Nominative Memories of a Past Life

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In this chapter, I will argue for a new view of the distinction between finite and nonfinite clauses that suggests a need to reopen certain important questions concerning case and nominal licensing that many researchers believe to have been settled over the past two decades. The new view of finiteness advocated here itself reopens questions about clause size commonly believed to have been settled even earlier. In a nutshell, I will argue that nonfinite clauses are not distinguished from their finite counterparts as a matter of lexical choice (i.e. deciding to Merge a finite vs. nonfinite flavor of T) — the only proposal seriously entertained for the past half-century. Instead, I propose that all clauses are built as full finite CPs, and are infinitivized in the course of the derivation, thus reviving proposals widely entertained in the 1960s — proposals that were abandoned in response to arguments that were watertight in the context of grammatical models of the time, but lose their cogency in the context of more recent models.

Where the current consensus views the special behavior of subjects in a nonfinite clause as a consequence of building an infinitival clause, I will argue instead that the causal arrow points in the opposite direction. A clause becomes infinitival as a consequence of a higher probe targeting its subject in a particular configuration, in response to a rule that I will call *Exfoliation*. It is this proposal in turn that suggests a re-evaluation of phenomena that some believe to have decisively militated against previously accepted hypotheses concerning nominal case. These hypotheses mostly concern the assignment of *nominative* case and the licensing of subjects more generally, and the observation that, viewed through the lens of early standard proposals, these processes seem to be sometimes observed in nonfinite clauses that lack a plausible assigner or licenser. The new view of finiteness advocated here acknowledges the absence of a plausible assigner or licenser in these nonfinite clauses on the surface. but offers evidence for its presence at earlier stages in the syntactic derivation, before infinitivization applies — an instance of *derivational opacity*, and therefore (if correct) an argument for a crucially derivational character to syntax.

The proposal sketched here raises many important additional questions that will not be explored in this short contribution. Many of them are discussed at greater length in Pesetsky (2019). The present chapter is a précis of some of the most important points of that larger work, with a focus on its implications for theories of case.

1 Achievements of Classic Case Theory

Classic Case Theory (which I will abbreviate as **CCT**), as first proposed by Vergnaud (1976/2006) and immediately extended by Chomsky (1980, 1981), offered a novel generalization about the distribution of nominal phrases in languages like English that lack overt morphology: that it closely mirrors the distribution of nominative and accusative case morphology in languages that do boast case morphology, such as Latin or Russian. Where a particular type of syntactic position excludes a nominal marked with NOM or ACC morphology in a (non-ergative) overt-case language like Latin or Russian, nominals as a whole are excluded in a language such as English. In light of this generalization, Vergnaud suggested that apparent

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"non-case" languages such as English are actually case languages after all, and merely happen to lack overt markers of NOM and ACC case. Once we add to the picture (1) a Case Filter requiring that every nominal be assigned some case, and (2) the stipulated absence in English of oblique cases of the sort that N or A assign to their complements in languages like Russian and Latin, the result is a case-theoretic account of the overall distribution of English nominals. An English nominal is licensed, according this proposal, only in positions where its counterpart in a language such as Latin or Russian could successfully receive NOM or ACC morphology.

CCT marked a turning point for a field that had previously attributed the distribution of nominals and nominals to multiple idiosyncratic and independent phrase structure rules. CCT presented a deeper generalization that could now be factored out of the rules governing basic structure building, clarifying and simplifying them. Combined with Chomsky's (1970) X-bar theory, which had had a similar clarifying and simplifying effect, as well as similar discoveries in the domain of movement, CCT lit the way towards a "Principles and Parameters" perspective on syntax as a whole. On this view, the diversity of syntactic structures arises from the intersection of deep constraints and the interactions of general laws, rather than the construction-specific rules of previous approaches. Furthermore, by proposing that apparent non-case languages are actually case languages in disguise, Vergnaud's proposals struck a blow for the very existence of deep constraints and general laws in the first place, and for research programs that aim to uncover them.

CCT made two crucial distinctions. First, it distinguished a class of case assigning heads (finite T, verbs with an external argument, prepositions, and the English clause-introducer *for*) from a class of non-case-assigning heads (nonfinite T, verbs without an external argument, adjectives and nouns). Second, it distinguished nominals as phrase types that need case from phrase types such as prepositional phrases and clauses that are indifferent to case assignment. Armed with these twin distinctions, the effects of CCT could immediately be seen to span multiple constructions and syntactic phenomena — a novel result.

CCT made straightforward predictions about what can and cannot not serve as a *complement* to a lexical head — preventing a nominal phrase from serving as a complement to N or A, for example, while permitting a CP or PP in these same positions:

(1) **CCT: CP and PP complement does not show Case Filter effects in complement position.**

a. Mary is certain [that they are honest].
   Mary is certain [about their honesty].
   cf. **We are certain* [*their honesty*].

b. my demonstration [that they are honest]
   my demonstration [of their honesty
   cf. **my demonstration* [*their honesty*]

c. Sue convinced us [that they are honest].

d. Sue convinced us [of their honesty].
   cf. **They assured us* [*their honesty*].

e. It was demonstrated [to our satisfaction] [that they are honest].
   cf. **It was proved* [*their honesty*].

In addition, however, CCT also seemed to correctly characterize the distribution of *subjects* — permitting a nominal to serve as the specifier of a finite TP without a care in the world (because finite T can assign NOM case to it), while imposing severe restrictions on the ability of a nominal to serve as the subject of a nonfinite clause (because nonfinite T does not assign any case, at least in languages like English). The

consequences of CCT for subjects were in fact the primary focus of Vergnaud's initial investigations, and will be the focus of our attention here.

From these predictions arose another apparent achievement of CCT: an explanation for the obligatoriness of certain instances of movement. Though nonfinite T was claimed to not assign case to the subject of its clause, a nominal unlucky enough to find itself in danger of caselessness because of this property could still satisfy the Case Filter if some future derivational step provided it with a new opportunity to be Case-licensed by Case and thus to pass the Case Filter. This might occur if the nominal subject could undergo raising into a higher clause where it might receive NOM or ACC case from a local assigner, as illustrated in (2).

A note about terminology: in this chapter, I will use **R1** as an abbreviation for the "raising to subject" construction characteristic of predicates like *seem* or passive forms of predicates like *believe*, and **R2** for the type of A-movement to a lower position ("raising to object") available with predicates like *believe* (here taken to be raising to form a specifier of a higher VP, as discussed below):

(2) **CCT: "Raising rescues nominal from a Case Filter violation"**

a.	Mary believed Sue (sincerely) to have finished her dissertation.	*R2*
b.	Sue seemed to have finished her dissertation.	*R1*
c.	*It seemed Sue to have finished her dissertation.	*subject unraised*
d.	*It was believed Sue to have finished her dissertation.	*subject unraised*
e.	*Mary was sure Sue to have finished her dissertation.	*subject unraised*
f.	*Mary's belief Sue to have finished her dissertation	*subject unraised*

The same logic taken to explain movement in R1 and R2 constructions could be applied to movement from caseless *complement* positions as well, and was used to explain instances of obligatory clause-internal raising of the complements of passive and unaccusative verbs (as readers of this chapter are of course aware).

A few subsequent discoveries yielded widely endorsed friendly amendments to CCT, which preserved the basic logic of CCT while altering details. One important example was the finding that *v*, a head higher than V, rather than V itself, might be crucial to the assignment of ACC. This was the result that motivated the view that both NOM and ACC are assigned as a by-product of φ-featural agreement, rather than the more local head-specifier or head-complement relation between assigner and recipient claimed crucial to earlier versions of CCT. This development also made it possible to account for situations in which a nominal triggers agreement and is marked NOM — despite not moving so as to form a specifier of finite T. One example is the much-studied construction in Icelandic in which the subject bears lexically governed quirky case, while the direct object bears NOM and triggers number agreement with the verb.

(3) **Quirky subject, nominative object in finite clause (Icelandic)**

a. Barninu batnaði veikin.
the.child.DAT recovered.from.**3SG** the.disease.**NOM.SG**
'The child recovered from the disease.' (Andrews 1982, 462)

b. Barninu bötnuðu veikirnar.
the.child.DAT recovered.from.**3PL** the.disease.**NOM.PL**
'The child recovered from the diseases.'

The positing of *v* as a head between T and V also provided a plausible landing site for the raised subject in the English R2 construction. This proposal could explain the acceptable intervention of a higher VP

adverb between the subject and the infinitival clause it originated from, first noted by Postal (1974, 146-147) and illustrated in the fuller version of (2a) above. On this analysis, the higher V triggers raising of the subject of the embedded clause to form a specifier of VP linearized to the left of VP-internal adverbs — with raising of the higher V to *v* yielding the final observed word order. If case assignment by *v* is not permitted to cross a clause boundary, R2 could now be viewed, on a CCT approach, as the means by which the embedded subject passes the Case Filter in examples like (2a) — assuming that only once the subject is in the higher verbal domain can ACC can be assigned to it. The contrast between these examples and the unacceptable (2c-f), could then be explained either as a consequence of the claim that case-assigning *v* is absent with unaccusative and passive verbs, and has no case-assigning counterpart in adjectival and nominal domains — or else as the consequence of the absence of an R2 probe in these environments. In a CCT context, of course, the first possibility alone was sufficient to explain the paradigm in (2). I mention the second in anticipation of discussion below.

2 Challenges to CCT

Other discoveries, however, seemed less like friendly amendments, and more like direct challenges to the logic of the proposal — raising doubts about its core claimed achievements. One of the most influential challenges to CCT concerned the very claim that seemed to be supported by examples like (3) above: that NOM case on a direct object is a by-product of agreement with T, which in turn permits the object to pass the Case Filter. The logic claim makes what I will call a "class 1" prediction of classic Case Theory.

(4) **Class 1 prediction of CCT**
If a nominal occupies a position where the only imaginable case assigner is the local T, but T is nonfinite, it will violate the Case Filter, unless later derivational steps provide it with a different source of case assignment.

This class 1 prediction was directly challenged by what happens when T is nonfinite in an Icelandic construction otherwise identical to (3), in which the embedded clause is a complement to an R2 verb. CCT predicts that the embedded object in such a configuration will violate the Case Filter violation with no acceptable outcome. In defiance of this predication, however, as observed by Yip et al. (1987, 240-242) and further discussed by Marantz (1991), no Case Filter effect observed and the embedded object bears the same NOM morphology that it bears in a corresponding finite clause:[1]

(5) **Quirky subject, nominative object in an R2 infinitival complement(Icelandic)**

Læknirinn$_i$	telur	barninu	(í	barnaskap	sínum$_i$)	hafa	batnað
the.doctor.NOM	believes	the.child.DAT	(in	foolishness	his)	have.INF	recovered.from

veikin.
the.disease.**NOM**

'The doctor$_i$ believes the child (in his$_i$ foolishness) to have recovered from the disease.'

In CCT (with or without the friendly amendment concerning *v*), the source of case for the embedded object cannot be the verbal system of the higher clause — because the embedded object is NOM (not ACC), and passivization of the higher verb does not affect the syntax or morphology of the embedded object. Nor can it be the T of the higher clause, which agrees in person and number with its own specifier when finite, and

1. Example (5) without the parenthesized material is due to Yip et al. (1987, 242, figure 28). The parenthesized material added here is a diagnostic for R2 as movement out of the embedded clause due to Thraínsson (1979, 314 ff.). As he discusses, the fact that 'in his foolishness' is a "subject-oriented adverbial" makes it clear what clause the adverbial is modifying — here, the matrix clause, confirming that *barninu* 'the child.DAT' has raised into the higher verbal domain. For verifying the acceptability of Yip et al's example with the addition of this adverbial, I am grateful to Halldór Sigurðsson.

whose own finiteness does not affect the syntax of the embedded object. The possibility of the parenthesized matrix adverbial following the raised subject makes it clear that this is indeed an R2 construction, but it is the quirky case-marked subject, not the NOM object, that has raised into the higher clause. Consequently, there is no plausible later derivational step to which CCT could appeal that might be assumed to have rescued the NOM object in (5).

This construction thus seems to challenge two of the core tenets of CCT:

1. **Nominative case assignment:** NOM is assigned as a by-product of φ-featural agreement with T.
2. **Case Filter:** A nominal must be assigned case.

For this reason, Marantz (1991) and others who built on his proposals concluded that one or both of these tenets must be wrong. As it happens, both tenets were rejected in his work and subsequent research that built on it.

The rejection of tenet 1 was the most obvious part of the response. To replace it, Marantz proposed a new theory of NOM assignment, anticipated by Yip et al. (1987), that assigned no role to finiteness. On this theory, NOM is assigned by an ordered rule to nominals that have not been previously assigned either a lexically governed case such as DAT or a structure-dependent case such as ACC. The rule involved some additional restrictions to exclude certain positions from its purview, but crucially made no reference to finiteness or agreement with T. In addition, because NOM should always be available as a last-resort case for subjects and objects under this proposal, the Case Filter could no longer be invoked as a motivation for obligatory A-movement — thus undermining part of the evidence for tenet 2 as well.[2] This is why not only tenet 1 but also tenet 2 was rejected.

3 The source of nonfiniteness

There is, however, a third tenet intrinsic to CCT that could have been questioned in response to the puzzle of (5), but never was. This tenet concerns how finite and nonfinite clauses come to be distinguished in the first place. As mentioned in the introduction to this chapter, for the last half-century, a very particular view of this distinction has been presupposed in all corners of the field, which treats the finite/nonfinite distinction as a matter of lexical choice — no different in kind from a decision to use one noun instead of another, or past instead of future tense:

3. **Finiteness as a result of lexical choice:** T may come from the lexicon (i) with or (ii) without a set of φ-features. A finite clause in a language like English results from choice (i), and an infinitival clause reflects choice (ii).

Tenet 3 is a crucial presupposition behind CCT's entire approach to nominal licensing in subject position and its relation to case and raising. CCT presupposes that the syntax directly generates either a finite or a nonfinite clause, depending on what kind of T is chosen. If a finite clause is produced, because finite T has been chosen, its subject has no case-related problem; but if a nonfinite clause is built, because nonfinite T has been chosen, the result will be illegitimate unless later derivational steps provide a source of case for its subject. Once the system chooses to build a nonfinite clause, it must deal next with the case problem created by this choice.

The earliest work in generative syntax, however, took a very different approach to these issues. Rather than attributing nonfiniteness to a lexical decision that later forces the subject to move, it was generally

2. Languages like Icelandic in which quirky case assigned to complements is preserved under A-movement in passive and raising constructions were taken to further undermine the claimed link between lack of case and obligatory movement in such constructions. See footnote 8 below.

assumed by researchers in the 1960s that the logical arrow pointed in the opposite direction. On this earlier view, the nonfiniteness of a clause in examples like (2a-b) is a *consequence* of raising the subject, not a motivation for it.

It was the work of Kiparsky and Kiparsky (1971) and Bresnan (1972) that convinced the field to abandon this *derivationalist* view of finiteness, in favor of the *lexicalist* view of nonfiniteness (as a consequence of free lexical choice) that has been taken for granted ever since. Kiparsky and Kiparsky's and Bresnan's arguments for the lexicalist view were, however, crucially rooted in a grammatical model that posited a pre-movement level of Deep Structure at which selectional properties were enforced and at which semantic interpretation applied. By showing that some predicates impose selectional restrictions on the finiteness of their complements and further demonstrating that finiteness had semantic implications, they provided an irrefutable argument in the context of that grammatical model that finite complements must be differentiated from nonfinite complements at Deep Structure — and thus must be differentiated before movement and other syntactic processes applied. The grammatical model that they assumed, however, needed to state selectional restrictions at a pre-movement level because it was assumed that movement of a constituent left no trace in the original position. Similar considerations required at least some aspects of semantic interpretation to take place before movement. With the discovery that movement does not eliminate the origin position after all ("trace theory"), and the development of a model in which movement is interspersed with basic structure building (Internal and External Merge), however, there is no longer a distinguishable level of Deep Structure. Consequently, no argument from selection or semantic interpretation remains in favor of the proposition that finiteness is necessarily differentiated from nonfiniteness before movement takes place.

It is therefore possible and timely to examine the possibility that it is tenet 3 rather than tenets 1 and 2 that is challenged by phenomena like the NOM object in (5). In this chapter, I explore some of the consequences of this alternative, and argue for it. If a nonfinite clause is first built as a full and finite clause, and later infinitivized as a *consequence* rather than a cause of R2 movement, then we may attribute NOM morphology on the embedded object and the absence of any Case Filter violation to a stage in the derivation that precedes R2. At this stage, the embedded clause resembles the main clauses of (3) and NOM is assigned in the same way — quite possibly as a by-product of agreement with finite T after all. The fact that the embedded object creates no Case Filter problem and bears NOM morphology is thus a memory of its past derivational life as an entirely unexceptional NOM object in a finite clause, a classic instance of *derivational opacity*.

Note that this proposal, if correct, does not argue in favor of the CCT theory that posits a Case Filter and views NOM case as a by-product of agreement, nor does it argue against the alternative proposal that dispenses with the Case Filter and views NOM as a default. But it does eliminate the relevance of (5) to the discussion. At the same time, however, it does this by undermining the CCT account of subjects. The entire logic of the CCT proposal rested on the assumption that nonfinite clauses are generated as such — which creates a case problem for a nominal subject of such a clause that is in turn solvable by movement to a case position.

This is not necessarily a bad consequence, however, since the CCT account of subjects is already at odds with its account of complements with respect to what I will call a "class 2" prediction of the theory:

(6) **Class 2 prediction of CCT**
The contrast between unacceptable nominals and acceptable non-nominals in a caseless complement position (as illustrated in (1)) should be recapitulated in the subject position of a nonfinite clause.

This class 2 prediction turns out to be false. English provides us with a number of constructions in which a non-nominal constituent appears preverbally in a manner that appears to satisfy the normal English EPP requirement for a subject. When such a construction is embedded as a nonfinite clause, these non-nominal subjects show exactly the same pattern as that shown by nominal subjects, the pattern seen above in (2), as the paradigms in (7)-(10) show:

(7) **Predicate fronting**

Finite clause: *Even more important than linguistics is the fate of the planet.*

a. Sue considers [even more important than linguistics] to be the fate of the planet.
b. [Even more important than linguistics] seems to be the fate of the planet.
c. * It seems [even more important than linguistics] to be the fate of the planet.
d. * It was believed [even more important than linguistics] to be the fate of the planet.
e. * Mary is aware [even more important than linguistics] to be the fate of the planet
f. * Mary's belief [even more important than linguistics] to be the fate of the planet

(8) **Locative Inversion**

Finite clause: *In this room are found the finest examples of Athenian sculpture.*

a. Sue considers [in this room] to be found the finest examples of Athenian sculpture
b. [In this room] seems to have been found the finest examples of Athenian sculpture.
c. * It seems [in this room] to be found the finest examples of Athenian sculpture
d. * It was believed [in this room] to be found the finest examples of Athenian sculpture
e. * Mary is aware [in this room] to be found the finest examples of Athenian sculpture
f. * Mary's belief [in this room] to be found the finest examples of Athenian sculpture

(9) **Expletive *there***

Finite clause: *There is a riot in progress.*

a. Sue considers [there] to be a riot in progress.
b. [There] seems to be a riot in progress.
c. * It seems [there] to be a riot in progress.
d. * It was believed [there] to be a riot in progress.
e. * Mary is aware [there] to be a riot in progress.
f. * Mary's belief [there] to be a riot in progress

(10) **CP subject**

Finite clause: *That the world is round annoys them.*

a. We consider [that the world is round] to be a tragedy.

b. [That the world is round] seems to have annoyed them.

c. *It seems [that the world is round] to have annoyed them.

d. *It was believed [that the world is round] to have annoyed them.

e. *Mary is aware [that the world is round] to have annoyed them.

f. *Mary's belief [that the world is round] to have annoyed them

It is of course occasionally proposed that apparent clausal subjects are obligatorily nominal in some fashion— a proposal that would bring (10) into the "class 2 prediction" fold if English clausal subjects are subject to the Case Filter as a result. I do not believe this is a plausible proposal for the paradigms in (7)-(9), however. English does have locative subjects with clear nominal properties in constructions like *Under the chair is a nice place for the cat to sleep*, but these contrast in several respects with the preverbal locatives of English Locative Inversion, as discussed by Stowell (1981, 268) and Bresnan (1994, 103 ff.), among others. I know of no specifically nominal properties attributable to predicate adjectival phrases or expletive uses of *there* besides the paradigms above.[3]

In response to this false prediction of CCT, I propose an alternative account of paradigms like (2) and (7)-(10) that reverses the logical arrow of CCT. On this alternative view, it is not the properties of a pre-existing infinitival clause that mandate movement of its subject, but rather movement of the subject that triggers a rule of *Exfoliation*, whose formulation is discussed in detail in the next section. In these configurations, Exfoliation reduces a previously finite clause to an infinitive — with infinitivization crucially limited to this circumstance, and illegal otherwise. What goes wrong in the (c)-(f) examples of (7)-(10) on this view has nothing to do with the Case Filter. For any of these examples to be acceptable, there should have been a derivation in which the embedded subject has raised as an instance of R2. For this to happen, unaccusative and passive verbs, adjectives, and nouns would have needed to bear a probe triggering R2 movement. If these elements contrast with verbs like *consider* in lacking such a probe, the paradigms above are predicted in their entirety. Crucially, this account also extends to the one paradigm that CCT did explain successfully: (2), in which a nominal is the subject of the embedded clause. This alternative would thus render the Case Filter superfluous as an account of the relevant contrasts.

Now note that the (b) examples in (7)-(9) also instantiate a version of the Icelandic "class 1" puzzle raised by (5). The postverbal nominal in each of these constructions (*the fate of the planet*, *the finest examples of Athenian sculpture, a riot*) lacks any obvious source of case licensing, just like their Icelandic counterpart in (5). Though the poverty of English morphology does not permit us to identify these nominals as bearing NOM rather than some other case, an analysis according to which these infinitival clauses spent the first part of their derivational lives as finite, and were assigned case by T during that state, immediately resolves the question of their licensing under the Case Filter, just as it did for the Icelandic construction discussed above. This analysis removes the status of these examples as posing any specific problem for CCT. In each of these examples, the postverbal NOM-marked nominal can be assumed to have been licensed and assigned case by exactly the same process that accomplishes these tasks in corresponding finite clauses that are never infinitivized, such as (3a-b) for Icelandic, and the initial italicized examples in (7)-(9). In CCT extended with the friendly amendments discussed above, this process involves an agree-

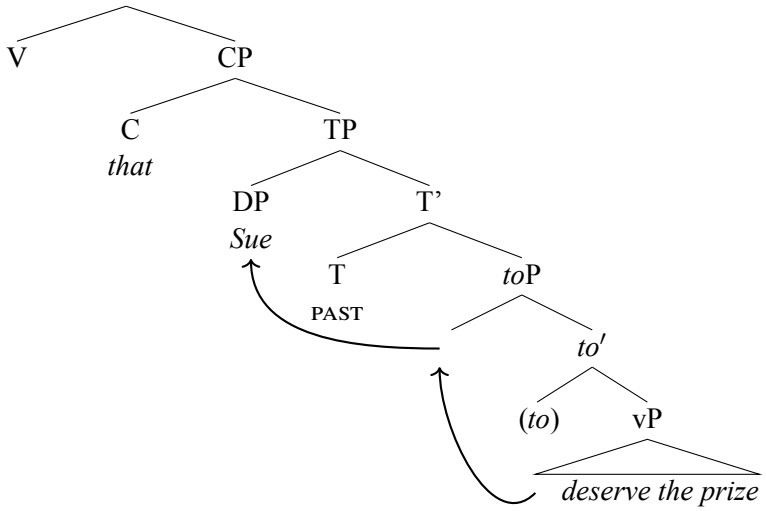
3. The observations exemplified by (7c) and (10c), as well as the threat that such examples pose to the class 2 prediction of CCT, were also noted by Davies and Dubinsky (2002, 248, ex. (3a)). They resolved the problem by positing a D-feature on all subjects in English, including fronted adjectives and subject-like locatives, as well as clausal subjects, a path that I do not follow here, for the reason discussed.

ment relation with the local T. In an R1 or R2 construction, this T disappears as a consequence of the Exfoliation rule, but the consequence of its presence in the form of a licensed and NOM nominal remains — providing another example of derivational opacity parallel to that provided by the Icelandic NOM object in (5). On the approach advanced here, we thus remain free to view NOM as a by-product of agreement,[4] even though that generalization is not always surface-true.[5]

4 The proposal

Let us now consider somewhat more carefully what specific properties we should attribute to the rule that reduces a full finite clause to an infinitive in R1 and R2 constructions. As first observed by Kayne (1981, 351-352) for English, French, and Italian, and proposed as a general law by Landau (2013, 18ff.) — when the subject is raised across a clause boundary in infinitival R1 and R2 constructions, the embedded clause is not only nonfinite, lacking tense and agreement morphology, but also must lack an overt complementizer. With this in mind, let us permit ourselves to analyze the English infinitival marker *to* as a lower head distinct from T. An English finite declarative embedded CP thus has the following structure:

(11) **Structure of full finite CP (including *to*P distinct from TP)**



We may now regard infinitival R1 and R2 clauses as clauses that have come to lack their outermost layers (CP and TP) as a consequence of a rule that strips a full finite CP of these layers. Let us call this rule *Exfoliation*.

What is the structural description of the rule of Exfoliation? I propose that Exfoliation is triggered whenever a probe external to an embedded CP finds a goal located in a position internal to that CP, i.e. not at its edge — and seeks to move it across that clause boundary. Let us assume (contrary to most propos-

4. As a reviewer reminds me, plural agreement with a plural NOM object as in (3b) is subject to variation across speakers and registers, as well a complex and nuanced pattern of acceptability when a NOM object is first or second person — variation never observed with a NOM subject (Sigurðsson 1990-1991, 1996). Does this asymmetry imperil the possibility that both NOM subjects and NOM objects might owe their licensing and case properties to agreement with T? I will leave this question open here.

5. The fact that the semantic possibilities available to nonfinite clauses differs from its finite counterparts (and is more restricted) might seem to pose a problem for this approach. Why does the semantics contributed by T not remain undisturbed even if T disappears from the derivation, just as the NOM assigned by T remains undisturbed (the theme of this chapter)? A possible answer to this question is proposed in Pesetsky (2021), which builds on findings by Wurmbrand (2014), but offers an alternative explanation within the framework sketched in this chapter.

als likely to be familiar to readers of this chapter) that a probe has the power to *find* a goal on the other side of a clause boundary. But let us also assume (now in agreement with more familiar proposals) that a probe does not have the power to *move* that goal across the clause boundary unless the goal does end up occupying the edge of its clause. This is what Exfoliation accomplishes: it strips away just as many layers of the clause as are necessary for the goal to find itself at edge of what remains of the clause. Crucially, Exfoliation applies only in the circumstance described in this paragraph, and strips away exactly as much structure as is necessary to place the goal of clause-external probe at the edge of what remains — no more, and no less. If we simultaneously assume (12), then, as we shall see, the paradigms of (2) and (7)-(9) are fully predicted:[6]

(12) **Full CP hypothesis**
Every embedded clause is built by Merge as a full finite CP, and may be reduced to a less-than-full clause only as a consequence of later derivational processes.

We state Exfoliation in (13) below. In this formulation, the effect of stripping away the outer layers of a clause is achieved by replacing the original full CP with the subconstituent ("γP") whose edge the goal of the probe occupies. I discuss the requirement that this subconstituent not be phasal below. The statement of Exfoliation in (13) is also broadened beyond CP to apply to any kind of phase. This has consequences discussed in Pesetsky (2019), where Exfoliation of *v*P is argued to be a component of the analysis of passive — but the present chapter will not exploit this broadening:

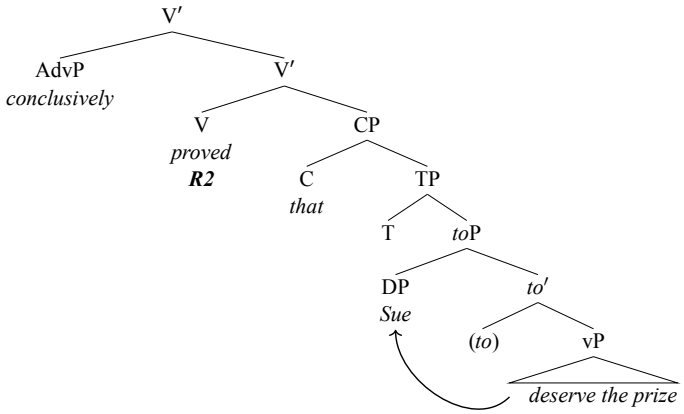
(13) **Exfoliation**
a. **Structural Description:** ... β ... [$_{\text{YP (phase)}}$ ... [$_{\text{γP (non-phase)}}$ ... α ...]], where
(i) YP is the minimal phase that dominates α
(ii) YP does not dominate β,
(iii) α occupies the edge of γP,[7] and
(iv) a movement-triggering probe on β has located α as its goal.
b. **Structural Change:** Replace YP with its subconstituent γP, which assumes the phasal property of its predecessor.

The starred examples of the paradigms in (2) and (7)-(10) are now not excluded for any reason connected to case and CCT, but instead instantiate illegal instances of infinitivization: clauses that began their lives as full finite CPs because of (12) and somehow ended up missing their outer layers without any rule having accomplished this task. Let us see how this works in the domain of English R2 constructions.

In an English R2 construction, on this view, the subject of an embedded clause raises only as far as the specifier position of *to*P within an embedded CP — and that CP is merged into a structure containing a verb with an R2 probe such as *prove*, as illustrated in (14):

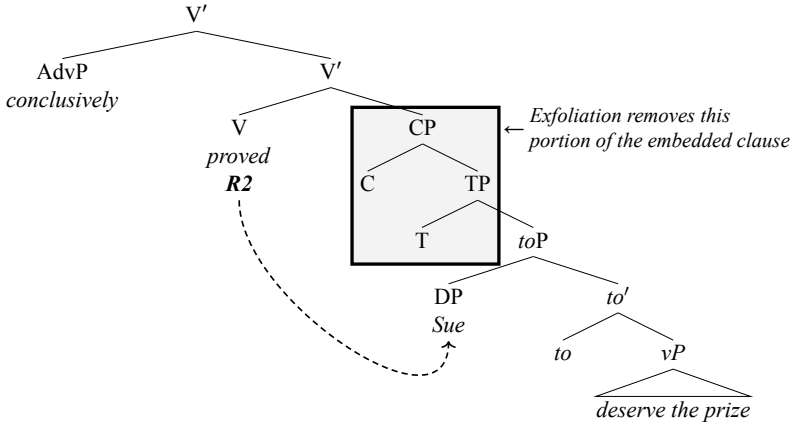
6. It is possible that (12) is too strong, and that certain phrases that one might informally describe as clausal are born smaller than CP. It is crucial that this possibility be tightly constrained, or else we might lose the explanation in terns of "illegal infinitivization" of the ungrammatical members of paradigms such as (7)-(10). It is possible, however, that the complements of restructuring predicates owe their small size (Aissen1970; Rizzi 1978; Wurmbrand 1998, 2001) to factors other than Exfoliation, and might be created as such. I will this question open.
7. The *edge of α*, for present purposes, may be defined as the XP immediately dominated by the maximal projection of α.

(14) **R2 part 1: subject raises only as far as *toP* in embedded CP**



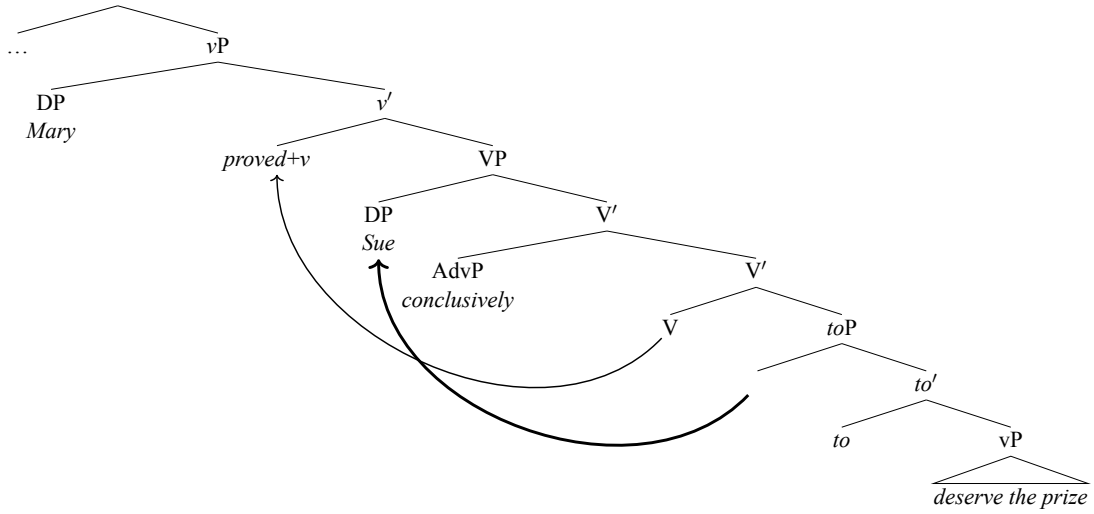
An R2 probe with a movement-triggering property (EPP) on the higher verb finds the subject specifier of *to*P in the embedded clause. This triggers Exfoliation, which strips away the CP and TP layers of the embedded clause, leaving the clause nonfinite:

(15) **R2 part 2: Exfoliation applies**



The embedded subject raises to form a specifier of the higher VP (landing above any VP modifiers), and the higher-clause verb raises to *v*, yielding the surface form of an R2 construction (here *Mary proved Sue conclusively to deserve the prize*):

(16) **R2: final steps**



Returning for a moment to clauses that do not undergo Exfoliation, and thus remain full and finite as seen in (11), we need to account for the fact that in such a case, the head of *to*P is not pronounced. For the purposes of this chapter, I will stipulate this fact with (17), but in the fuller exposition of this material (Pesetsky 2019), I argue that (17) is a special case of a more general principle governing the pronunciation of functional heads that also predicts the effects of the "Doubly Filled Comp Filter", among other consequences.

(17) **Overtness of *to***
English *to* is overt only when it heads a phase.

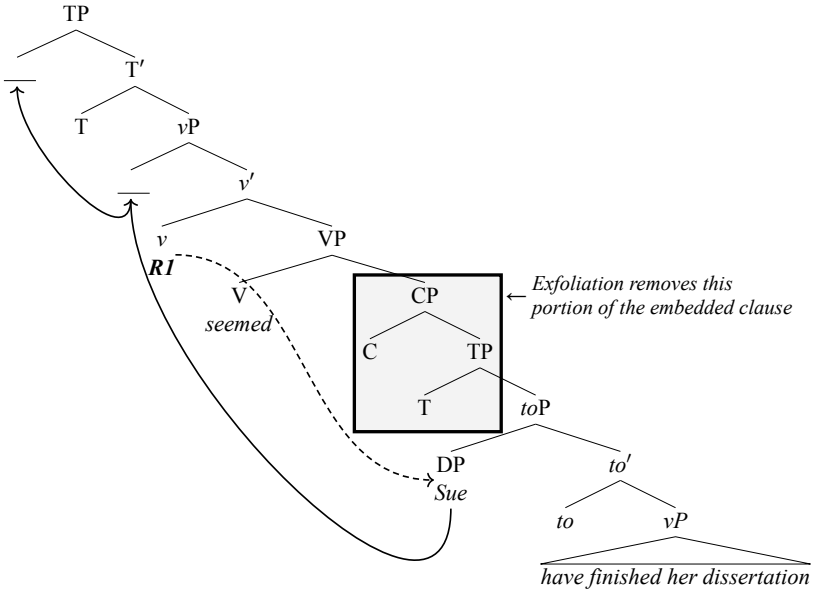
5 The distribution of probes that can trigger Exfoliation

How does this proposal account for the paradigms in (2) and (7)-(9) ? The possibility of R2 raising for non-nominal subjects exemplified in (7)-(9) makes it clear that the probe that triggers this movement (like the probes on T and *to* that create subjects) is not limited to nominals, but can be satisfied by a wider set of phrases, including certain PPs, APs, CPs and expletive *there*. That conclusion is not specific to the proposal under consideration here, but must form part of any account of the construction. Likewise, any analysis of the English R2 construction (not just the one under consideration here) must come to grips with the fact that R2 probes are available only to a limited set of verbs, e.g. *believe* and *prove*, but not *say, wager*, or any noun or adjective. On the Exfoliation proposal developed above, the mere fact that the main-clause predicates in the (c)-(f) examples of (2) and (7)-(9) do not bear an R2 probe, while the predicates in the (a) examples does, is sufficient to explain the contrasts between them. Only if the higher predicate contains a movement-triggering probe that finds the embedded subject in spec,*to*P and attempts to raise it will Exfoliation eliminate the outer layers of the embedded clause — and only if this happens will the embedded clause end up nonfinite. The case-theoretic properties of the embedded subject are irrelevant to the story. Only the presence or absence of an R2 probe is relevant. If the embedded subject is not extracted from its clause, Exfoliation does not occur, and the clause remains finite.

The (b) examples of (2) and (7)-(9) show R1 movement (i.e. raising to subject), which we may attribute to a distinct probe that is clearly also capable of triggering Exfoliation. R1 probes are possible with certain unaccusative and passive verbs, adjectives and nouns. I propose that this probe, when it occurs in the verbal domain, is located on *v* — or on *a* and *n* in constructions in which a noun or adjective

functions as the higher raising predicate (e.g. *Mary is likely to v*P; *our likelihood to v*P). I thus assume that A-movement proceeds successive-cyclically, stopping at the edge of the higher *v*P, *a*P, and *n*P (as argued independently for passive and unaccusative constructions by Legate 2003). When an R1 probe on *v,* for example, finds its goal within a complement CP, that CP undergoes Exfoliation just as it does for R2 movement. The goal raises to form a specifier of *v*P. From there, in English, it will normally be targeted by a probe on T and raise to form the specifier of TP:

(18) **Analysis of R1**



As argued in much work of the past two decades, I also propose that *v*, *a*, and *n* host an Ā-probe crucial to successive-cyclic Ā-movement. The overall distribution of probes relevant to clausal Exfoliation can thus be summarized as (19):

(19) **Probes that yield movement of an embedded subject in English**

a. **R2 probe**: on some active instances of V, but not on passive or unaccusative verbs, A, or N)

b. **R1 probe**: on certain instances of unaccusative *v*, *a*, and *n*

c. **Ā-probe**: on *v*, *a*, and *n*

The presence of an Ā-probe on *v, a*, and *n* makes an additional correct prediction that favors the Exfoliation theory of nonfinite clauses over the lexicalist alternative, and once again eliminates a serious problem for CCT. Recall first how the Exfoliation approach predicts and explains the acceptability of a NOM object in Icelandic infinitival complements with a raised quirky case-marked subject such as (5) in a manner compatible with CCT. If CCT is correct, this object receives NOM case and gets licensed due to agreement with finite T, in keeping with the general syntax of quirky subject/NOM object constructions. A similar process may be assumed to assign case (presumably also NOM) to the postverbal nominal in the English constructions of (7)-(9). When a clause with a postverbal NOM argument is embedded in an R2 configuration — and if its highest argument is raised into the higher VP from the specifier of *to*P — Exfoliation is triggered. Even though Exfoliation removes the finite T of the lower clause (along with

the C layer), the lower NOM argument, which has not been extracted from its clause, retains its case and licensed status as a "memory of its past life".[8]

Compare this situation to the more commonly discussed R2 configuration in which the subject is a normal non-oblique nominal, for which an Exfoliation derivation was sketched in (14)-(16). Here we can maintain, without abandoning CCT, that agreement with T has licensed the subject nominal internal to its own clause, and presumably assigned it NOM, before this subject is raised in response to the R2 probe on the higher V — triggering Exfoliation, which eliminates the TP and CP layers of the embedded clause. In this derivation, however, the subject is assigned case a second time in its new position — self-evidently in Icelandic, where a non-oblique subject raised by an R2 probe bears ACC morphology, and perhaps true in English as well, if the use of *me, her,* etc. rather than *I, she,* etc. indicates the presence of ACC on the raised nominal. On an Exfoliation approach, this second instance of case assignment may be a fact about the R2 construction, but was not necessary as a licenser for the raised nominal, which was already licensed within the embedded clause. In this respect, the Exfoliation approach differs crucially from standard lexicalist analyses of nonfinite clauses.[9]

With this in mind, consider now a derivation whose first steps are identical to (14): a non-oblique subject nominal raises to form a specifier of *to*P. But now let us imagine that this subject nominal has features that qualify it as a goal for an Ā-probe on a higher *v*, *n*, or *a*. Let us additionally stipulate that the clause containing this subject is not embedded in a configuration where its subject serve as the goal for an R2 probe — either because there is a closer goal for such a probe (if the embedded clause is the second object of a double-object structure) or because the higher predicate is not an R2 predicate. Crucially, the Exfoliation rule makes no distinction between a probe that triggers A-movement and one that triggers Ā-movement. Consequently, Ā-movement across a clause boundary in the configuration described should trigger Exfoliation, infinitivizing the embedded clause. As a result, we should observe an infinitival clause that looks like a puzzle for CCT when combined with a traditional lexicalist view of nonfinite clauses: an overt subject of an infinitival complement to a non-raising verb that is acceptable only when extracted from its clause by Ā-movement.

As first explored by Postal (1974, 305 ff.) and Kayne (1984, xiii ff.), exactly this configuration exists. For example, a double-object verb like English *assure* permits an infinitival clause with an overt subject as its second object, so long as this subject is extracted by Ā-movement. Even if the higher V bears an R2 probe in this configuration, it cannot affect the subject of the second object, since the first object is a closer goal. But if the second object is the closest bearer of Ā-features to the Ā-probe on the higher *v*, it can serve as the goal for that probe, with movement to that probe triggering Exfoliation:

(20) **Infinitivization triggered by Ā-movement: second object of a double-object structure**
   a. *I assure you Mary to be the best candidate.
   b. Mary, who I assure you ___ to be the best candidate … Kayne 1984, xiii, ex. (33)-(34)

---

8. It is also worth noting that the Exfoliation approach removes the challenge to CCT posed by the behavior of raised Icelandic quirky subjects in R1 and R2 constructions. With the nonfinite form of the embedded clause attributed to the raising rather than the other way around, it is no longer necessary to propose, for example, that such subjects must not only receive the oblique case required by the main predicate of their original clause, but also non-overt structural NOM (R1) or ACC (R2), to be licensed and pass the Case Filter (as suggested by Jónsson 1996, chapter 4; cf. Thráinsson 2007, 181 ff.). I leave open the proper analysis of comparable issues in Icelandic passive clauses, which pose similar issues but fall outside the scope of this chapter.

9. In the context of this chapter, I leave open the mechanism by which only the second case assigned to a raised, previously NOM-marked nominal in an R2 construction is morphologically visible in languages like Icelandic. One possibility is actual case stacking, with some additional rules or principles silencing inner case morphology (as discussed by Richards 2012, Pesetsky 2013, and Levin 2017, among others; see Caha 2022 for a survey). Alternatively, earlier-assigned case features might be overwritten entirely by the new features, without stacking at any point in the derivation.

Verbs like *wager*, which lack an R2 probe for most English speakers, show exactly the same paradigm, and may receive the same explanation: Exfoliation triggered by Ā-movement:

(21) **Infinitivization triggered by Ā-movement: *wager*-class verbs**
a. * We wagered Mary to be the most likely winner.
b. Mary, who we wagered ___ to be the most likely winner...

Many French verbs whose English counterparts permit R2 such as 'believe' show the same behavior. We may once again attribute this paradigm to the absence of an R2 probe (and the presence of an Ā-probe), assuming an Exfoliation approach to nonfiniteness:

(22) **Infinitivization triggered by Ā-movement: French verbs like 'believe' (= (22)**
a. * Je croyais cet homme être arrivé.
'I believed this man to have arrived.'

b. l'homme que je croyais ___ être arrivé…
the man that I believed AUX.INF arrived…
'the man that I believed to have arrived…' (cf. Kayne 1981, p. 357, ex. (65))

This paradigm poses a puzzle for traditional lexicalist accounts that attribute the star in front of the (a) examples of (20)-(22) to the absence of case assigned within its clause to the subject of an infinitive. Why should Ā-movement eliminate this violation of the Case Filter. To answer this question, Kayne proposed that the (a) examples were excluded because the case-licensing properties of the higher verb could not penetrate the embedded clause boundary, but successive-cyclic Ā-movement includes a landing site closer to the higher verb, permitting case assignment to proceed. His proposal thus served as a new argument for the successive-cyclicity of Ā-movement in the first place (and was later updated by Rezac 2013, 310 ff. with similar conclusions).

The Exfoliation account of this paradigm, by contrast, makes no appeal to the Case Filter to explain the contrasts in (20)-(22). What goes wrong with the (a) examples has nothing to do with case on this approach. Instead, the culprit is illegal infinitivization. Because the subject of the embedded clause does not move anywhere in the (a) examples, the structural description of Exfoliation is not met, and there is no reason for the clause to have ended up nonfinite. The (b) examples contrast because a higher Ā-probe has triggered extraction of the embedded subject, which raised only as far as the specifier of *toP* within its own clause. Though the embedded clause loses its TP layer because of Exfoliation, NOM case was assigned to the embedded subject before Exfoliation takes place, licensing the embedded subject and avoiding a Case Filter violation. Once again, we see derivational opacity, a nominative memory of the past life of the embedded clause as a full and finite CP.

The two proposals advanced to explain (20)-(22) make different predictions. All things being equal, if these contrasts reflect the ability of the embedded subject to be case-licensed by material in the higher clause, we expect familiar contrasts between licensors and non-licensors in the higher clause to affect the ability of Ā-movement to rescue the subject of an infinitival complement from a Case Filter violation. In fact, however, this is not the case. The domain that embeds the infinitival complement in constructions like the (b) examples above may be headed by a passive verb, an adjective, or a noun:

(23) **Category of embedding head irrelevant**

a. Mary, who I've been assured ___ to be the best candidate… *passive*[10]

b. Mary, who I am positive ___ to be the best candidate… *adjective*[11]

c. Mary, who I have a hunch ___ to be the best candidate… *noun*

This suggests that the Case Filter has nothing to do with the contrasts under discussion. Instead, what is crucial is whether the subject was extracted, because only under these conditions does the derivation render the embedded clause nonfinite.

The observant reader (and in fact, even the unobservant reader) will have noticed that our discussion of nonfinite clauses has focused entirely on the raising constructions R1 and R2, in which an embedded subject moves to a non-thematic position across a clause boundary, and ignored control. For the proposal to do its job explaining the properties of R1 and R2 constructions discussed here, it is indeed crucial that all nonfinite clauses result from Exfoliation. Consequently, it is crucial to analyze control constructions as involving cross-clausal movement of the embedded subject as well. This might entail acceptance of proposals that analyze control as movement from the controllee position to the controller position, i.e. movement to a θ-position (Bowers 1973, 675 ff., 1981; Wehrli 1980, 115-131,1981; Hornstein 1999; among many others) — a much-debated issue. Alternatively, the subject might undergo movement that traverses a shorter distance but still counts as cross-clausal — for example into a functional superstructure that embeds CP and contains a head motivating extraction of the subject. There are some reasons to analyze English *for*-infinitivals (not discussed here) as a consequence of just such a superstructure. To the extent that the semantics of a *for*-infinitival are also found in some (but not all) control complements, a superstructure analysis is plausible for at least complements of this type. See Pesetsky (2019) for a fuller exploration of these issues.

6 Clause size and the position of the subject

In all the examples of Exfoliation discussed so far, the rule strips away both the CP and TP layers of an embedded clause because the subject has raised only as far as the specifier position of *to*P. This raises an obvious question concerning the EPP property of T, which (in English at least) appears to require the subject to raise to the specifier position of TP in main clauses and embedded clauses that Exfoliation does not turn into infinitives. How is this EPP requirement successfully disregarded in clauses rendered infinitival by Exfoliation? I propose that this is possible by the familiar logic of "salvation by deletion" (Lasnik 1995). When a probe feature has the EPP property and has found a goal, it permits but does not require movement of its goal. When movement takes place, the EPP feature is deleted from the representation. If it remains, the result is toxic to the derivation. The toxicity of an undeleted EPP feature thus enforces *de facto* movement to the bearer of the feature — unless some distinct process eliminates the feature from the derivation. Exfoliation is a distinct process with precisely this ability. This explains the possibility of raising the subject only as far as the specifier of *to*P in clauses whose TP layer is later deleted to form an infinitive.

That said, nothing discussed so far *prevents* the subject of an embedded clause from raising to its canonical position as the specifier of TP — and nothing in principle prevents it from being contacted in that position by an R1 or R2 probe in a higher clause. Under such a circumstance, Exfoliation would still apply, but would delete only the CP layer, leaving behind a complementizerless but still finite clause. The

10. Kayne himself observed that passive morphology fails to block the possibility seen in examples like this.

11. Kayne marks as ungrammatical a comparable example (*John Smith, who I'm sure __ to be one of the very best students in the class…*). Kayne's adjective *sure*, however, has an alternative use as an R1 adjective, which may produce a garden-path effect influencing judgments for his example.

result would be an instance of what is often called *hyper-raising* (Ura 2000). Hyper-raising is generally forbidden in English (though see Danckaert and Haegeman 2017 and further discussion in Pesetsky 2019), but is attested (and studied in some detail) in other languages.

I know of two languages in which hyper-raising has been argued to require the absence of the complementizer, as predicted by the Exfoliation approach. One is the Bantu language Lusaamia (spoken in Kenya and Uganda), as described by Carstens and Diercks (2009). In Lusaamia, the subject may undergo R1 movement from a clause that remains finite (showing tense and subject agreement), but the complementizer *koti* used in the absence of raising (seen in (24a)) must be omitted when the subject raises, as shown in (24b). If the complementizer is used, the sentence can only be interpreted in a non-raising fashion (with a θ-role assigned to the subject of the higher clause, and presumably a null pronoun as the embedded subject). The scenario devised by Carstens and Diercks is designed to disambiguate between these readings:

(24) **Raising from spec,TP requires Exfoliation of CP: Lusaamia (Bantu, Kenya/Uganda)**
Scenario: You find that the watering hole is empty. Though there are no cows on site, you can say:

a. Bi-bonekhana **koti** eng'ombe chi-ng'were amachi. *no R1*
8SA-appear COMP 10cow 10SA-drink 6water
'It appears that the cows drank the water.'

b. Eng'ombe chi-bonekhana (#**koti**) chi-ng'were amachi. *R1 entails *C*
10cow 10SA-appear (#COMP) 10SA-drink 6water
(without *koti*) 'The cows appear to have drunk the water.'
(with *koti*) '#The cows appear as if they drank the water' [inappropriate in context provided]

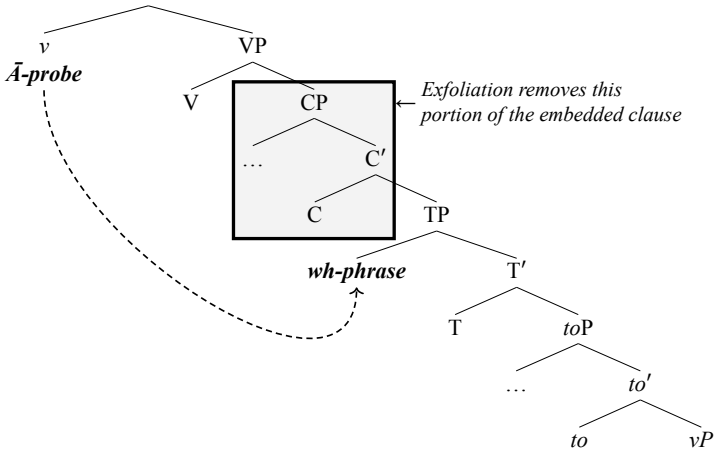
(Carstens and Diercks 2009, 103, ex. (10a-b),(11a))

Jenks and Rose (2017, 214-216) discuss a similar contrast in the Kordofanian language Moro (spoken in Sudan).

When an Ā-probe extracts a subject that has raised all the way to the specifier of TP position (but no further), the same outcome is expected. Exfoliation should apply, but should eliminate only the CP layer, leaving a fully finite clause behind that is only missing its complementizer. In fact, as is well known, Ā-movement of the subject does indeed require the omission of the complementizer (with counterparts, sometimes more complex, in many other languages). This is the much-studied *complementizer-trace effect*:

(25) **Ā-extraction from spec,TP requires Exfoliation of CP: the complementizer-trace effect**
Mary, who Sue declared (*that) ___ was the best candidate…

(26) **Exfoliation of only CP layer**



To force Exfoliation to apply when a subject undergoes cross-clausal Ā-extraction from the specifier of TP (and thus predict the contrast in (25), it must be forbidden for the subject to move successive-cyclically via the edge of its own clause. If a subject were permitted to move from the specifier of TP to the edge of the local CP, and could be contacted by a higher Ā-probe in that position, Exfoliation would not apply (since its structural description would not be met). Local movement of this sort must therefore be blocked. Though there is much more to be said about the matter, we may invoke (for present purposes) an "anti-locality" constraint of the kind argued for in much recent work (Saito and Murasugi 1998; Bošković 1994; Ishii 1999; Grohmann 2003; Erlewine 2016: Brillman and Hirsch 2014)**:**

(27) **Antilocality constraint**
Movement to the edge of CP must cross a phase boundary.

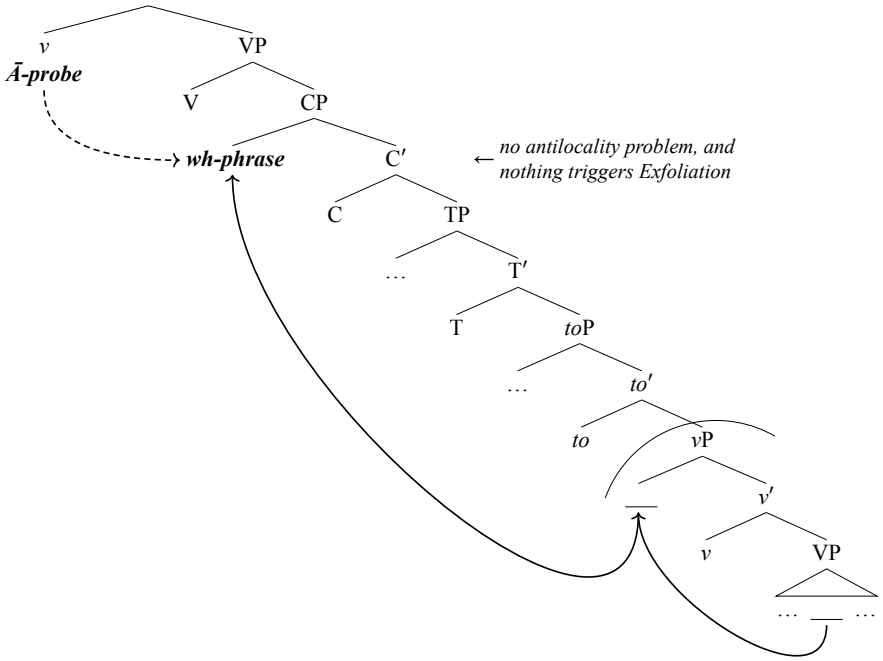
The same constraint will also prevent cross-clausal A-movement from specifier of *to*P from stopping at the edge of the local CP — once again blocking a possible "end run" around the obligatoriness of Exfoliation, thus guaranteeing that infinitivization will be the result.

It is also correctly predicted that the same non-nominals that pattern with nominals for R1 and R2 movement from the specifier of *to*P (as seen in seen in (7)-(10)) will yield a complementizer-trace effect when Ā-extracted from the specifier of TP (or similar position high enough to leave the clause finite when extracted). Exfoliation triggered by Ā-movement should be just as oblivious to nominal/non-nominal distinctions as Exfoliation triggered by A-movement:

(28) **Ā-extraction from spec,TP requires Exfoliation of CP: the complementizer-trace effect with non-nominals**
a. How much more important than linguistics did they say (*that) ___ was the fate of the planet?
b. this room, in which Sue believes (*that) ___ are found the finest examples of Athenian sculpture…
c. That the world is round some people believe (*that) ___ is a tragedy.

Finally, it is important to note that the Antilocality Constraint in (27) does not prevent successive-cyclic movement to the specifier of CP of the direct object (or lower constituents) via the specifier of *v*P. Not only does movement from the specifier of *v*P to the specifier of CP fail to violate Antilocality, it also does not create a configuration that matches the structural description of Exfoliation — since all goals found by a probe across a phase boundary are occupying the edge of their phase:

(29) **Ā movement from lower position → no Exfoliation**



This has the right consequences both for infinitivization and for the complementizer-trace effect paradigm cross-linguistically.

In the domain of infinitivization, Ā-movement of elements within *v*P are correctly blocked from triggering infinitivization. No example in previous sections of this chapter that was starred as an instance of illegal infinitivization can be ameliorated by Ā-moving some element out of its *v*P. Thus, (30b) below is no better than (30a), and (30d) is no better than (30c). All are instances of illegal infinitivization.

(30) **Ā-movement from within *v*P doesn't trigger infinitivization**

a. *It seemed Sue to have finished her dissertation. = (2c)

b. *How many dissertations did it seem Sue to have finished ___ ?

c. *I assure you Mary to be the best candidate. = (20a)

d. *No matter how good a candidate I assure you Mary to be …

For exactly the same reason, Ā-movement of an element from within *v*P yields no complementizer-trace effect. In English, for example, Ā movement of the direct object of an embedded clause is correctly predicted to be completely compatible with the presence of an overt complementizer *that*.[12] Also predicted is the famous finding by Rizzi (1982), building on Perlmutter (1968) and richly supported by later work (see Pesetsky 2017) that if a language can be independently shown to permit the subject to remain within

12. The full picture of English extraction and finite complementation is complicated by several considerations that space does not permit me to explore in this chapter. All these topics are discussed at length in the fuller presentation in Pesetsky (2019). One complication is the fact that English permits the omission of the complementizer *that* even in the absence of self-evident subject extraction. In the fuller presentation, I adapt earlier arguments by Pesetsky and Torrego (2001) that the subject of such a clause has in fact been extracted (string-vacuously) to a higher-than-normal position external to the CP in which it originated. The presence of such a position is also important to the explanation offered there for another famous complication: the observation by Bresnan (1977, 194, fn 6) (rediscovered by Culicover 1993a, 1993b) that the complementizer-trace effect often disappears when sentence-initial adverbials are present in the embedded clause. Another complication arises in English relative clauses, which may be introduced by *that* even when the subject has been extracted — with omission of *that* actually ungrammatical in the absence of an overt *wh*-phrase. This too is discussed in the fuller work, and an analysis is proposed that is compatible with the proposals sketched here.

the *v*P, it may be Ā-moved from an embedded clause without triggering a complementizer-trace effect. This possible precisely because it does not need to stop over as the specifier of TP on its way to the CP edge (what Rizzi and Shlonsky 2007 called a "skipping" derivation), and thus can instantiate the picture in (29) (except that extraction of an external argument originates in the specifier of *v*P, rather than moving there).[13]

The proposals advanced here thus do not merely resolve long-standing puzzles of CCT (explaining in the process why nonfinite clauses exist in the first place) — but also unify that discussion with an account of the complementizer-trace effect. As far as I know, this is an unique advantage of the Exfoliation proposal.

7 Agreement memories of a past life

As we have seen, the hypothesis that a nonfinite clause starts its life as a full finite CP eliminates several puzzles for CCT analyses of NOM as a by-product of agreement with T — puzzles that have led many researchers to reject that family of proposals in favor of alternatives. On the other hand, my discussion in this chapter does not provide new affirmative arguments in favor of the agreement theory of NOM over competitors. It merely eliminates arguments against the proposal previously taken as conclusive, in the wake of Yip et al. (1987) and Marantz (1991). It does this by positing an early derivational stage at which a clause that ends its life without agreement has just the same full agreement found in clauses that remain finite.

With this in mind, it would be reassuring to have independent arguments for the presence of agreement early in the derivation of nonfinite clauses. The behavior of NOM reflexive anaphors in Icelandic may furnish just such an argument. As is well-known, and as (31) shows, a reflexive pronoun is barred from a subject position where a non-reflexive nominal would trigger agreement with the verb and be marked with NOM case morphology:

(31) **Reflexives banned from certain subject positions**

a. *Mary believes that herself is the best candidate.

b. *Jón segir að sig elski Maríu. (Icelandic)
John says that REFL love.SBJV.3SG Mary

(Everaert 1991, 280 ex. 8)

Replacing the reflexive with a non-reflexive pronoun makes both examples acceptable, and permits binding by the higher subject.

This phenomenon is widespread among the languages of the world. It thus must have roots in some general principle and is unlikely to reflect a simple morphological gap, i.e. the accidental absence of a NOM form for the reflexive. Building on foundational work by Woolford (1999) (who developed an idea due to Rizzi 1990), a consensus has emerged that the culprit is *agreement*, a generalization dubbed by Rizzi the *Anaphor-Agreement Effect* (AAE):

13. A fuller, more complex picture of cross-linguistic variation in the appearance of complementizer-trace effects is presented in Pesetsky (2019), including the analysis of phenomena in which the complementizer does not disappear under subject extraction, but appears to be supplanted by another clause-introducing formative (e,g, *qui* replacing *que* in French). Also considered in the fuller work is the possibility that a languages such as Greek and Serbian that permit raising and control across a finite clause boundary even in the presence of a complementizer make use of the same skipping strategy that Rizzi proposed for Ā-movement of the embedded subject in languages like Italian.

(32) **Anaphor-Agreeement Effect**
Anaphors do not occur in syntactic positions construed with agreement. (Woolford 1999, 257)

Crucial to the relevance of the AAE generalization to this section is the claim it is indeed specifically agreement and not NOM case that blocks reflexives. As Woolford and others have argued, this claim is supported by the acceptability of NOM-marked anaphors in languages without subject agreement, and the unacceptability of non-NOM anaphors in non-subject positions that also trigger agreement — as well as the special strategies that some languages invoke to by-pass the effects of the AAE (Sundaresan 2016; Yuan to appear; among others). Let us suppose then that the AAE is the correct descriptive generalization underlying the ban on reflexives seen in (31).

It is no surprise then that a reflexive is acceptable subject marked with quirky case in Icelandic, since a non-NOM subject does not trigger agreement:

(33) **No AAE effect for quirky subject (Icelandic)**
Hún sagði að sér þætti vænt um mig.
she said that REFL.**DAT** was.SBJV.3SG fond of me
'She$_i$ said that she$_i$ was fond of me.' (Maling 1984, 216 ex. (8b); Woolford 1999, 261 ex. (9a))

Nor is it a surprise that a reflexive is unacceptable as a NOM object in a finite clause, since NOM-marked objects in Icelandic do trigger agreement:

(34) **AAE effect for NOM object (Icelandic)**
*Maríu leiðist sig.
Maria.DAT find.boring.3SG REFL.**NOM**
Intended: 'Maria finds herself boring.'
(Everaert 1991, 289, ex 27; cf. Woolford 1999, 261 ex 8b)

But, assuming that AAE is the correct generalization behind the ban on reflexives under discussion, it is a unique prediction of the Exfoliation approach to nonfinite clauses that a reflexive should be impossible as a NOM object in a clause whose subject bears quirky case even when that clause ends up infinitival, as in the R2 complement of (34). The impossibility of the reflexive in such a construction is thus an "agreement memory of a past life": the lethal interaction of agreement with reflexivity, detectable even in a clause that shows no agreement on the surface.

(35) **AAE effect for NOM object (Icelandic)**
*Ég tel Maríu leiðast sig.
I believe Maria.DAT find.boring.INF REFL.**NOM**
Intended: 'I consider Maria to find herself boring.'
(Heimir Viðarsson and Halldór Sigurðsson, personal communication; building on Everaert 1991)

This proposal raises one immediate problem. In both English and Icelandic (and other languages with similar constructions), a reflexive is acceptable as the raised subject in an R2 construction. If the infinitival embedded clause in an R2 construction begins its life full and finite, such a reflexive should also be barred as yet another memory (a bad one, this time) of its past life:

(36) **No AAE effect for raised ACC subject in R2**

a. She believes herself to be strong.

b. Hún telur sig vera sterka. (Icelandic)
She.NOM believes REFL.ACC be.INF strong.F.ACC
(Andrews 1982, adapted by Halldór Sigurðsson, Facebook comment, January 15, 2018)

The most salient difference between the impossible reflexive in (35) and its acceptable counterparts in (36) is the raising of the reflexive into the higher verbal domain in (36) that permits it to receive ACC case . In (35), by contrast, the reflexive retains NOM because it remains within the lower clause. I propose that this is the crucial factor distinguishing (35) and (36). The proposal that NOM case is a consequence of agreement does not entail that ACC case also results from agreement. Baker and Vinokurova (2010, esp. 639), for example, present arguments from Sakha simultaneously favoring an agreement-based account of NOM and a dependent-case theory of ACC. Supplementing this point, Branan (2021) presents evidence from Kikuyu that a dependent-case theory of ACC should be integrated into a CCT approach that includes a Case Filter excluding nominals not licensed by case. With this as background, let us advance the following hypothesis concerning the source of the AAE:

(37) **AAE as a Case Filter effect**
Agreement does not case-license a reflexive anaphor.

If (37) is correct, a reflexive occupying a position where the only possible source of case-licensing is agreement with T will end up violating the Case Filter, unless movement brings it to a position where it can be case-licensed in some other way. This proposal will immediately capture the contrast between (35) and (36).

Support for this approach can be found in a variant of the Icelandic constructions discussed so far in which an unaccusative verb with a quirky subject appears to bear an R2 probe. This yields a configuration in which an embedded subject raises into the higher clause (over higher VP adverbs, if present) from a clause that ends up nonfinite — but because ACC is not assigned in the higher clause (following the normal laws of quirky-subject constructions), it remains NOM: yet another "nominative memory of a past life":

(38) **"Nominative with infinitive" construction (Icelandic)**
Mér sýndist Haraldur (í barnaskap mínum) hafa gert þetta vel.
me.DAT seemed Harold.NOM (in foolishness my) have.INF done this well
'Harold seemed to me (in my foolishness) to have done this well.'
(Thraínsson 1979, 426, ex 121)

As predicted by the approach advanced in this section, once again the raised subject may not be a reflexive, despite the fact that it has raised into the higher verbal domain. Because of (37), the reflexive was not case-licensed in the embedded clause when it was still finite, and in contrast to (36), it has no new case-licensing opportunities in the higher clause:

(39) **AAE effect in "Nominative with infinitive" construction (Icelandic)**
*Mér sýndist sig hafa gert þetta vel.
me.DAT seemed REFL.NOM have.INF done this well
'I seemed to myself to have done this well.'
(Heimir Viðarsson and Halldór Sigurðsson, personal communication)

Whatever the right account of AAE effects may be, however, it is clear that if the properties of agreement play a role in the distribution of reflexives as has been argued, nonfinite clauses behave as though they did indeed contain subject agreement at some point in their derivation, yet another "past life" effect.[14]

8 Conclusions

In this chapter, I have argued for a derivational view of nonfinite clause formation, which in turn defuses what have been taken as strong arguments against an otherwise attractive link between NOM case assignment (with a licensing function) and agreement with finite T — hence its relevance to topic of this volume. If this view is correct, rumors of CCT's demise are premature. At the same time, as I have noted above, this chapter did not specifically argue in favor of CCT and the standard view of NOM case. It merely defused certain counter-arguments. Consequently, it remains to be determined which among several seemingly viable proposals concerning NOM are correct.

In addition, if the new view of finiteness sketched here is correct, it eliminates the unification of the behavior of nominal complements and subjects that was one of the claimed virtues of CCT. Thus it does not restore the arguments for CCT to full vigor, but rather reinstates the plausibility of one component of CCT at the expense of another. Here too there is obvious work to be done, reevaluating the complementation component of CCT in light of the elimination of its subject component.

14. A reviewer asks whether the impossibility of a reflexive as a NOM object might actually be a Person Case Constraint effect, as suggested by Anagnostopoulou (2003, 258 and 337 fn 81), related to the well-known difficulty (cf. footnote 4) that many Icelandic speakers report with first and second person pronouns as NOM objects in clauses with oblique subjects (see Thráinsson 2007, 234 ff. and the references he cites). To the extent that the latter difficulty is attributable to issues connected to verbal agreement, the fact that these effects also surface in nonfinite clauses remains an argument for the Exfoliation approach. Significantly, as Pesetsky (2019) discusses at some length, building on observations by Sigurðsson (2004) and Schütze (2003), the variable unacceptability of first and second person NOM objects also repeats itself in nonfinite contexts — a further indication that the proposal sketched here could be recast in PCC terms. The Anaphor Agreement Effect, however, extends to the impossibility of NOM reflexives as subjects, where first and second person pronouns have no problem surfacing. We thus have competing generalizations (AAE and PCC) covering overlapping, but distinct sets of phenomena. I will not attempt to adjudicate among them here, since both approaches support the same kind of argument in favor of the derivational approach to infinitivization presented here.

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