Analysing Word Order in the English Imperative^{*}

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Abstract

This paper proposes that the syntax of inverted English imperatives such as *Don't you leave!* assimilates to that of better studied polar interrogatives: both involve a conservative clause structure in which the subject occupies the specifier of IP and the clause-initial auxiliary has undergone I° -to- C° . Evidence from negation/quantifier scope interactions and adverb placement argues against an alternative in which the subject is in the specifier of a projection below IP and the auxiliary is no higher than I° .

1. Introduction

The syntax of the English imperative was rather heavily analysed in the early generative linguistic literature (Thorne 1966, Downing 1969, Stockwell, Schachter, and Partee 1973, Chomsky 1975, Cohen 1976, Hankamer 1977, Schmerling 1977, 1982, and others). After a long lull in which the imperative received relatively little attention, Beukema and Coopmans (1989) proposed the first comprehensive analysis of the English imperative within the Government-Binding tradition. That work pointed out the relevance of the English imperative to syntactic theory and spurred a wave of renewed interest (Pollock 1989, Zhang 1990, 1991, Zanuttini 1991, Henry 1995, Platzack and Rosengren 1998, Potsdam 1998, Rupp 1999, Moon 1999, Han 2000, Flagg 2001).

One of the characteristics of the English imperative that has received much attention is the inverted word order of subject and *don't* in negative imperatives:

- (1) a. Don't you touch that dial!
 - b. Don't everybody talk at once!
 - c. Don't anyone get in my way!

The aim of this paper is to explore two existing analyses of this word order and to provide evidence in support of an analysis that assimilates the syntax of the above imperatives to superficially similar polar interrogatives:

- (2) a. Don't you help them!
 - b. Don't you help them?
 - c. $[_{CP} [_{C'} \text{ don't}_i [_{IP} \text{ you} [_{I'} t_i [\text{help them}]]]]]$

The paper will defend the claim for English that both clause types have the same structure and derivation with I° -to- C° head movement, as shown in (2c). This is essentially the analysis in

^{*} I would like to thank Jeff Runner, Laura Rupp, and Wim van der Wurff for helpful comments. I would also like to emphasise that the paper is concerned only with the syntax of English imperatives and that I make no claims about imperatives in other languages. See the other papers in this volume for cross-linguistic observations.

Beukema and Coopmans (1989), which I will argue on empirical grounds is fundamentally correct.

The evidence for this analysis comes from scope and adverb placement facts. The syntactic patterns in imperatives parallel those in tensed clauses and we can straightforwardly capture them by giving the two clause types identical structure. The conclusion supports a larger hypothesis that the English imperative has largely unexceptional syntactic behaviour that can be successfully analysed with a conservative conception of English clause structure (Potsdam 1998).

The paper is structured as follows: Section 2 presents two structural hypotheses for the syntax of negative imperatives and lays out the underlying assumptions. Section 3 provides evidence to decide between the hypotheses. Section 4 closes with some discussion of the consequences.

2. Two analyses of imperative clause structure

As a starting point for the analysis of English imperative structure, I present some core facts that any analysis must account for. The observations originate in Davies (1986), which systematically documents the word order options in English imperatives. For non-neutral imperatives, imperatives with negative *don't* or emphatic *do* as in (3), she observes that alongside the usual inverted imperative pattern in (4) in which a subject can follow do(n't), the reverse non-inverted imperative order of a subject preceding do(n't) is also available, (5).¹

- (3) a. Don't touch that dial!b. Do be more careful!
- (4) do(n't)+SUBJECT
 - a. Don't you forget!
 - b. Don't anyone misbehave while we're gone!
 - c. Do at least some of you give it a try!
 - d. Do someone help him quickly!
- (5) SUBJECT+do(n't)
 - a. Everybody don't talk at once!
 - b. You don't be late!
 - c. Someone do answer the phone!
 - d. Those with children do bring them along!

- (i) a. Do not walk on the grass!
 - b. ?Do not any of you try that again!
 - c. ?Somebody do not desert me!

Although an adequate account of the syntax of English imperatives must ultimately deal with such data, I will not consider them here. Formal imperatives are rather unnatural and consultants have difficulty making judgments on all but the most basic cases in (i a). See Davies (1986), Potsdam (1998: ch. 6), and Rupp (1999: ch. 6) for discussion of the data and overviews of the analytical challenges.

¹ The same word order options are available with formal imperatives, those containing *do not*:

In sections 2.1 and 2.2, I present two analyses of this word order alternation. Section 2.3 discusses various background assumptions.

2.1 The CP hypothesis

The CP hypothesis for imperative structure capitalises on the word order similarity between imperatives and tensed clauses:

- (6) a. Don't everybody leave!
 - b. Didn't everybody leave?
- (7) a. Everybody don't leave!
 - b. Everybody didn't leave.

The fundamental claim is that the word order parallel is a consequence of identical structure and derivation. I assume that tensed clauses are CPs, with interrogatives undergoing I°-to-C° (Koster 1975, Koopman 1984, Chomsky 1986). As a result, inverted imperatives have the structure in (8a) and non-inverted imperatives have the structure in (8b).



This analysis is fundamentally Chomsky's (1975) original proposal that inverted imperatives involve Subject-Auxiliary Inversion (SAI) (see also Emonds 1970, Stockwell et al. 1973, Beukema and Coopmans 1989, Potsdam 1998, and Han 2000). The analysis is conservative in the sense that it posits no mechanisms or structures that are not independently needed in the grammar of tensed clauses. The specifier of IP is the canonical subject position in English and I°-to-C° head movement has a number of other well-known uses.

2.2 The FP hypothesis

A number of researchers have proposed that imperative subjects and do(n't) are not as high in inverted imperative structures as they are in tensed clauses (Platzack and Rosengren 1998; Rupp 1999, this volume; Flagg 2001). In order to account for the observed word order in inverted imperatives, an additional projection must be posited. The FP hypothesis capitalises on recent articulated clausal structures which invoke a variety of functional projections (Pollock 1989, 1997, and others). Given this possibility, inverted imperatives have the structure in (9a) and non-inverted imperatives have the structure in (9b).



Like the CP hypothesis, the FP hypothesis invokes two projections above the VP. Following Rupp (1999), the higher projection is IP, as discussed in more detail below. The FP hypothesis asserts, however, that subjects in inverted imperatives are in the specifier of a lower functional projection, FP, and that no head movement takes place. Although the exact nature of FP will not be crucial here, Rupp (1999) identifies it as Aspect and Platzack and Rosengren (1998) identifies F as a verbal head into which a null or overt form of *do* is inserted (see also Pollock 1989).² The fundamental claim of the FP analysis is that imperative subjects have a special syntax. They have surface-positional options unavailable to tensed clause subjects.³

2.3 Assumptions

The two hypotheses share a number of theoretical assumptions about English syntax, which I make explicit below. I will not in general defend these assumptions, which are summarised in (10) and commented on in turn, but simply give references where appropriate.

- (10) a. tensed clauses have a CP > IP > VP structure;
 - b. IP stands in for the set of inflectional projection(s);
 - c. imperative *do*(*n*'*t*) arises from *Do*-Support;
 - d. the term 'subject' refers to the DP that is the external argument of the main predicate;
 - e. movement is driven by morphosyntactic features and governed by Minimalist Checking Theory.

For the structure of tensed clauses, I will assume the hierarchy of projections CP > IP > VP with SpecIP the canonical position of the subject. An abstract functional projection immediately above the VP to introduce the external argument (vP of Chomsky 1995, PredP of Bowers 1993, or μP of Johnson 1991) is not invoked since it is too low in the structure to be of concern here. Similarly, FP may well be present in tensed clauses; however, its presence or absence does not impact the discussion below and I leave it out of the structures.

Throughout I will represent the inflectional domain, which contains agreement, tense, mood, negation, polarity, and other verbal morphosyntactic categories, as a unitary projection IP. I do this for expository purposes. If internal structure to IP is necessary or desired, then it can be articulated. I do not believe that this representational simplification interferes with the argumentation or the fundamental claims of the proposals.

² Thus Platzack and Rosengren (1998) posit an extra derivational step not shown in (9a) in which do(n't) moves from F° to I°. I depart from their terminology and projection labeling without, it is hoped, misrepresenting the fundamental structural aspects of their proposal.

³ Platzack and Rosengren (1998) present data from other Germanic languages in support of this claim.

I assume that the elements do and don't that appear in non-neutral imperatives result from the same *Do*-Support operation that inserts do into an inflection head in tensed clauses (Emonds 1970, Chomsky 1975, Lasnik 1981, Davies 1986, Potsdam 1998: ch. 4, Rupp 1999: ch. 4, and to some extent Schmerling 1977 and Pollock 1989). I will not be concerned here with the exact mechanics of *Do*-Support in the presence of negation or affirmation (see Pollock 1989, Laka 1990, Chomsky 1991, Wilder and Cavar 1994, Bobaljik 1995, and Grimshaw 1997 for recent analyses) but will simply include do(n't) in the structure when necessary.

I use the term 'subject' throughout to refer to the noun phrase that functions as the external argument of the matrix predicate. There is some debate over both the theoretical significance of the term 'subject' (McCloskey 1997) and whether the noun phrase in imperatives deserves this label (Platzack and Rosengren 1998). I take no stand on this issue here. I assume only that this noun phrase is syntactically integrated into the imperative clause and must receive a non-vocative analysis (Potsdam 1998: 170-185 and references therein).

Finally, it is evident that in both of the hypotheses there is an optional movement which must be encoded in the grammar. To this end, I adopt the Minimalist assumption that all movement is driven by feature checking and I assume the tenets of Minimalist Checking Theory (Chomsky 1995, see Radford 1997). Features are divided into weak and strong, interpretable and uninterpretable, and all uninterpretable features must be eliminated by being checked off in a core structural relation (head-head or head-specifier) against a corresponding feature. Strong features must additionally be checked overtly, before Spell Out.

To implement the optional movement operations, assume that in both analyses there is an optionally-instantiated, strong, uninterpretable feature [F]. In the CP analysis, the target of movement is imperative C°. Therefore, imperative C° optionally bears the feature [F], which must be eliminated via checking against an I° head also bearing [F]. If both C° and I° are inserted with [F], then movement occurs as in (8a). If neither head bears [F], no movement occurs, (8b). If only one of the heads is inserted with [F], the derivation crashes because the uninterpretable feature cannot be eliminated. In the FP analysis, the subject optionally moves from SpecFP to SpecIP. In this scenario, it is imperative I° that optionally bears [F], which is checked against a DP bearing [F].⁴ As in the CP analysis, the derivation only converges if both I° and DP bear [F] and movement takes place, (9b), or neither I° nor DP bears [F] and no movement occurs, (9a). In what follows, I will not include [F] in the structures.

3. Evidence for the CP hypothesis

To my knowledge, the literature contains five significant arguments relevant to the above analytical choice for English. First, Rupp (1999) discusses putative theory-internal difficulties with the CP analysis. She suggests that Minimalist assumptions require that all movement be motivated but that a motivation for I° -to- C° in the CP analysis is absent. I addressed this issue above and suggested that both hypotheses face comparable challenges in accounting for their respective optional movements. Thus, such theory-internal considerations do not immediately eliminate either hypothesis. Second, Han (2000) and Platzack and Rosengren (1998) discuss the relevance of the claim that imperatives do not occur in embedded environments (Sadock and Zwicky 1985). Platzack and Rosengren (1998) use the fact to argue for an FP analysis. At the same time, Han (2000) explains the observation assuming that imperatives have a CP structure. The argument apparently depends upon particular theory-internal assumptions. Most recently, Platzack (this volume) asserts that embedded imperatives do exist, requiring a

⁴ Rupp (1999) identifies [F] as the EPP-feature.

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rethinking of the argument on both sides. Third, Zhang (1990, 1991) and Potsdam (1997, 1998: 325-333) discuss the empirical implications of English Topicalisation. Zhang takes Topicalisation patterns in imperatives to argue against the CP analysis but Potsdam (1997, 1998) shows that the facts are identical in imperatives and tensed clauses and do not clearly support one hypothesis over the other. Fourth, Henry (1995) and Potsdam (1997, 1998: 333-346) explore the implications of Negative Preposing. Potsdam (1997, 1998) and Rupp (1999) again conclude that the data are ultimately compatible with both hypotheses. Finally, Rupp (1999) uses previously unaccounted for scope facts to argue for the FP hypothesis. I explore these data below.

Ultimately, it is not clear to me that any of the first four arguments is decisive and I will not explore them. The reader is referred to the above references. Instead, in this section I will present two additional empirical arguments, both I claim supporting the CP hypothesis. The first, in section 3.1, based on scope observations from Schmerling (1982), originates with Rupp (1999), although I reach a different conclusion. The second, in section 3.2, invokes adverb placement facts deriving from Jackendoff (1972) and Potsdam (1998).

3.1 *Scope interactions*

Rupp (1999) provides an interesting argument for the FP hypothesis based on the interpretation of negative imperatives with quantified subjects. In this section, I review the argument and the assumptions that it rests on and show that they are not unproblematic. I also suggest that consideration of additional data actually yields an argument in favor of the CP hypothesis.

Schmerling (1982) and Potsdam (1998: 278) observe that in negative inverted imperatives the scope of the subject with respect to the preceding *don't* is fixed. The surface order of the two elements determines the scope relation, with the quantified subject necessarily taking narrow scope. (11a) for example has only the interpretation in (12a), in which negation scopes over *everyone* (indicated by the notation NEG > EVERY) and not the interpretation in (12b).

- (11) a. Don't everyone expect a raise!
 - b. Don't all the workers take a break now!
 - c. Don't two people order the same thing!
- (12) a. =Not everyone should expect a raise.NEG > EVERYb. \neq Nobody should expect a raise.EVERY > NEG

I summarise the observation in (13).

(13) Imperative subjects take narrow scope with respect to preceding negation.

Rupp (1999: 144-154) cleverly argues that this pattern follows from the special syntax of imperative subjects in the FP analysis in conjunction with Hornstein's (1995) A-movement analysis of scope. Under Hornstein's analysis, there is no rule of Quantifier Raising that covertly raises quantificational DPs (QPs) to scope positions (May 1985). Instead, quantifier scope is determined parasitically from derivational operations that are independently needed for feature checking. A DP can take scope from any A-position in its chain.⁵

⁵ Kennedy (1997) and Johnson (2000), however, point out the inadequacy of Hornstein's analysis in a wide range of cases, including data parallel to (17) below.

Given Hornstein's analysis, the structure of (11a) under the FP analysis, in (14), is correctly predicted to be unambiguous. Neither the QP nor any of its possible traces ever c-commands negation in I° so negation must be construed with wider scope.⁶

(14) $\left[\prod_{IP} \left[\prod_{i} \text{ don't} \left[FP \text{ everyone} \left[F' \left[\text{ expect a raise} \right] \right] \right] \right] \right]$

At the same time, the CP analysis of (11a), in (15), incorrectly yields an ambiguous structure under these assumptions. Negation c-commands the subject in SpecIP to yield the NEG > EVERY reading but the subject also c-commands the trace of negation in I° to yield the unavailable EVERY > NEG reading. A crucial assumption here is that Neg Lowering is available; that is, at LF, negation can also be interpreted at the site of its trace. This is necessary to achieve the EVERY > NEG reading.

- (15) $\left[_{CP} \left[_{C'} \text{ don't}_i \left[_{IP} \text{ everyone} \left[_{I'} t_i \left[\text{expect a raise} \right] \right] \right] \right] \right]$
- (16) *Neg Lowering* Negation can be interpreted at its trace position

In summary, the FP analysis seems to correctly account for the generalisation in (13) while the CP analysis does not. When we consider a wider range of scope facts from both imperative and tensed clauses however, it turns out that the FP analysis does not generalise while the CP analysis does.

The initial challenge comes from a consideration of the behaviour of quantified objects in imperative and declarative clauses. Examples as in (17) demonstrate that object QPs in declarative clauses may take scope over negation in I°. In particular, (17a), with the structure (17d), has both interpretations in (17b,c) including the EVERY > NEG reading.⁷

(17)	a. Pat didn't believe every rumor.	
	b. =Pat believed not every rumor.	NEG > EVERY
	c. =Pat believed no rumor.	EVERY > NEG
	d. [IP Pat [I' didn't [believe every rumor]]]	

Surprisingly, (18) illustrates that the behaviour of quantified objects in imperatives is different. Object QPs in inverted imperatives must take narrow scope with respect to negation. The wide scope reading of the QP, (18c), is impossible, in contrast to (17).

(18)	a. Don't you believe every rumor!	
	b. =Believe not every rumor!	NEG > EVERY
	c. ≠Believe no rumor!	EVERY > NEG

The contrast between (17) and (18) yields a paradox for the FP hypothesis: scope interactions between negation and object QPs differ in inverted imperatives versus declaratives; however, under the FP hypothesis, the syntactic positions of negation and direct objects are identical in the two clause types (see (14) and (17d)). Negation is in I° and the

⁶ Wim van der Wurff (p.c.) points out that in order for this explanation to go through the subject must be prevented from raising covertly to SpecIP. Rupp (1999: 134-135, 165) addresses this issue.

⁷ Hornstein (1995: 170, 244) interprets the data differently, indicating that the inverse reading of the quantified object over negation is not available without focal stress on the quantifier. While this may be true, the implications are unclear and the reading is nonetheless possible. I follow Johnson (2000), who concludes that it must be possible for objects in declarative clauses to take scope over negation.

object is in a lower checking position. Consequently, no structurally-based theory of quantifier scope will be able to handle both patterns if the FP analysis is adopted because there is no relevant structural difference.

In order to account for the facts, negation and/or the direct object must have different syntactic behaviour in inverted imperatives versus declaratives. I suggest that there is little reason to believe that objects behave differently across the two clause types and their syntax is not the source of the contrast. Rather, the more likely culprit is the syntax of negation. This is precisely the claim of the CP hypothesis. Negation in the two clause types has distinct syntactic behaviour because in inverted imperatives but not declaratives the negative auxiliary moves to C° .

Further facts implicate negation in the contrast. Other VP-internal QPs also cannot take scope over inverted imperative negation. (19) and (20) illustrate this observation for indirect objects and adjuncts. The observation in (20) is from Moon (1999).

a. Don't you talk to everyone!	
b. =Talk to not everyone!	NEG > EVERY
c. \neq Talk to no one!	EVERY > NEG
a. Don't you play football for many years!	
b. =You should play football for not many years.	NEG > MANY
c. \neq You should wait many years before playing football.	MANY > NEG
	 a. Don't you talk to everyone! b. =Talk to not everyone! c. ≠Talk to no one! a. Don't you play football for many years! b. =You should play football for not many years. c. ≠You should wait many years before playing football.

The scope options of objects, adjuncts, and subjects with respect to negation in inverted imperatives appear to be the same:⁸

(21) Negation in inverted imperatives always takes widest scope.

(21) directly implicates negation as the source of the scope restrictions. We are led to the conclusion that the original observation about scope in (13) does not require a special syntax for imperative subjects.

In fact, the observation in (21) is even more general. Turning to tensed clauses with inverted word order, one encounters exactly the same pattern: negation preceding the subject necessarily takes widest scope over QPs in the clause. I offer evidence for the larger generalisation in (22), which I will call the Inverted Negation Scope Generalisation (INSG).

(22) *INSG*

Inverted negation always takes widest scope.

Two tensed clause constructions with SAI, wh-interrogatives and Negative Preposing, support the INSG.⁹ (23) exemplifies the claim for wh-interrogatives. The examples are unambiguous

(i) a. Does Pat sing?

⁸ The observations here and below apply only to inverted imperatives and the presence of the subject is crucial to ensuring that we are in fact dealing with such a structure. When the subject is missing or appears preceding *don't*, the scope options are the same as in tensed clauses. This fact follows in both analyses because non-inverted imperatives have the same structure as declaratives in the relevant respects.

⁹ Polar interrogatives cannot be used to test the INSG. As is widely recognised, negation in polar interrogatives is 'fake negation' (McCawley 1998: 519), contributing only information about the expected answer. As Quirk et al. (1985: 84, 808-810) state 'Logically, negative *yes-no* questions are equivalent to positive ones, in that they elicit equivalent *yes* and *no* answers: they differ from the latter only in indicating that the corresponding negative statement has been implied''. To illustrate, (i a,b) ask for the same information while (ii a,b) clearly do not.

b. Doesn't Pat sing?

and have only the NEG > EVERY reading. For example, (23a) has only the interpretation in (24a), the wide scope reading of negation, and not (24b), the inverse EVERY > NEG reading. (23a) cannot be used to ask why no runner finished. The structure, with I°-to-C°, is as in (24c).¹⁰

(23)	a.	Why didn't every runner finish?
	b.	When doesn't Harry Potter use every magic spell?
	c.	Who didn't John call on every day of his vacation?
(24)	а	=Why was it that not every runner finished?

(24) a. =Why was it that not every runner finished?
 NEG > EVERY
 b. ≠Why was it that no runner finished?
 EVERY > NEG
 EVERY > NEG

The same pattern appears with Negative Preposing, exemplified in (25), which numerous researchers also analyse as involving I°-to-C°, with concomitant fronting of the negative constituent to SpecCP (Koster 1975, Emonds 1976, Radford 1988, Progovac 1994, Haegeman 1995, Rizzi 1996).

- (25) a. Never have we seen such a mess.
 - b. Only under duress will Joey share his chewing gum.
 - c. $[_{CP} \text{ never } [_{C'} \text{ have}_i [_{IP} \text{ we } [_{I'} t_i [\text{seen such a mess}]]]]]$

An inverted negative auxiliary in this construction obligatorily takes wide scope with respect to clause-internal QPs, (26). (26a) has only the wide scope reading of negation in (27a).

(26) a. Only on Fridays doesn't everybody come.
b. Only on Fridays doesn't he help every student.
(27) a. =Only on Fridays does [not everybody] come.
b. ≠Only on Fridays does nobody come.
c. [_{CP} only on Fridays [_C' doesn't_i [_{IP} everybody [_T t_i [come]]]]]

The INSG and the fact that declaratives and interrogatives with inverted negation are also unambiguous further indicate that the explanation of the initial imperative data has nothing specifically to do with imperatives or subjects. Instead, it has everything to do with negation.

To conclude this section I will suggest that the INSG has a straightforward explanation if we adopt the CP analysis of imperatives. The INSG and the scope facts remain unexplained

- (ii) a. When does Pat sing?
 - b. When doesn't Pat sing?

The negation in (i b) serves mainly to indicate that the questioner expects a positive answer. I thus conclude that negative polar interrogatives are not a testing ground for the INSG because there is no negative operator to participate in scope ambiguities.¹⁰ Rupp (1999: 154) notes in a footnote that such data are problematic for her analysis. She suggests that 'the

¹⁰ Rupp (1999: 154) notes in a footnote that such data are problematic for her analysis. She suggests that 'the possibility of forming negative interrogatives clauses with the free element *not* may play some role' in the lack of ambiguity in examples similar to (23a). As I understand it, the idea is that the EVERY > NEG interpretation in (24b) is blocked by the existence of an alternative syntactic structure that expresses this meaning, namely *Why did every runner not finish*? It is not clear how strong an explanation syntactic blocking is. In any case, it cannot extend to the same lack of ambiguity with a quantified object or adjunct, (23b,c). There is no reasonable alternative that expresses the EVERY > NEG reading in these cases because freestanding *not* will still be structurally above these elements. Such an account also necessarily gives up on the idea that all of the scope facts are covered by a single explanation.

with an FP analysis. Recall that the structure of the inverted imperative in (28a) is (28b) under the CP analysis.

- (28) a. Don't everyone expect a raise!
 - b. $[CP \text{ don't}_i [IP \text{ everyone } [I' t_i [expect a raise]]]]$

With this structure, imperatives, interrogatives, and Negative Preposing declaratives are structurally identical (compare (24c), (25c), and (28b)). It is thus unsurprising that they show the same scope patterns. This permits a reformulation of the INSG:

(29) Negation in C° always takes widest scope

It remains only to explain (29). I propose that it follows from a well-known restriction on QP scope: its clause-boundedness. As has been widely discussed, a QP can generally not take scope outside of its clause (Chomsky 1977, May 1977, Farkas 1981, 1997, Fodor and Sag 1982, Aoun and Hornstein 1985, Beghelli 1993, Abusch 1994, Hornstein 1995, Fox and Sauerland 1996, and numerous others). While this observation is empirically well-grounded, its theoretical basis is less secure. Nevertheless, if we ensure that Quantifier Raising, Hornstein's A-movement, or whatever operation licenses scope cannot scope a QP outside of the minimal IP containing it, then the INSG follows. With negation in C°, the QP will be not be able to scope above negation. The configuration in (30), which is necessary to get a QP outside the scope of negation in C°, will require an application of QP scoping that violates clause-boundedness. Only when negation is in I° do we expect and see QP/negation interactions.

(30) $*[_{CP} QP_i [_{CP} [_{C'} NEG [_{IP} ... t_i ...]]]]$

If these considerations are correct, then Rupp's argument against the CP structure for negative imperatives must also be flawed. Remember that she pointed out that a structure as in (28b) incorrectly predicted that examples as in (28a) should be ambiguous because the subject in SpecIP c-commands the trace of negation in I°. I consequently reject Neg Lowering in (16), the claim that the trace of a negative head can be used to determine scope relations. If Neg Lowering existed, not only the imperative data, but also the interrogative and Negative Preposing data would incorrectly be predicted to be ambiguous because they less controversially have a trace of the negative auxiliary below the subject (see (24c) and (25c)). I agree with Ladusaw (1988) that the scope of negation is fixed by its surface position. I leave for future work the question of why there is no X° reconstruction for scope in the case of I°-to-C° head movement.

The argument in favour of the CP hypothesis is that it allows us to capture the INSG in (22) because constructions with the same scope characteristics (inverted imperatives, interrogatives, and Negative Preposing declaratives) have the same syntactic structure. The FP analysis cannot provide a uniform analysis of the INSG because it assigns distinct structures to inverted imperatives and inverted tensed clauses. The FP analysis can only account for the limited facts involving negation and subject QPs. That explanation does not extend to the rest of the imperative data because the relevant structure of such imperatives is the same as in declarative clauses but the scope facts are not. In conclusion, I have claimed that the CP hypothesis more adequately captures the surprising scope facts in imperatives because they are due not to a special syntax of imperative subjects but, rather, to the structural position of imperative negation.

3.2 Adverb placement

In this section I use adverb placement to provide a second argument for the CP analysis.¹¹ I first use tensed clauses to determine the structural distribution of a particular class of adverbs. I then demonstrate that these adverbs have the same distribution in imperatives relative to the subject and auxiliaries. The CP hypothesis correctly predicts the identical behaviour but the FP hypothesis does not.

In addition to the two well-known syntactic classes of adverbs, S(entence)- and VP-adverbs, Jackendoff (1972) describes a third class of adverbs which have the positional distribution of neither of the two former classes. Adverbs like *merely*, *hardly*, and *scarcely* do not assimilate into either category on syntactic or semantic grounds. Potsdam (1998) calls them E(XTENT)-ADVERBS since they approximately describe the extent or degree to which a situation holds. They are a subset of what Ernst (1984) calls Degree adverbs.

E-adverbs have unified syntactic behaviour and Jackendoff (1972) summarises their distribution in declarative clauses as follows: they necessarily occur somewhere between the subject and the main verb. This pattern is schematised in (31) and is supported by the data in (32) through (36). In (32), the adverb immediately follows the subject but precedes a finite auxiliary. In (33) the adverb immediately follows the finite auxiliary. (34) illustrates that E-adverbs may also immediately follow any non-finite auxiliary when multiple auxiliaries are present. Finally, (35) and (36) illustrate two impossible positions for these adverbs: they cannot appear clause-initially or clause-finally. As Jackendoff observes, only clause-internal positions and not clause-peripheral ones are acceptable for E-adverbs.

- (31) * SU \checkmark AUX \checkmark AUX \checkmark VERB *
- (32) a. He *simply* is incapable of it.
 - b. The raccoons scarcely have touched our garbage.
 - c. They *hardly* should worry about that.
 - d. We *already* don't have enough.
- (33) a. He is simply incapable of it.
 - b. The raccoons have scarcely touched our garbage.
 - c. They should *hardly* worry about that.
 - d. We don't *already* have that one.
- (34) a. They must have *simply* become disoriented.
 - b. John will be merely annoyed with Bill.
 - c. They should have *hardly* worried about that.
 - d. We shouldn't be *simply* abandoning them.
- (35) a. **Simply* he is incapable of it.
 - b. *Scarcely the raccoons have touched our garbage.
 - c. *Hardly they should worry about that.
- (36) a. *He is incapable of it *simply*.
 - b. *The raccoons have touched our garbage scarcely.
 - c. *They should worry about that hardly.

¹¹ The material is based on Potsdam (1998: 320-322), which used similar examples as evidence against a VPinternal position for imperative subjects. That work did not explore the implications of the adverb data for the two hypotheses under investigation here.

These examples illustrate E-adverbs with *be, have,* a modal, and a negative auxiliary. There are thus no inherent co-occurrence restrictions between such adverbs and any of these elements; in particular, there is no restriction against E-adverbs co-occurring with negation.

(37) repeats the structure that I assume for such declarative clauses. AuxP* stands for zero or more verbal projections for non-finite auxiliaries.

(37) [IP SU [I' I [AuxP* Aux [VP]]]]

The finite auxiliary, if there is one, is in I° and non-finite auxiliaries are in head positions below IP.¹² Whether FP is present and contains an auxiliary or not is not relevant to the argument to follow and it is not shown. Unlike auxiliaries, main verbs are not in I° but remain in VP.

As for the integration of adverbs into this syntactic structure, I assume without argument that adverbs are base-generated in adjoined positions. I do not assume that adverbs appear in dedicated specifier positions of additional functional projections interspersed in the clause (Kayne 1994, Alexiadou 1997, Cinque 1999). The adjunction analysis follows numerous researchers, some of whom explicitly argue against Cinque's system (Pollock 1989, Iatridou 1990, Johnson 1991, Bowers 1993, Ernst 1998, Shaer 1998, Haider 2000).

In order to capture the distribution of E-adverbs with the structure in (37), they must be allowed to adjoin to I', AuxP or Aux', and VP or V' (see Potsdam 1998). The relevant positions are indicated in the tree in (38), which corresponds to the grammatical examples above. The I'-adjoined position is crucial to placing the adverb between the subject and finite auxiliary, (32).¹³ The adverb positions immediately following a finite auxiliary or non-finite auxiliary, (33) and (34), are adjunction to AuxP/Aux' or VP/V' (only the Aux' and V' options are shown). Adjunction to IP must be impossible in order to prevent the clause-initial position in (35). Likewise, rightward adjunction must be prohibited, (36). The statements in (39) summarise the syntactic distribution.¹⁴

(i) $[_{MP} SU [_{M'} M^{\circ} [_{TP} ADV [_{TP} [_{T'} AUX [_{VP}]]]]]$

Since there is no expository advantage to adopting Pollock's analysis, I will not introduce it here.

Belletti (1990) proposes a second alternative analysis of the pre-finite-auxiliary adverb position based on French and Italian facts. She suggests that the word order is derived by Topicalisation of the subject over an IP-adjoined adverb:

(ii) $[_{IP} SU_i [_{IP} ADV [_{IP} t_i [_{I'} AUX [_{VP}]]]]]$

¹² Whether the finite auxiliary reaches I° via V°-to-I° head movement as is standardly assumed (Klima 1964, Jackendoff 1972, Emonds 1976, Pollock 1989, Chomsky 1991, Rohrbacher 1994, and many others) or via base-generation (Radford 1997, Lobeck 1999) need not concern us.

 $^{^{13}}$ The proper analysis of English adverbs in the pre-finite-auxiliary position has been much debated. If IP is assumed to contain both the subject in SpecIP and the finite auxiliary in I°, then there seems to be little alternative to an analysis with adjunction to I'.

Adjunction to I' could be avoided if one adopts a split Infl scenario. Pollock (1997) analyses the pre-finiteauxiliary adverb position in English with a split Infl structure in which IP is replaced by MoodP, TP, and AgrP. The adverb position results when the auxiliary does not move all the way to Mood[°]:

Pollock (1997: 276) provides a number of arguments against this analysis for English. E-adverbs provide an additional problem. A claim of the proposal is that an adverb can appear between the subject and finite auxiliary if and only if it can also be adjoined to IP, clause-initially. E-adverbs however contradict this: they only appear in the post-subject position, not clause-initially. Thus the structure in (ii) with an E-adverb would be illicit because adjunction to IP is impossible although the corresponding word order is acceptable.

¹⁴ Space considerations do not permit providing a theoretical basis for the distribution. See Travis (1988), Rochette (1990), Potsdam (1998), and Ernst (1998) for theories of adverb licensing.



- (39) syntactic distribution of E-adverbs
 - a. left adjunction to I'
 - b. left adjunction to AuxP or Aux'
 - c. left adjunction to VP or V'

The structural distribution statements receive independent support from the placement of E-adverbs in interrogatives. The data in (40), schematised in (41), are precisely those expected given (39) and an 1° -to- C° analysis of interrogatives.

- (40) a. Couldn't they *simply* have become disoriented?
 - b. Couldn't they have simply become disoriented?
 - c. *Hardly should they have worried about that?
 - d. *Should hardly they have worried about that?
 - e. *Should they have worried about that *hardly*?
- (41) [CP [*ADV [C' AUX_i [IP *ADV [IP SU [I' ADV [I' t_i [AuxP [ADV [Aux' AUX [VP [ADV [V']]]]]]]]]]

(40a) illustrates the I'- or AuxP/Aux'-adjoined position. (40b) is the VP/V'-adjoined position. (40c) and (40d) are ungrammatical because adjunction to CP/C' or IP is not permitted for E-adverbs. (40e) confirms that right adjunction is still not available.

Given the description of the positions in which E-adverbs occur, I turn to imperatives and the predicted positions for such adverbs under the CP and FP structures. The options for E-adverbs in negative inverted imperatives are illustrated in (42).

- (42) a. Don't you *simply* stand there!
 - b. Don't you have *simply* ignored my advice!
 - c. *Simply don't you stand there!

- d. *Don't simply you stand there!
- e. *Don't stand there *simply*!

The most immediate observation is that the judgments exactly parallel the interrogative data in (40). The facts clearly support the CP analysis since this is what we expect if interrogatives and inverted imperatives have identical structures. Further, the data are problematic for the FP hypothesis. Because the FP analysis places the subject in a specifier below the canonical subject position, the imperative subject should be able to appear to the right of an E-adverb, unlike in finite clauses. In particular, the FP hypothesis predicts that (42c) should be grammatical, with the following structure:

(43) *[$_{IP}$ [$_{I'}$ simply [$_{I'}$ don't [$_{FP}$ you [$_{F'}$ F [$_{VP}$ stand there]]]]]]

The adverb is licitly adjoined to I' as I argued above is independently necessary.¹⁵ The sentences in (44), from Potsdam (1998: 321), are similar ungrammatical examples without the potential interference of negation. The subject still cannot appear below an E-adverb.

- (44) a. There's plenty of room.
 - *Simply everyone move to his right a little!
 - b. Be careful when you dust that machinery.
 - *Barely everyone touch it!

I conclude that only the CP hypothesis accounts for the correct positioning of E-adverbs in imperatives.

Before closing, I would like to address an apparent complication. Curiously, non-neutral imperative examples with clause-initial E-adverbs are grammatical if the subject is unpronounced:

(45) a. Simply don't do it!b. Just don't stand there!

This challenge is readily resolved with the CP hypothesis once it is remembered that the full derivation involves I°-to-C°, which is optional. A primary motivation for the two hypotheses under consideration was that they could account for both imperative word orders repeated in (46). Only in (46a) does I°-to-C° take place.

I leave such data for future investigation.

¹⁵ Laura Rupp (p.c.) offers a potential counterexample to the claim that the pattern in (42c) is ungrammatical (her judgment shown):

⁽i) (group of friends at a party) So far, Bill hasn't shown up and we're really glad. Whenever you say one word to him, he won't stop talking. But what if he's only late?(speaker) Well, simply don't anyone say a word when he comes in! That way he won't feel invited to speak.

The example seems strained to my ear and little better than the following interrogative:

⁽ii) (group of friends) Bill is very shy but we can't figure out why he left the party without talking to anyone. Usually if people engage him in conversation he stays for a while.(speaker) ??Simply didn't anyone talk to him when he arrived?

(46) a. Don't everybody leave!b. Everybody don't leave!

If I° -to- C° is optional, then the examples in (45) have the following structure in which it has not applied:

(47) [_{CP} [_{C'} [_{IP} *pro* [_{I'} simply [_{I'} don't [_{VP} do it]]]]]]

If the subject is realised, we transparently obtain the grammatical option in (48) in which the subject precedes the adverb and the auxiliary:

- (48) a. Everybody simply don't do it!
 - b. $[_{CP} [_{C'} [_{IP} everybody [_{I'} simply [_{I'} don't [_{VP} do it]]]]]$

In summary, the argument against the FP hypothesis is that it places the imperative subject lower in the structure than in corresponding tensed clauses and predicts that the imperative subject will be able to follow adverbs that tensed clause subjects cannot. For E-adverbs, this expectation is not borne out. The CP hypothesis in contrast correctly predicts that the positional distribution of E-adverbs in imperatives will be exactly the same as in corresponding tensed clauses with the same word order, because they have identical structure.

4 Consequences

The FP hypothesis for English imperative structure, if correct, would be significant because it would provide substantive, empirically-based support that otherwise seems to be lacking for a more articulated clause structure in English. While there has been much work on the nature and content of functional projections since Pollock's (1989) work, the lion's share of results has come from other languages in which word order is freer and verbal morphology is richer. English, with its relatively rigid word order and impoverished morphology, has yielded little conclusive support for the proposals (see for example Iatridou 1990). Extension of articulated clause structure to English is typically done based on simple assumptions about a fixed universal clause structure; however, one would ideally like language-internal evidence for such structures. One result of this paper has been to show that inverted imperative word order does not yet provide the desired independent evidence for these functional projections in English.

The main goal of this paper has been to argue for the claim that English non-neutral imperatives have the same clause structure and derivation as superficially similar and better studied interrogatives and declaratives. The support came from parallel facts in the domain of scope and adverb placement. The significant similarities do not seem accidental and are straightforwardly captured if the two clause types receive the same structural analysis. If this conclusion is on the right track, it indicates that English imperatives, at least the ones under investigation here, have a rather conventional syntax that uses a canonical clause structure and derivation. Such imperatives do not require exceptional derivational strategies or structures unsupported elsewhere in English. If this result holds, syntactic theory is closer to providing a truly integrated treatment of English imperatives.

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