

Exfoliating the implicational universal in complementation

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Overview. Recent theories of complementation have proposed different sizes for control complements. Pesetsky (2019) has argued that Exfoliation deletes CP and TP in control complements. By contrast, Wurmbrand & Lohninger (2019) provides convincing empirical data that certain control complements, such as those of *claim* can be as large as CP, due to their propositional nature. As such, Pesetsky does not predict the noted semantic contrasts between these classes of complements. In this paper, I argue that this conflict can be resolved by assuming that Exfoliation can happen in different degrees, depending on the class of complement that Probes for PRO. Most importantly, I propose that for the propositional class of control complements, Exfoliation must at the very least erase FinP—but not CP—following Rizzi (1997)'s structure of the CP layer where FinP encodes finiteness.

In defense of this analysis, I propose that this approach makes one important prediction: that finite control doesn't exist. This conclusion seems to be at odds with existing literature, such as Landau (2004), who claims that at least Hebrew and the Balkan languages have finite control complements with verbal agreement. In the spirit of Keine (2016), who also analyzes finiteness as a matter of clause size—where finite and nonfinite complements differ in their selective opacity—I survey the selective opacity of finite control complements crosslinguistically. I conclude that such "finite" control complements are in fact nonfinite.

The Basics of Exfoliation. Pesetsky seeks to answer the question of why nonfinite clauses exist in the first place; in particular, why the properties of subject position in nonfinite clauses so often differs from their counterparts in finite clauses. Usually, (2) below is ruled out because *seem* does not assign accusative case, whether by ECM or raising-to-object:

- (1) Mary believes him to be happy.
- (2) * It seems him to be happy.

Pesetsky notes this approach makes one false prediction. It predicts that we would not obtain Case Filter-like effects on non-nominal subjects like CPs, but this is incorrect. One of many examples is below:

- (3) Mary believes [that there is life on Venus] to be likely.
- (4) * It seems [that there is life on Venus] to be likely.

Pesetsky abandons the assumption that infinitives are born, and not made; the contrast in (1)-(4) is instead derived by assuming that the interaction between, for example, *believe* and the object precedes the differentiation of the embedded clause into finite or nonfinite. (2) and (4) are then ruled out because they involve illicit Exfoliation; *seem* cannot probe as a raising-to-object or ECM predicate.

Pesetsky assumes the following hierarchy (simplified for control complements):

- (5) CP > TP > toP > vP

Raising-to-object removes two layers of the embedded clause, CP and TP. All finite clauses are born with a toP, but *to* is only pronounced if it is left exposed—that is, there is no CP or TP. As such, Pesetsky claims that control complements lack CP or TP layers.

Problem. Wurmbrand & Lohninger (2019) provides convincing empirical data that control complements can in fact have CP and TP layers. They propose that there are three kinds of control complements: propositional, which are CPs; situational, which are TPs; and events, which are vPs. Propositional complements involve those which can be assigned a truth value, ex. *ESA claimed life to be on Venus, which seems true*. But situational ones cannot, ex. **Mary asked me to buy an apple, which is true*. One empirical test that they provide is given below; propositional infinitives behave like finite clauses in that they cannot occur in the non-progressive form when referring to a non-generic episodic event (7) but situational infinitives can (6):

- (6) Clara decided to eat salad right now.
- (7) Clara claimed to be eating/*eat salad right now.

Analysis. For Pesetsky, such contrasts are underivable in the syntax, as CP and TP layers are missing. To account for this data, I assume some additional machinery. First, I assume that FinP is present in the CP layer, following Rizzi (1997). Fin⁰ encodes whether the head is finite or not, and has a more basic specification for mood, tense and agreement than in other domains. Second, I propose each class of control complement has its own probe for PRO that Exfoliates a different amount of structure. For example, propositional complements Exfoliate only FinP, but the other classes Exfoliate more (ignoring Pesetsky's FP and FP in control complements for simplicity):

- | | | |
|---------------------------|---------------------------|---------------------------|
| (8) Proposition | Situation | Event |
| FinP > CP > TP > toP > vP | FinP > CP > TP > toP > vP | FinP > CP > TP > toP > vP |

Further, contra Pesetsky, I propose that toP is exposed as long as FinP is deleted. In this way, a derivational account of the implicational universal in complementation is made possible.

Predictions. It is necessary to move the phasehood of CP to the phasehood of FinP, which leads to one major consequence. It predicts PRO can only be present in nonfinite control complements, and never in finite complements, given the lack of FinP. Although PRO is usually associated with nonfinite complements, Landau (2004), among many others, have pointed out that finite control is attested in the Balkan languages and Hebrew, among many other languages. An illustrative example is given below from Romanian, where the subjunctive complement has verbal agreement markings:

- (9) L_i-am îndenmat ca de mîine PRO_{i/*k} să meargă la scoală cu bicicleta.
 him-I.have urged that from tomorrow PRO SUBJ go.3SG to school with the.bike
 'I urged him to ride his bike to school from tomorrow on.' Romanian

But if we take a closer look at the properties of these clauses in the spirit of Keine (2016), we notice that "finite" control complements are less opaque than finite embedded clauses. I argue that these complements are in fact nonfinite based on their opacity—and this is derived by the lack of FinP. In (10), I present some (not all) of a survey of the selective opacity of "finite" control complements in several languages:

- (10) "Finite" control complements in Japanese: Binding of a reciprocal via scrambling, A-scrambling and scope, weak crossover effects do not pattern with finite clauses (Uchibori (2000))
 "Finite" control complements in Ewe: transparent to NPI-licensing (Satik (2020))
 "Finite" control complements in Hebrew: transparent to NPI-licensing (Landau (2004))
 "Finite" subjunctive complements in Greek: allow raising and control (Felix (1989))

Following Nikolaeva (2007), it seems that the determinant of finiteness is not the same crosslinguistically—eg. it is not always tense and/or agreement—but in languages like Japanese it may also be politeness, among other cases. As such, "finite" control complements may have been misclassified given the general mysteriousness of finiteness. I propose that "finite" control languages, ex. Romanian, may have other determinants of finiteness, such as mood, that lead to more or less opacity. But at least for embedded clauses, the crucial distinguishing feature of finiteness is opacity via differences in clause size.

Conclusion. For hyperraising, or genuine raising from a finite clause, following Pesetsky I propose a tentative account where the phasehood of FinP is deactivated via agreement. To conclude, this paper not only provides a derivational account of the implicational universal, it also allows for the elimination of the undesirable existence of finite control in the grammar, which has been confounding to syntacticians.

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