agreement is not only possible, as shown in (17b), but required, as shown by the ungrammaticality of (17a). For Miyagawa's (2012) analysis to predict this outcome, the allocutive probe on C would have to be able to tell the difference between a second person argument (which can value it) and a second person adjunct, which it seems cannot value it, given the ungrammaticality of (17a) and the grammaticality of (17b). Even if such a mechanism were to be ascribed to the probe, it still seems more likely that the incompatibility of allocutivity and second person arguments is related to the fact that only arguments trigger verbal agreement. Oyharçabal (1993, p.14) notes that the incompatibility "reflects a more general property of Basque verb inflexion. Indeed, within verb inflexions, person agreement markers never can co-refer or overlap."

These facts suggest that it may not be second person features that value an allocutive

probe. Instead, I would like to suggest that an allocutive probe must be valued by an allocutive feature, or perhaps feature bundle. Such a bundle would comprise whatever features are relevant for allocutivity in a given language. For Basque, for instance, the allocutive feature bundle would be [±solidarity] and the φ features [±gender][±number] while for Japanese it would comprise of only [±respect]. Such a solution achieves three things: 1) it succeeds in eliminating the problem of forcing the probe to distinguish between adjuncts and arguments, 2) it can be extended to languages which freely allow (or require) allocutivity to co-occur with second person arguments, and 3) it reflects the syntactic, morphological, and semantic properties of allocutive agreement by reflecting the variety of features which it can exhibit (as was seen in section 5.1).

Even with this amendment, however, there remains one fairly significant drawback to the analysis presented in Miyagawa (2012). He provides no explanation for why allocutive morphology should appear on the auxiliary rather than on C, as some super-sentential particle, or why it should be pronounced at all. In fact, in a derivation in which the allocutive probe is valued by the HEARER (thus giving rise to allocutivity) there is actually no interaction between the probe and the auxiliary whatsoever. This is a considerable problem for Miyagawa's analysis, as many of the allocutive phenomena discussed in section 5.1 take the form of verbal morphology. In the next section, we see an analysis that conversely is closely informed by the Basque auxiliary.

5.2.2. Haddican 2015

The analysis presented in Haddican 2015 is based on the morphological properties of Basque

"allocutive morphology", which Haddican analyzes as vocative clitics. In doing so he follows a school of thought which considers Basque person morphemes clitics that double an argument (Laka 1993; Oyharçabal 1993; Preminger 2009; Arregi & Nevins 2012 - via Haddican 2015). Haddican concludes that these vocative clitics are associated with a functional projection just below FinP. Below, I will briefly outline the most relevant points of his argument before turning to its consequence to the present discussion.

The Basque auxiliary template, in the most neutral terms, is given below in (18) and illustrated in (19-20).

18) Absolutive person - Root - Dative person - Ergative person - Ergative number - T/C

19) Ikusi-ko na-u-zu-la.
    see-FUT 1SG.ABS-ROOT-2.ERG-C
    'That you will see me.'

20) Eman-go d-i-o-zu-te.
    give-FUT EPENTH-ROOT-3SG.DAT-2.ERG-ERG.PL
    'You all will give it to him/her/it.'

                                                                      (=(2-4) Haddican 2015)

The placement of the allocutive clitic in this hierarchy is not immediately clear from the morphological patterns found in Basque. When the ergative argument is third person, it appears to the left of the allocutive clitic, as shown in (21), however when the ergative argument is first person, it appears to the right of the allocutive clitic, as shown in (22).

21) Egin-go d-i-te-**k**.
    do-FUT   EPENTH-ROOT-ERG.PL-**2SG.FAM.MASC**
    '*They will do it.*'

22) a. Egin-go d-i-**a**-t.
    do-FUT EPENTH-ROOT-**2SG.FAM.MASC**-1SG.ERG
    'I will do it.'
  b. Egin-go d-i-**a**-gu.
    do-FUT EPENTH-ROOT-**2SG.FAM.MASC**-1PL.ERG
    'We will do it.'

                                              (=(5-6) Haddican 2015)

Additionally, allocutive clitics appear to the left of several morphemes traditionally

associated with C, shown below in (23-24).

23) Egin-go z-i-te-**a**-n.
   do-FUT   EPENTH-ROOT-ERG.PL-**2SG.FAM.MASC**-PST
   'They were going to do it.'

24) %Esa-n   d-i-k   [etorr-i   d-u-**k**-ela]
   say-PERF EPENTH-ROOT-2SG.FAM.MASC come-PERF EPENTH-ROOT-**2SG.FAM.MASC**-C
    'He/she/it said it he/she/it has come.'

                                              (=(7-8) Haddican 2015)

Thus, we are left with an apparent contradiction, with allocutive clitics appearing both to

the right (21) and left (22) of ergative clitics, though always to the left of C (23-24). Haddican's

solution to this puzzle is inspired by Bianchi's 2003 observation that Fin° is the locus of several

speech act-deictic properties, including speech act time and participants, namely the speaker.

Haddican proposes that ergative agreement clitics are split: 1st person ergative clitics are

associated with Fin°, as they refer to the speaker, and third person ergative clitics are associated

with T, which is a more traditional analysis. Haddican's final derivation of the Basque auxiliary

is shown below in (25).

25)

```
                    FinP
              ┌──────┴────────┐
            Fin            AddresseeP
           Erg.1         ┌─────┴──────┐
            ⌄        Addressee       TP
                       2.Fam      ┌───┴────┐
                        ⌄         T        PP
                               Erg.3    ┌───┴────┐
                                ⌄       P       AuxP
                                       Dat     ┌─┴──┐
                                        ⌄     Aux   …
                                              Abs
```
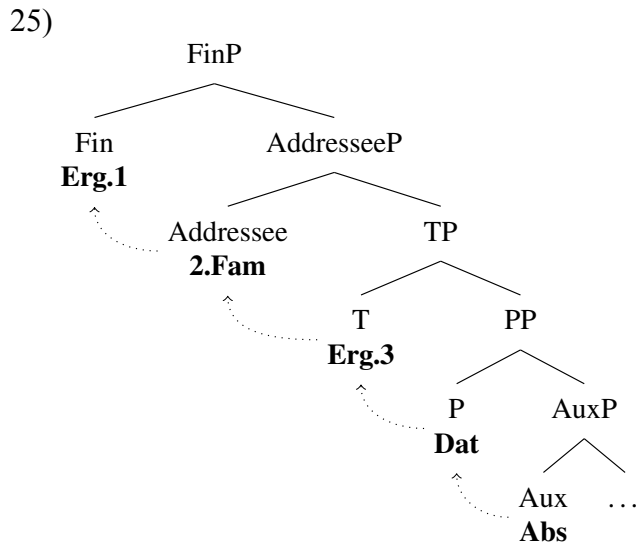
This analysis succeeds in deriving the morphological structure of the Basque auxiliary,

but it leaves several questions to be answered about syntactic word order. Haddican does not take

a position on the location of vocatives in Basque, but if it is the case that addresses and

allocutivity should be associated with the same functional projection, then one would imagine

the specifier of AddresseeP to be a reasonable host. If this is the case, and the analysis in

Haddican (2015) is correct, then addresses in Basque should linearize to the right of the

auxiliary, as the auxiliary undergoes head movement to Fin. As is shown in (26), addresses may,

in fact, be sentence initial in Basque.[43]

26) Ane,   Pettek   lan   egin   di**n**
    Ane.VOC Peter.ERG work.ABS do.PERF AUX-3.S.ABS-**2.S.C.FM.ALLOC**-3.S.ERG
    'Ane, Petter worked'

Sentences such as those in (26) are derivable under Haddican's proposal, but would have

to be derived via substantial phrasal and/or remnant movement to the CP domain. In fact, for

anyone deriving the Basque auxiliary through head movement, even simple sentences will

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43. Thanks to Imanol Mozo Carollo for judgement on this sentence. All errors are my own.

require such movement as Basque auxiliaries are generally sentence final. If, however, an

alternative view of Basque morphology is taken under which the auxiliary is derived via Agree

+feature valuation, the auxiliary may remain lower in the clause (Etxepare 2006; Rezac 2008;

Béjar & Rezac 2009 via Haddican 2015). Presumably, under such an analysis the morpheme

order on the auxiliary would be determined by a morphological component of the grammar,

leaving nothing lost by adopting the functional hierarchy proposed in Chapter 4. Under such an

analysis, the Basque functional hierarchy would be as shown below in (27).

      27) [Top [**Alloc** Addressee [Foc [**Erg.1** Fin [**Erg.3** T [**Dat** P [**Abs** Aux …]]]]]]]

      As was proposed in the last section, I take ALLOC to be a feature bundle consisting of one

or more features with which the allocutive morpheme agrees with the addressee. I take this to

apply not only to Basque, but to the languages discussed in section 5.1.2 which exhibit verbal

allocutive agreement. I have not yet, however, had anything to say about the SADs presented in

section 5.1.3. In the next section, I turn to those.

5.2.3. Huidobro 2014

The analysis of SADs presented in Huidobro (2014) overtly links the expression of addressee

agreement to the grammatical presence of a vocative phrase. She argues that SADs are the heads

of an independent functional category (CL, below) which contains a PRO in its specifier.

Adopting the VocativeP of Moro (2003), located on the left edge of the split Comp Field of Rizzi

(1997, 2004), she argues that PRO enters into an anaphoric relationship with the vocative head.

The structure is shown below in (28) from Huidobro (2014).

28)

```
                    VocativeP
                   /\
           Vocative    ForceP
                      /\
                 Force    …
                          TP
                        /\
                     T    CLP
                         /\
                    PRO    CL'
                          /\
                       CL    VP …
```
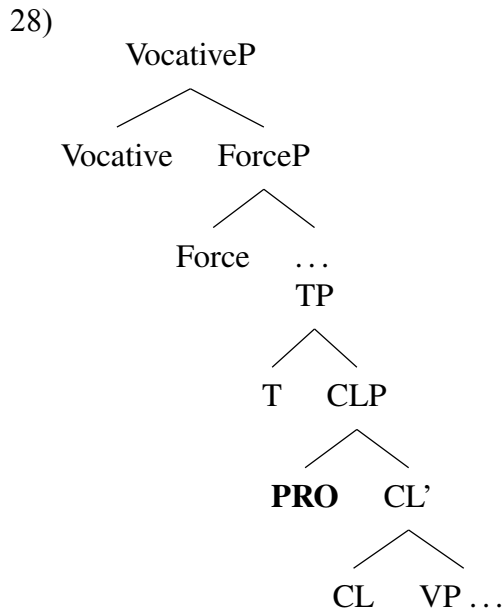
(Huidobro 2014)

This analysis loses nothing by adopting the functional hierarchy proposed in Chapter 4 in which addressee (vocative) features are located in a functional head Addr° in the topic domain of CP. It is also entirely compatible with the view of allocutive agreement put forth in the last section in which the Addr head enters into an Agree relation with a lower functional head.

5.3. Allocutivity and AddrP

Up to this point, I have made no mention of what rules out a non-vocative DP from merging into the specifier position of AddrP. The following examples illustrate the ungrammaticality that would result from such a construction in English, a language with no morphological vocative case, and Georgian, which does have a vocative case.

29) a. *The dude, where's my car?
    b. *Play that funky music, that white boy.
    c. *This baby, just you shut your mouth.
    d. *A father who art in heaven, hallowed be thy name.

30) *k'ac-i,   ʒaɣl-i   uxeš-i=a
     man-NOM   dog-NOM mean-NOM=is
     Intended: 'Man, the dog is mean'

In Chapter 3, I made the argument that vocative DPs differ from argument DPs in two ways: 1) they are valued with inherent vocative case and 2) vocative d bears second person features. I have also independently argued in Chapter 4 that addresses are merged in Spec, AddrP. It stands to bear, then, that there must be a feature driven relationship ensuring that only vocative DPs are merged into the specifier of AddrP, and that they are not merged elsewhere.

I assume that whether or not a vocative is pronounced, however, an addressee always exists. The most obvious counterargument to this claim is the case of speaking to one's self. If we examine self-speech, however, we find that there remains evidence for the presence of a grammatically present 2nd person addressee. To begin, when people are speaking to themselves they may use second person pronouns or addresses. Take, for example, the following lines from the movies *The Wedding Singer* (31) and *Pulp Fiction* (32). Both are spoken by the protagonists to themselves when they are alone.

31) "Don't worry, man, everything's gonna be alright."

32) "You see, this is a moral test of one's self; whether or not you can maintain loyalty."

In (21) the speaker, protagonist Robbie Hart, refers to himself with an address, *man*, and uses an imperative (presumably 2nd person, see Chapter 2 for discussion) while speaking to himself. In (32), Vincent Vega, uses second person pronouns to refer to himself alone. In these examples

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we see direct evidence for the presence of a second person addressee in the structure.

Even when speakers refer to themselves in the first person when speaking to themselves, however, there is still a very real sense in which the speaker is both the speaker and addressee; the first and the second person. For example, speakers can ask themselves questions, like, "*Am I dreaming?*" and then go on to answer it: "*I must not be, because I've pinched myself.*"
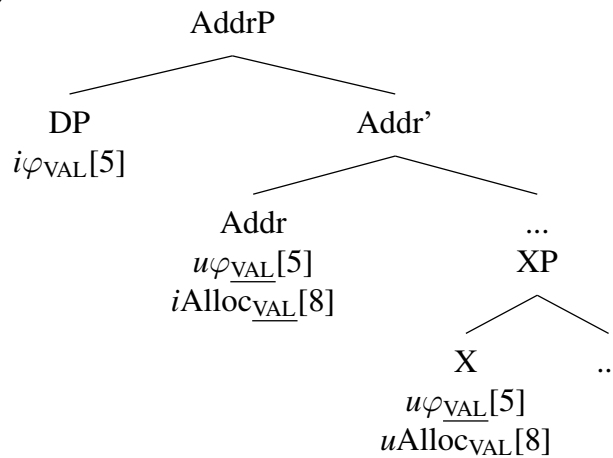
The ubiquity of an addressee and the optionality of vocatives lead me to conclude that overt vocatives are in complementary distribution with a null vocative pronominal, *pro*$_{VOC}$. This null pronominal is able to check the selectional requirements on the Addr head in the absence of an overt vocative DP.

In the previous section, the examination of previous analyses of allocutivity led to several conclusions, which I will bring together here to form a cohesive picture of the relationship between allocutivity and AddrP.

Given the interpretive similarities between addresses and allocutive agreement, I have first and foremost concluded that they should be associated with the same functional head. After examining the proposals for allocutive functional heads by Miyagawa (2012), Haddican (2015) and Huidobro (2014), I find no compelling arguments to amend the proposal for AddrP put forth in Chapter 4. Indeed, it is the only proposal which can account for both the distribution of allocutive agreement and mid-sentential addresses. In (33) below, I sketch the relationship between Addr, addresses, and allocutivity.

33)

AddrP
├─ DP
│ $i\varphi_{\underline{VAL}}[5]$
└─ Addr'
    ├─ Addr
    │ $u\varphi_{\underline{VAL}}[5]$
    │ $i\text{Alloc}_{\underline{VAL}}[8]$
    └─ ...
        XP
        ├─ X
        │ $u\varphi_{\underline{VAL}}[5]$
        │ $u\text{Alloc}_{VAL}[8]$
        └─ ...

In (33), X stands for the inflectional head on which allocutivity is spelled out in a given language. For example, in the case of SAD languages, XP is the clitic phrase (CLP). On the other hand, in Basque, X is the auxiliary. This head enters the derivation bearing a valued allocutive feature bundle. The allocutive feature bundle is composed of a maximum of two features: [±solidarity] and [±respect]. Since [+solidarity] and [+respect] are in complementary distribution, it may seem excessive to propose that both of them are present, rather than a binary [attitude] feature. However, I am inclined to suspect that these features are operating independently. For one, some languages exhibit only solidarity (e.g. BCS), some exhibit only respect (e.g. Japanese), and some exhibit both (e.g. Telugu). These patterns are all derivable with a single binary feature, but the existence of languages that exhibit only one still casts doubt on the proposal. Allocutivity, we know, also exhibits φ feature agreement, in some cases exhibiting gender and number agreement. This is all reflected in (33).

In languages without allocutive agreement, Addr° enters the derivation with fully valued and interpretable allocutive features, unvalued and uninterpretable φ features. In languages with

allocutive agreement, however, the allocutive feature is valued and uninterpretable on a head in the inflectional domain (CL° in languages with SADs, the Auxiliary in Basque, etc), which also has unvalued and uninterpretable φ features. In these languages, Addr° is merged with unvalued, interpretable alloc features and unvalued φ features, and probes to enter into an agree relation with the valued alloc features. The φ features, however, remain unvalued. Under standard notions of agree, the derivation should crash if the probe (Addr°) is unable to value its φ features within its C-command domain. However, recent work by Wurmbrand (2012) proposes that Last Resort is a condition on merge to satisfy 'needy' elements under Reverse Agree. Under this proposal, a vocative DP can merge with Addr° to value the φ features on Addr, and the inflectional head.

Notice that there is no allocutive feature relationship between the address DP and the inflectional head. Though they both express the relationship between the speaker and the addressee, I see no empirical evidence that this connection is syntactic and not pragmatic. For example, there is no language which requires or disallows the presence of an address with verbal allocutivity. Also, this makes it possible to mismatch the attitude of the address and the phrase, which allows for expressions such as "*Shove it, your majesty*" and "*Would you care for some tea, jackass?*". The possibility of and context for such mismatched phrases is better left to the pragmatic than syntactic domain.

5.4. Conclusion

This chapter has achieved several goals. First, it has shown that the phenomenon of allocutivity

is much more typologically common than has been acknowledged in generative syntax, which has allowed for greater insight to the phenomenon. For example, looking only at Basque, the incompatibility of allocutivity with second person arguments appeared to be a feature of allocutivity itself. However, the absence of this constraint in other languages with allocutivity allowed us to instead reconsider that this is a property of Basque morphology, rather than of allocutivity more broadly.

Having considered two very different analyses of allocutive morphology (Miyagawa 2012 and Haddican 2015), I have adopted a proposal under which allocutive agreement and clitics are the result of agreement with the allocutive feature bundle located in the Addr head. The make up of this feature bundle varies across languages, but seems to be composed of one or more of the following features: [±solidarity][±respect], and the φ features [±gender][±number]. I assume that these features are valued Addr and spelled out on a functional head in the inflectional domain. In the case of verbal allocutive morphology, this feature bundle values the verb or auxiliary, and in the case of SADs it values the clitic head.

Not only does this analysis provide a unified view of the fairly broad phenomenon of allocutivity, it also solidifies the argument first raised by Hill (2013b) and Haegeman & Hill (2014) that allocutivity is evidence in favor of a syntactic treatment of vocatives.

Chapter 6

Vocatives and Parentheticals

The study of vocatives, as discussed in Chapters 1 and 4, was largely dismissed in both the classical and linguistic traditions. A prime example of this is the tradition of labeling the vocative as extra-sentential or parenthetical. The problem is not necessarily that these labels are incorrect, but rather that they are insufficient. Frequently, when vocatives are described as being parenthetical, there is no further discussion of their distribution or even what it means to be parenthetical (a matter which is not at all agreed upon in the literature, as will be discussed in section 6.3). Classical grammarians like Hjelmsev (1935) traditionally considered all vocatives to be extrasentential or parenthetical. This view carried over to some cross-linguistic studies as well. Blake (1994) begins and ends his discussion of the distribution of the vocative by stating, "vocatives do not appear as dependents in constructions, but rather they stand outside constructions or are inserted parenthetically." Anderson (2004) provides a slightly more concrete description, concluding that vocatives are only extrasentential if they are not appositive.

As discussed in Chapters 3 and 4, a new era in the study of the vocative began with Moro's 2003 "Notes on Vocative Case." Moro was the first to argue that vocatives are associated with a single functional projection, a stance which has since been adopted by the vast majority of recent work on vocatives (Mauck and Zannutini 2005, Hill 2007, Stavrou 2010, Espinal 2013, Hill 2013a, 2013b). The problem, of course, with associating vocatives with a single functional projection is that they are well known to appear sentence initially, finally, and in a broad range of mid-sentential positions, as illustrated below in (1).

1) a. **Ladies**, the tackling in this game has been worse than I would expect from ducks.
   b. The tackling in this game has been worse than I would expect from ducks, **Ladies**.
   c. The tackling in this game, **Ladies**, has been worse than I would expect from ducks.
   d. The tackling in this game has been worse, **Ladies**, than I would expect from ducks.

Under the analysis proposed in Chapter 4, the address 'Ladies' in the examples in (1) is always located in the specifier position of the functional head AddrP, and in (1b-d) other phrases in the sentence have undergone movement for information structure.[44] For many who followed Moro (2003), the answer is quite different: some of the vocatives in (1) are associated with a functional projection, but others are assigned a less integrated, and also less well defined, status. For Stavrou (2010), most initial vocatives are calls[45], and mid-sentential vocatives like (1c-d) are parenthetical. Espinal (2013) likewise considers mid-sentential vocatives to be parentheticals, but refers to her earlier (1991) work on parentheticals for a more detailed analysis, which I will come back to in section 6.1.

Espinal 1991 is not the only work on parentheticals to include vocatives in that category.

_____

44. Note that the vocative in (1a) can be either a call or an address (see Chapter 1 for details).

45. See Chapter 1 for a discussion of calls and addresses.

Indeed, the section devoted to parentheticals in McCawley's 1988 book "Syntactic phenomena of English" includes vocatives, as does Kaltenböck's 2007 taxonomy of parentheticals. Without a doubt, the parenthetical description of mid-sentential vocatives is the dominant analysis within all relevant fields of study: classical grammar; generative approaches to the vocative; and studies of parentheticals. Thus, it is not enough to simply propose an alternative without also carefully considering the parenthetical analysis, which I devote this chapter to fulfilling.

We saw in Chapter 4 that Hill (2013b) provides an analysis of mid-sentential vocatives that does not involve parentheticals. She does not, however, address parentheticals as a class, but rather states that "our analysis pre-empties [sic] any attempt of treating VocP as parentheticals, adjuncts or appositions in the clause" (Hill 2013b:12). Ashdowne (2002, 2007) provides a systematic comparison of the properties of vocatives and parentheticals, but does not carefully define the class of parentheticals. In this chapter, I will show that addresses do pattern with a subset of syntactic phenomena which are often referred to as parentheticals, and I will extend the analysis of mid-sentential addresses detailed in Chapter 3 to that subset of parentheticals. I will begin by providing a brief overview of some of the major generative analyses of parentheticals in section 6.1. Next, I will show that, like addresses, some parentheticals have been shown to mark the boundary between old and new information. In section 6.3, I will present some characteristics that have been used to identify and define parentheticals, as well as a taxonomy from Kaltenböck (2007) of the range of syntactic phenomena that have been analyzed as parentheticals. With the taxonomy in hand, we can then identify the set of parentheticals which display the property of marking information structure. In section 6.4, I come back to the structural independence of

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parentheticals, showing that the parentheticals which mark information structure display varying degrees of structural independence. Finally, in 6.7.1, I apply the analysis of mid-sentential addresses from Chapter 4 to the other parentheticals which mark information structure boundaries, and show that this analysis predicts the properties discussed in section 6.4.

6.1.   Syntactic Accounts of Parenthesis

Parenthesis, like vocatives, has drawn little attention in generative grammar. Generative grammar, which is so adept at addressing structural dependencies and hierarchical relations, has little to say about optional elements which have little discernible interaction with argument structure. It is also not well equipped to handle optionality, which is perhaps the one quality that everything ever dubbed a parenthetical shares. These qualities make parentheticals unappealing subjects of study because they seem to either a) show that parentheticals are non-syntactic or b) identify very significant inadequacies in syntactic theory. Some have nonetheless made relatively small adjustments to syntactic theory in order to account for parentheticals. Here I will briefly review 4 such proposals: Ross 1973, Emonds 1976, McCawley 1982 and Espinal 1991.

Ross 1973, Emonds 1976, McCawley 1982 shared the hypothesis that parentheticals are S-level adjuncts. Thus, for sentence (2) they all agree that the deep structure is more or less as represented in (3).

2) John talked, of course, about politics.

3)

```
                              S
                    ┌─────────┴─────────┐
                    S                   ?
              ┌─────┴─────┐         ╱───────╲
             NP          VP        of course
              │       ┌───┴───┐
            John      V       PP
              │       │    ╱──┴──╲
                   talked  P      NP
                          │        │
                        about   politics
```
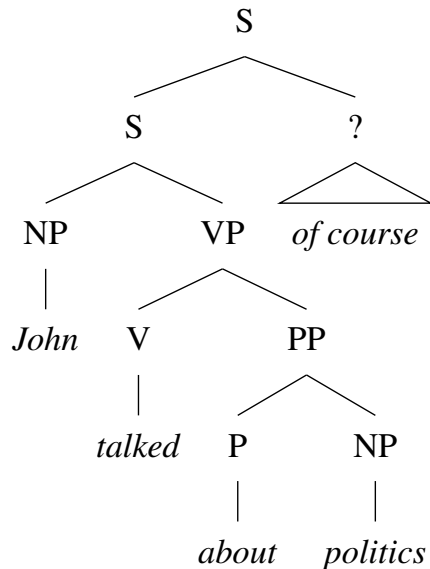
<div align="right">(=(4) McCawley 1982)</div>

Under standard assumptions of linearization, of course, the structure in (3) will not produce the string represented in (2). For Ross 1973, the correct word order is produced by lowering the parenthetical to VP so that the parenthetical and material in VP become a constituent [*talk of course about politics*]. Emonds 1976 takes a rightward movement approach, under which any material which ends up being linearized to the right of the parenthetical right adjoins to S. In this case, this means the PP [*about politics*] right adjoins to S. McCawley 1982 takes a very different approach, under which the hierarchical structure remains as represented in (3), and the linear order is only changed in pronunciation.

Espinal 1991, on the other hand, does not start with the assumption that parentheticals are adjuncts. She proposes a 3rd dimension to syntactic representation, under which parentheticals

have no hierarchical relationship to the host clause, but still have complex internal structure. Her

representation of (2) would have the parenthetical PP [*of course*] represented on a separate

syntactic plane, which only intersects with the S [*John talked about politics*] at PF. Although she

does not offer an analysis of (2) exactly, in (4) I show a representation of her analysis based on

her depiction of the structure of "*your brother behaved, of course, like a gentleman.*"

4)
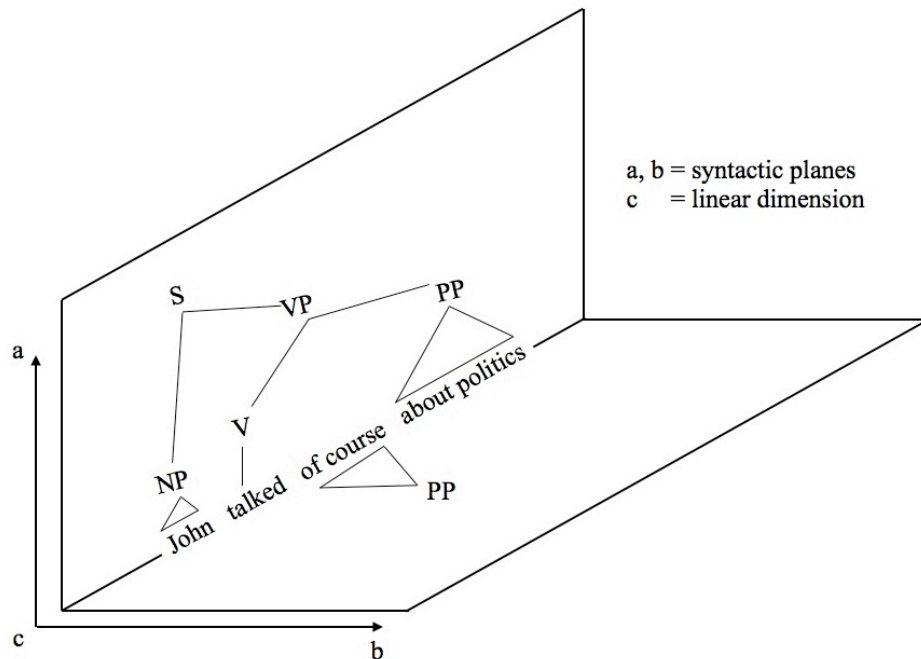
The four proposals listed above each have their own empirical and theoretical strengths

and weaknesses. My intent here is not to argue against them in their entirety, but rather to point

out that none of them are concerned with describing, predicting, or placing any theoretical

importance on the location of the parenthetical with respect to the host clause. For example, none

of the four proposals predict any interpretive differences between the two sentences in (5).

    5) a. John talked, of course, about politics.
         b. John, of course, talked about politics.

Though the sentences in (5) are truth-conditionally identical, they have distinct information structures. Consider the following exchange:

    6) A: What happened at the party last night?
        B: John, of course, talked about politics.
        B': John talked, of course, about politics.

Both (6B) and (6B') are potentially possible responses to the question in (6A), but they depend on different amounts of shared knowledge about the party in question. In both responses, the speaker believes that he and the addressee share the knowledge that *John* was at the party. The response in (6B'), however, additionally conveys that the addressee knew that there was *talking* at the party, and suggests that the addressee was asking about the topic of conversation. Correspondingly, in (6B) the new information introduced is *talked about politics*, and in (6B') it is simply *about politics*. We can see that, like addresses, the parenthetical 'of course' is marking a difference in information structure between (5a) and (5b).

In the following sections I develop this idea further, and propose that they are derived via the same mechanisms proposed for addresses in Chapter 4.

6.2. Some Parentheticals Pattern with Mid-Sentential Addresses

Recall from Chapter 4 that Taglicht (1984) writes that in addition to vocatives, some "disjuncts" may mark the boundary between a *marked theme* and the rest of the sentence. For Taglicht, a

marked theme is old information (perhaps a topic) that is grammatically marked, meaning that some process has taken place to show that it is old information, like fronting (topicalization), or, as is most relevant here, the presence of an "intrusive element" such as a vocative or a disjunct. Take, for example, (7-9).

7) That shed, **my dear,** will have to be painted.

8) John, **of course,** has been painting the shed.

9) John, **you know,** has been painting the shed.

(=(8-10) Taglicht 1984; emphasis mine)

For Taglicht, the presence of a mid-sentential vocative or disjunct is a tool for marking information structure. Ziv (2002) argues in more detail for Taglicht's proposal, offering the following scenes presented in (10-12).

10) A: Could you remind John that there's a meeting this evening?
    B: John, **I believe**, will not attend the meeting this evening (but I might).

11) A: Remember there are 2 meetings: one this evening and one tomorrow.
    B: This evening, **I believe**, John will not be able to attend, (but tomorrow he might).

12) A: Tell John that the demonstration is at 5pm, and the meeting at 7.
    B: The demonstration, **I believe**, John will not be able to take part in, (but the meeting, he might).

(=(1-3) Ziv 2002; emphasis mine)

In sentences (10-12), the material to the left of the parenthetical [*I believe*] is a contrastive topic. In (12), it is clear that the leftward material, [*the demonstration*], has undergone topicalization, since it is the direct object of the predicate thus the surface word order is affected by the movement. In (10-11), on the other hand, the surface order is relatively

unchanged, but from the context we can see that the leftmost material, [*John*] and [*this evening*],

are standing in contrast to [*I*] and [*tomorrow*] respectively. In Chapter 3 we saw that one way to

see that phrases left of the addresses are topics is that they may not be pleonastics, since

pleonastics bear no denotation and therefore definitionally can not be topics. Ziv (who uses

Taglicht's term "marked theme") also uses pleonastics to show that these leftmost phrases are

topics, repeated here in (13).

> 13) a. *It, I believe, will rain tomorrow.
>   b. *There, I assume, are a million theories about word order.

<div align="right">(=(11-12) Ziv 2002)</div>

Up to this point, I have presented several generative-influenced analyses of parentheticals

and shown that there is good reason to believe that some mid-sentential parentheticals, like

addresses, mark the boundary between old and new information. What I have not yet discussed is

what, exactly, a parenthetical is, and what their properties are outside of their distribution. In the

next section, I will discuss some definitions of parentheticals and outline a number of syntactic

phenomena which have been described as parenthetical.

6.3.   What is a Parenthetical?

Parentheticals, though frequently referred to, are rarely carefully defined. Even prescriptive

grammars state that the eponymous brackets are not the only way to identify parentheticals in

text - that commas and dashes are sometimes used instead (Merriam-Webster, Inc., 1998).

Nevertheless, there are some generalizations and characterizations to help us approach the

question. The first, and probably most exceptionless, is optionality. Every kind of linguistic element that has been claimed to be parenthetical may be omitted from its host clause without affecting that clause's grammaticality. This attribute, however, subsumes a much broader host of phenomena than simply parentheticals, as it applies to adjuncts (definitionally, in fact) and also to most modifiers. To further restrict the class of parentheticals, scholars often turn to the idea of "structural independence" (Bussman 1996, Espinal 1991, and Burton-Roberts 2006), which I will discuss in more detail in section 6.4. Finally, parentheticals are often identified by prosody (Bolinger 1989, Döring 2007). It is often claimed that parentheticals are set off in their own intonation domain, or at least set off by pauses. This diagnostic, however, is not uncontested. Reis (2002) for instance argues that there are two types of parentheticals: integrated and unintegrated, only the former of which is set off by intonation breaks. In addition, Dehé's 2007 corpus study of British English finds a spectrum of prosodic integration of parentheticals.

Kaltenböck (2007) provides a comprehensive list of syntactic phenomena in English that have been commonly considered parenthetical in the literature (see Kaltenböck 2007 for references). In (14) below I provide the list, all examples from Kaltenböck 2007.

14) Syntactic categories commonly included under parenthetical

1. *Main clause/parenthetical parataxis*
   He called John - **he is one of his best friends** - to find out what happened.

2. *Parenthetical coordination*
   For several years now - **and I don't mean to be cynical** - we have been trying to overcome this problem.

3. *Main-clause-like 'comment clause'*
   The solution, **it seems/I believe**, is an easy one.

4. *Reporting clause*
    She was very happy, **she said.**
    Next year, **John announced,** I will move to London.

5. *Non-restrictive relative clause*
    -- ad-nominal: John, **who lives in London,** is traveling to France.
    -- nominal: **What is more interesting**, he finished his paper.
    -- sentential: Mary went on holiday to Crete, **which is probably what you'd like to do.**

6. *Content clause (appositive clause)*
    The excuse she gave - **that there had been a traffic jam** - was ridiculous

7. *Adverbial clauses / clausal adjunct*
    -- finite: **As you probably know,** I won't be here next week.
                          That's a Ming vase, **if I'm not mistaken**.
    -- non-finite: I'm a bit overworked, **to be honest.**
                          I doubt, **speaking as a layman**, whether this will be the right solution.
                          Stated briefly, there is no quick solution to the problem.

8. *Question tag*
    Mary is coming tomorrow, **isn't she?**

9. *Right node raising / interpolated coordination / shared constituent coordination*
    He is, **or at least was,** a great actor.

10. *Amalgam(ation)*
    He gave this **I prefer not to know how awful** paper

11. *Verbless clause*
    The visitors, **most of them students**, were rather surprised

12. *Adverbial phrase*
    Frankly, I don't know what to say about this

13. *Adjective phrase*
    The chairman, **angry at the delay,** demanded a full report

14. *Prepositional phrase*
    In brief, the film has been a great success.

15. *Noun phrase*
   -- apposition: Annie Lennox, **my favourite pop singer,** has a new album out.
   -- vocative: Today's topic, **ladies and gentlemen**, is astrophysics

16. *Interjection*
   Damn, we've missed the train

17. *Discourse Marker*
   John, **you know,** is not going to come tonight.

We can see above that scholars have used the term 'parenthetical' to refer to a broad range of syntactic categories: CPs, DPs, PPs, AdvPs, AdjPs, and small clauses. For the purposes of this paper, our primary interest is in those which function mid-sententially like addresses in marking the boundary between old and new information. Following Taglicht (1984) I will call these parentheticals *partitions*. In (15) below, I show the limited number from the list in (14) which seem to behave as partitions.

15) Information Structure Marking Parentheticals (*Partitions*)
   a. *Comment Clause*
       A: Does Leda have the jerseys?
       B: Melissa, **I think**, was the last one with them.
   b. *Reporting Clause*
       A: What are you doing for spring break?
       B: Well tomorrow, **John said**, is going to be a gorgeous day for a rugby
                          match.
   c. *Adverbial phrase*
       A: Let's go get some celebratory strawberry ice cream!
       B: Strawberry's **honestly/frankly** not my favorite
   d. *Prepositional Phrase*
       A: Do you want to see a movie or a play?
       B: A play, **of course,** would be more novel, but a movie sounds more fun.
   e. *Address*
       A: Let's get a pet bunny!
       B: Rabbits, **Ally,** can live for up to 14 years.
   e. *Discourse Marker*
       A: Let's get a pet bunny!
       B: Rabbits, **you know,** can live for up to 14 years.

It appears that six of Kaltenböck's 17 syntactic phenomena naturally fall after a topic when in a mid-sentential position. Note that the category labels are not meant to denote that all members of that syntactic category (e.g. prepositional phrases) can be partitions, but rather that any parenthetical which falls into that syntactic category can play that role. This leaves the task of identifying which prepositional phrases, for example, can be parenthetical. For this, we return to the property of "structural independence" that I referred to in the previous section.

6.4. Constructions Labelled 'Parenthetical' are Structurally Diverse

In the previous section we saw a plethora of constructions which have been called 'parenthetical' in the literature. Despite the frequent use of the term, few have attempted to classify or define parentheticals by structural criteria in any rigorous manner. Espinal (1991) provides the most detailed list of properties of parentheticals, though she is largely not concerned with carefully defining the class of parentheticals. In this section, I apply the properties of parentheticals put forth in Espinal (1991) to the variety of constructions identified as parentheticals in Kaltenböck (2007). We find that these constructions have very little in common structurally, and I conclude that they should be analyzed independently.

6.4.1. Espinal 1991

Espinal (1991) carefully defines structural independence through 15 properties of parentheticals. I list the first 11 briefly, which are the most relevant to structural independence, in

([16]) below, before discussing them in more detail (see Espinal 1991 for more detail and examples) . Note that for her, parentheticals are "disjunct constituents" which I abbreviate as "DC" below:

16) *Properties of Parentheticals*

    A.   DCs cannot be the focus of cleft sentences
    B.   DCs cannot be questioned
    C.   The sequence of tenses does not apply to DCs
    D.   DCs cannot be arguments of the host predicate
    E.   There can be multiple DCs associated with a single host predicate
    F.   DCs are optional
    G.   DCs cannot fill the initial position in German V2 constructions
    H.   DCs may be inserted in relative clauses[46]
    I.   A pronoun in an appositive relative DC cannot be bound by an antecedent outside that DC
    J.   Gaps in DCs may not be parasitic on host clause gaps
    K.   DCs have no c-command relations with the host clause

Espinal 1991's footnote 3 notes that these properties do not hold of all parentheticals - indeed, parentheticals have such a range of internal structure that it would be unexpected. Thanks to Kaltenböck's typology of syntactic categories of parentheticals shown above in ([14]), it is now a relatively simple task to determine how each of the above syntactic categories fare according to the properties of parentheticals listed in ([16]). In [Table 3], I present the full results of such a comparison, the details of which will be discussed below. Many of Espinal 1991's tests are not applicable to all of the syntactic categories which purported parentheticals may instantiate. The most striking example of this is Test I, "A pronoun in an appositive relative DC cannot be bound

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46. Espinal's description of property H makes the claim that parentheticals can occur in wh-islands. The examples provided involve the insertion of DCs into relative clauses rather than islands created by movement in subordinate clauses selected by verbs such as *remember/wonder*. In the text, to avoid confusion, I will refer to the former as relative clauses and the latter as wh-islands. See Chapter 4 for a discussion of the degraded status of vocatives in wh-islands.

by an antecedent outside that DC." This test, of course, only applies to appositive relatives, and

therefore is not particularly helpful in its diagnostics. However, the related Test K, "DCs have no

c-command relations with the host clause," can be applied to all of the syntactic categories in

(14) except for adverbial phrases, which do not show c-command relationships.

	A. DCs cannot be the focus of cleft sentences	B. DCs cannot be questioned	C. The sequence of tenses does not apply to DCs	D. DCs cannot be arguments of the host predicate	E. There can be multiple DCs	F. DCs are optional	G. DCs cannot fill the initial position in German V2 constructions	H. DCs may be inserted in relative clauses	I. A pronoun in an appositive relative DC cannot be bound outside that DC.	J. Gaps in DCs may not be parasitic on host clause gaps	K. DCs have no c-command relations with the host clause
A. *Main clause/ parenthetical parataxis*	N/A	✓	✓	✓	✓	✓	✓	✓	N/A	✓	✓
B. *Parenthetical coordination*	N/A	✓	✓	N/A	✓	✓	N/A	✓	N/A	✓	✓
C. *Main-clause-like 'comment clause'*	N/A	X	?*	N/A	?*	✓	N/A	✓	N/A	N/A	X
D. *Reporting clause*	N/A	X	?*	N/A	?*	✓	N/A	✓	N/A	N/A	X
E. *Non-restrictive relative clause*	✓	✓	X	N/A	✓	✓	N/A	✓	✓	N/A	✓
F. *Appositive clause*	✓	✓	✓	✓	✓	✓	N/A	✓	N/A	✓	?
G. *Adverbial clauses/ clausal adjunct*	N/A	✓	X	✓	✓	✓	X	✓	N/A	✓	✓
H. *Question tag*	N/A	N/A	X	✓	X	✓	N/A	✓	N/A	N/A	✓
I. *Right node raising*	N/A	✓	X	N/A	✓	✓	N/A	✓	N/A	X	✓
J. *Amalgam(ation)*	N/A	✓	✓	✓	✓	✓	N/A	✓	N/A	✓	X
K. *Verbless clause*	✓	✓	N/A	✓	✓	✓	N/A	✓	N/A	✓	✓
L. *Adverbial phrase*	✓	✓	N/A	N/A	✓	✓	?	✓	N/A	N/A	N/A
M. *Adjective phrase*	✓	✓	N/A	N/A	✓	✓	X	✓	N/A	N/A	X
N. *Prepositional phrase*	✓	✓	N/A	✓	✓	✓	X	✓	N/A	N/A	✓
O. i. *Appositive nominal*	X	X	N/A	X	✓	✓	N/A	✓	N/A	N/A	X
O. ii. *Vocative*	✓	✓	N/A	✓	X	✓	✓	✓	N/A	N/A	✓
P. *Interjection*	✓	✓	✓	✓	✓	✓	✓	✓	N/A	✓	✓
Q. *Discourse Marker*	✓	✓	✓	✓	✓	✓	✓	✓	N/A	✓	✓

* See section 6.7 for discussion

Table 3

What emerges from the data in Table 3 is that there is a range of degree of structural independence which is displayed across the syntactic phenomena listed in Kaltenböck 2007. The high rate of inapplicable tests makes grouping the phenomena together in a systematic way relatively opaque. In this section, I will briefly highlight some properties which the constructions listed in (14) seem to share, and also discuss the properties which show their differences. We will see that while comment clauses and reporting clauses show a higher degree of syntactic integration, adverbials, prepositional phrases and discourse markers show greater syntactic independence. Despite this difference, in section 6.7.1 I will show that all of these properties are predicted by an extension of my analysis of mid-sentential addresses from Chapter 3.

6.4.2. Optionality and presence in relative clauses

The number one defining characteristic of constructions labelled 'parenthetical', as those in (14), is optionality. These clauses are all optional in the sense that the host clause remains grammatical if they are omitted. Beyond optionality, it is difficult to group these constructions together by any structural properties, including those listed in (16).

In examining Table 3, we can see that the only other property which applies to all of the constructions is their presence within relative clauses. Espinal (1991) uses this property to conclude that parentheticals are structurally independent, as relative clauses are immune to extraction. Note that, though they may be present in relative clauses, it is often the case that they are also interpreted within that relative clause. Take, for instance, the example of an adverbial

clause inside a relative clause presented in Espinal (1991):

      17) a. John reads books which deal with geology.
          b. *Which topic does John read books which deal with?
          c. John reads books which, as far as I know, deal with geology.

                                                              (=(20) Espinal 1991)

In (17c), the parenthetical *as far as I know* can only be read as commenting on the limitations of the speakers knowledge of the relative clause. That is, it does not hedge the speaker's statement that *John reads books*. It may not tell us anything interesting about the relationship between the parenthetical and the matrix clause, or the structural independence of the parenthetical.

6.4.3. Parentheticals and V2

Espinal (1991) lists the inability to serve as the initial constituent in V2 clauses in German as another diagnostic of parenthesis. This property is one of the most interesting, as it is true of only half of the types of parenthetical clauses to which it is applicable, showing the lack of structural conformity between these constructions. Examples (18 - 20) show constructions which are not able to fill the initial position in V2 clauses, while examples (21 - 26) show those which do fill the initial position.[47]

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47. Unless otherwise noted, I am indebted to Katharina Schumann for the German judgements in this section, as well as helpful discussion of the data. All errors are my own.

Adverbial phrases

18) a. Ehrlich, es   wurde getanzt.
   sincerely, there was   dancing
  b. *Ehrlich wurde getanzt.
   'Sincerely there was dancing'

               (=(19) Espinal 1991)

Comment clauses

19) a. [Ich glaube] Johannes aß den Kuchen.
   I   think   John   ate the cake
  b.*Ich glaube aß Johannes den Kuchen.
   'I think, John ate the cake'

Vocatives

20) a. Maria, Johannes aß den Kuchen.
   Maria, John   ate the cake
  b.*Maria aß Johannes den Kuchen.
   'Maria, John ate the cake

Adverbial phrases

21) Natürlich aß Johannes den Kuchen.
  naturally ate John   the cake
  'Of course, John ate the cake'

Adverbial clauses

22) [Ehrlich   gesagt] aß Johannes den Kuchen.
  sincerely stated   ate John   the cake
  'To tell the truth, John ate the cake'

23) [Wie du wahrscheinlich weißt] aß Johannes den Kuchen.
   as   you probably   know ate John   the cake
  'As you probably, know John ate the cake'

Adjective phrases

24) [Wütend über die Verspätung] aß Johannes den Kuchen
   angry   over the delay   ate John   the cake
  'Angry at the delay, John ate the cake'

25) Hungrig aß Johannes den Kuchen.
     hungry   ate John   the cake
     'Hungry, John ate the cake'

       Prepositional phrases

26) [In Prinzip] aß Johannes die Pizza alleine
      in principle ate John   the Pizza alone
     'In principle, John ate the pizza by himself'

The data in (18 - 26) show a great deal of inconsistency with respect to V2 clauses. Some sentential modifying adverbs such as *ehrlich,* 'sincerely,' are invisible to the initial position (18), while *natürlich*, 'naturally' is visible (21). Furthermore we find that comment clauses (19) and vocatives (20) do not count for the initial position in V2 clauses, but various adverbial clauses (22, 23) adjective phrases (24, 25) and prepositional phrases (26) do.[48] The purpose of this discussion is not to provide an analysis of V2 clauses, but rather to illustrate the problematic nature of treating the vast array of constructions commonly referred to as 'parenthetical' (listed in (14)) as a natural class for syntactic purposes. It is more fruitful, instead, to examine each construction individually to account for its unique set of properties.

In the following three sections I will focus on the 'parenthetical' constructions which pattern, like addresses, as information structure partitions. Repeated from (15), they are listed below in (27).

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48. This is not to say that all adverbial clauses, adjective phrases, or prepositional phrases may take the initial position in V2. I have specifically considered those clauses and phrases which have been proposed in the literature to be parentheticals.

27) Information Structure Marking Parentheticals (*Partitions*)
    a. *Comment Clause*
        A: Does Leda have the jerseys?
        B: Melissa, I think, was the last one with them.
    b. *Reporting Clause*
        A: What are you doing for spring break?
        B: Well tomorrow, John said, is going to be a gorgeous day for a rugby
                      match.
    c. *Adverbial phrase*
        A: Let's go get some celebratory strawberry ice cream!
        B: Strawberry's honestly/frankly not my favorite
    d. *Prepositional Phrase*
        A: Do you want to see a movie or a play?
        B: A play, of course, would be more novel, but a movie sounds more fun.
    e. *Address*
        A: Let's get a pet bunny!
        B: Rabbits, Ally, can live for up to 14 years.
    e. *Discourse Marker*
        A: Let's get a pet bunny!
        B: Rabbits, you know, can live for up to 14 years.

In section 6.5, I evaluate the addresses with respect to the properties attributed to parentheticals, both in Espinal (1991) and in Ashdowne (2002, 2007). I show that the analysis of mid-sentential addresses proposed in Chapter 4 accounts for these properties straightforwardly. In sections 6.6 and 6.7 respectively, I extend this analysis first to parentheticals in the forms of APs, PPs, and discourse markers, and then to comment clauses and reporting clauses.

6.5. The Syntactic Independence of Addresses

In his 2002 and 2007 studies of vocatives in Latin, Ashdowne confronts the dominant view that addresses are parentheticals. He approaches this question in his 2002 work by delineating three criteria by which to identify parentheticals, and concluding that they do not

apply to addresses. They are shown here in (28).

> 28) a. ability to interrupt freely;
>   b. absence of connection;
>   c. no limit on the number present (beyond those concerned with interpretability).

(Ashdowne 2002:154)

In the following sections, each criterion will be discussed in detail, before returning to the criteria presented in Espinal (1991).

6.5.1. "The ability to interrupt freely"

Ashdowne (2002) investigates the first criteria for parentheticality by means of a corpus study he performed consisting of 403 vocatives taken from a 60,000 word corpus of Latin literature. He reports that, "Specifically, addresses cannot interrupt freely, and do not have this complete freedom of placement. In Latin, for example, there are three typical positions for the vocative, namely sentence-initial, sentence-final and in second position in a sentence. These make up 76% of the examples in the corpus. Of the remaining 24%, over half come between two clauses (usually the main clause and a subordinate clause, i.e. large syntactic constituents)" These data presented are not definitive in that they are incomplete (somewhere around 12% of the data are not accounted for in the discussion) and in that comparable data for parentheticals is not available. It is not clear that parentheticals do not follow similar patterns. The tendency for vocatives to appear in predictable positions relative to the host clause is of great importance to the hypothesis that their distribution is related to information structure. The remaining 12% of the data, however, suggest that while there are certain patterns that may be more frequent, a

larger set of possibilities exists, which should also be accounted for in a comprehensive analysis of their distribution.

6.5.2. "Absence of Connection"

Ashdowne's next criterion for parentheticality is an "absence of connection" with the matrix clause. He argues, "...addresses actually do have some *necessary* connection with the accompanying utterance through something in the discourse context, viz. they must refer to the addressee(s) and are unacceptable if they do not. Since the addressee in question must specifically be that of the utterance they accompany, there is a consistent connection between the two *in a systematic way* — this cannot be said of the other parentheticals, where any connection is optional." Ashdowne's characterization of the vocative is flawless, but his characterization of parentheticals requires more thorough discussion. There certainly exist parentheticals which do not have any connection to the host clause (namely interjections), but many do have a systematic connection. Indeed, I will repeat here the characterization given by Bonami, Godard, & Kampers-Manhe (2004) that a parenthetical adverb "has the status of a 'comment' on that assertion." This connection is as systematic and as consistent as the role of the address.

6.5.3. "No Limit on the Number Present"

The last criterion for parentheticality listed by Ashdowne 2002 is iteration, like Espinal 1991's

Test E. Ashdowne 2007 explores the possibility of multiple addresses in more detail. He provides ample evidence that addresses are significantly more restricted in their distribution than other parentheticals.

29) a. The time has come, Mary, for all good men to come to the aid of the party.
   b. The time has come for all good men, my friends, to come to the aid of the
      party.   (= (7-8) Ashdowne 2007)
   c. The time has come, Mary, my friends, for all good men to come to the aid of
      the party.
   d. The time has come for all good men, Mary, my friends, to come to the aid of
      the party.
   e. *The time has come, Mary, for all good men, my friends, to come to the aid of
      the party.   (= (9) Ashdowne 2007)

Ashdowne shows that addresses may intervene before the embedded clause (29a) or after the embedded subject (29b). In addition, multiple vocatives may be listen in either position (29c-d). Splitting multiple vocatives between the positions, however, results in marked ungrammaticality (29e). Importantly, it should be noted that there is no restriction on making multiple references to the addressee. Calls and addresses co-occur relatively freely.

30) Mary$_i$! (my dear$_i$) how are you (my dear$_i$)?

In (30) the call "*Mary!*" may co-occur with an address (*my dear*). Even if two addresses are co-referent, however, they are nonetheless not able to be split between two positions in the host clause:

31) *How could you think, Mary, that I would betray you, my dear?

If we return to Table 3 we see that vocatives pass many of Espinal 1991's tests of syntactic independence. Though they are often co-referent with an argument of the predicate they can never be an argument of that predicate. Second person imposters may appear to take the

function of addresses, however I follow the analysis of Collins & Postal (2012) that while they

are anteceded by the addressee, they are not an address.

32) What would his majesty like for breakfast?

In (32), the title "*his majesty*" takes the place of a second person pronoun, and is an

argument of the predicate. Though it refers to the addressee, it is not an address. We can see that

clearly by applying the test seen in examples (29-31) showing that is impossible to have multiple

addresses.

33) Well ok, smarty$_i$, what does Mr. Know It All$_i$ say we should do?

In (33) the address "*smarty*" is able to co-occur with a co-referent imposter, "*Mr. Know It*

All" indicating that the imposter is not a second address. We can conclude then that addresses

may never be arguments of the predicate.

Likewise, it is often cited that addresses cannot be questioned. Ashdowne (2007) presents

the following data to show this:

34) A: Mary, the door's open.
     B: a. *Who, the door's open?
             b. *Which Mary, the door's open?
             c. Who was/is told (that) the door was/is open? Mary.

                                                              (= (36-39) Ashdowne 2007)

Ashdowne points out that while it is completely acceptable to ask who the addressee is

(34c), it is impossible to do so by using a question word in place of an address (though (34a,b)

are almost acceptable as echo questions).

6.5.4. Addresses and Espinal (1991)

In section 6.4 we have seen that addresses exhibit mixed properties in respect to syntactic

independence. These properties are summarized in (35-36).

35) *Properties of addresses indicating syntactic independence:*
   a. ability to interrupt freely
   b. inability to be an argument
   c. inability to be questioned

36) *Properties of addresses indicating syntactic integration:*
   a. systematic relationship to host clause
   b. restricted to one non-consecutive address per host clause

Rather than being problematic, these properties are predicted by the analysis presented in

Chapter 4. Let us consider them one by one:

The ability to interrupt freely

The proposal in Chapter 4 does not, in fact, predict that addresses can interrupt freely, but

rather that given a wide range of possible contexts, the information structure may produce a wide

range of outputs, with the appearance of free interruption.

The inability to be an argument & the inability to be questioned

Addresses are defined by being specifiers of AddrP, which is outside of the verbal domain

and thus cannot host thematic arguments. Theta roles are necessary for the ability to be

questioned, and so first inability implies the second.

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Systematic relationship to the host clause

The relationship between the address and the host clause is defined in Chapter 4 by the feature Interlocutional Grounding (ILG) which is shared between Addr° and the verbal domain.

Restricted to one non-consecutive address per host clause

This restriction exists because addresses are associated with the single functional projection, Addr°, and must be in its specifier position. The distinction made in Chapter 1 between addresses, calls, and subjects of imperatives also predicts that a single host clause should be able to host multiple referents to the addressee if the referents are of different types, and this is also borne out.

This section described the details of how the proposal in Chapter 4 for the derivation of mid-sentential addresses accounts for or is compatible with the properties of addresses which have been used to argue that they are parenthetical. In the following sections, I will extend the analysis to the set of parentheticals listed in (27), and show that, like addresses, many of their properties of syntactic integration and independence are compatible with and/or explained by this proposal.

6.6. Parenthetical Adverbial Phrases, Prepositional Phrases, and Discourse Markers

In this section I will evaluate the syntactic independence of parentheticals taking the shape of adverbial phrases, prepositional phrases and discourse markers. I have up to this point

made no attempt to define the classes of "parenthetical adverbial phrases" or "parenthetical prepositional phrases." A thorough classification is outside the scope of this dissertation, but I will nonetheless present some criteria that have been proposed.

6.6.1. When is a Modifier 'Parenthetical'?

Bonami, Godard, & Kampers-Manhe (2004) discuss the classification of French adverbs. For them, it is not the case that a semantic class of adverbs are parenthetical, but rather that some adverbs may have a parenthetical interpretation. They write, "an adverb may have a special, 'parenthetical' interpretation, in that the semantic contribution of the adverb is not integrated into the proposition the sentence asserts; rather, it has the status of a 'comment' on that assertion." It so happens, however, that only S-adverbs have the ability to comment on an assertion rather than on a predicate, limiting the semantic class. This classification can be carried over to prepositional phrases as well, identifying comment prepositional phrases such as "*of course*," "*in brief*," "*in principle*," "*at last*" etc.

Linear distribution in a host clause can also identify a parenthetical use of an adverb or prepositional phrase. Parentheticals are known for having relatively few restrictions on their position in a host clause, while non parenthetical adverbs and adjuncts are slightly more restricted.

37) a.　　(Frankly) time (frankly) is (frankly) passing (frankly) as we speak (frankly).
　　 b.　　Time (swiftly) is (swiftly) passing as we speak.

38) a. (Of course) time (of course) is (of course) passing (of course) as we speak (of course).
   b. (In the classroom) time is passing (in the classroom) as we speak.

39) (You know) time (you know) is (you know) passing (you know) as we speak (you know).

Example (37) shows us that the speech act adverb "*frankly*" has a much more free distribution pattern than the manner adverb "*swiftly*." Likewise, the evaluative PP "*of course*" in (38) has a much freer distribution pattern than the locative PP "*in the classroom*." [49] Free distribution is often used as an indication of lack of syntactic integration into a host clause (Ashdowne 2002, 2007).

Espinal 1991's tests for syntactic independence also indicate that parenthetical adverbs, PPs and discourse markers are not well integrated into the host clauses. While not all of the tests are applicable, those that are all indicate that they are more syntactically independent than their non-parenthetical counterparts. A well known example of this is seen when applying Test B (DCs cannot be questioned):

40) *Test B: DCs cannot be questioned*
   a. *How frankly is time passing as we speak?
   b. How swiftly is time passing as we speak?
   c. *Of what is time passing as we speak?
   d. Where/In what room is time passing as we speak?
   e. *How well is time passing as we speak?

We can see that parenthetical adverbs (40a) and PPs (40c) cannot be questioned. When the discourse marker "*well*" is questioned (40e), it is interpreted as a manner adverb and cannot

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49. Several other positions are possible for the PP 'in the classroom,' but those listed in (38b) are the only possible permutations which allow 'in the classroom' to modify the matrix predicate. Likewise, the discourse marker "you know" may appear in the lower clause with a slightly different interpretation.

retain the discourse marker interpretation. Once again, this test indicates greater structural independence for parentheticals.

6.6.2. An Information Structure Driven Account

In Section 4.3 we saw that Slioussar (2007) proposed an information structure driven analysis to account for the distribution of some adverbs in Russian. Such an account can be directly applied to S-adverbs in English, given the intuition expressed in Taglicht (1984) and discussed in section 6.3 that they appear at information structure boundaries. Let's revisit example (37a), repeated in (41) below, illustrating the variety of positions S-adverbs can take with respect to the host clause.

41) (Frankly) time (frankly) is (frankly) passing (frankly) as we speak (frankly).

Each position of "*frankly*" in (41) corresponds to a different information structure. I follow Cinque's (1999) analysis of adverbs in associating "*frankly*" with the functional projection Mood$_{SpeechAct}$, and represent the phrase structures of the possibilities seen in (41) below in (42).

42) a. [$_{MoodSpeechActP}$ *frankly* [$_{TP}$ *time is passing as we speak*]

b. [$_{TopP}$ *time$_i$* [$_{MoodSpeechActP}$ *frankly* [$_{TP}$ *t$_i$ is passing as we speak*]

c. [$_{TopP}$ [$_{TP}$ *time is t$_i$*]$_j$ [$_{MoodSpeechActP}$ *frankly* [$_{FocP}$ [$_{vP}$*passing as we speak*]$_i$ *t$_j$*]]]

d. [$_{TopP}$ [$_{TP}$ *time is passing t$_i$*]$_j$ [$_{MoodSpeechActP}$ *frankly* [$_{FocP}$ [$_{AdvP}$ *as we speak*]$_i$ *t$_j$*]]]

e. [$_{TopP}$ [$_{TP}$ *time is passing as we speak*]$_j$ [$_{MoodSpeechActP}$ *frankly* *t$_j$*]]

As we can see in (42) above, each position of the adverb corresponds to a difference in information structure. (42a) shows neutral word order, while in (42b) the subject is topicalized. In (42c), the *v*P has moved to spec, FocP, and the remnant TP containing the *v*P trace has been topicalized. This is similar to (42d), except that only the AdvP has been focused in (42d). Note that remnant topicalization of TP is required in (42c), but optional in (42d). This could be attributed to several factors. It may be the case that the functional projections in the inflectional domain must be linearized in a strict order at LF. It could also be the case that pragmatic functions which demand focalization of a *v*P are a proper subset of those which demand TP topicalization. A thorough investigation of these possibilities is beyond the scope of this dissertation.

I assume that parenthetical PPs and discourse markers behave in a very similar way to S-adverbs. Though PPs such as "*of course*" are not standardly assumed to be adverbial, they pattern very similarly to S-adverbs and often even have S-adverb correlates ("*naturally*," for example). Looking back at the properties of syntactic independence examined in section 6.4, we can see that these properties are predicted by the analysis presented here. They cannot be the focus of a cleft because the functional projections associated with them are all higher than FocP, making them an impossible target to probe, which is likewise why they are unable to be the target of *wh*-movement.

We have thus far seen that some parentheticals which mark an information structure boundary are relatively structurally integrated (comment clauses and reporting clauses) while others exhibit properties associated with syntactic independence (adverbs, prepositional phrases

and discourse markers). In the next section, we will shift our focus back to vocatives and see that they exhibit mixed properties.

6.7. Comment Clauses & Reporting Clauses

A great debate exists over whether so called comment clauses (mid-sentential *I think, you know, he believed,* etc.) are parenthetical or derived via extraction in German syntax. I will address this debate in section 6.7.1.

6.7.1. German Comment Clauses

Comment clauses in German have been a subject of considerable debate. The sentences in contention are seen below in (43).

43) a. *Wo   glaubst du, wohnt sie seit   1985?*
        where believe you lives she since 1985
        'Where do you believe she has lived since 1985?'
    b. *In Bonn meint Franz, wohnt sie seit   1985.*
        in Bonn thinks Franz lives   she since 1985
        'Franz thinks it is in Bonn that she has lived since 1985.'

(=(1) Reis 1996)

The original "extraction analysis," attributed to Thiersch (1978), considers the leftmost phrase of the sentences, "*wo*" and "*in Bonn*" respectively, to be extracted topics. As is well discussed in the literature, German exhibits V2 word order in matrix clauses and verb final structure in subordinate clauses. In (43), however, the subordinate verbs are not final. This fact led Reis (1996) and Kiziak (2007) to argue instead for the "parenthetical analysis," under which

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"*glaubst du*" and "*meint Franz*" are inserted parentheticals.

I have thus far argued that all of the other information structure marking parentheticals (listed in (15)) are derived by phrasal movement to the CP domain, an analysis which might be thought of as a modern incarnation of the extraction analysis. If this analysis is applied to German comment clauses, however, it does not necessarily mean that "*wohnt*" in (43) is a subordinate verb. Neither Reis (1996) nor Kiziak (2007) specify the details of what a parenthetical analysis might look like exactly, and here I will attempt to show that the "parenthetical analysis" may, in fact, be derived by information structure driven extraction.

Let us, for a moment, consider the interpretation of comment and reporting clauses. Comment clauses add a layer of epistemic modality to the host clause in a similar manner to modal adverbs. Indeed, first person comment clauses and epistemic modal adverbs are often interchangeable (44):

44) Maybe/perhaps/I think/I guess/it seems it's going to rain later.

Reporting clauses provide similarly epistemic information, but of an evidential nature. They are used to identify the evidential source of the clause. In a certain sense, both comment and reporting clauses behave like modal adverbs, modifying the host clause with epistemic and/ or evidential information.

It may, in fact, be possible to think of German comment and reporting clauses as adverbial in nature. The internal structure of these phrases is a question for anyone arguing in favor of parenthetical analysis, and I will not speculate too much here, but we can assume they have something akin to a null operator direct object ensuring the interpretation is directly related

to the host clause. We find again the all-too-often overlooked question that arises with analyses arguing in favor of parentheticals: what is their relation to the host clause?

Two likely candidates for the locus of the type of information that is conveyed by reporting and comment clauses are Mood$_{evidential}$P and Mod$_{epistemic}$P, respectively (Cinque 1999). If reporting and comment clauses are associated with these functional heads, they then lie mid-CP domain, below the highest TopP and above FocP, in the same domain as addresses and high adverbs, making the same analysis of mid-sentential addresses apply here. Let's consider a derivation of a mid-sentential comment clause in (45):

45) Jetzt wohnt sie - sagt PAUL - in BONN.
    now lives   she says Paul   in Bonn
    'She now lives, says Paul, in Bonn.

                                                                    (=(9) Reis 1996)

46) $[_{TopP}\ [_{TP}$ Jetzt wohnt sie $t_i]_j\ [_{ModEP}$ [sagt Paul] $[_{FocP}$ [in Bonn]$_i\ t_j]]]]$

I propose the derivation of (45) is something like that which is sketched in (46). Here, the PP *in Bonn* undergoes movement for focus to Spec, FocP, followed by remnant topicalization of the TP to the specifier of the highest TopP, moving above the reporting clause located in Mod$_{epistemic}$P. An analysis of this nature has the benefit of the parenthetical analysis: the verb in the reporting clause is not the matrix verb and thus finding V2 in the rest of the clause is unsurprising, but also the benefit of the extraction analysis: we account for information structure effects in the reading of the mid-sentential comment and reporting clauses.

Such an analysis is also possible for the English correlates of (43), however there doesn't seem to be sufficient reason to posit that such phrases exist in English. Indeed, comment clauses

and reporting clauses in English seem to be syntactically integrated into the host clauses enough to suggest that they are matrix verbs. In the next section we will revisit the properties of parentheticals discussed in section 6.4.

6.7.2. English Comment and Reporting Clauses are Matrix Clauses

Comment clauses and reporting clauses show the most syntactic integration of any of the categories listed by Kaltenböck. Indeed, the only syntactic independence tests that they pass freely are F (optionality) and H (presence in wh-islands). Several of the tests do not apply to them because of their syntactic category; they are the wrong category to be the focus of cleft sentences (test A), be arguments of the host predicate (test D), fill the initial position in German V2 constructions (test G) and they are not appositive relatives (required for test I). Similarly, they cannot be tested for parasitic gaps because it is strictly required that the complement of the predicate of a comment or reporting clause be interpreted as the host clause. Thus, we are left with a smaller number of ways to test their structural independence. The remaining tests will be examined below in (47-51).

> 47) *Test B: DCs cannot be questioned*
>   a. A: John, he believes, isn't at fault.
>   B: Who believes John isn't at fault?
>   b. A: John, he reported, isn't at fault.
>   B: Who reported John isn't at fault?

The subject of comment clauses (47a) and reporting clauses (47b) can be questioned using Wh-movement (i.e. in a non-echo question). It is possible, of course, that B questions are not structurally related to the A statements, and so we cannot make any strong conclusions,

except that this test does not show the structural independence of comment and reporting clauses.

48) *Test C: The sequence of tenses does not apply to DCs*
 a. You read Jane's letter, I believe/*believed/*will believe
 b. You read/*are reading/*will read Jane's letter, I believed
 c. You read Jane's letter, he says/said/will say
 d. You read/are reading/will read Jane's letter, he said

Test C brings the only significant difference between comment clauses and reporting clauses according to Espinal's tests for structural dependence. Espinal (1991) argues (contra Ross 1973) that parentheticals are invisible to tense compatibility requirements with the host clause. Indeed, any combination of tenses is possible between the host clause and a reporting clause, as illustrated in (48c-d). Comment clauses, however, are sensitive to tense compatibility requirements, as is illustrated in (48a-b). The difference between the two is likely due to the possibility of reading a host clause containing a reporting clause as a quote, a fact which in and of itself may point to a structural dependence.

49) *Test E: There can be multiple DCs*
 a. ?This purse, I believe, is the exact one, I believe, you were carrying that night.
 b. *This purse, I believe, is the exact one you were carrying that night, I think.
 c. *This purse, I believe, is the exact one you were carrying that night, he believes.
 d. ?This purse, he said, is the exact one, he said, you were carrying that night.
 e. *This purse, he$_i$ said, is the exact one you were carrying that night, he$_{i/j}$ reported.

It is not at all clear that Espinal (1991) intends this test to apply within types of parentheticals. It is certainly true that comment and reporting clauses may co-occur with other parenthetical types, however it is interesting to note that there are restrictions on multiple iterations of comment and reporting clauses within a single host clause. The most acceptable attempts listed in (49), which are still marginal, show multiple identical parenthetical insertions

(49a,d). If either the parenthetical verb (49b,e) or subject (49c,e) is different between parentheticals, the sentence crashes. The property of iteration has been discussed in detail with respect to parentheticals and addresses in Ashdowne (2002, 2007).

50) *Test H: DCs may be inserted in WH-islands*
    a. John read books which, I think, deal with geology.
    b. John read books which, he said, deal with geology.

Example (50) shows that comment and reporting clauses can freely occur in Wh-islands. In both (50a) and (50b) the parenthetical can occur in the wh-relative island which is immune to extraction. It's not clear, however, that this shows the syntactic independence of comment and reporting clauses, because there's no way to show that they didn't originate in the wh-island. The final test, Test K, however, is the strongest argument for syntactic integration that we have thus far examined:

51) *Test K: DCs have no c-command relations with the host clause*
    a. *John$_i$, he$_i$ believes, will never leave
    b. John$_i$, so he$_i$ believes, will never leave
    c. *John$_i$, he$_i$ says, will never leave
    d. John$_i$, so he$_i$ says, will never leave

Strikingly, comment clauses, and to a lesser extent reporting clauses, exhibit binding restrictions between their subjects and the host clause. In (51a), we see that the host subject, [*John*] is unable to antecede the subject of the comment clause. This stands in stark contrast to (51b), where [*John*] may antecede the subject of the adverbial clause parenthetical.

Despite the fact that their persistent optionality is consistent with canonically syntactically independent parentheticals, all other tests indicate that comment and reporting clauses are more syntactically integrated than other parentheticals. Examination of the properties

of parentheticals proposed in Espinal (1991) show overwhelmingly that comment and reporting clauses behave very much like matrix phrases even when they do not appear to be initial. These facts all fall naturally out of the simplest analysis: that there is nothing special about "comment clauses" and "reporting clauses" in English.

6.8. Summary

In this chapter I have shown that a subset of parentheticals pattern like addresses in that they delineate the boundary between old and new information. In these cases, the property of being a parenthetical is not, in fact, a property of the "parenthetical" clause itself, but rather of the information structure which causes that clause to be linearized mid-sententially rather than initially. These parenthetical clauses display a wide range of syntactic independence, from comment and reporting clauses which are syntactically integrated with the host clause, to adverbials, prepositional phrases, and discourse markers which appear to be syntactically independent. I have shown that these differences are predicted by an analysis which associates them with high CP domain functional projections, like addresses, and derives their mid-sentential position via topic and focus movement of other phrases.

Conclusion

This dissertation has provided a comprehensive view of the syntax of address in language. The primary goal has been to bring new attention to the role of the vocative in syntax, building on a small surge of research that began with Moro (2003). This surge of research has addressed a number of issues in the syntax of vocatives, including: 1) their relationship to the host clause, 2) the distinction between vocatives and overt imperative subjects, 3) the internal structure of vocative DPs, 4) the relationship between vocatives and allocutivity, and 5) the claim that vocatives are parenthetical. This dissertation has addressed and added to each of these discussions, resulting in a unified understanding of the syntax of address.

I began with the taxonomy of addressee referring nominals shown below in (1):

1) Addressee Referring Nominals:
   a. 2nd person arguments
   b. Imperative Subjects
   b. Vocatives
        i. Calls
        ii. Addresses

Setting aside second person arguments, set about creating a descriptive condition to capture the distribution of imperative subjects in English. This had two great effects: to help identify whether a given addressee referring nominal is an overt imperative subject or a vocative, but also to gain some insight into the nature of overt imperative subjects, which can be the basis for future research. After showing that existing analyses (Downing 1969, Beukema & Coopmans 1989, Potsdam 1996) fail in empirical coverage, I proposed the following condition on the

distribution of English overt imperative subjects:

2) *OSI Condition*
   Imperative subjects may be overt in the presence of a non-null set of contextually defined alternatives

This condition captures and unifies the observation that we find overt imperative subjects in one of two contexts: when there are salient alternatives to the subject (other individuals who might carry out the task, such as other addressees, the subject, or controllees) or when there are salient alternative tasks to the one identified by the imperative (for example the task of the subject at the time of the imperative). Although I do not offer a formal implementation of the condition in (2), I suggest in Section 2.7 that it could be due to the presence of an exhaustivity operator *à la* Fox (2007).

In Chapter 3 I turn to the internal structure of vocative DPs, which have been of interest to linguists for three reasons: 1) the controversial status of vocative case, 2) the frequent lack of overt determiners and 3) adjective-initial vocative constructions. Despite frequent and longstanding claims that vocative case is a variant of nominative case, I show through a 30 language survey that there is no cross-linguistic support for a connection between the vocative and any other case form. Next, I turn to the fact that vocatives frequently lack determiners, despite being inherently definite. I adopt Bernstein (2008)'s analysis that D is the locus of person features, and the definite article is its 3rd person form. The last issue I address is the existence of adjective initial vocative constructions, which arguably offer the greatest insight into the internal structure of vocative DPs. Following Hill (2013) and Slocum & Taylor (2010), I argue that adjective-initial vocatives in Italian, Romanian and Slavic provide evidence for the existence of

an additional layer of functional structure in vocative DPs. I depart from previous analyses, however, in taking the word order in adjective-initial vocative DPs to be the result of N-to-D movement of the nominalized adjective.

In Chapter 4 I present arguments that the great majority of current work on vocatives errs in one crucial point: the location of the functional projection with which vocatives are associated. Since Moro (2003) the prominent assumption has been that vocatives are associated with a functional projection above or at the left edge of CP. Instead, I propose that addresses are in the specifier of a functional projection AddrP, which is located in the topic domain of CP. This analysis is largely motivated by attention to mid-sentential vocatives, which I argue are derived by phrasal and remnant movement for information structure of other phrases. This proposal predicts that vocatives should not be able to interrupt syntactic islands, as their derivation would necessarily involve movement out of that island. The results of a 128 person judgement survey show that this prediction is borne out. Finally, in Chapter 4, I touch briefly on the syntactic status of calls. I suggest that, given the morphological identity between calls and addresses, calls are likely structurally identical to addresses, but used independently.

In Chapter 5 I address the relationship between allocutive agreement and vocatives, which have been claimed to be closely related in work by Hill 2014, Haegeman & Hill 2014, Huidobro 2014 and Haddican 2015. After examining two prominent accounts of allocutivity (Miyagawa 2012 and Haddican 2015) I show that the present proposal of vocatives, as argued for in Chapter 4, has crucial strengths over these analyses in its ability to unify vocative patterning with allocutive agreement in a single functional head, AddrP.

Finally, in Chapter 6, address the popular but largely unsubstantiated claim that vocatives are parentheticals. This claim is unsubstantiated largely because there are very few formal accounts of what it means to be a parenthetical (Espinal 1991 being a prominent counterexample). I explore the characteristics of the vast array of syntactic elements that have been claimed to be parenthetical, and find that a small subset seem to, like vocatives, mark an information structure boundary between old and new information. I suggest that an analysis like that which is presented in Chapter 4 for vocatives could potentially be extended to other parenthetical-like constructions.

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Appendix

Results from the survey presented in Section 4.4

	Condition A: Interrupting island	mean	stdev
Subject Islands	The description, Jason, of the party was really insane.	9.75	0.71
	The winner, Jason, of the race finished in less than 10 minutes.	3.43	2.53
	The destruction, Jason, of the sandcastle made the children cry.	4.13	3.17
	No view, Jason, from the overlook would make Sarah happy today.	3.16	2.57
	The book, Jason, about the Great Depression gets skipped every year.	3.94	3.59
		3.66	
Adjunct Islands	My dad likes to chill after working all day, Jason, at the post office.	0.75	1.04
	I saw a woman with a pink chihuahua, Jason, in a stroller.	4.78	3.60
	The owner left early because he has to work, Jason, tomorrow.	2.26	2.51
	I always wore my seatbelt after my mother, Jason, got in an accident.	1.90	2.32
	John always takes a flashlight when he travels, Jason, to the edges of the Earth.	3.00	2.94
		2.54	
Coordinate Structure Islands	Ally ordered an omelet with cheese and, Jason, ham.	0.63	1.41
	Peanut butter, Jason, and jelly was the only sandwich I ate as a kid.	2.53	3.13
	Chris was singing, Jason, and dancing all night.	4.82	3.37
	The farm had a goat and, Jason, three sheep.	1.45	2.11
	The shop is getting rid of all of their books, Jason, and CDs.	5.20	2.93
		2.93	
Wh-Islands	Tanya remembers where the crook, Jason, took her wallet.	6.50	3.63
	I wonder when the puppy, Jason, broke the vase in the kitchen.	4.22	3.67
	Steve forgot how to change his bike tire, Jason, by himself.	2.43	2.13
	Peter is wondering why the show, Jason, sold out already.	2.37	2.75
	Kim can't figure out who the police caught, Jason, late last night.	2.13	2.19
		3.53	

	Condition B: midsentential, outside island	mean	stdev
Subject Islands	The description of the party, Jason, was really insane.	4.71	2.80
	The winner of the race, Jason, finished in less than 10 minutes.	7.88	2.90
	The destruction of the sandcastle, Jason, made the children cry.	5.56	3.15
	No view from the overlook, Jason, would make Sarah happy today.	5.00	3.33
	The book about the Great Depression, Jason, gets skipped every year.	5.31	3.02
		5.94	
Adjunct Islands	My dad likes to chill, Jason, after working all day at the post office.	4.81	3.33
	I saw a woman, Jason, with a pink chihuahua in a stroller	6.50	3.63
	The owner left early, Jason, because he has to work tomorrow.	7.88	3.18
	I always wore my seatbelt, Jason, after my mother got in an accident.	7.18	2.53
	John always takes a flashlight, Jason, when he travels to the edges of the Earth.	5.87	3.29
		6.45	
Coordinate Structure Islands	Ally ordered an omelet, Jason, with cheese and ham.	4.88	3.30
	Peanut butter and jelly, Jason, was the only sandwich I ate as a kid.	4.63	4.53
	Chris was singing and dancing, Jason, all night.	3.22	2.85
	The farm, Jason, had a goat and three sheep.	6.38	2.66
	The shop, Jason, is getting rid of all of their books and CDs.	6.34	3.09
		5.09	
Wh-Islands	Tanya thinks that the crook, Jason, took her wallet.	6.71	3.51
	I think that the puppy, Jason, broke the vase in the kitchen.	4.38	3.78
	Steve was thrilled to change his bike tire, Jason, by himself.	3.06	2.85
	Peter knows that the show, Jason, sold out already	2.50	2.57
	Kim says the police caught a murderer, Jason, late last night.	5.52	2.93
		4.43	

	Condition C: Initial vocative	mean	stdev
Subject Islands	Jason, the description of the party was really insane.	9.84	0.37
	Jason, the winner of the race finished in less than 10 minutes.	9.63	0.59
	Jason, the destruction of the sandcastle made the children cry.	9.56	0.95
	Jason, no view from the overlook would make Sarah happy today.	8.67	1.88
	Jason, the book about the Great Depression gets skipped every year.	9.75	0.71
		9.49	

Adjunct Islands	Jason, my dad likes to chill after working all day at the post office.	9.56	0.95
	Jason, I saw a woman with a pink chihuahua in a stroller.	9.74	0.88
	Jason, the owner left early because he has to work tomorrow.	9.60	1.13
	Jason, I always wore my seatbelt after my mother got in an accident.	7.71	3.18
	Jason, John always takes a flashlight when he travels to the edges of the Earth.	9.75	0.71
		9.27	

Coordinate Structure Islands	Jason, Ally ordered an omelet with cheese and ham.	9.47	1.04
	Jason, peanut butter and jelly was the only sandwich I ate as a kid.	9.15	1.44
	Jason, Chris was singing and dancing all night.	9.39	1.05
	Jason, the farm had a goat and three sheep.	9.50	0.97
	Jason, the shop is getting rid of all of their books and CDs.	9.88	0.35
		9.48	

Wh-Islands	Jason, Tanya remembers where the crook took her wallet.	9.88	0.34
	Jason, I wonder when the puppy broke the vase in the kitchen.	9.51	0.96
	Jason, Steve knows how to change his bike tire by himself.	9.68	0.65
	Jason, Peter is wondering why the show sold out already.	9.53	1.23
	Jason, Kim can't figure out who the police caught late last night.	9.75	0.71
		9.67	

	Condition D: Mid DP	mean	stdev
Subject Islands	The, Jason, description of the party was really insane.	0.51	1.67
	The winner of the race finished in less than 10, Jason, minutes.	0.34	0.87
	The destruction of the sandcastle made the, Jason, children cry.	1.13	1.86
	No, Jason, view from the overlook would make Sarah happy today.	3.50	4.47
	The book about the Great, Jason, Depression gets skipped every year.	0.41	0.84
		1.18	

		mean	stdev
Adjunct Islands	My dad likes to chill after working all day at the post, Jason, office.	0.51	1.10
	I saw a woman with a pink, Jason, chihuahua in a stroller.	0.55	1.21
	The, Jason, owner left early because he has to work tomorrow.	0.94	1.47
	I always wore my, Jason, seatbelt after my mother got in an accident.	0.00	0.00
	John always takes a flashlight when he travels to the edges of the, Jason, Earth.	0.44	0.84
		0.49	

		mean	stdev
Coordinate Structure Islands	Ally ordered a, Jason, omelet with cheese and ham.	0.54	0.88
	Peanut, Jason, butter and jelly was the only sandwich I ate as a kid.	0.39	0.95
	Chris was singing and dancing all, Jason, night.	0.69	1.14
	The farm had a, Jason, goat and three sheep.	0.50	0.93
	The shop is getting rid of all of their, Jason, books and CDs.	1.13	1.41
		0.65	

		mean	stdev
Wh-Islands	Tanya remembers where the crook took her, Jason, wallet.	0.67	1.15
	I wonder when the puppy broke the, Jason, vase in the kitchen.	0.32	0.65
	Steve forgot how to change his bike, Jason, tire by himself.	0.88	1.09
	Peter is wondering why the, Jason, show sold out already.	0.13	0.35
	Kim can't figure out who the police caught late last, Jason, night.	0.50	0.80
		0.50	

	Condition E	mean	stdev
Adjunct Islands	My dad's usually working all day, Jason, at the post office.	5.50	2.79
	I want a pink chihuahua, Jason, in a stroller.	6.06	3.25
	The owner has to work, Jason, tomorrow.	1.88	3.56
	I think my mother, Jason, got in an accident.	3.72	3.18
	John has traveled, Jason, to the edges of the Earth.	5.36	3.29
		4.50	

	Condition F: island violation	mean	stdev
Subject Islands	The description was really insane of the party.	2.45	3.26
	Of which race did the winner finish in less than 10 minutes?	4.71	3.60
	What did the destruction of make the children cry?	1.38	2.77
	From where would no view make Sarah happy today?	2.31	2.13
	The book gets skipped every year, about the Great Depression.	3.08	2.31
		2.78	

Coordinate Structure Islands	What did Ally order an omelet with cheese and?	2.52	3.59
	What and jelly was your favorite sandwich as a kid?	4.88	3.33
	What was Chris doing and dancing all night?	2.25	2.25
	Three sheep the farm had a goat and.	0.06	0.25
	What is the shop getting rid of all of and CDs?	0.97	1.58
		2.14	

Wh-Islands	Take her wallet is what Tanya remembers where the crook did	0.30	0.77
	Break the vase is what I wondered when the puppy did	0.53	0.87
	Change his bike tire is what Steve forgot how to do	2.75	3.28
	Sell out already is what Peter is wondering why the show did.	0.72	1.14
	Late last night Kim can't figure out who the police caught.	2.64	3.09
		1.39	