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The Parallel Structure of English Questions and Imperatives

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1. Introduction*

This paper investigates the apparent similarity between the English imperative in (1) and the string-wise identical interrogative in (2).

(1) Don't you believe him!

(2) Don't you believe him?

While the analysis of yes/no questions is relatively uncontroversial, the structural analysis of the superficially similar non-neutral imperatives, negative and emphatic imperatives further exemplified in (3) and (4), has no such consensus.

(3) a. Don't everyone talk at once!

b. Don't anybody misbehave while we're gone!

*I would like to thank Judith Aissen, James McCloskey, and audiences at the University of California, Santa Cruz and WCCFL XV for helpful comments and questions.

- (4) c. Do be more careful!
 d. Do try the dandelion salad!¹

Questions are typically taken to be CPs with the auxiliary having undergone I'-to-C' movement. Chomsky 1975[1955] first suggested that some imperatives share this same Subject-Auxiliary Inversion derivation, a position that I will defend. This paper offers evidence that the two clauses do in fact have significant syntactic parallels and are alike in both representation and derivation as CPs.

Section 2 presents two hypotheses regarding the structure of the above imperatives. The two analyses differ most fundamentally in whether they take imperatives to have a structure more similar to that of questions or declaratives. Questions are CPs while statements have no C' projection. They are IPs in the unmarked case. Sections 3 and 4 investigate two phenomena in English syntax that bear on the hypotheses: topicalization and negative preposing. Both constructions have been used to argue that imperatives and questions are structurally distinct. Upon closer examination, however, the data are actually compatible with a unified analysis of the two clause types. Lastly, Section 5 briefly discusses some consequences of adopting a question-like structure for imperatives.

2. Two Hypotheses

The two analyses under consideration for non-neutral imperatives are illustrated in (5) and (6). Both structures obey the X' schema and take the core of an imperative to be a verb phrase. Additionally, they both assume that the imperative markers *do* and *don't* are heads and imperative subjects occupy specifier positions (support for these assumptions is offered in Potsdam, in preparation). Where the analyses contrast is in what they take the structure dominating the verb phrase to be.

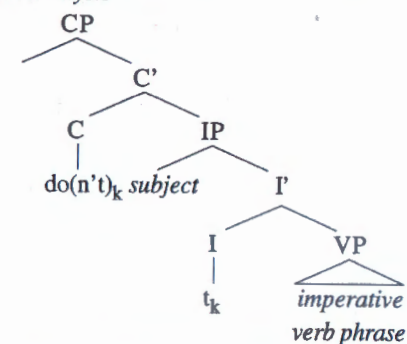
The QUESTION or CP ANALYSIS in (5) claims that imperatives have the same syntax as yes/no questions. They are CPs, a claim also put forth in Beukema and Coopmans 1989, and the inverted word order is obtained by movement of the auxiliary from I' to C'.

¹Although imperatives with *do* normally do not contain a subject, in contrast to negative imperatives which readily permit one, such examples are not impossible (Davies 1986):

- (i) a. Do at least some of you have a try!
 b. Do SOMEONE help him! He's choking to death!

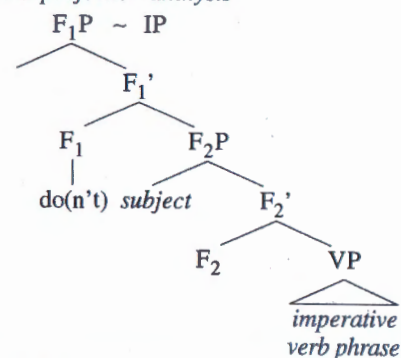
I thus assume that the emphatic imperatives in (4) are structurally identical to the negative imperatives in (3) despite their lack of an overt subject. Even when a subject is not overt it is nonetheless syntactically represented.

- (5) *question analysis*



(6) illustrates the FUNCTIONAL PROJECTION or IP ANALYSIS. In contrast, it maintains that imperatives are more like declarative sentences. They are composed of a verb phrase dominated by two inflectional projections, a clause structure inspired by the complex Infl analysis of Pollock 1989. Two functional projections, F₁P and F₂P, permit the required word order by having *do(n't)* in the head of the upper projection and the subject in the specifier of the lower projection, as shown.² The IP analysis crucially differs from the CP analysis in that CP is not present and the top active projection is instead roughly equivalent to the unitary IP. Pollock 1989 and Zhang 1990 instantiate proposals along these lines.

- (6) *functional projection analysis*



In what follows, I consider two syntactic phenomena which have been used to claim that imperatives are incompatible with a CP analysis,

²If one were to adopt such an analysis, it would need to be explained why the imperative subject remains in the specifier of the lower inflectional projection. I leave the additional analytical complexities of this hypothesis aside since I will ultimately reject it. The unexpected positioning of the subject could be taken as a theory-internal argument against the proposal.

supporting instead an IP analysis. A closer examination of the data, particularly in comparison to questions, indicates that this is not the case and that analyzing imperatives as CPs can account for the facts. The argumentation does not actually rule out the IP analysis; however, it demonstrates that the CP analysis requires no new syntactic mechanisms beyond what is independently needed in the theory. On grounds of simplicity and uniformity, then, it is to be preferred.

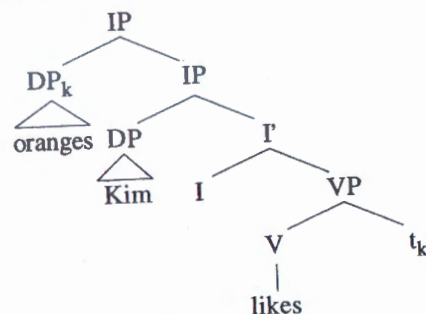
3. Topicalization

Topicalization is the construction illustrated in (7) in which a non-*wh* maximal projection is found in sentence-initial position and corresponds to a gap somewhere in the sentence.

- (7) a. Bigotry, we will not tolerate.
 b. The fuzzy pink slippers, Maxine gladly donated to Goodwill.
 c. Oranges, Kim likes.

Lasnik and Saito 1992, following Baltin 1982, argue that the structural position of such topics is left-adjoined to IP. The example in (7c) receives the analysis in (8).

(8)



3.1. Topicalization in Imperatives

Zhang 1990 demonstrates that topicalization is possible in imperatives, in (9). The ungrammaticality of the data in (10) indicates that the position of the topic is such that it must always be left-peripheral, preceding *do(n't)*.

- (9) a. That present, don't you open until next week!
 b. My good wine, don't anybody touch!
 c. The lemon mousse, do try! It's delicious.
 (10) a. *Don't, that present, you open until next week!
 b. *Don't, my good wine, anybody touch!
 c. *Do, the lemon mousse try!

Given that topics are adjoined to IP, Zhang concludes that imperatives must be IP-like because topics appear on their left. They would transparently have an analysis exemplified by (11).

- (11) [_{IP} that present [_{IP} don't you open *t* until next week]]

Furthermore, if imperatives were CPs and *don't* were in C°, one would incorrectly predict the examples in (10) to be good with the topic following *do(n't)*. They would have a structure in (12) with the IP-adjoined topic to the right of C°.

- (12) *[_{CP} don't [_{IP} that present [_{IP} you open *t* until next week]]]

Two problems thus arise if imperatives are to be analyzed as CPs: an additional CP-adjoined topic position is apparently needed to account for the data in (9) and IP adjunction has to be ruled out in (10). These difficulties do not arise if imperatives are IPs. Looking only this far one is led to conclude that imperatives are indeed IPs.

The picture becomes more complex, however, when one considers questions—which are CPs. The same two difficulties arise and receive explanations already available in the literature. The accounts are then immediately extendible to imperatives. Consequently, the CP analysis is not ruled out in favor of an IP analysis for imperatives.

3.2. Topicalization in Questions

In contrast to the acceptable imperative topicalization examples, Zhang claims that topicalization is not permitted in yes/no questions, citing (13).

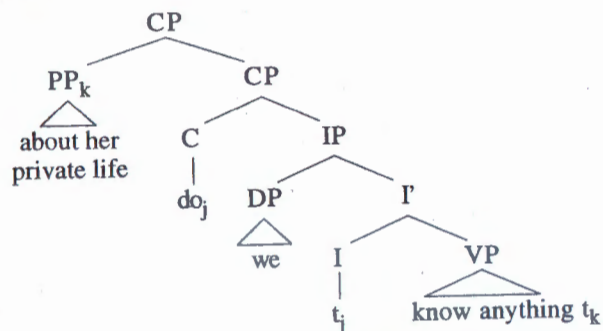
- (13) *That classic novel, did you read last week? (Zhang 1990:75)

If (13) contrasts in grammaticality with imperative examples like (9), it supports the claim that imperatives and yes/no questions have different structures. Radford 1988 and Rochemont 1989, however, observe that topicalization in yes/no questions is possible:

- (14) a. That kind of antisocial behavior can we really tolerate in a civilized society? (Radford 1988)
 b. A MANATEE did Jim claim he had never seen?
 c. About her private life do we know anything?

The structure that is required for (14c) is (15), where the topic is adjoined to CP, the projection containing the auxiliary.

(15)



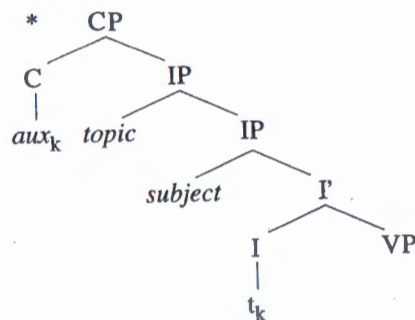
The structure is permitted under a proposal for English topicalization from Rochement 1989. He convincingly argues that topicalization is more generally adjunction to a propositional domain, either CP or IP. This accounts for the data in (14) and also automatically extends to the grammatical imperative examples in (9) if they are CPs as well.

At the same time, parallel to the imperative examples in (10), topics in questions are impossible after the inverted auxiliary:

- (16) a. *Can, that kind of antisocial behavior, we really tolerate in a civilized society?
 b. *Did, a MANATEE, Jim claim he had never seen?
 c. *Do, about her private life, we know anything?

The illicit structure is in (17).

(17)



Since IP adjunction and I'-to-C° movement are each independently permitted, it must be the interaction of the two that rules out (17). Following Lasnik and Saito 1992, the movement of the auxiliary in (17) constitutes a Subjacency violation, hence the ungrammaticality. Under their

definitions,³ the IP is a barrier because it is not L-marked by C°. The head movement of I'-to-C° across the adjunction structure is then illicit because the target position is not subjacent to the launching site—the barrier intervenes. This analysis too automatically extends to the corresponding imperative data in (10).

In summary, imperatives and yes/no questions show the same behavior with respect to topicalization. Since the interrogative data can be fully accounted for assuming that they are CPs, the analysis of imperatives as CPs comes at no cost.

4. Negative Preposing

The second syntactic phenomenon under investigation is negative preposing, illustrated in (18). Certain negative phrases when fronted trigger obligatorily inversion of the auxiliary.

- (18) a. *Never* have I seen such a disaster.
 b. *Only in emergencies* would Joey share his chewing gum.
 c. *Under no circumstances* does Judy tolerate poor manners from her guests.

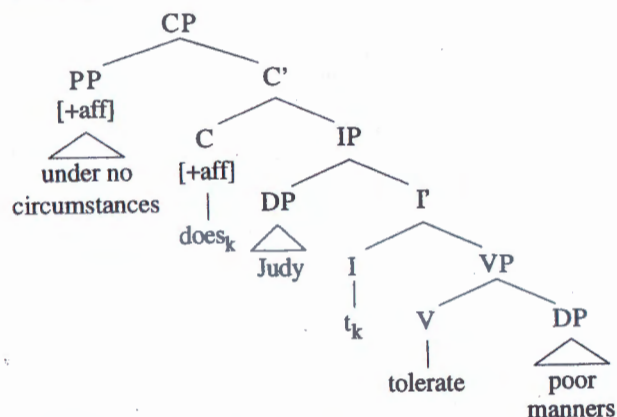
A standard analysis of this construction, for example Rizzi 1991, has the adverbial phrase in the specifier of CP and the auxiliary in C° (see also Koster 1975 and Haegeman 1995). The inverted word order is modeled just as in questions. (18c) has the structure given in (19): the prepositional phrase is in spec,CP and the auxiliary has moved from I° to C°.

³(i) γ is a *barrier* for β if (Lasnik and Saito 1992:87)

- a. γ is a maximal projection,
- b. γ is not L-marked, and
- c. γ dominates β .

(ii) β is *subjacent* to α if for every γ , γ a barrier for β , the maximal projection immediately dominating γ dominates α (Lasnik and Saito 1992:87).

(19)



Rizzi takes spec-head agreement as the motivation for this movement. Such 'affective' phrases are specified with a feature [+aff] which must 'agree' with a head also specified in this way.⁴ The important claim for what follows is that negative preposing involves movement into CP. It thus serves as a diagnostic for the presence or absence of a C' projection.

Further exploratory power comes from a particular kind of negative preposing case discussed in Liberman 1974. Liberman observes that the example in (20) is ambiguous and can be disambiguated with negative preposing and topicalization, as shown in (21). The corresponding meanings are paraphrased in (22).

(20) John would be happy with no job.

(21) a. With no job would John be happy. NEGATIVE PREPOSING

b. With no job, John would be happy. TOPICALIZATION

(22) a. There is no job such that John would be happy with it. ('unsatisfiable' reading) NEGATIVE PREPOSING

b. John would be happy without a job. ('unemployed' reading) TOPICALIZATION

Negative preposing with obligatory inversion in (21a) yields the reading in (22a), the 'unsatisfiable' reading. The sentence has the structure in (23)

⁴The precise mechanisms are the Operator Criterion in (i) and Dynamic Agreement in (ii) (Rizzi 1991).

(i) *Operator Criterion*

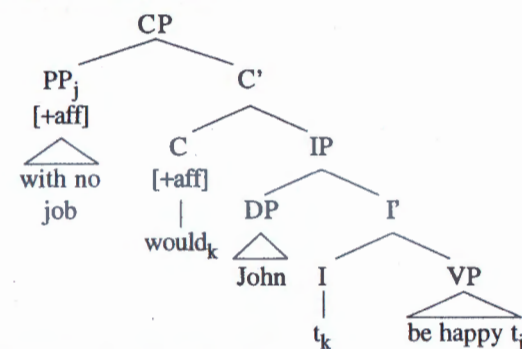
- A. An Operator [+aff] must be in a Spec-head configuration with an X' [+aff]
 B. An X' [+aff] must be in a Spec-head configuration with an Operator [+aff]

(ii) *[+aff] Dynamic Agreement*

$$[+aff]-Op \ X' \Rightarrow [+aff]-Op \ X' \ [+aff]$$

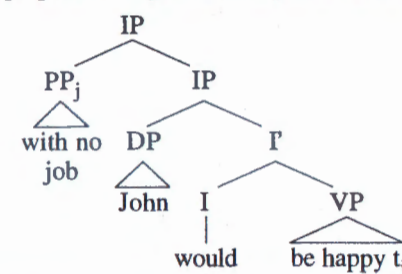
given the above analytical assumptions. The prepositional phrase is marked [+affective] and is fronted to the specifier of CP. This is accompanied by movement of the auxiliary into C'.

(23)



Topicalization isolates the second meaning of (20). (21b) has the 'unemployed' or 'lazy' reading paraphrased in (22b). It receives the analysis in (24). The prepositional phrase is adjoined to IP and there is no inversion.

(24)



The reason for introducing Liberman's examples is that the meaning distinction can be used to distinguish the negative preposing reading of interest from a topicalization interpretation. In declarative sentences, (21), the difference between the two phenomena is readily apparent from the word order alone. In questions and imperatives, however, inversion independently applies and topicalization and negative preposing of an affective phrase will yield the same string. The word order thus provides no indication of the underlying structure. For this reason, the meaning difference supplied by the Liberman examples will crucially be recruited to investigate the availability negative preposing.

4.1. Imperatives and Questions

Henry 1995 looks at negative preposing in imperatives and based on the ungrammaticality of (25) concludes that CP is not active in imperatives.

(25) *Under no circumstances do (everybody) sit down! (Henry 1995)

Judgments on other examples are not as robust, however, and in some cases the data are acceptable to a reasonable extent—for example, the contextualized case in (26c).

- (26) a. ??Only when I say don't everyone sing!
 b. ??Only on Fridays don't you eat meat!
 c. You all don't have to be quiet for the entire class.
Only for the next thirty seconds, don't anyone talk!
 I want to hear this announcement.

The same situation exists with negative preposing in questions. Although the examples in (27) are generally considered ungrammatical, the judgments are again difficult and inconsistent across speakers.

- (27) a. ??Under no circumstances do they all sing in unison?
 b. ??Only next week shouldn't we come to class?
 c. ??Never are we to try this?

The data thus do not make a particularly clear statement regarding any similarity between imperatives and questions since the judgments are so murky in both domains. It could be the case that negative preposing is permitted in the two clause types but there is interference from other factors. I will reject this possibility and instead present evidence that negative preposing is *not* available; acceptable instances of the above data represent topicalization. I turn to the more revealing Liberman sentences which isolate negative preposing to justify this conclusion.

Just as with the declarative example in (20), the imperative in (28) is ambiguous. It has the two interpretations in (29). When the prepositional phrase is fronted in (30), however, only the topicalization reading survives. In (31), the example is contextualized to illustrate the situations in which each meaning might be used. Only the 'lazy' reading in (31b) seems acceptable. The example supports the conclusion that negative preposing is not possible in imperatives.

- (28) Do be satisfied with no analysis!
 (29) a. There is no analysis that you should be satisfied with.
 ('unsatisfiable' reading) NEGATIVE PREPOSING
 b. You should be satisfied with having no analysis.
 ('lazy' reading) TOPICALIZATION
 (30) With no analysis (,) do be satisfied!
 (31) a. Linguistic theory is changing. **With no analysis do be satisfied!*
 b. *With no analysis, do be satisfied!* At least you got the facts right.

Turning to questions, the same behavior is seen. The yes/no question in (32) is ambiguous in the familiar way, with the two readings in (33). The example with the fronted prepositional phrase in (34) has only the topicalization interpretation, a judgment also asserted in Rochemont 1985.

- (32) Can you be satisfied with no analysis?
 (33) a. Is there no analysis that you can be satisfied with?
 ('unsatisfiable' reading) NEGATIVE PREPOSING
 b. Can you be satisfied with not having any analysis?
 ('lazy' reading) TOPICALIZATION
 (34) With no analysis (,) can you be satisfied?

The judgments on the examples are still difficult, though the data more strongly suggest that questions and imperatives are alike in resisting negative preposing. The following subsection offers two additional pieces of evidence to support this conclusion. It presents two syntactic tests, each of which isolates one of the readings of interest.

4.2. Further Confirmation

4.2.1. focus particles

The first diagnostic demonstrates that the claimed topicalization reading is indeed present. The contrast is that only topicalized XPs are compatible with focus particles such as *even* (see Anderson 1972, Rooth 1985 for a discussion of the semantics of *even*). This is illustrated for declarative clauses in (35). Negative preposing in (35a) is largely infelicitous with *even*, while topicalization in (35b) is acceptable. In fact, such particles often improve such examples and make them more natural.

- (35) a. *Even with no job would John be happy. NEGATIVE PREPOSING
 b. Even with no job, John would be happy. TOPICALIZATION

Replicating this test for imperatives and questions in (36) and (37), respectively, yields grammatical results. The data thus confirm that topicalization is available in the two clauses.

- (36) Even with no analysis, do be satisfied!
 (37) Even with no analysis can you be satisfied?

4.2.2. negative polarity items

The second diagnostic shows that the negative preposing structure is indeed absent. The relevant phenomenon is the licensing of negative polarity items. Negative polarity items (NPIs) such as *ever* and *any* are subject to a surface structure requirement that they be in the scope of an appropriate semantic operator, typically negation (Ladusaw 1992). The declarative examples in (38) demonstrate that, of the two, only the negative preposing

structure licenses NPIs. In (38a), the fronted negative operator in spec,CP takes scope over the entire clause and licenses the NPI *ever*. Topicalization, on the other hand, does not license NPIs and (38b) is ungrammatical. The judgements in (38) are reversed from those in (35).

- (38) a. With no job would John ever be happy. NEGATIVE PREPOSING
 b. *With no job, John would ever be happy. TOPICALIZATION

A negative polarity item in the corresponding imperative and question examples, in (39) and (40), respectively, is ungrammatical. This is unexpected if negative preposing were a possible analysis; it should license the NPI.

- (39) *With no analysis do ever be satisfied!
 (40) Q: *With no analysis can you or Bill ever be satisfied?⁵
 A: Bill.

The diagnostic confirms that negative preposing is unavailable in imperatives and questions.

4.3. Summary

The data combine to support the conclusion that negative preposing is not permitted in imperatives and questions. Again, parallel behavior is seen. It remains to return to the two hypotheses under consideration and consider the analytical implications.

Under a CP analysis of questions and imperatives, the illicit negative preposing structure that must be ruled out is in (41).

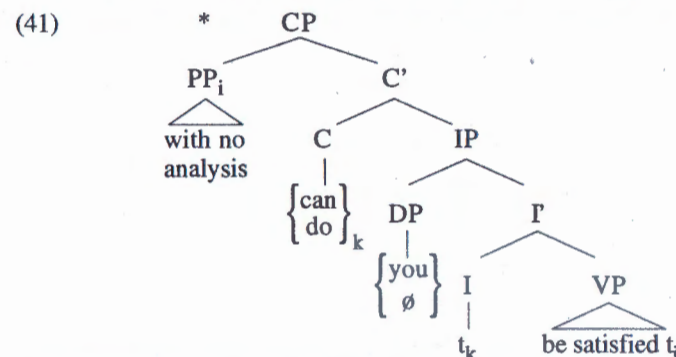
⁵The situation is complicated by the fact that most polarity questions independently license NPIs:

- (i) a. Will *anyone* go?
 b. Does he *ever* clean his desk?

Important for considerations here, Han and Siegel (to appear) observe that NPIs are licensed only in questions in which a negative answer is possible. NPIs are ungrammatical in questions in which a negative answer is not possible. One instance of this is so-called alternative questions, illustrated in (ii), in which the answer is not yes or no but must be one of a choice of alternatives. As shown in (iii), NPIs are not licensed in this case.

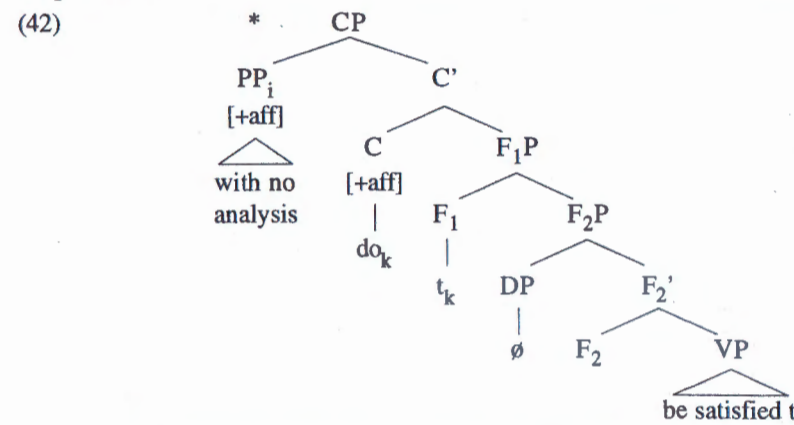
- (ii) Will Bob Dole or Bill Clinton win the election?
 (iii) *Will Bob Dole or Bill Clinton ever win the election?

The question/answer scenario in (40) is designed to be of this type.



For the question case, a solution that suggests itself is that the specifier of CP is already filled by a question operator. A second, negative operator in the same position is then prohibited. This approach can be straightforwardly extended to imperatives by proposing an imperative operator in that construction. Den Dikken 1992 has independently claimed the existence of an imperative operator in Dutch to account for certain facts in that language.

Such an account, though it obtains the desired results, is not particularly compelling. It is worth considering how the alternative hypothesis, the IP analysis, would handle the observation. In fact, it fares no better. The IP analysis does not actually rule out negative preposing in imperatives either. Nothing prevents the structure in (42) in which a CP is projected above the inflectional projections and the associated movements are performed.



In order to block negative preposing under the IP analysis, some additional assumption must be made. Three alternatives are 1) either C' just cannot project in imperatives, 2) the top functional head cannot move into C' to satisfy spec-head agreement, or 3) spec,CP is already filled with an imperative operator, preventing the preposing. In any of the cases, the third

in particular, it should be evident that the IP analysis has no transparent advantage over a CP analysis. Each requires an as yet unmotivated assumption—or stipulation. Given that the CP structure is independently needed for clauses in English, it is again preferable.

5. Conclusion

In summary, topicalization and negative preposing provide no evidence for analyzing imperatives differently from yes/no questions. On the contrary, the parallel behavior highlights the two clauses' similarities. Since questions are widely analyzed as CPs, the null hypothesis is that non-neutral imperatives with *do(n't)* should also be so analyzed, on grounds of simplicity, as illustrated in (5). Constructions that behave similarly should receive similar analyses. Making imperatives CPs has the desirable consequence of keeping clause structure constant across English: declaratives, questions, and now imperatives have highly similar phrase structure and there is further uniformity within the language.

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