

A Syntactic Analysis of Interpretive Restrictions on Imperative, Promissive, and Exhortative Subjects*

Raffaella Zanuttini, Miok Pak and Paul Portner

March 2011

1 Perspectives on the interpretation of imperative subjects

In this paper we address a long standing issue concerning imperative subjects: What explains their semantic association with the addressee? We do so by working at the intersection of syntax and semantics and by taking into account data from two other clause types, exhortatives and promissives. These types are minimally different from imperatives and yet have not been examined in the same light. We will show that, by adding these missing pieces to the puzzle, we obtain a clearer picture of the syntax and semantics of this class of clauses, labelled *JUSSIVES*. We claim that the jussives update the conversational context in the same way, differing only in a single parameter, namely which conversational participant they relate to. Syntax plays a crucial role in the identification of this participant.

Because there is a long standing tradition of attempts to understand the semantic restrictions on imperative subjects, in this section we describe in broad strokes a number of existing analyses. We also outline our proposal and discuss how it relates to these previous approaches and how it departs from them, both conceptually and in its empirical coverage.

1.1 Syntactic perspectives

It has long been recognized that the subjects of imperative clauses have a restricted interpretation: they refer to, quantify over, or overlap in reference with, the addressee(s):

- (1) a. (You) eat your dinner!
- b. Don't anybody move!
- c. Boys be the cops and girls be the robbers! (Schmerling (1982, p. 216))

In the literature, the issue of how imperative subjects are interpreted is often mixed together with an analysis of the licensing of null subjects in imperatives. This connection seems natural for two reasons: First, it is well known that the subjects of imperatives can be null in all languages, even those that are

*This research was supported by a grant from the National Science Foundation awarded to Paul Portner and Raffaella Zanuttini (BCS-0234278, "Clause Types: Form and Force in Grammatical Theory"). The grant enabled us to form a research team in which Miok Pak was a post-doctoral fellow; our graduate student Simon Mauck made important contributions as well, especially in helping us broaden our knowledge of the typology of imperatives. We thank Marcel den Dikken and the NLLT reviewers for their insightful comments that have helped us clarify many aspects of this article. We also thank the audiences at GURT 2004, the Linguistic Society of Korea 2004 conference, the 14th Japanese/Korean Linguistics Conference (2004), the LSA Summer Institute (2005), the Sixième Colloque de Syntaxe et Sémantique à Paris (2005), the DGfS/GLOW Summer School (2006), NELS 37 (2006), the 16th International Conference on Korean Linguistics (2008). We also thank Bob Frank, Tom Leu, Young-Key Kim-Renaud, Shigeru Miyagawa, Mike Diercks and Jong-Un Park for their valuable comments.

not ordinarily pro-drop. Second, theories of the licensing of null subjects often appeal to grammatical mechanisms that determine their interpretation, for example the presence of ϕ features, or deletion under identity. In broad outline, we can identify three main approaches to the interpretation (and, in some cases, licensing) of imperative subjects:

(A) A special imperative subject, which can be null, itself brings in the interpretive restrictions. For example, Schmerling (1982) proposes that the subject of an imperative has two special properties: it involves reference to the addressee and it is of the category IMP/IV, combining with a verb phrase to yield an imperative sentence. The essential idea is that the only way to make an imperative clause (something of category IMP) is to use a subject that has the interpretive restrictions built into it. The work of Platzack and Rosengren (1994, 1998) may be seen as expressing a similar idea in a minimalist framework. The difficulty with Schmerling's analysis is that it seems to require separate lexical entries for noun phrases which can serve as the subject of either an imperative or a non-imperative clause; thus *you* is IMP/IV in imperatives, but must be of another category in other clauses.

(B) A higher noun phrase controls the interpretation and licenses the null subject. We see several implementations of this idea. The performative hypothesis (e.g. Downing 1969) claims that the interpretation of the subject is determined by an argument of the higher performative predicate, and that it can be null because of an operation of deletion (parallel to control). Han (1998) has a similar idea, proposing that the subject is PRO and is controlled by an implicit (phonologically unrealized) argument of a null imperative operator.¹ A slightly different version is found in Beukema and Coopmans (1989). Their analysis states that a null subject of an imperative is a variable bound by a (possibly null) element in a topic position in the left periphery, and that the interpretation of a null topic is determined by discourse.²

(C) A functional projection both determines the interpretation and licenses the null subject. Several analyses treat the subjects of imperatives as pro, with its meaning determined by a functional head present in the structure. We find different claims about precisely which functional head is involved: a special imperative Infl (Rupp 1999), a special imperative T (Jensen 2003b), or a special imperative C (Bennis 2006; 2007). Our approach fits broadly into this category.

Our approach to the imperative subjects is in line with the proposals of Jensen (2003b) and Bennis (2006), in the sense that we also attribute the interpretive restrictions on the subjects to the work of a functional projection present in the clausal structure. In our view, the interpretation of a null imperative subject is determined by a functional head that is responsible for the interpretation of imperative subjects in general, both when they are null and when they are overt. More specifically we argue that, when sufficiently local, such a functional head both semantically binds the subject and enters into an agreement relation with it, resulting in restrictions on its person features. Moreover, our proposal is more general than the ones just cited, because we do not tie the presence of this functional projection to imperative verbal morphology; rather, we see it as present in all the sentential forms canonically associated with imperative force, including those which employ verbs in the subjunctive or infinitival forms.

Existing analyses of imperatives have in general seen this clause type as exhibiting unique properties, and indeed imperatives have unique properties when compared to the other major clause types, declaratives and interrogatives. However, there are two other clause types that are syntactically and semantically close to imperatives: exhortatives and promissives. We believe that comparing their similarities and differences both provides important evidence for the proper analysis of imperatives, and supports our approach to them.

¹Han (1998, 136-7) treats the argument that controls the PRO subject of an imperative as an implicit argument of a higher imperative operator; it is not clear whether this implicit argument is syntactically present or not. If it is, presumably it is pro, and we'd still have to know how this pro is licensed and how it gets its 2nd person interpretation. If it is not syntactically present, it is difficult to see how to fit it into any of the ideas of how control works that are present in the literature (i.e., that it is an instance of binding, movement or Agree).

²Beukema and Coopmans discuss the syntactic analysis of quantificational subjects, but not their interpretation. They assume that it is possible to treat other lexical subjects, like those in (1c), as quantifiers.

Though the subjects of imperative clauses have been well-studied, the subjects of exhortatives and promissives (a cross-linguistically rare clause type) have not received much attention in the literature. Exhortative clauses are used to urge that the speaker and addressee do something together, and promissives are used to make a promise. Interestingly, they exhibit parallel interpretive restrictions. We can observe all three of these types in Korean:

- (2) a. Cemsim-ul sa-**la**. (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.'

Korean imperatives, promissives, and exhortatives differ syntactically from one another in the choice of sentence final particle, and they differ semantically in the interpretations of their subjects. Just as the subject of an imperative is associated with the addressee, the subject of a promissive is restricted in interpretation to the speaker, and that of an exhortative to the speaker and addressee together. Grammatically speaking, the subject of an imperative is second person, that of a promissive is first person singular or plural exclusive of the addressee, and that of an exhortative is first person plural inclusive of the addressee.

In previous work, we have shown that imperatives, promissives, and exhortatives in Korean share many grammatical properties, and argued that they should be grouped together into a single *JUSSIVE* type (Pak, Portner and Zanuttini 2004; 2008a; 2008b). We have outlined the proposal that a functional head bearing a person feature, the *JUSSIVE HEAD*, is present in all three sub-types of jussive clauses, and that they differ in terms of which value for the person feature is borne by the Jussive head, and as a result in the interpretation of the subject. In this paper, we provide an explicit and detailed formulation of the agreement relation between the Jussive head and the subject, offer an account of a range of different subject types, and show that the proposed structures are compatible with a compositional semantics that yields the desired meaning.

1.2 Semantic and pragmatic perspectives

Most work in the generative tradition assumes an important role for syntax in explaining the properties of imperative subjects. However, we have learned, based on personal communications with several linguists, that it is often assumed that these syntactic restrictions are a corollary of the semantics and pragmatics of imperatives. In this section we offer a brief discussion of what we see as the shortcomings of this view. In other words, we provide a justification of why we believe that a syntactic approach is needed.

We can think of two ways to understand the idea that the interpretation of imperatives is responsible for the restrictions on their subjects. From the perspective of someone who does not believe that there is anything in the syntax that distinguishes imperatives from other clause types, one could observe the function that an imperative has, namely to issue a directive to the addressee, and conclude that this function can only be performed with a sentence whose subject is second person. This does not seem to us to be an adequate approach from the perspective of generative linguistics. Our goal is to give an autonomous, compositional theory of how each structure is generated and of how the structure is associated with the meaning it has. In general, one cannot appeal to the final meaning of a sentence in explaining which lexical items go into the sentence that has that meaning; it is the other way around: the final meaning is what it is because of the pieces and the way in which they are put together.

The second way to understand this semantic/pragmatic perspective would begin with the assumption that the subject could in principle have any reference (speaker, addressee, others, and various groups of the above), but only a limited range of these can be used to perform a useful speech act. A first requirement for such a theory is an explanation of what that speech act is and some explanation for how the grammar forces the sentence to perform that speech act.³ Even if such a theory is forthcoming, it faces severe difficulties in explaining the interpretation of imperative subjects (similarly for promissives and exhortatives.) In particular, a pragmatic explanation would be unable to explain why the addressee must be represented as the *subject* of the sentence. For example, assume that we have principles ensuring that any imperative sentence is associated with a speech act ‘The addressee is to make *p* true.’ Consider the examples in (3):

- (3) a. (You) be kissed by John!
 b. *John kiss you!

Given that (3b) would be synonymous with (3a) if it were grammatical, the pragmatic theory should allow both of them. That is, as long as a noun phrase referring to the addressee is present in the sentence, the injunction ‘The addressee is to make *p* true’ should make sense. In fact, even if the addressee is not represented in the sentence, it should be possible to apply this speech act. There is no reason why one could not be enjoined to make *p* true, when *p* is the meaning of a sentence like (4). The relevant meaning would be ‘See to it that the table is clean!’ In fact, we can express this in English with a (somewhat archaic) *let*-imperative, as in (5):

- (4) *The table be clean!
 (5) Let the table be clean.

Other languages allow imperative-like forms expressing this type of meaning. For example, Bhojpuri, which has a fully inflected paradigm in imperatives, exhibits examples in which the addressee is not the subject, and not even one of the arguments, as shown in (6).⁴ (See Aikhenvald 2010 for brief descriptions of several other languages similar to Bhojpuri.) A pragmatic theory would have difficulty explaining why the standard imperative (4) is unacceptable, given the grammaticality of (5) and (6). We will discuss how we view these and similar examples in section 3.2.

- (6) a. Layke tini baje aavẽ (Bhojpuri)
 children three o'clock come-imp.3p
 ‘The children come at 3 o'clock!’
 b. Tebulwa: sa:ph rahe!
 table-nom. clean-nom be-imp.3s
 ‘The table be clean!’

The proposal in Potsdam (1998) comes as the closest in providing an explanation for the requirement that the addressee be represented as the subject in imperatives. It argues that a null imperative subject has second person features that determine its interpretation, and that these features are licensed “via semantic, and not purely syntactic, means” (p. 219). It takes the core meaning of an imperative to be as in (7):⁵

- (7) *Core meaning of an imperative*
 In an imperative, it is proposed that the addressee bring about an event. (Potsdam 1998, 215)

³As far as we know, there are no theories of this discussed in the syntactic literature, other than the performative hypothesis, but the performative hypothesis explains the meaning of the subject as the result of a syntactic process, not as a result of pragmatic reasoning.

⁴We are grateful to Shaligram Shukla for providing the Bhojpuri data present in this paper.

⁵One may also see Han (1998) as suggesting that the interpretation of the subjects of suppletive imperatives (that is, those in subjunctive or infinitive form) is determined pragmatically; however, she is not explicit on this point.

Potsdam (1998) reasons that (i) the entity that brings about an event is the agent, and (ii) the agent of an event is typically represented as the subject; thus, (7) implies that the addressee will be the subject.

Potsdam's idea is based on a tight connection between the entity that brings about an event, the agent, and the subject position. But we know that agents can be represented in other syntactic positions as well; for example, in passives, agents are typically *by*-phrases. So, if the requirement is simply that the addressee must be the agent, what is wrong with an imperative in the passive form, where the addressee is expressed by the *by*-phrase? (for example, **John be kissed by you!*) It seems to us that a general notion that the meaning of imperatives involves the addressee bringing about a certain state of affairs is not sufficient to derive the interpretive restrictions on imperative subjects.

For the same reasons we saw above, a pragmatic account cannot explain the restrictions on jussive subjects in Korean. Let us illustrate this fact briefly with promissives. The idea here would be that a promise by its very nature involves the speaker doing (or refraining from doing) something, and this type of meaning can only be expressed by a sentence whose subject refers to the speaker. Furthermore, according to such a pragmatic approach, that subject must have first person features in order to let it refer to the speaker.

Such a pragmatic approach to promissive subjects cannot account for the fact that a first person noun phrase must be present in the sentence. Suppose that the pragmatics of promising is something like "the speaker is committed to making *p* true". There is no reason *p* could not be something like the proposition expressed by (8a), lacking a noun phrase that refers to the speaker. However, there are no promissive clauses of this form in Korean, as illustrated in (8b):

- (8) a. The dishes are clean.
b. *Cepsi-ka kkaykkutha-ma. (Korean)
dish-NOM clean-PROM

Even if the pragmatic analysis could explain why the promissive clause must contain a first person noun phrase, it has no way of ensuring that this noun phrase is in subject position. Therefore, it predicts that an example like (9a) would be as acceptable as (9b) and (9c):⁶

⁶We observe that a similar pattern holds in English sentences with *promise*. In such sentences, the matrix subject, referring to the "promiser", has a special connection to the subject of the embedded clause:

- (i) Sarah promised PRO to kiss John.
(ii) Sarah promised that she would kiss John.
(iii) ??Sarah promised that John would be kissed by her.
(iv) #Sarah promised that John would kiss her.

While it is not surprising that the subject of *promise* binds the subject of the infinitival clause in (i), because it is a control verb, there is also a difference between (ii) and (iii), with a finite embedded clause. The meaning of (ii), where the matrix subject binds the embedded subject, is the same as (i): it reports a garden variety promise. Example (iii), in which the embedded clause has been passivized, is quite odd, probably for independent reasons. Crucially, while (iv) is grammatical, it has a slightly different meaning: it implies that Sarah can affect John's behavior so that he will kiss her. The relation between matrix and embedded subject in (iii) is very similar to what Potsdam (1998) calls the CONTROL RELATIONSHIP in his analysis of imperatives.

The pattern in (i)-(iv) is distinctive to verbs which report jussive speech acts (others include *swear* and *require of*). In contrast, non-jussive verbs such as *hope* show no such relationship between the matrix subject and the subject of a finite complement:

- (v) Sarah hoped PRO to kiss John.
(vi) Sarah hoped that she would kiss John.
(vii) ??Sarah hoped that John would be kissed by her.
(viii) Sarah hoped that John would kiss her.

It seems that *promise* has some of the syntactic properties of the jussive head, in that it imposes restrictions on the embedded subject, even when the embedded clause is finite. Though we are merely speculating here, it is possible that the jussive head is syntactically similar to a lexical jussive verb; in this sense, our proposal could be seen as a modern version of the performative hypothesis.

- (9) a. * Jon-i na-lul/eykey khisuha-ma. (Korean)
 John-NOM me-ACC/DAT kiss-PROM
 Intended meaning ‘I promise that John will kiss me.’
- b. Nay-ka Jon-ul/eykey khisuha-ma.
 I-NOM John-ACC/DAT kiss-PROM
 ‘I promise to kiss John.’
- c. Nay-ka Jon-hantey khisu-lul patu-ma.
 I-NOM John-from kiss-ACC receive-PROM
 ‘I promise to be kissed by John.’

It is clear that there is a syntactic constraint on promissive subjects, and the pragmatic account fails to explain this constraint. Similar reasoning shows us that a pragmatic approach alone would also be unable to explain the restrictions on imperative and exhortative subjects in Korean. Based on these considerations, we develop an analysis of jussive subjects which gives a central role to syntax.

1.3 Overview of the remainder of the paper

In this paper we argue that the interpretative restrictions on the subjects of jussive clauses are determined not only semantically, but also syntactically; more specifically, they result from the presence in the structure of a functional head unique to this clause type, which semantically binds the subject and enters an agreement relation with it. Our proposal is that this head is characteristic of jussive clauses across languages, and that it bears person features across languages (even in those where T does not exhibit person features). In particular, we propose that all languages have a Jussive head with second person features; this explains why all languages have second person imperatives, and why all languages allow second person subjects to be null in imperatives, even when they do not generally allow null subjects. In some languages, though not all, the Jussive head can also host first person features, and first person features inclusive of the addressee; in such cases, the language will also allow jussive clauses with null subjects that are interpreted as referring to the speaker, or to the speaker and the addressee. Korean is such a language, as we will discuss in detail.

In section 2 we provide the empirical motivation and the linguistic intuition that underlie our overall claim concerning the interpretive restrictions on the subjects of jussive clauses. In section 3 we give our analysis of the restrictions on jussive subjects. Finally, in section 4 we show that the syntactic forms that our analysis yields can be associated with the semantic values that correspond to jussive clauses.

2 The person features of jussive subjects

In this section we show that the interpretive restrictions on imperative and other jussive subjects plausibly result from the presence of person features in the functional structure of jussive clauses. We begin by discussing English imperatives, and then move on to Korean and show how subjects of jussive clauses more generally exhibit what we take to be the same kind of interpretive restrictions.

It has long been observed that subjects of imperative clauses in English seem to have second person features (cf. Bolinger 1967, who provides several earlier references). Evidence for this comes from two main observations: (A) imperatives exhibit second person pronouns in tag questions, as in (10); (B) imperatives may have second person reflexives in object position not only when the subject is an overt second person pronoun, but also when the subject is null, as in (10), when it is a proper name, as in (11),⁷ and when it is a quantificational subject, as in (12):

⁷See Downing (1969), Davies (1986), Potsdam (1998), Rupp (2003), Jensen (2003b) and Zanuttini (2008) for arguments that the crucial noun phrases, such as *Mary* in (11), are not vocatives, but rather true subjects.

- (10) Wash *yourself*, won't you!
 (11) Kids, Mary wash *yourself*, John take the dog for a walk!
 (12) Everyone wash *yourself*!

From this pattern, we draw two conclusions. One is that imperative clauses contain an element with second person features that binds the second person anaphor in (10)–(12).⁸ The other is that the second person features present in an imperative have something to do with this particular clause type; this is shown by the fact that proper names and quantificational subjects do not freely co-occur with second person anaphors in other clause types, like declaratives:⁹

- (13) a. Mary washed **yourself*.
 b. Everyone washed **yourself*.

The linguistic intuition that guides our analysis of this set of data is that the second person feature that we see at play in cases like (10)–(12) is brought in by a functional head that is unique to this clause type (thus not present in declaratives or interrogatives), namely the Jussive head.

One might be skeptical of this hypothesis. After all, if we invoke a functional head with person features, why would second person be possible, and not first person, say? In fact, other values for the person feature are possible in the Jussive head. Korean provides the crucial evidence for this claim, and therefore gives support to our approach. We present such evidence next.¹⁰

When Korean jussive clauses contain a bound pronoun, like a possessor within the object noun phrase, we see the following pattern: the bound pronoun exhibits first person features in promissives, second person features in imperatives, and first person inclusive of the addressee in exhortatives. This is true when the subjects are pronominal, whether overt (as in 14) or null (all of the subjects in (14) can be dropped). More interestingly, it is also true when the subject is a lexical element, for example the noun corresponding to English *mother*, or a proper name like *Inho*. As we see in (15), even in the presence of these subjects, the bound pronoun exhibits first person features in a promissive clause (15a), second person features in an imperative clause (15b), and first person plural inclusive in an exhortative clause (15c):¹¹

⁸ We take this element to be the subject. Kratzer (2009) argues that, in cases where we traditionally say that the subject binds an anaphor, it is actually a functional head, namely v , that does so: v and the external argument share their ϕ -features via PREDICATION (cf. (19) in Kratzer 2009); since v binds the reflexive, they also share all their ϕ -features via FEATURE TRANSMISSION UNDER BINDING. While Kratzer's approach fits well with our views, here we will continue to describe the phenomenon in the more familiar terms.

⁹ Chris Collins, Marcel den Dikken, Eric Potsdam and an anonymous reviewer have pointed out to us that a second person bound element in co-occurrence with a quantificational subject is not completely ruled out in declaratives and interrogatives. For example, the following are two naturally occurring examples provided to us by Chris Collins:

- (i) (Context: Marchers protest for federal immigration reform) Has everyone here forgotten your own history???
www.chicagobreakingnews.com/.../demonstrators-march-for-federal-immigration-reform.html
 (ii) (Context: message posted on Myspace) Has everyone on here (My Space) received your class of 1997 reunion invitation?
www.myspace.com/1997richmond

We agree that such examples are acceptable. But we think that there is a crucial difference: in declaratives and interrogatives, examples of this type require a special context, whereas in imperatives they do not. This difference must be explained.

¹⁰ One might think that English exhortatives like *Let's go!* are like imperatives with first person plural (inclusive) features. While this may be correct, showing that it is would require a detailed analysis of the syntax of this clause type. Note that *Let us ...* is not equivalent to *Let's ...*, as it makes sense for a group of prisoners to say to their guard *Let us go!*, but not *Let's go!* *Let us ...* clearly has a use as an imperative, with a second person subject, and thus *Let's ...* is not simply its phonetically reduced form.

¹¹ Of course the asterisks in (15) only apply to the bound reading of the possessive pronoun. As a reviewer notes, in Korean the use of pronouns is restricted, and the most natural way to express the sentences in (15–16) is by repeating the proper nouns:

- (i) Emma-ka_i emma-uy_i chinkwu-lul teyliko o-ma.
 mother-NOM mother-POSS friend-ACC bring come-PRM

- (14) a. *Nay-ka_i nay_i/ *ku-uy_i chinkwu-lul teyliko o-ma.* (PROMISSIVE)
 I-NOM my/ his friend-ACC bring come-PRM
 ‘I’ll bring my friend.’
- b. *Ney-ka_i ney_i/ *ku-uy_i chinkwu-lul teyliko o-ala.* (IMPERATIVE)
 you-NOM your/ his friend-ACC bring come-IMP
 ‘You bring your friend.’
- c. *Wuli-ka_i wuli_i/ *ku-uy_i chinkwu-lul teyliko o-ca.* (EXHORTATIVE)
 we-NOM our/ his friend-ACC bring come-EXH
 ‘We will bring our friend.’
- (15) a. *Emma-ka_i nay_i/ *kunye-uy_i chinkwu-lul teyliko o-ma.* (Inho-ka_i ney_i chinkwu-lul
 Mother-NOM my/ her.FEM friend-ACC bring come-PRM (Inho-NOM your friend-ACC
 teyliko o-ala.)
 bring come-IMP)
 ‘Mommy will bring her friend. (Inho bring your friend)’ (Mommy = speaker)
- b. *Inho-ka_i ney_i/ *ku-uy_i chinkwu-lul teyliko o-ala.* (Emma-ka_i nay_i chinkwu-lul
 Inho-NOM your/ his friend-ACC bring come-IMP. (Mother-NOM my friend-ACC
 teyliko o-ma.)
 bring come-PRM)
 ‘Inho bring your friend. (Mommy will bring her friend.)’
- c. *Emma-hako Inho-ka_i wuli_i/ *ku-uy_i chinkwu-lul teyliko o-ca.*
 Mother-and Inho-NOM our/ his friend-ACC bring come-EXH
 ‘Mother and Inho will bring our friend.’ (Mother = speaker)

This pattern is especially important because the first and second person features on the subject are not associated with these nominals in the lexicon; that is, *mommy* is typically third person, not first or second. First person features on *mommy* are only possible in promissives and second person features on *Inho* are only possible in imperatives. Of course these nominals can be used to refer to the speaker/addressee in declaratives and interrogatives as well; however, in these cases they crucially differ from imperatives in not being able to co-occur with a bound first or second person element. For example, although (16a) can be spoken by the mother to convey that she’s putting on her shoes, the first person possessor is still impossible, as shown by (16b):¹²

‘Mommy will bring mommy’s friend.’ (Mommy = speaker)

However, our survey of 30 native speakers of Korean shows that possessive pronouns are also acceptable in jussives.

¹²Once again, the asterisks only apply to the bound readings of the pronouns. If the subject marker is replaced with a topic marker, the examples in (16) are more acceptable. (Making the sentence a tag question also seems to help.) These subjects have a contrastive interpretation, as in (i):

- (i) ?*Emma-nun nay sinpal-ul sin-ko Inho-nun ney sinpal-ul sin-nun-ta, kuchi?*
 mother-TOP my shoes-ACC put-on-and Inho-TOP your shoes-ACC put-on-Pres-DECL right
 ‘Mommy_i (=speaker) is putting on her_i shoes and Inho_i is putting on his_i shoes, right?’

In such cases, there might be a null 1st or 2nd person subject that binds the pronoun. Alternatively, it could be that first person features can be assigned to nominals in topic position. In either case, the 1st and 2nd person features are not a lexical property of “mommy” or “Inho”. According to Lee (2003), the subjects *emma* and *Inho* in (i) above are contrastive topics; however, for simplicity throughout the paper we will gloss them as topics (without distinguishing between topics and contrastive topics).

We note that the most natural way of expressing this meaning is by repeating “mommy”/“Inho” in the possessive:

- (ii) *Emma-nun Emma sinpal-ul sin-ko Inho-nun Inho sinpal-ul sin-nun-ta.*
 mother-NOM mother shoes-ACC put-on-and Inho-TOP Inho shoes-ACC put-on-Pres-DECL

- (16) a. Emma-ka sinpal-ul sin-nun-ta.
 mother-NOM shoes-ACC put-on-Pres-DECL
 ‘Mommy_i (=speaker) is putting on her_i shoes.’
- b. *Emma-ka nay sinpal-ul sin-nun-ta.
 mother-NOM my shoes-ACC put-on-Pres-DECL
 (intended meaning) ‘Mommy_i (=speaker) is putting on her_i shoes.’
- c. *Inho-ka ney sinpal-ul sin-nun-ta.
 Inho-NOM your shoes-ACC put-on-Pres-DECL
 (intended meaning) ‘Inho_i (= addressee) is putting on his_i shoes.’
- d. *Emma-ka nay sinpal-ul sin-ni?
 mother-NOM my shoes-ACC put-on-INT
 (intended meaning) ‘Is mommy_i (=speaker) putting on her_i shoes?’
- e. *Inho-ka ney sinpal-ul sin-ni?
 Inho-NOM your shoes-ACC put-on-INT
 (intended meaning) ‘Is Inho_i (= addressee) putting on his_i shoes?’

The bottom line here is that the person features associated with jussive subjects are not determined by the lexical material in the subject position, but rather by the broader grammar of the clause type. That is, in the examples in (15), the person feature of the subject must be attributed to the clausal structure: in our proposal, to the presence of the Jussive head. In the next section, we develop a precise syntactic analysis of this pattern.

3 The contribution of the Jussive head

The central hypothesis of this paper is that all jussive clauses contain a Jussive head that hosts person features and is key to explaining the interpretive restrictions of jussive subjects. In this section, we will develop these ideas in greater detail. We begin in section 3.1 by laying out our hypothesis and the detailed assumptions necessary to implement our analysis. Then, in section 3.2, we discuss the case in which the Jussive head is in a sufficiently local relation with the subject and enters an agreement relation with it; we claim that this situation is widely attested cross-linguistically. We contrast this case with the (less cross-linguistically common) one in which the Jussive head is not in a sufficiently local relation with the subject and therefore does not enter an agreement relation with it. In section 3.3, we offer a detailed discussion of null and overt subjects in jussives, focusing on Korean. Finally, in section 3.4, we briefly compare our ideas to previous work on imperatives.

3.1 Underlying assumptions and claims

The core of our proposal is that certain key semantic and syntactic properties of jussive subjects are explained by the presence of the Jussive head. This element leads to the directive meaning of promissive, imperative, and exhortative clauses by singling out a participant in the conversation as one on whom a requirement (speaking broadly) is imposed; it does this, as will be discussed in more detail in section 4, through a presupposition that identifies that participant, and by functioning as a λ operator which, in certain syntactic configurations, abstracts over the subject. Here we lay out the ideas and assumptions necessary to explain in detail the syntactic properties of the Jussive head and its relation to the subjects of jussive clauses.

‘Mommy_i (=speaker) is putting on mommy’s_i shoes and Inho_i is putting on Inho’s_i shoes.’

- (17) 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.
- (18) Assumptions concerning T:
- a. A T head has a case feature.
 - b. A T head may or may not have person features (across languages and within a single language).
- (19) Claims about (structurally adjacent) features:
- a. Features on structurally adjacent functional heads form a bundle and probe as a unit.
 - b. A bundle of features results from head-to-head movement.
 - c. A bundle of features can contain at most one instance of a given feature.

In (19) we set out our idea about how multiple heads in a clause work together with respect to Agree: though features might enter the derivation through different instances of Merge, when they are in a given local domain they are all accessible to the same syntactic operations. In particular, thinking of features on functional heads that are structurally adjacent (i.e., merged one after the other), we claim that, when they enter a syntactic relation, they function as a unit, as if they were a bundle of features on a single head (19a). This intuition is not novel. We find it in the notion of extended projection in Grimshaw (2000), where features on a number of different functional heads are all accessible to certain syntactic operations, like selection. The more specific idea that they function as a unit, initiating certain syntactic relations, can be found in very recent work, like Sigurðsson (2009, 2010), where features scattered on different heads are argued to function as a bundle of features on a single head. But it was also present (in different terms) in older proposals, like Pollock's (1989) seminal paper (and many works that followed along those lines), where different features like tense, person and number may come into the derivation on different heads, but end up on a single head as a result of head movement, and together enter an agreement relation with the subject. Following this tradition, and for the sake of concreteness, we assume that features form a bundle as a result of movement, from head to head (19b). We also assume that each bundle can only have one instance of a given feature (19c); so, for example, once a bundle contains features for tense, person and number, the head that carries those features may raise and adjoin to a head that has a different feature ([Q], for example), but not to a head with a tense, person or number feature.

The sharing of features between a functional head and a maximal projection can take place in more than one way. (A) When the functional head is an operator that locally binds the maximal projection, the former transmits its features to the latter. This is a commonly held assumption, which is made explicit in Kratzer's work with the mechanism labeled *Feature Transmission under Binding*, by which the bindee acquires the ϕ -features of the binder:

- (20) Feature Transmission under Binding (Kratzer 2009):
 The ϕ -feature set of a locally bound pronoun unifies with the ϕ -feature set of the head that hosts its binder.

(B) When the functional head is not an operator that binds the maximal projection, we need a different feature transmission mechanism, along the lines of Chomsky’s (2001) notion of the AGREE operation. A functional head (probe) and a maximal projection (goal) enter an Agree relation if they share a certain feature, the probe c-commands the goal, and no other element that bears the same feature and is an “active goal” intervenes. A maximal projection is an active goal if it has an uninterpretable feature (case) that needs to be eliminated. When the probe and the goal Agree, the probe’s uninterpretable features are valued and deleted, and so is the case feature of the goal (hence the goal is no longer an active goal).

In a convergent derivation, when probe and goal enter an Agree relation, they end up with the same value for the features they share. This requirement is expressed in Chomsky (1995, 309), where it is proposed that a mismatch of features *cancel*s the derivation.¹³ It is also made explicit in Kratzer (2009), where unification is taken to be the mechanism to obtain the sharing of features, following Barlow (1988). In that work, the operation *Agree* is defined in terms of feature unification as follows:

(21) Agree (Kratzer 2009):

The ϕ -feature set of an indexed head α that is in need of ϕ -features (the probe) unifies with that of an item β (the goal) if β is the closest element in α ’s c-command domain that has the needed features.

Whether by feature matching or by unification, what is important is that the feature values of probe and goal are the same as a result of Agree, and that the value can come from either the probe or the goal, as long as there is no clash.

Finally, let us also make explicit our assumptions concerning person features on XPs that can occur as subjects. We assume that pronouns come in different kinds, which differ in having or lacking ϕ -features, as convincingly argued in Déchaine and Wiltschko (2002). Focusing on English, we assume that personal pronouns like *you*, *we* and *I* may enter the derivation without a person feature and acquire it via binding by an operator (see Baker 2008, and also Bianchi 2006, Sigurðsson 2004, 2010). In such cases, they are instances of ‘minimal pronouns’ in the sense of Kratzer (2009), namely pronouns that acquire their person feature via binding; they contrast with pronouns that are not bound by an operator, which may enter the derivation with person features. We also assume that lexical nouns do not have a person feature, and that the person feature of a DP containing a lexical noun depends on the content of D. Like a pronoun, D may acquire a person feature in the course of the derivation, via binding. Finally, we assume that quantifiers lack a person feature, but are associated with a partitive phrase (which provides their domain) that may acquire a person feature in the course of the derivation, via binding.

3.2 How the Jussive head contributes its person features

There are two syntactic strategies by which the Jussive head contributes its person feature to the interpretation of the clause. One is by semantically binding the subject and entering an agreement relation with it, thus imposing restrictions on its person features; this is what gives rise to the type of jussive clause that is commonly found cross-linguistically, in which the subject exhibits the interpretive restrictions described in section 2. The other is by being present in the derivation without entering a semantic or syntactic relation with the subject. We discuss these two cases in turn.

3.2.1 Cases where the Jussive head agrees with the subject

As stated in (17b), we assume that in all languages the Jussive head can enter the derivation with an interpretable second person feature ($[person : 2]_i$), yielding an imperative. The subject enters the derivation with an interpretable number feature and a case feature that is uninterpretable and makes it an active goal.

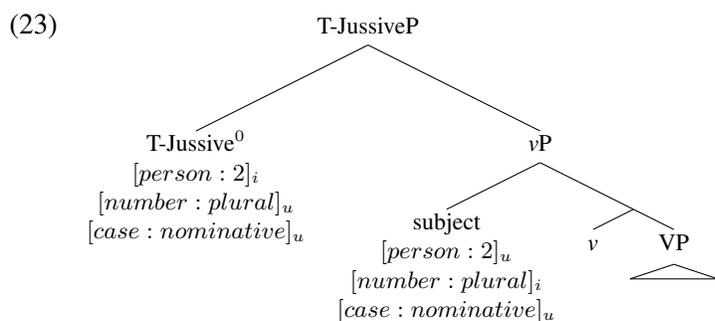
¹³In Chomsky (1995), *cancel* is a technical term that allows him to distinguish a cancelled derivation from a non-convergent one.

Many proposals in the literature view imperatives as lacking the functional head T, or having a T that is different from that of indicative and subjunctive clauses, by carrying a special kind of (future-oriented) tense feature and lacking some or all ϕ -features. Leaving aside the issue of whether there is a temporal “tense” feature that introduces some type of future meaning in imperatives, we assume that T in imperatives enters the derivation with a case feature, though without a person feature.

As stated in (19a), the features of structurally adjacent functional heads form a bundle and function as a unit in the syntactic derivation. Suppose that we have an imperative like (22):

- (22) Hablad! (Spanish)
 ‘Talk!’ (2nd pl)

After the verb and the subject (and possibly other functional projections, like Aspect) are merged, T enters the derivation with a number and a case feature, but without a person feature. When the Jussive head is merged, it brings in a person feature but no other feature that would duplicate the features of T. T raises to Jussive and the features on these heads form a bundle and probe as a unit. For ease of graphic representation, we represent them as features on a single functional head, which we label T-Jussive for convenience. The T-Jussive head searches its c-command domain for the closest active goal; it finds the subject, which is the closest XP that has a number feature and an unchecked uninterpretable feature (i.e., the case feature). The T-Jussive head and the subject enter an Agree relation, as a result of which they share the values for the number feature, by (21). As a side effect of the Agree relation, the case feature on the subject acquires a value (nominative) and is eliminated.¹⁴ Moreover, because the Jussive head contains a second person feature and is a lambda operator that semantically binds the subject (17d), the subject acquires a second person feature via binding, by (20).¹⁵ In the tree below, a subscripted *i* indicates that a feature is interpretable, while *u* indicates that it is uninterpretable. We have the subscript *u* on the person feature of the subject, though it is hard to say whether the person feature is really interpreted on the subject or on the binder, and our system would work if it were interpretable on both, as we discuss in section 4 (below 49b).¹⁶



Before we delve into the details of jussive subjects in English and Korean, let us raise one more issue: the reader might wonder why we are proposing that the Jussive head enters an Agree relation with the subject. After all, the fact that it semantically binds the subject is sufficient to guarantee that they share person features, by (20). We appeal to the Agree operation because we need to ensure that a relation is established between the Jussive head and the subject: in canonical imperatives, we always observe interpretive restrictions and the presence of second person features on the subjects (as opposed to on another argument, as discussed in section 1.2). The proposal that the Jussive head and T form a unit and together probe the

¹⁴Zhang’s (1990) cross-linguistic investigation points out that imperative subjects bear nominative case.

¹⁵Alternatively, if we were to follow Chomsky in assuming that the subject enters the derivation with a valued person feature, we would have to assume that the only syntactic derivations that yield a grammatical result are those in which the value for person of the T-Jussive head and the subject match.

¹⁶This reasoning applies to locally bound pronouns. We follow Kratzer (2009) in assuming that pronouns that are not bound enter the derivation with person features; in such cases, the person feature is interpretable on the pronoun.

subject allows us to capture the fact that the Jussive head always affects the subject in this kind of imperatives. These special properties of subjects are something that our analysis must capture: it is the basis of our criticism of the pragmatic approach, which cannot capture them.

English. We can now go back to the English examples in (10)-(12), introduced in section 2 as cases in which the subject exhibits second person features:

(A) We view an imperative like (10) (*Wash yourself, won't you!*) as containing a null pronoun in subject position. English does not allow null subjects that refer to the addressee in any other clause type. We argue that this is due to the fact that the T-Jussive head, which contains an interpretable second person feature, semantically binds the subject and Agrees with it, thus licensing the null pronoun in subject position.¹⁷

(B) As stated above, we assume that lexical nouns do not have a person feature, and that the person feature of a DP is determined by D. Viewing proper names as a type of lexical noun, we analyze an imperative like (11) (*Kids, Mary wash yourself, John take the dog for a walk!*) as containing two conjoined DP's that consist of a null D and a proper name. As a consequence of the T-Jussive head binding and probing the subject, the null D acquires a second person feature. In other words, these subjects contain a D that is the null counterpart of the *you* that can be seen overtly in *you Mary, you John* (*Kids, you Mary wash yourself, you John take the dog for a walk!*).¹⁸

(C) Finally, we analyze an imperative like (12) (*Everyone wash yourself!*) as having a subject QP that contains a null partitive phrase. Quantificational subjects in imperatives have two distinctive properties: they are always interpreted as ranging over a set containing the addressee, and can readily co-occur with a 2nd person bound element in object position (by 'readily' we mean that they do not require a special context, thus differing from interrogatives and declaratives; see note 9). Our intuition is that the same mechanism that makes possible a null second person subject in imperatives (as in *Wash yourself!*) also makes possible the null partitive phrase with a second person feature. This null partitive phrase can then serve as the antecedent of the reflexive pronoun in object position (either directly or through *v*, as mentioned in note 8). To implement this idea, we assume that, in the case of English QPs, the T-Jussive head Agrees with a null partitive phrase associated with the quantifier and binds it; hence, the partitive phrase ends up bearing a second person feature.

As pointed out by an insightful reviewer, this way of looking at things makes two predictions. The first is that, if the T-Jussive head can enter an Agree relation with the partitive phrase in imperatives, we should also find that T alone can enter an Agree relation with the partitive phrase, in declaratives or interrogatives. We think that this is indeed a correct expectation; however, finite T in English does not have a value for the person feature, hence it cannot endow the null partitive phrase with a value for person. The second prediction is that, if finite T with present tense enters an Agree relation with a partitive phrase like *you*

¹⁷Due to space limitations, we cannot discuss what "licensing a null subject" means in modern terms, i.e. how Rizzi's (1982; 1986) licensing mechanism should be expressed today (see the new take on Rizzi's ideas given in Neeleman and Szendrői 2007 or in Holmberg 2005). Hence we limit ourselves to pointing out the existence of a correlation between the presence of an interpretable person feature on the probe and the presence of a null subject as the goal.

¹⁸Ananda Lima pointed out to us that, in her variety of Portuguese (from Brasilia), proper names obligatorily take a determiner, as shown in (i). However, when they occur in imperatives, the overt determiner is impossible (ii):

- (i) *(A) *Maria saiu.*
 the *Mary left.*
 'Mary left.'
- (ii) *Meninas, (*a) Maria se lava, (*a) Vitória come as suas verduras e (*a) Joana arruma o seu quarto.*
 Girls, (*the) *Mary self wash, (*the) Victoria eat the self vegetables and (*the) Joana clean the self room.*
 'Girls, Mary wash yourself, Victoria eat your vegetables and Joana clean your room.'

Following our line of reasoning, she suggests that this is because the determiner *a* is 3rd person, and thus incompatible with the 2nd person value of the T-Jussive head. In contrast, the null determiner lacks a value for person, and thus can acquire the 2nd person value of the T-Jussive head. (The reflexive *se* and the possessive pronoun *seu* are the same in 2nd and 3rd person.)

or *us* in declaratives or interrogatives, we would expect the verb *not* to exhibit verbal *-s*. This is because these pronouns are plural, and generally they do not trigger verbal *-s* on the verb (e.g., *We think/*thinks...*). Indeed, in such cases the verb can fail to exhibit verbal *-s*, as we see in (24):¹⁹

- (24) a. Every one of us think that the war in Iraq is wrong.
b. Everyone of you know this article is true.

A google search for the sequence *Everyone of you* followed immediately by *is* or *are* yields about 114,000 hits for the form *is*, and about 595,000 for the form *are* (search performed on October 7, 2010), a 5 to 1 ratio in favor of *are*.²⁰ Even though the search is imperfect and surely includes irrelevant examples, this imbalance suggests that agreement with the partitive phrase is at the least possible, and likely preferable.²¹

As widely noted in the literature (see Bolinger 1967, Cohen 1976, Davies 1986, Zhang 1990, Platzack and Rosengren 1998, Potsdam 1998, Rupp 1999, 2003 and Zanuttini 2008), imperatives with quantificational subjects in English can exhibit, in addition to second person anaphors, third person anaphors as well. That is, alongside examples like the one in (12), speakers also accept examples like “Everyone wash *himself!*” (Some speakers prefer to avoid gender-specific anaphors in this type of construction, preferring *themselves* or *themselves*.) We assume that this option is available because, in sentences with quantificational subjects in English, a bound element exhibits either the person feature of the partitive phrase, or a default third person value. That these two options are available in English is clear from the case of declaratives and interrogatives, where, in the presence of an overt partitive like, for example, *you*, both “Everyone of you should wash *your* hands” and “Everyone of you should wash *his/their* hands” are possible.²²

Korean. We now turn to the Korean examples in (14) and (15), introduced in section 2, to show that jussive subjects can exhibit not only second, but also first person features. We take the sentence final particles to be the overt morphological realization of the Jussive head.

We view *-la* as the overt realization of the Jussive head with the person feature valued as second person.²³

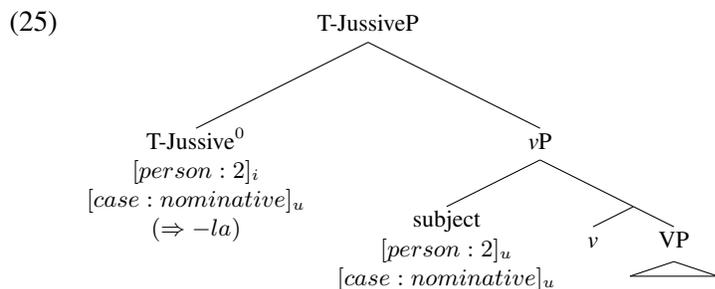
¹⁹Examples (24a) and (24b) are from http://veteransforpeaceactions.blogspot.com/2007_05_01_archive.html, and <http://www.postalnewsblog.com/2010/08/18/mailers-say-oversized-overpaid-workforce-is-biggest-contributor-to-usps-financial-woes/>, respectively.

²⁰A search on *everyone of you* followed immediately by a form of *have* yields about 468,000 hits for *has* and about 5,880,000 for *have*. But this result is less relevant, because *have* is also the non-finite form, so the *have* count is likely to include things like *That made every one of you have a problem*.

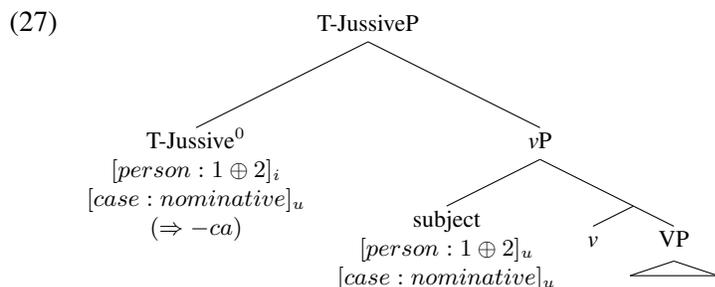
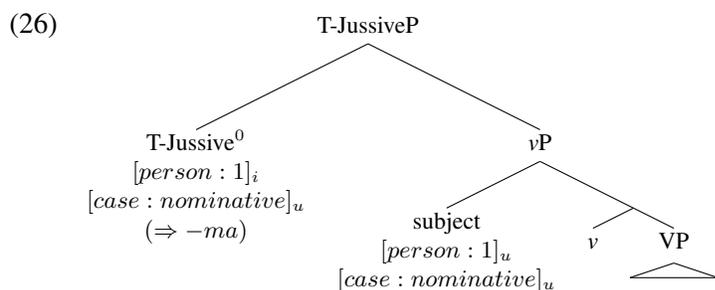
²¹One might be tempted to assimilate these cases to the cases of ‘agreement attraction’ (e.g., *The label on the bottles are...*) mentioned in descriptive grammars (from Jespersen 1913/1961 to Quirk et al. 1985) and widely discussed in the literature on sentence processing (cf. Bock and Miller 1991, Vigliocco et al. 1996, and Badecker and Kuminiak 2007, among others). Though we are not in a position to definitively show that they are not cases of agreement attraction, we doubt that they are, due to the fact that speakers do not find them ungrammatical in the same way, and that agreement attraction is usually said not to apply to pronouns (cf. den Dikken 2001). We leave the investigation of this possibility for further research.

²²For some speakers of English (though not all), not only quantifiers, but even lexical subjects can co-occur with either second and or third person anaphors in imperatives, as argued in Potsdam (1998). That is, some speakers accept both “Mary wash *yourself*, John take the dog for a walk!” and “Mary wash *herself* and John take the dog for a walk!” Because of this inter-speaker variability, we see this case as different from that of imperatives with quantificational subjects. We refer the reader to Zanuttini (2008) for a discussion of variation in this domain.

²³We represent the Jussive Phrase as a head initial phrase for simplicity. We do not need to enter the debate of whether Korean is structurally head initial or head final, as it is tangential to our proposal concerning the properties of the head of the Jussive Phrase, which would remain the same even if the head followed its complement.



Unlike in many other languages, in Korean the Jussive head can also enter the derivation with a first person feature value ($[person : 1]_i$), yielding a promissive, or with a first person inclusive value ($[person : 1 \oplus 2]_i$), yielding an exhortative.²⁴ We take the sentence final particle *-ma* to be the overt morphological realization of the Jussive head with first person value, and *-ca* to be the overt realization of the Jussive head with first person inclusive value, respectively:



Before we go on, we should mention that, while we focus on examples where the Jussive head is overt, it can also be null. This is not surprising, if we think about interrogative clauses: though many languages, including Korean, have an overt question morpheme, many do not, and it has long been argued that there is a null Q morpheme in such cases (cf. Baker 1970, Cheng 1991). Even in Korean the Q morpheme can often be covert. Similarly, the Jussive head is null in certain cases. For example, take the case of imperatives, where a jussive particle can co-occur with a speech style particle: in (28a), we see the combination of the speech style particle *-e* with the jussive particle *-la*:²⁵

- (28) a. Kongpuha-e-la!
 study-SSP-IMP
 ‘Study!’

²⁴There are several possibilities as to how to represent the meaning of inclusive *we* in terms of person features. We opt to treat it as a complex combination of first and second person, but one might also think of it as a distinct fourth person (Benincà and Poletto 2005) or as an instance of two distinct feature specifications ($[person : 1]$, $[person : 2]$). Kratzer (2009) employs a 1st+2nd feature similar to Benincà and Poletto’s fourth person, but also discusses the possibility of sum features.

²⁵Phonologically, *-ha-e* becomes *-hay*.

- b. Kongpuha-e!
study-SSP
'Study!'

The sentence in (28b), which lacks *-la*, is synonymous with (28a). Whatever meaning is contributed by *-la* in (28a) is still present in (28b), and we view it as being brought in by a null counterpart of *-la*.

3.2.2 Cases where the Jussive head does not agree with the subject

To some readers, it might seem surprising that we treat the person feature as interpretable on the Jussive head rather than the subject. The goal of this section is to provide the empirical motivation for this choice. The evidence comes from sentences that are canonically used to impose a requirement on the addressee, and thus have the same sentential force as the imperatives illustrated above, but in which the addressee is not expressed by the subject. This kind of imperative is interesting, and while it is poorly understood, it cannot be ignored. We focus on a relatively well-understood case, from Italian:

- (29) a. Signor Rossi, che nessuno si sieda in prima fila! (Italian)
Mister Rossi that no one self sit in first row
'Mr. Rossi, nobody sit in the first row!'
- b. Ragazzi, che tutto sia in ordine quando torno questa sera!
Kids, that all be in order when return this evening
'Kids, everything be in order by the time I get back this evening!'

These sentences, which employ a verbal form from the subjunctive paradigm, are used to place a requirement on the addressee; hence they are conventionally associated with the same sentential force as the sentences that use verbal forms from the imperative paradigm. Yet, contrary to the examples we have seen so far, in these cases the addressee is not expressed by the subject.²⁶ Thus the second person feature brought into the derivation by the Jussive head is not interpreted on the subject; on our account, the place where it is interpreted is on the Jussive head itself. In these examples, the Jussive head binds the vocative. When no vocative is present, it might be assumed to bind a null counterpart of the vocative.

Let us consider how the syntactic derivation works in these cases. Given that the sentences in (29) are grammatical, the derivation must have converged. Yet the subject does not exhibit a second person feature. Why doesn't the Jussive head agree with the subject? Our answer, in a nutshell, is that the two are not in a sufficiently local relation, because T in these examples contains a person feature. To implement this idea, we appeal to the restriction on what can form a feature bundle, given in (19c), combined with the properties of T in the examples under consideration. The examples in (29) employ a verbal form from the subjunctive paradigm, which has a finite T standardly assumed to carry both number and person features. This kind of T cannot raise to the Jussive head, because they both carry a person feature, and a bundle of features can contain at most one instance of a given feature (19c). Therefore, T enters an Agree relation with the subject without the Jussive head; in so doing, it also checks the subject's case feature, making it invisible to further probing. The T-Jussive head thus does not enter an Agree relation with the subject, as it is not sufficiently local. It does not semantically bind it either, as the kind of pronominal binding under discussion is also strictly local: as convincingly argued in Kratzer (2009), the relation between a bound pronoun and its binder does not tolerate the intervention of a verbal inflectional head bearing different person features.

²⁶In the examples in (29), from Zanuttini (2008), a vocative is used to make it clear that the subject does not refer to the addressee; but, in the proper context, the sentences would be fine even without the vocative, and the interpretation would still involve an addressee: the addressee is asked to see to it that nobody sit in the front row (29a), or that everything be in order (29b). Given the semantics outlined in section 4, the meaning for (29b) can be paraphrased as "be in a world such that everything is in order by the time I get back"; in order to comply with this directive, the addressee should see to it that everything is in order.

The advantage of this approach is that it can say why reference to the addressee is present in the interpretation of these sentences: they contain a Jussive head, and therefore (in the case of imperatives) second person features. Yet they differ from the typical imperatives that show restrictions on their subjects in that the Jussive head fails to bind the subject and pass its features on to it.

If we are correct in arguing that the Jussive head does not enter an Agree relation with the subject in cases like (29), we would expect these sentences to be able to exhibit a range of subjects, including definite noun phrases and pronouns that exhibit first or third person features. This is indeed the case:

- (30) a. Signor Rossi, che la signora sia pronta alle 3:00/ badi a se stessa!
 Mister Rossi, that the lady be ready at 3:00/ care to herself
 ‘Mr. Rossi, (see to it that) the lady be ready at 3:00/ worry about herself.’
- b. Che venga anche lui!
 that come also he
 ‘(See to it that) he comes as well.’ (with the subject distinct from the addressee)
- c. Prof. Fiore, che io sia / mi senta ben preparato per quell’esame!
 Prof. Fiore, that I be / self-1st feel well prepared for that exam
 ‘Prof. Fiore, (see to it that) I be / feel well prepared for that exam.’

In contrast with the cases in which the imperative clause uses a verbal form of the imperative paradigm, in these cases with the subjunctive the subject is not restricted to having second person features, or to being interpreted as referring to the addressee, or to a group containing the addressee, or quantifying over a set containing the addressee. Moreover, if a reflexive form is present in the sentence, as in (30a) and (30c), it exhibits the same person feature value as the subject, and not as the addressee. Our analysis can capture these facts: in these cases, the subject does not enter a binding nor an agreement relation with the Jussive head. The subjects in these kinds of imperatives do not depend on the Jussive head for their person feature. We assume, following Kratzer (2009), that these subjects enter the derivation with person features (thus differing from the ‘minimal pronouns’ that are bound by an operator).²⁷

We can now return briefly to Bhojpuri which, as mentioned in the introduction, has a full paradigm for imperatives that includes first, second and third person forms (see Aikhenvald 2010 for a description of other languages with paradigms of this type).²⁸ All three forms can be used in a variety of situations, which include both directive uses and optative-like uses. For example:²⁹

- (31) a. k^ha: (Bhojpuri)
 eat-imp.2p (informal) ‘Eat!’
- b. k^ha:y
 eat-imp.3p ‘Eat (polite)!’/‘Let him eat.’

In their imperative-like uses, the forms in (31) can be analyzed in the same way as the Italian cases above. Since these forms show full person agreement, we propose that the sentence contains a T bearing a person feature; as above, this means that T cannot raise and form a bundle with the features of the Jussive head (by 19c). The Jussive head therefore does not enter an Agree relation with the subject and does not locally bind it, either. The result is a meaning like ‘You see to it that he eats.’ We assume that the politeness/indirect

²⁷Alternatively, one could assume that they are bound by an operator of the sort proposed in Baker (2008), which must be brought in by T and be in a more local relation with the pronoun than the Jussive head.

²⁸Note the distinction between promissives and first person imperatives. Promissives, as seen in Korean, place a requirement on the speaker. In contrast, first person imperatives place a requirement on the addressee, but this requirement is expressed with a first person element in subject position, as in Italian (30c). The first person imperative is grammatically more parallel to the third person imperative (31b) than to the promissive.

²⁹The use of (31b) as a polite imperative is restricted to particular social situations, for example a wife to a husband.

interpretation is pragmatically derived from this one. A remaining open issue in the analysis of Bhojpuri is of course how to handle true optative meanings, but this is beyond the scope of the present paper.³⁰

As we mentioned in the introduction, English also allows imperatives in which the subject is distinct from the addressee. We see an example in (32), from Potsdam (1998):³¹

(32) *Maitre d'*, someone seat the guests!

Following the discussion of Italian, these examples would be handled within our system by proposing that their structure contains a T with a person feature that, because of this person feature, cannot raise and form a bundle with the features of the Jussive head. This projection, which we identify with the subjunctive T that we assume to be present in the clause, enters an Agree relation with the subject. The case of English is not identical to the case of Italian, in that the range of overt subjects that are possible is much more limited. As Potsdam points out, for example, a pronoun like *he* is not possible as a subject in sentences like (32), though we noted that it is possible in Italian (see 30b). This might be due to an independent difference between the subjunctive T in the two languages, which we see in other aspects of grammar as well. We leave this as an open issue for the time being.³²

In this section, we have provided some preliminary discussion of imperatives that do not restrict their subjects to being second person. In each case, we have suggested that a functional head with person features, possibly T, enters the derivation and Agrees with the subject. Due to the presence of a person feature on T, the person feature on the Jussive head cannot raise and form a bundle with the features of T, and consequently does not participate in the Agree relation with the subject. This allows the subject to have a value other than second person. These types of imperatives are possible in languages like Italian and Bhojpuri, where T can have person features, and even in English, to a certain extent. They are not possible at all in Korean. In our view, the difference between Korean and these other languages stems from the fact that Korean does not have a functional head with person features that can merge and Agree with the subject: T in Korean lacks person features entirely, as suggested by the lack of any morphology expressing person agreement.³³

³⁰Patrick Grosz (p.c.) has suggested that optatives may be analyzed using the same semantic/pragmatic ideas as imperatives simply by relaxing the restriction that it should be possible for the addressee to bring about the situation described. Combining this perspective with the ideas about imperative semantics summarized in Section 4, the “optative” use of (31b) which is translated ‘I wish he would eat’ would come about by adding something like ‘you make it the case that he eats’ to the addressee’s To-do List, but without the presupposition that the addressee can make it the case that he eats. In this situation, the addressee is committed to the judgment that a world in which he eats is preferable to one in which he doesn’t, even though we know that the addressee cannot bring the world to this preferable state.

³¹The vocative *Maitre d'* makes it much easier to get the interpretation in question, though it is not strictly necessary, if the supporting context is clear enough.

³²As pointed out by a reviewer, Hawaiian is another language that has been said to allow third person subjects in imperatives. The imperative in Hawaiian makes use of the particle *e*, which, according to Andrews (1854), Judd (1940), and Zhang (1990), is the same form employed in the paradigm for the future. According to these sources, imperative clauses containing *e* occur with second person subjects, as well as with first person plural and third person subjects; the subject can be null in the second person singular, and must be overt in all the other cases. This pattern suggests to us that the Jussive head in Hawaiian has second person features, as in all other languages, and this is what enables it to license a null second person subject. For the third person cases with *e*, it is possible that these are simply future tense declaratives, used to impose an obligation through an indirect speech act (similarly to English *You WILL do it!*). Alternatively, it could be that the subject enters an abstract AGREE relation with a different functional head (possibly the one expressing future, spelled out as *e*). Also relevant is the fact that, according to Judd (1940) and Elbert and Pukui (1979), *e* may be replaced by *o*, *ou* or *i*, and *mai* in the case of negative imperatives, in which case the subject can only be interpreted as second person. We do not know what *o*, *ou* and *i* are, and whether it would be justified to view them as morphological realizations of the Jussive head.

³³A reviewer points out some data from Tagalog that are relevant to our analysis. In this language, the second person, addressee argument of an imperative is always the agent, regardless of the verb’s voice. Thus we find examples like (i), (Schachter and Otnes 1972; Kroeger 1993):

- (i) Bigy-an mo siya ng=kape.
give-DV 2.sg.GEN him(NOM) GEN=coffee
‘Give him some coffee.’

3.3 Null and overt subjects in Korean jussives

We have argued that, in Korean, the person feature of the Jussive head always binds and enters an Agree relation with the subject. In this section, we look at null subjects and overt referential subjects in Korean jussives in order to discuss particular issues that arise in each case.

3.3.1 Null subjects

It might seem unnecessarily complex or redundant to propose that null jussive subjects are licensed by person features in Korean, given that null arguments appear so freely in this language and are not related to the presence of ϕ features. However, existing theories of null arguments in Korean and similar languages have not been applied explicitly to imperatives or other jussives, and so it should not be taken for granted that they would give the correct results when applied to these cases. In fact, next we will show that null jussive subjects cannot be explained in terms of existing accounts of other null arguments in Korean. We do this by briefly examining two major approaches to null arguments in Korean-type languages, those of Huang (1984) and Neeleman and Szendrői (2007). Similar considerations apply to other treatments of null arguments in Korean, for examples those of Speas (2006) and Tomioka (2003).

Huang (1984) gave the standard analysis of null arguments in what he calls “discourse prominent languages”, in particular Chinese, Japanese and Korean. He proposed that null objects are empty categories A-bar bound by a null topic, and that null subjects are empty categories bound either by a null topic or by an argument in the higher clause, similarly to control structures. Null arguments in these languages are therefore different from the null subjects of languages like Italian and Spanish, where they are pronominal elements licensed by the rich ϕ features of inflection. One might attempt to apply this approach to jussives by proposing that they contain a null topic that binds the subject, but this would leave several problems unsolved: (i) One would have to assume that an imperative always includes a second person null topic, that promissives include a first person null topic, and that exhortatives include a first person plural inclusive null topic. It is not at all clear what pragmatic analysis of topics would guarantee that each jussive clause always has the right kind of topic, and in any case this move seems to just push the problem of interpretation from the subject to the topic.³⁴ (ii) An analysis in terms of null topics would leave unexplained why this topic must always bind the subject, rather than the object or another argument, as null topics can in other clause types. (iii) Huang’s analysis was explicitly designed to account for the contrast between topic-prominent and non topic-prominent languages, and so it would be difficult to give a uniform analysis of the null subjects of imperatives across the two classes of languages. This is problematical, because null subjects of

This sentence contains a nominative recipient argument, as well as non-nominative agent and theme arguments. The agent argument is the second person element referring to the addressee, and refers to the person charged with bringing him coffee. According to our analysis, the Jussive head must bind the agent argument, transmit its second person features and produce the correct directive meaning. Yet in several respects the nominative-marked DP is syntactically the most prominent in the clause, and has been argued to be the subject (Guilfoyle et al. 1992; Kroeger 1993). If it is indeed the subject, the question arises of why the Jussive head does not agree with it.

While these points show that Tagalog raises interesting questions for our analysis, we do not yet understand the syntactic issues well enough to say whether it constitutes a problem. There are various analyses of the voice and case systems of Tagalog, and we cannot do justice here to the many positions and arguments which have been put forth. Besides the claim that the nominative marked element is a regular subject, we see the idea that it is actually an absolutive (e.g., Aldridge 2006, 2009), that it represents the element which agrees with the verb (Rackowski and Richards 2005), and that it indicates movement to an A-bar topic position (Richards 2000), among other possibilities. As discussed by Schachter (1976, 1996) and others, the agent argument retains some subject properties even when it is not nominative, such as the capacity to bind reflexives or the ability to be controlled. Moreover, we have not investigated the relevance, pointed out by (Kroeger, 1993, 88-90) of the Tagalog mood system. Until the field reaches a greater consensus on the analysis of these features of Tagalog, it is impossible to determine their exact relevance to the theory of imperatives.

³⁴One might propose that all imperatives contain a vocative, overt or covert, and that this plays the role of the topic in Huang’s theory. However, there is no analogue of a vocative for the first person cases, promissives and exhortatives.

imperatives occur in all languages with the same restriction to second person. For this reason we do not think that Huang’s analysis can explain the full range of null subjects in Korean jussives.

Another approach to the null subjects in Chinese, Japanese, and Korean is proposed in Neeleman and Szendrői (2007). They treat null arguments as regular pronouns that are given a phonologically null realization. There are two mechanisms that make this possible, one of which accounts for Japanese, Korean and Chinese, and the other for languages with rich agreement inflection. The former involves a context-free rule of zero spell-out that applies only in languages with agglutinating morphology.³⁵ The latter uses a context-sensitive rule of zero spell-out that depends on the presence of ϕ features; this rule accounts for the presence of null subjects in Italian/Spanish. The key issue for us is which of these two mechanisms would be responsible for null subjects of jussives in Korean. On the one hand, one could propose that jussive null subjects are different from other null arguments in Korean in that they are derived through the application of the context-sensitive rule, not the context-free rule. However, it would be difficult to block the applicability of the context-free rule in their system, since it only depends on the presence of agglutinating morphology on the pronoun. On the other hand, they could propose that jussive null subjects are licensed by the context-free rule, just as other null arguments in Korean are. However, this would not explain the restrictions on the interpretation of jussive null subjects, and they would have to provide another account of this fact.

We have examined two accounts of null subjects in languages like Korean, those of Huang (1984) and Neeleman and Szendrői (2007), but neither provides an explanation of the restrictions on the interpretation of jussive subjects. We have argued in this paper that a syntactic account is needed, and in particular that agreement is the correct mechanism to appeal to. In fact, it would be possible to combine our approach with either Huang’s or Neeleman and Szendrői’s. That is, one could propose that jussive clauses differ from other clauses in Korean in having the Jussive head bind and Agree with the subject, thereby sharing ϕ features with it. As a result, the null subject would be “doubly licensed”, both by agreement (as in rich agreement languages) and by a null topic, on Huang’s approach, or agglutinating morphology, on Neeleman and Szendrői’s. Such an analysis would agree with our claim that there is a universal mechanism which licenses null subjects in imperatives, distinct from the one which licenses other null arguments.

3.3.2 Overt referential subjects

Next we turn to a brief discussion of lexical noun phrases as subjects in jussive clauses. There are two subcases: bare noun phrases that describe a social role, like *mommy*, and certain referential noun phrases, including proper names and definites (but not demonstratives).³⁶ We begin here with some background on

³⁵The absence of agreement in these languages has nothing to do with the free availability of null arguments, according to Neeleman and Szendrői, in contrast to the traditional view represented in the analyses of Huang (1984), Speas (2006), and others.

³⁶Jussives also allow quantifiers as their subjects, but we do not discuss these cases here. A proper analysis would require a description of different types of quantificational structures, including quantificational noun phrases, floated quantifiers, and adverbial quantifiers. We do not have a full understanding of these phenomena, and even if we did, they are too complex to be treated in sufficient detail here. We note that, with a strong quantificational noun phrase, a null anaphor is preferred, but we can find both second and third person anaphors, depending on the context:

- (i) Motwu (caki) pumonim-kkey cenhwahay-la.
Everyone (self) parents-to call-IMP
'Everybody call his parents.'
- (ii) Motwu (nehitul) socipum-ul cenglihay-la.
Everybody (your.plural) belonging-ACC organize-IMP
'Everybody organize your things.'

With floated or adverbial quantifiers, a null anaphor is strongly preferred, and it is therefore difficult to tell whether the subject’s features are second person:

- (iii) Namhaksayngtul-un (motwu) khothu-ul (motwu) ip-e-la.
Male.students-TOP (all) coat-ACC (all) wear-SSP-IMP

the former. Jespersen (1924/1965, 217) already pointed out cases of the kind represented by *mommy*:

- (33) a. Mommy will help you.
b. Can you give it to mommy?
c. Mommy promises to help you later.

Note that *mommy* can function in this way in all clause types and in all syntactic positions. There are crosslinguistic patterns concerning which kind of lexical noun phrases have this ability, though languages are not precisely the same in this respect; for example, in Korean ‘teacher’ can also have this function, in contrast to English:

- (34) a. Emma/Sensayngnim-i towa cwu-lkey.
mommy/teacher-NOM help give-will
‘Mommy/Teacher will help you.’
b. Emma/Sensayngnim-hantey cwul-lay?
mommy/teacher-DAT give-will
‘Can you give it to mommy/teacher?’
c. Emma/Sensayngnim-i nacwung-ey towa cwu-ma.
mommy/teacher-NOM later-at help give-PRM
‘Mommy/Teacher promises to help you later.’

It is not a goal of our paper to explain why *mommy* and *sensayngnim*, ‘teacher’, can refer to the speaker across clause types. However, as we pointed out above, there is one fact specific to jussive subjects that is important here. As illustrated in the examples in (15)–(16) in section 2, when a word of this class functions as the subject of a promissive, it can bind a first person anaphor in the same clause, while in contrast such a subject cannot do so in declaratives. We take this to show that an occurrence of *emma* that refers to the speaker does not have first person features in a declarative, while it does so in a promissive. Facts similar to those just observed also obtain for reference to the addressee: there are certain noun phrases that have the ability to refer to the addressee across clause types, such as ‘mommy’ and ‘brother’, but it is only in imperatives that they can bind a second person anaphor. Whatever mechanism accounts for the fact that ‘mommy’ is compatible with reference to the speaker or the addressee, according to our view, when it serves as the subject of a jussive, it acquires person features from the Jussive head. So, when it is the subject of a promissive, it receives a first person feature, and this allows it to bind a first person anaphor; and likewise, when it is the subject of an imperative, it receives a second person feature, and this allows it to bind a second person anaphor. We assume that these noun phrases have an empty D whose value for the person feature matches that of the Jussive head, as a result of agreement.³⁷

Turning now briefly to proper names and definite noun phrases, recall that it is not in general possible to use them to refer to the speaker or addressee in declaratives and interrogatives, as mentioned in section 2. But it is possible in jussives. For example, in (35), the subjects refer to the addressee and bind a second person anaphor:

- (35) a. Inho-ka_i ney_i/ *ku-uy_i chinkwu-lul teyliko o-ala.
Inho-NOM your/ his friend-ACC bring come-IMP
‘Inho bring your friend.’

‘Every boy wear your coat.’

Note that the status of quantificational subjects of imperatives in other languages is also controversial and complex (see Platzack and Rosengren 1998, Potsdam 1998, Zanuttini 2008).

³⁷In declaratives and interrogatives, where the Jussive head does not enter the derivation, we assume that the D head acquires a third person value by default, as suggested in Baker (2008) and Sigurðsson (2010).

- b. Namhaksayng-tul- i_i nehui $_i$ /*ku-tul-uy $_i$ yeca chinkwu-tul-ul teyliko o-ala.
 male.student-PL-NOM your/their female friend-PL-ACC bring com-IMP
 ‘Boys bring your girlfriends.’

Downing (1969) pointed out that the use of a referential subject in an imperative requires some sort of contrastive interpretation. Thus, (35) implies that someone other than Inho is not being told to bring a friend. Once we control for these special restrictions, referential noun phrases fit into our theory. In the subject position of an imperative, and only in this position, they acquire second person features from the jussive head, and this determines the correct anaphor agreement.³⁸

3.4 Previous analyses similar to ours

In this section we briefly examine two proposals that are similar to ours, in suggesting the presence of a functional projection with second person features, focusing on what they suggest concerning its structural position. Bennis (2006) argues that some of the forms used as imperatives in Dutch have second person features in C. His discussion is based on imperatives like those in (36), from his (20):

- (36) a. Wees-t U niet bang! (Dutch)
 be.imp-2 you not afraid
 ‘Don’t be afraid!’ (polite)
 b. Wees- \emptyset pro niet bang!
 be.imp-2 pro not afraid
 ‘Don’t be afraid.’ (informal)

The suffix *-t* in the polite imperative (36a) marks second person in other clause types, so it is natural to associate it with second person features here. Moreover, the verb is in first position, presumably in C. Based on these observations, Bennis concludes that *-t* is in C and triggers verb movement to that position. He assumes that the regular (non-polite) imperative in (36b) is syntactically like (36a), except that the ϕ features on C are null and thus license a null subject. Returning to Korean, it might be natural to assume that the person features that we attribute to the Jussive head reside in C instead. However, this would not work, since jussive particles can co-occur with an overt complementizer in embedded clauses:

- (37) Emma-ka Inho-eykey kongpuha-la-ko hasiess-ta.
 mother-NOM Inho-DAT study-IMP-COMP said(honorific)-DEC
 ‘Mother told Inho to study.’

We conclude that the functional head hosting the person features is lower than the complementizer, at least in Korean. However, we would agree that the Jussive head is more broadly in the part of the clausal structure that has been referred to as the “CP domain”.³⁹

Jensen (2003a,b) also proposes that imperatives contain a functional head with second person features. In her analysis, the relevant projection is T. This allows her to give the same basic structure to imperatives and declaratives and to associate the second person feature in T with a specific future-oriented tense. On

³⁸In English, but not Korean, it is possible for a referential noun phrase in a declarative or interrogative to refer to a member of the set of addressees. Such a noun phrase neither has second person feature nor is able to refer to the addressee per se. Thus, in (i), *your* can refer to a group of which Noah is a member, but not to *Noah*:

(i) Yesterday Noah picked your (=Noah and Ben’s) bedtime story (so today Ben can).

We assume that, in this use, the relation between the subject and the addressee is coincidental, i.e., not grammatically represented.

³⁹Rizzi (1997) proposes a ForceP as the highest projection in the CP domain. Clearly jussive particles are not in this position, because they are lower than the overt complementizer.

our account, the person feature resides on the Jussive head, spelled out as a jussive particle in Korean, so if we were to adopt Jensen's theory, this would amount to saying that the jussive particles are in T. Though the jussive particles do not co-occur with an overt tense marker, the declarative and interrogative clause typing particles do. And since the simplest assumption is that all clause typing particles occur in the same position, we do not adopt Jensen's proposal that would view the jussive particles in T.

To summarize, then, the existing literature suggests two main possibilities for the position of second person features in imperatives. When we translate these approaches into our account of Korean, we end up with two possible views on the position of the jussive particles: In one view, they are in the same position as other clause typing particles, above T and below the complementizer.⁴⁰ In the second view, they are in a position distinct from that of declarative and interrogative particles, either in C or in T. Though our main ideas are compatible with both options, we adopt the first one, because it follows the traditional idea that all clause typing particles form a grammatical class and we do not have any reason to contradict this claim. Therefore, when we talk about the Jussive head, we mean to identify a functional element between T and the complementizer, which hosts clause typing particles generally, but has special properties in jussive clauses.

4 Compositional Semantics for Jussive Subjects

Our analysis in this paper is designed to provide a syntactic account of the interpretive restrictions on null subjects in jussive clauses. This is achieved through a mechanism of agreement which ensures that the subjects share person features with the Jussive head at the syntax-semantics interface. In order to show convincingly that this mechanism has the desired effects, we must do more than display syntactic structures containing person features; we must be explicit about how the interpretation process works, taking such syntactic structures as input and producing appropriate meanings as output. Our goal in this section is to provide evidence that the syntactic forms produced by our analysis indeed can be associated with the correct semantic values.

4.1 The denotation of jussive clauses

Before we present explicit rules accounting for the semantic interpretation of jussive subjects, we must understand precisely what jussive clauses denote. This is a difficult task, because their interpretation obviously involves more than just the interpretive restrictions on their subjects. For example, we have to account not only for the fact that an imperative's subject refers to the addressee, but also the fact that the imperative is used to perform a directive speech act. Where does this directive meaning come from? In the literature on imperatives, we find three basic approaches to answering this question. Let us discuss each of them briefly, before returning to the issue of how jussive subjects are interpreted, since we will need to make an assumption about this issue before we can become explicit about how the interpretation process works.

1. THE SPEECH ACT VIEW states that the meaning of an imperative is a speech act. There are several versions of this idea:

(A) According to the performative hypothesis, an imperative is formally associated with a directive illocutionary act by means of a hidden higher performative predicate, so that an imperative sentence like (38a) is equivalent to an explicit performative sentence such as (38b):

- (38) a. Leave!
 b. I order you to leave.

⁴⁰This position might be in the higher IP or lower CP domain; some of the literature has identified a MoodP in this general area (Ahn and Yoon 1990, Cinque 1999, Brandner 2004). In that case, the Jussive head that we discuss is equivalent to the Mood head with the special property of containing person features.

Lewis (1972) discusses how the performative hypothesis can be fit into a truth-conditional semantic framework. The key idea is that the semantics of a performative is technically no different from that of a declarative, so that both sentences in (38) denote the set of worlds in which the speaker orders the addressee to leave at the time and place in which the sentence is uttered. If the context is right, the utterance of one of these sentences itself will be sufficient to make manifest the intentions that are essential for performing a speech act of ordering, and if the context otherwise supports the giving of an order, the sentence will in effect make itself true.

The syntactic arguments for the performative hypothesis are no longer considered convincing, but certain more recent syntactic proposals can be seen as constituting updated versions of the performative hypothesis. For example, Rivero and Terzi (1995) and Rizzi (1997) propose that the higher functional structure of all clauses contains an illocutionary force operator. Unfortunately, the semantics of this operator is not discussed in an explicit way. Perhaps the assumption is that it contributes to the sentence's meaning in the same way as the higher predicate did under the performative hypothesis. If this is so, and we adopt Lewis's idea about how performative sentences are interpreted, the force operator in an imperative would be a sentential operator with a meaning like (39):

$$(39) \quad [[\text{IMP}]]^c = \lambda p[\text{at } t_c \text{ in } w_c \text{ speaker}(c) \text{ orders } \text{addressee}(c) \text{ to make } p \text{ true}]$$

Several problems would have to be solved before this idea could constitute a plausible analysis of the meaning of imperatives. First, while there is syntactic evidence for the presence of a distinct functional head or feature in some clauses that are associated with imperative meaning, this is not the case for all such clauses. In particular, so-called "true imperatives" (those with a distinct morphological paradigm in inflecting languages) have properties suggestive of an imperative operator; however, imperatives containing subjunctive, indicative, or infinitival verb forms, such as those in (29) and (30) above, in general do not.⁴¹ Second, imperatives are used not only to give orders, but also to perform a variety of other directive speech acts. For example, they may be used to give permission or to suggest (e.g., Davies 1986, Portner 2007):

- (40) a. Have a glass of wine, if you like. (permission)
 b. Take the #3 bus. (suggestion)

Thus, in order for this approach to be plausible, we would need to modify (39) in such a way that it encodes a general directive act type which subsumes ordering, permitting, suggesting, and the like. It is not, however, a simple matter to develop speech act theory in a way which makes sense of such a general act type (see Recanati 1987, Vanderveken 1990; 2002, Alston 2000 for relevant foundational work).

(B) Since one problem with the speech act view is that it cannot easily provide an explanation of what all imperative clauses share, perhaps we should look for an alternative view of speech acts. A number of dynamic theories of imperatives in the tradition of Lewis (1979) have recently been developed, and within this tradition, Han (1998) develops a theory which can be seen as falling within the Speech Act View:

But here, rather than defining illocutionary force and the corresponding speech act in terms of felicity conditions under which they can be appropriately used, our goal is to suggest a more direct way to interpret them, from which the felicity conditions are made to follow. (...)

We propose that by performing a directive action, the speaker instructs the hearer to update a particular module which we call the PLAN SET. A hearer's plan set is a set of propositions that specifies his/her intentions which represents the state of affairs the hearer intends to bring about. Thus, an imperative, *directive(irrealis(p))*, is an instruction to the hearer to add *p* to his/her plan set. (Han, 1998, p. 154-155)

⁴¹Second person singular negative imperatives in Italian, which employ an infinitival form, have been argued to contain a null element (Kayne 1992), and one might identify this element with a null operator or null modal. However, other imperative forms, including polite imperatives in Italian and negative imperatives in Spanish, do not show such evidence (see Han 1998).

In short, Han proposes that the meaning of an imperative is a certain kind of speech act, specifically an instruction to update the addressee's Plan Set. This proposal as it stands has several weaknesses. First, it is not clear whether the Plan Set is to be understood as a pragmatic construct (parallel to the common ground) or a cognitive one (the speaker's actual plans). Second, she does not give a precise theory of the syntax-semantics-pragmatics interface which would allow one to derive the relevant speech acts in an explicit way. And third, by describing the directive speech act in terms of the speaker's instructions to the hearer, she is giving a circular explanation; after all, instructing is a particular kind of directive act. Nevertheless, despite these problems, we do not believe that Han's analysis should be discarded. Her basic ideas could be improved upon by borrowing from subsequent work in the tradition of Lewis (1979) (in particular Mastop 2005, Portner 2004; 2007, Charlow to appear). The result would be similar to Portner's theory, which we will adopt below.

2. THE MODAL VIEW states that the meaning of an imperative derives from a covert modal. A common intuition holds that imperatives are similar to modal sentences, and several scholars have proposed that the semantics of imperatives depends on their containing a covert modal (the idea goes back at least to the early generative literature, e.g. Stockwell et al. 1973; this is discussed on the semantics side more recently in Han 1999; 2001; 2011, Schwager 2005; 2007, Grosz 2008, among others). This approach seems especially plausible when one notes that modal sentences are often used performatively in a way very similar to imperatives, as pointed out by Lyons (1977), among others:

(41) You must leave right now!

Note that many deontic modals can be used either performatively or non-performatively, as in (42):

(42) You should leave now.

Example (42) can be used either to impose or to report a requirement that the addressee leave; the former use is performative, and the latter non-performative. This contrasts with root occurrences of *must*, as in (41), which are always performative, according to Ninan (2005). (Grosz 2008 identifies several modals in German with properties similar to *must*.) Given this background, we can characterize the modal view as being committed to the presence of a covert, obligatorily performative modal in imperative sentences.

Portner (2007) points out that simply proposing that imperatives contain a covert modal does not in and of itself explain their directive function, since the usual semantics of modals only explains their non-performative, descriptive meaning. Performativity is a pragmatic meaning on top of this. Presumably in the case of *should* in (42), it is derived by implicature, but when it comes to an obligatorily performative modal like root *must*, we have to explain precisely how the grammar encodes the directive meaning. At this point, our options are similar to those available to the speech act view: we can either adopt an updated version of the performative hypothesis and treat the modal itself as a kind of performative verb, or propose that the modal has a dynamic meaning, creating a speech act in the sense of Han's analysis.

A important issue that has never been addressed by the modal view, as far as we know, is the fact pointed out above that imperative clauses are syntactically diverse. While many imperative clauses show syntactic evidence for a covert element which might be identified with a modal, there is no such evidence when it comes to other clauses that show imperative function (for example, polite imperatives and some negative imperatives). No analysis of the directive meaning of imperatives will be plausible if it cannot apply to all of the relevant cases.⁴²

3. THE SEMANTIC TYPE VIEW states that imperatives have a distinct semantic type from declaratives, and that their discourse meaning is derived from this difference in type. Both the speech act view and the

⁴²In Korean, one piece of evidence in favor of the modal view might come from the distribution of the negative marker *-mal*. This element occurs with deontic modals in all clause types (cf. Han and Lee 2007); hence, its presence in jussive clauses can be seen as evidence for the presence of a (covert) modal. However, an alternative would be to consider its distribution as being semantically, rather than syntactically determined; that is, *-mal* might be restricted to clauses that express modal concepts, i.e. obligation, permission or preference, based on rules, morality and the like, whether or not a modal operator is syntactically present.

modal view assume that the semantics of imperatives is similar to that of declaratives, and specifically that both clause types denote propositions. In contrast, the semantic type view attempts to derive the pragmatic functions of each clause type from a distinction at the level of semantic type. Ginzburg and Sag (2001) suggest this approach in the context of a theory which focuses on interrogatives. Hausser (1980) and Portner (2004, 2007) develop this idea in more detail, proposing that imperatives denote properties, thus distinguishing them from declaratives (which denote propositions) and interrogatives (which denote sets of propositions or something similar). The advantage of this proposal is that we need not encode the conversational function of clauses in the syntactic structure. Rather, we can appeal to a rule which produces the right conversational function on the basis of the particular type of meaning a given clause has.

In this paper, we will follow Portner’s version of the Semantic Type view. Like Han’s analysis, Portner’s proposal builds on the ideas of Lewis (1979), but instead of the Plan Set, a set of propositions, Portner works with the To-do List, a set of properties. And whereas Han was unclear about the exact status of the Plan Set, Portner is explicit that it is a discourse component that is to be understood as parallel to Stalnaker’s Common Ground. Just as Stalnaker conceives of assertion as the addition of a proposition to the Common Ground, Portner proposes that the function of imperatives is to add a property to the addressee’s To-do List. Given the distinction between properties and proposition, the following principles will properly align imperatives and declaratives with the To-do List and Common Ground, respectively.⁴³ In the following $T(c)$ assigns to each conversational participant in c a To-do List, and $CG(c)$ is the Common Ground in c :

- (43) For any context c and any root sentence S , add $[[S]]^c$ to the component of c which is a set of objects of the same semantic type as $[[S]]^c$, specifically:
- a. **Imperatives:** For any context c and any root sentence S such that $[[S]]^c$ is a property P ,
 $c + S =$ the context c' just like c except that $T(c') =$
 $T(c)[addressee(c) \rightarrow T(c)(addressee(c)) \cup \{P\}]$
 - b. **Declaratives:** For any context c and any root sentence S such that $[[S]]^c$ is a proposition p ,
 $c + S =$ the context c' just like c except that $CG(c') = CG(c) \cup \{p\}$

The Semantic Type approach separates the function of clause typing (a clause is typed as imperative by the fact that it denotes a property) from the assignment of illocutionary force (by principle (43)). This separation is an advantage because, as pointed out above, there is no syntactic evidence for an imperative operator across the full range of imperative clauses.⁴⁴

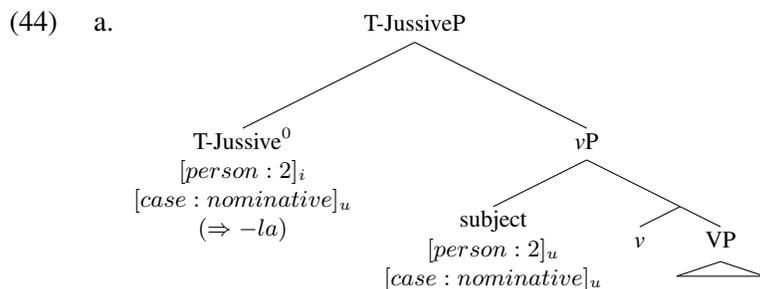
4.2 Deriving the interpretive restrictions on jussive subjects

We now turn to the project of providing a semantic analysis that explains the interpretive restrictions on jussive subjects. The key issue is to explain the meaning contributed to the sentence by the Jussive head and the person features that it shares with the subject. It would be possible to do this in terms of any of the three general approaches to imperative semantics outlined above. If we were to adopt the view that imperative sentences contain an illocutionary operator in a high functional projection, it would be natural to identify the head of this projection with the head of the JussiveP. Similarly, if we were to adopt the modal view, it would be natural to identify the modal itself with the head of JussiveP. For the reasons given above, however, we prefer the semantic type view, specifically the version which says that imperatives denote properties. We therefore develop our explicit account in terms of this approach.

The syntactic analysis developed in Section 3 derives the structure (25), repeated below, for a simple imperative containing a null subject; the intended interpretation according to the semantic type view is (44b):

⁴³For further discussion of the pragmatics of the To-do List and its relation to the Common Ground, see Portner (2004, 2007).

⁴⁴A similar point was made for exclamatives by Zanuttini and Portner (2003).



b. $[\lambda x : x = \text{addressee}(c).[\lambda w . vP'(x)(w)]]$

(44b) is a property expressed in the notation of Heim and Kratzer (1998). This property is only defined when its argument is the addressee; when defined, it is true of the argument a in a world w if the core vP is true of a in w . For example, the imperative *Leave!* expresses the property of leaving, restricted to the addressee. We abstract away from temporal aspects of the imperative semantics, for simplicity.

There are two key elements in (44a) whose contribution to the meaning must be elucidated: the jussive head, and the person feature $[\text{person} : 2]$. Our crucial ideas about the Jussive head are repeated in (45) from (17), and our assumption about person features is presented in (46):

(45) The Jussive head

- a. is an abstraction operator (i.e., a λ , or a binding index in the framework Heim & Kratzer 1998);
- b. binds the argument it agrees with, namely the subject.

(46) Interpreted person features (like other ϕ features) introduce presuppositions.

The point in (45a) accords with Kratzer's (2009) claim that functional heads can function as λ binders. The point in (45b) follows the observation of Baker (2008, Ch. 4) that a variable is referentially dependent on an operator it agrees with. It also follows the mechanics of Kratzer's proposal that a feature-sharing relation is established between a functional head and DP whenever there is a local binding relation between them. The point in (46) agrees with much of the literature on ϕ features, including Cooper (1979), Schlenker (2003), Sauerland (2008), and Kratzer (2009). Looking at (44a), we can see how this works: The jussive head binds pro , introducing " λx " into the semantic representation. The person feature introduces the presupposition that x is the addressee, i.e., " $x = \text{addressee}(c)$ ". In what follows we will implement these ideas in a rigorous way.

We begin with a definition of the abstraction operator introduced by the Jussive head. The following simplified definition will work for the Korean structures we are focusing on here:

(47) For any phrase XP,

$$[[\text{Jussive}^0[\text{person} : v]_k \text{XP}]]^{g,c} = [\lambda x : x = [[[\text{person} : v]_k]]^{g,c} . [[\text{XP}]]^{g[k \rightarrow x],c}]$$

The left side of this rule corresponds to (44a) and the right side to (44b), where XP is instantiated as vP . Note that the person feature on the head is introduced as a presupposition, restricting the domain of the function.

Next we must say how the person feature itself is interpreted, i.e. what is $[[[\text{person} : v]_k]]^{g,c}$. As pointed out above, we take ϕ features to be presuppositional, so the rule is as follows:

- (48) a. $[[[\text{person} : 1]_k]]^{g,c}$ is only defined if $g(k) = \text{speaker}(c)$; if defined, $[[[\text{person} : 1]_k]]^{g,c} = g(k)$.
- b. $[[[\text{person} : 2]_k]]^{g,c}$ is only defined if $g(k) = \text{addressee}(c)$; if defined, $[[[\text{person} : 2]_k]]^{g,c} = g(k)$.
- c. $[[[\text{person} : 1 \oplus 2]_k]]^{g,c}$ is only defined if $g(k) = \text{us}(c)$; if defined, $[[[\text{person} : 1 \oplus 2]_k]]^{g,c} = g(k)$.⁴⁵

⁴⁵ $\text{us}(c)$ is a group consisting of the speaker and addressee(s) in c .

A derivation which shows the crucial steps in interpreting the promissive (49a) is given in (49b); the promissive particle *ma* is the spell out of the Jussive head with first person features:

- (49) a. Cemsim-ul sa-**ma**.
 lunch-ACC buy-PRM
 ‘I will buy lunch.’
- b. Jussive⁰[person: 1]_k [pro_k[person: 1] cemsim-ul sa]
 i [[Jussive⁰[person: 1]_k [pro_k[person: 1] cemsim-ul sa]]]^{g,c} =
 ii [λx : x = [[[person:1]_k]]^{g,c} . [[pro_k[person: 1] cemsim-ul sa]]]^{g[k→x],c} =
 iii [λx : x = *speaker*(c).[λw . x buys lunch in w]].

In this way, the system derives our target interpretation for promissives, namely (iii). Note that we have assumed that the person feature on the subject, *pro_k* in (49b), is uninterpretable. However, even if it were interpretable, we would get the same interpretation in the end; the presupposition introduced by the person features on the subject would simply be redundant with the one introduced by the Jussive head and interpreted via principle (47).

The other jussive subtypes work similarly, the only difference being in the specific presupposition introduced by their person features.⁴⁶

The final point is to indicate how each of the jussive subtypes is assigned the appropriate conversational force. Definition (43a) implies that all jussives should be added to the addressee’s To-do List, but obviously this is incorrect for Korean. An imperative should be added to the addressee’s To-do List, a promissive to the speaker’s To-do List, and an exhortative to both the speaker’s and the addressee’s To-do List. These differences follow from the presuppositions associated with each type. That is, since a promissive denotes a property of an individual presupposed to be the speaker, it should be added to the speaker’s To-do List, and similarly for the other jussives. Thus we revise the principles that assign conversational force to sentences based on their types, as follows:

- (50) For any context *c* and any root sentence *S*, add [[*S*]]^c to the component of *c* which is a set of objects of the same semantic type and presupposition as [[*S*]]^c, specifically:
- a. **Jussives:** For any context *c* and any root sentence *S* such that [[*S*]]^{g,c} is a property *P*,
 $c + S =$ the context *c'* just like *c* except that $T(c') = T(c)[X \rightarrow T(c)(X) \cup \{P\}]$, where:
 (i) $X = \textit{speaker}(c)$, if $P(\textit{speaker}(c))$ is defined.
 (ii) $X = \textit{addressee}(c)$, if $P(\textit{addressee}(c))$ is defined.
 (iii) $X =$ both $\textit{speaker}(c)$ and $\textit{addressee}(c)$, if $P(\textit{us}(c))$ is defined.
- b. **Declaratives:** For any context *c* and any root sentence *S* such that [[*S*]]^{g,c} is a proposition *p*,
 $c + S =$ the context *c'* just like *c* except that $CG(c') = CG(c) \cup \{p\}$

In this section, we have seen that the syntactic analysis argued for in Section 3 can be associated in a compositional way with an appropriate semantics. The Jussive head is treated as a variable binding operator, and person features are given a presuppositional analysis, as in much of the literature. Obviously the literature on the semantics of imperatives is extensive, and there are many important issues which are still the subject of active research. See Portner (2004, 2007) for further details on the approach outlined here, and the other references cited for research on the semantics of imperatives.

⁴⁶In Section 3.2.2, we showed that some languages allow for imperatives where the Jussive head does not agree with the subject. In these cases, the Jussive head does not bind anything in the vP, and the resulting meaning of a sentence like (31b), for example, is [λx : x = *addressee*(c), [λw.he eats in w]]. Intuitively, this places a requirement on the addressee that is only satisfied if the referent of *he* eats.

5 Summary and further issues

In this paper, we have addressed one of the central issues in the study of imperatives and other jussive clauses: the unique properties exhibited by their subjects. On the syntactic side, we have focused on the fact that jussive subjects exhibit person features that subjects do not exhibit in other clause types; on the semantic side, we have focused on the fact that jussive subjects exhibit interpretive restrictions that subjects do not exhibit in other clause types. We have argued that this cluster of properties stems from a single characteristic of jussive clauses, namely the presence of a Jussive head.

Taking a broad theoretical perspective, our claims can be summarized as follows. (i) The unique properties of jussive subjects are rooted in their syntactic and semantic characteristics, as opposed to their pragmatic function. (ii) Cross-linguistically, jussive clauses are characterized by the presence of a Jussive head that has person features, and enters an agreement relation with the subject, provided that they are in a sufficiently local relation. As a consequence, null subjects in jussive clauses are made possible by the same mechanism across languages; this includes languages like English, which do not normally allow null subjects, and those like Korean, which allow null arguments freely.

Our view contributes to our understanding of the patterns of person agreement found across languages. The majority of discussions of person agreement concerns person features on (finite) T; some concern little *v* and C. To this inventory of heads that can exhibit person features and trigger agreement, we add the Jussive head. If we are correct in proposing that a Jussive head with a second person feature is present in all languages, then it is clear that some languages have a greater number, and others a smaller number, of functional heads exhibiting person features. In Korean, the Jussive head exhibits person features; in Italian, both the Jussive head and T do; in a language with complementizer agreement, like West Flemish, C does as well; and in a language that shows object agreement, like Pashto, little *v* does, too. Hence exhibiting person agreement is a matter of degree, not a property that a language either has or lacks completely.⁴⁷

This paper has dealt with data from Korean, which is illuminating for two reasons: it marks imperatives and other jussives with sentence final particles, the same mechanism used to mark other clause types; and it has a distinct sentence type of promissives that differs from imperatives in the interpretation of its subject.⁴⁸ Discussing jussive subjects from both the syntactic and the semantic perspective has left no room for us to explore whether and how our proposal could be extended to account for other properties exhibited by jussive clauses across languages. For example, it is often the case that verbs in imperatives occur in the first position, or in a position higher than the one they occupy in other clause types; it would be interesting to investigate whether this is because they move to the Jussive head, which has person features (thus corroborating the often noted correlation between person marking and verb movement). Another well-known property of imperatives is that some cannot be negated by a certain class of negative markers; in particular, in many languages, those that have a verbal form unique to the imperative paradigm cannot be negated by negative markers that are heads and occur in the higher part of the clause, above TP (cf. Zanuttini (1997)). Suppose that this restriction applies to all and only the cases in which the Jussive head is the head with person features closest to the subject; then new ways of thinking about it become possible. We leave the exploration for these and other connections between the Jussive head and the characteristic properties of jussive clauses for

⁴⁷We are not entirely sure of whether it is only the Jussive head that exhibits person features in Korean. Several authors have proposed that honorification in Japanese and Korean be analyzed as involving agreement between the person features of T and those of a noun phrase; see Ahn (2002), Tsujioka (2002), Boeckx and Niinuma (2004), and Boeckx (2007), among others. This analysis is controversial (cf. Bobaljik and Yatsushiro 2006); but if correct, then Korean exhibits two functional heads that may agree in person features. In any case, our proposal goes against the commonly held view that some languages, like Korean and Japanese, lack ϕ -feature agreement all together. Besides the literature on honorification just cited, there is other recent work proposing that these languages exhibit agreement; see Miyagawa (2007; 2009).

⁴⁸Some other differences among jussive types exist as well, but we do not have room to discuss them in this paper. Here (due to space constraints) we had to limit ourselves to focusing on the fact that they have similar illocutionary forces, and share parallel restrictions on their subjects, and could not offer a full discussion of all their similarities and differences.

further research.

Before we conclude, let us mention two properties of jussives that we have not discussed in our paper, but that are noteworthy from a cross-linguistic perspective. The first concerns the possibility of having embedded jussives: Korean allows embedded imperatives, promissives, and exhortatives, as shown in (51). We have not addressed the question of why embedded jussives are allowed in some languages but not in others, because it is not obviously related to the properties of the subjects; but from a broader perspective, it is important to investigate it.⁴⁹

- (51) a. Emma-ka Inho-eykey kongpuha-la-ko hasiess-ta.
mother-NOM Inho-DAT study-IMP-COMP said(honorific)-DEC
'Mother told Inho to study.'
- b. Kyoswunim-kkeyse Inho-eykey nayil liphothu-lul cwu-ma-ko hasiess-ta.
professor-NOM Inho-DAT tomorrow report-ACC give-PRM-COMP said(honorific)-DEC
'The professor promised Inho that he will give back the report tomorrow.'
- c. Emma-ka Inho-eykey kongpuha-ca-ko hasiess-ta.
mother-NOM Inho-DAT study-EXH-COMP said(honorific)-DEC
'Mother exhorted Inho to study together.'

The second property of jussives that we'd like to mention is the cross-linguistic rarity of the promissive subtype. Very few if any languages other than Korean have a distinct clause type for promises. Given our analysis of imperatives and promissives as differing only in the person features of the Jussive head, one might expect the two to be equally common. We do not yet have a good explanation for why this is not the case. In this paper, we have focused on giving a syntactic analysis of the interpretive restrictions on the subject, and we should note that an alternative pragmatic account would not fare better in this respect. As far as we know, speakers of every language can promise, and so there is no obvious pragmatic reason why this function could not be associated with a particular grammatical form just as easily as the imperative functions. One frequently makes promises with children of the kind seen in (52), so we cannot explain the absence of promises in English on the grounds that children are not exposed to them:

- (52) a. Emma-ka nayil kongwon-ey teyliko ka-cwu-ma. (Korean)
mother-NOM tomorrow park-to take go-give-PRM
'I, mommy, promise to take you to a park tomorrow.'
- b. I promise to take you to a park tomorrow.

We leave this issue as an open puzzle, but we would like to relate it to another puzzle in a related but different area of grammar, namely mood selection. In languages that make a distinction between indicative and subjunctive verb forms, the verb 'promise' typically selects the indicative, while 'order' and 'expect' select the subjunctive, as noted by Farkas (1985, 1992):⁵⁰

- (53) a. Il m'a ordonné que je parte. (French, from Farkas 1992, ex. (11))
he me-has ordered that I leave-SUBJ
'He ordered that I leave.'
- b. Il promet qu'il partira.
he promises that he leave-FUT
'He promises that he will leave.'

⁴⁹Some recent pieces of literature discuss the possibility of having embedded imperatives in other languages as well; see Chen-Main (2005) for Chinese, Rus (2005) for Slovenian, Platzack (2007) for old Scandinavian, and Crnić and Trinh (2008) for Vietnamese, German and even English.

⁵⁰An infinitive, instead of a subjunctive, is usually required when the subject of the main and embedded clauses are the same.

Various theories have been proposed concerning the choice of indicative vs. subjunctive verb forms; see for example Farkas (1985, 1992), Portner (1997), Giannakidou (2009), Quer (2001), Villalta (2000, 2008). For all of them, the case of ‘promise’ poses a problem. The content of a promise is irrealis, future, and creates a preference for one action over another — it has all of the hallmarks of a subjunctive-selecting predicate.⁵¹ There is a strong connection between the indicative mood and the declarative clause type. We suspect that there is a single underlying reason why promises tend to be expressed in the indicative rather than the subjunctive when embedded, and with a declarative clause when unembedded. A related point comes from the fact that we frequently find infinitive and subjunctive root clauses functioning as imperatives:

- (54) a. Non farlo! (Italian)
 neg do(infinitive)-it
 ‘Don’t do it!’
 b. Si sieda!
 self seat (subjunctive)
 ‘Have a seat!’ (polite)

Given that promises are likewise irrealis and future, one might expect that we could use a root infinitive or subjunctive to express them as well, but this is not possible. It would be interesting and relevant to the present concerns to explore why this is so.

Though we leave these and many other issues open, by focusing on jussive subjects we hope to have provided some new insights and tools that will allow us to further understand the similarities and differences among jussive clauses across languages.

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⁵¹Farkas (1992) claims to have a solution for this problem in terms of the concept of intensional anchoring. However, the semantics of ‘order’ and ‘promise’ are not given in detail, and so the explanation cannot be considered convincing as currently offered. See Portner (1999) for discussion of Farkas’s theory and of later related work like Giannakidou’s.

Focusing on Spanish, Villalta (2008) proposes that the two verbs differ in terms of whether they evaluate contextual alternatives, arguing that this semantic difference is revealed in the fact that ‘order’ is focus sensitive while ‘promise’ is not. Villalta’s analysis of mood selection is certainly the most complete yet developed, but we are not convinced that there’s really a difference between (i) and (ii):

- (i) His father ordered that Ted {MARRY Alice/marry ALICE}.
- (ii) Ted promised to {MARRY Alice/marry ALICE}.

In particular, it isn’t obvious that there’s a truth conditional difference between the two focus patterns in (i), but not in (ii), as claimed by Villalta.

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