Case transmission in Classical Latin control structures: Between syntax and morphology

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Latin nonfinite structures with no overt subjects exhibit puzzling properties with regard to the case- and ϕ-features of their subjects and their relationship to overt NPs in matrix clauses. While the transmission of case- and ϕ-feature related properties is obligatory when there is a nominative or accusative controller NP, it is only ϕ-feature transmission that remains obligatory when there is a dative controller, case transmission being apparently optional. To avoid an assumption of syntactic optionality, accounts of the phenomenon which rely on syntactic mechanisms propose that the apparent optionality reflects a syntactic difference between two types of nonfinite structures. It is instead proposed that mechanisms of linking of objects via Agree and ϕ-feature and case transmission should be assigned to different components of the grammar, syntax and morphology. The hypothesis allows a unified treatment of the syntactic phenomenon of control in Latin.

Keywords: minimalist syntax, Latin syntax, Multiple Agree, control, Case.

1. Introduction

1.1. Nonfinite clauses with no overt subjects in Latin

A significant subset of Latin nonfinite structures consists of structures without an overt subject, with the verb exhibiting infinitival morphology. The class of structures under consideration is heterogeneous with respect to the identity and properties of such no overt subjects. The morphological richness of nominal inflection in Latin permits to

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1 The discussion to follow is focused on nonfinite structures attested in Classical Latin, i.e. in the period between 90 BCE and 14 CE, with particular attention to the usage of Caesar and Cicero. Non-classical structures, in particular Late Latin developments, are not discussed below. On the periodization of Latin, see e.g. Pinkster (2015: 5-6).
identify several properties of covert subjects of infinitival structures, their featural endowment with regard to case and ϕ-features in particular: although covert themselves, non-overt subjects enter into an agreement relationship with predicatively used noun phrases and adjectives in their clauses, thereby revealing their own featural makeup. While general characteristics of Latin nonfinite structures are well established in these respects, there are phenomena which remain doubtful as far as their proper analysis is concerned; in particular, it remains unclear whether differences in syntactic properties or rather in the application of morphological operations are to be invoked in an explanatory account of their properties. One of the phenomena in question concerns case transmission in control structures in Latin. To consider the behaviour of such nonfinite structures and its possible explanation, we proceed as follows. After an overview of different nonfinite structures with covert subjects in Latin in the remainder of section 1.1, we turn to the transmission of features in control structures in section 1.2, delineating its properties and possible analyses which rely exclusively on syntactic mechanisms. An alternative is then developed in section 2, where an account of the phenomenon of control in terms of Multiple Agree is reviewed in section 2.1, followed by an analysis of the behaviour of P controllers in Latin in sections 2.2 and 2.3. Section 3 closes the discussion with concluding remarks.

To get a bird’s eye view of Latin nonfinite structures with covert subjects, consider (1):

(1) Cum ... vomere post cenam te comp vomit.INF.PRS after.PREP dinner.ACC.SG you.ACC.SG

velle dixisses (...) In cubiculo want.inf.prs say.SBJV.PLQPRF.ACT.2.SG LOC apartment.ABL.SG

malle dixisti.

prefer.INF.PRS say.IND.PRF.ACT.2.SG

‘When ... you expressed a desire to vomit after dinner (...) You said you preferred to retire to your apartment.’ (Cic. Dei. 21)²

There are three (overt) infinitival structures in (1). The first part contains two of them; in a simplified form (here and thereafter we restrict our analysis to structures as they are created only by indispensable applications of the structure building operation Merge, hence disregarding further rearrangements due to further syntactic operations and discontinuities arising therefrom, since complexities of Latin word order are orthogonal

to our present concerns; see e.g. Devine & Stephens (2006, 2019) for recent extensive
discussions of the relevant data and their possible analysis covering syntactic properties
and the syntax-pragmatics interplay):

$$\text{(2) dixissēs} \left[ _α \text{te} \; _β \text{velle} \; \left[ _β \Delta \text{vomere}\right]\right]$$

The larger structure labelled $\alpha$ in (2) is an instance of the accusative and infinitive
construction, with the subject NP $te$ bearing the accusative case and the verb $velle$ being
in the infinitive form. As an example without a $pro$ subject, consider (3):

$$\text{(3) Pherecydes\quad dixit\quad} \left[ _α \text{animos} \quad \text{Pherecydes.NOM.SG say.IND.PRF.ACT.3.SG soul.ACC.PL}\right]$$

$esse\quad hominum\quad sempiternos$

be.inf.prs\quad man.gen.pl\quad eternal.acc.pl

‘Pherecydes pronounced the souls of men to be eternal.’ (Cic. Tusc. 1.38)

Subjects of such nonfinite structures need not be coreferential with any object in the
matrix clause, as exemplified in (3), where the matrix subject $Pherecydes$ is disjoint in
reference from the subject of the embedded infinitival $animos$. It seems to be established
by now that the accusative case assignment (or, in more general terms, Vergnaud-type
nominal licensing) in such constructions, discussed in the generative framework since the
seminal discussion in Lakoff (1968) (in transformational terms), takes place without an
interaction with the matrix verbal complex, thus differing from the ECM type known
from English and being possibly due to properties of the C-T complex internal to the
accusative and infinitive structure (see e.g. Cecchetto & Oniga (2002), Jøhndal (2012),
Danckaert (2016), Lasnik (2019)). The structure labelled $β$, on the other hand, has a non-
overt subject, atheoretically signalled as $Δ$ in (2).

Beside the overt-nonovertness difference, the subjects of $α$ and $β$ differ crucially in inter-
pretive conditions imposed on their structural positions: subjects of an accusative and
infinitive structure are not dependent with respect to their reference on any other constit-
uent; subjects of structures exemplified by $β$ are obligatorily interpreted as coreferring
with the subject of the $α$ structure, as indicated in (2) with the help of indices. The
 distinction extends to cover other properties, including tense-related semantic properties
of the infinitive (with structures exemplified by $β$ being impoverished interpretively in
this regard, with the impoverishment reflected on the morphological side by the fact that
only so-called present infinitives are allowed) and the interpretation of the structure as
a whole (accusative and infinitive structures being “propositional”, structures as in $β$
being interpreted rather as expressing properties of individuals), and is arguably due to
$β$-like structures being instances of control infinitives with a $PRO$ subject (for an early
discussion of control structures and case transmission patterns, see Goggin (1983); for
a minimalist analysis, see Cecchetto & Oniga (2002, 2004), Oniga (2014: 290-298) for
further discussion and Pinkster (1990: 126-130), Pinkster (2021: 204-220) for a presenta-
tion within a functional framework; standard reference grammars of Latin, mostly pre-
dating the investigation of such structures in generative terms, understandably do not follow the distinction in their presentation of the relevant data, see Ernout & Thomas (1964: 321-331), Kühner & Stegmann (1966: 664-721), Hofmann & Szantyr (1972: 341-365), Menge (2012: 663-708)). It may be noted that several verbs, the verb *velle* included, allow both types of structures to be embedded, compare (1) and (4)-(5) (see also Pinkster (2021: 171-172)):

(4) Pertinentem *et* efficientem sapientiam
    leading to an end.ACC.SG and.PRT effecting.ACC.SG wisdom.ACC.SG
    
    volunt esse.
    want.IND.PRS.ACT.3PL be.INF.PRS
    ‘They want it to be the case that wisdom is both leading to an end and effecting it.’ (Cic. Fin. 3.55)

(5) *pro* volunt [sapientiam esse pertinentem et efficientem]

Whereas *velle* in (1) is an obligatory (subject) control verb, it selects an accusative and infinitive structure in (5), with concomitant change of interpretation of the embedded structure, slight as it is in the case at hand. Disjointness of reference in (5) is a property which excludes a control analysis for the structure; additionally, (5) would admit infinitives expressing different temporal relationships with the matrix event; thus, it would be possible to have not only (5), but also (6) and (7):

(6) Pertinentem *et* efficientem sapientiam
    leading to an end.ACC.SG and.PRT effecting.ACC.SG wisdom.ACC.SG
    
    volunt fuisse.
    want.IND.PRS.ACT.3PL be.INF.PRF
    ‘They want it to be the case that wisdom was both leading to an end and effecting it.’

(7) Pertinentem *et* efficientem sapientiam
    leading to an end.ACC.SG and.PRT effecting.ACC.SG wisdom.ACC.SG
    
    volunt fore.
    want.IND.PRS.ACT.3PL be.INF.FUT
    ‘They want it to be the case that wisdom will be both leading to an end and effecting it.’

No such possibilities are available for the embedded infinitival under *velle* in (1), the infinitive being obligatorily the so-called infinitive of the present, and the interpretation obligatorily referring to an event occurring later than the matrix eventuality (i.e. involving an irrealis interpretation). Furthermore, the subject of the relevant structure in (1) is

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3 The development of generative thinking about Latin closely reflects changes in the mainstream generative theory, as well as its place within Latin linguistics in general, gaining more prominence only in the minimalist period; see Mateu & Oniga (2017) for an overview of the generative work on Latin.
Case transmission in Classical Latin control structures

obligatorily nonovert under this interpretation: having an overt subject of *vomere* (i.e. *te* again) would immediately lead to a change in interpretation (‘you want it to be the case that you vomit’) and acceptability of infinitives other than the present infinitive.

Early discussions of infinitival structures within the generative tradition did not always observe the difference between structures like α and β (witness Pepicello (1977)), but both classes have been distinguished in Latin linguistics since Bolkestein (1976a, 1976b, 1976c, 1979), who capitalizes on different thematic properties of control verbs (assigning a separate θ-role to their NP objects) and verbs governing an accusative and infinitive structures (lacking this property) and different interpretive properties coming hand in hand with admissibility of different types of infinitives (see Pinkster (2021: 156-157) for a summary). Despite surface similarity between both types of structures, their distinctness in Latin is not subject to discussion, although details of theoretical accounts understandably vary.

The third infinitival structure in (1) conceals yet another, entirely nonovert one:

(8) dixisti \[ a \Delta_1 \textit{malle} \Delta_2 \]

\( \Delta_1 \) in (8) is the nonovert subject of a structure labelled \( \alpha \), which is strictly parallel to \( \alpha \) in (2)—an accusative and infinitive structure, and may be thus assumed to be a silent pronominal element *pro* (bearing the accusative case). Such nonovert subjects of accusative and infinitive structures enjoy the same freedom of reference as their overt counterparts do, the appearance of *pro* instead of an overt pronoun being due to discourse-pragmatic factors; in (8) the preceding context fixes interpretive properties of *pro* (see the discussion in Lebreton (1901: 376-378) and Melo (2007: 147-154)). To make the picture of infinitival clauses in (1) complete, \( \Delta_2 \) is a nonovert infinitival control structure embedded under *malle*, parallel to the structure embedded under *velle* in (2), of which only the preposed constituent *in cubiculo* ‘in your apartment’ survived the ellipsis. Alongside with the two types of nonovert subjects of infinitival clauses shown above, viz. PRO subjects in control structures as in \( \beta (=\text{CP}) \) of (2) and a *pro* subject of \( \alpha (=\text{an accusative and infinitive CP}) \) in (8), there are in Latin structures of the type exemplified in (9):

(9) \textit{Voluptas} mihi \textit{videtur} esse

\textit{summum} \textit{bonum}.

‘The Chief Good in my opinion is pleasure.’ (Cic. Fin. 2.2)

The relevant part of the syntactic structure in (9) may be schematized as in (10):

(10) \textit{NP}_i \textit{V} \[ a \Delta_1 \textit{INF} \]

The crucial difference with control structures like \( \beta \) in (2) concerns the lack of thematic role assignment in the matrix in (10), the structure \( \alpha \) being an instance of an
infinitival structure from which raising occurred, $\Delta$ (obligatorily coindexed with the subject NP) being a trace of an NP (its copy under the copy theory of movement). Verbs which admit of such structures form a class comprising mostly passive counterparts of verbs which embed accusative and infinitive clauses in the active voice.

### 1.2. Control structures and Feature Transmission

The presence of nonovert subjects in infinitival clauses in Latin raises questions about their properties and roles which they fulfill in determining properties of the elements of an infinitival clauses which they agree with. Control structures, in particular, are relevant for such considerations, given that raising structures as in (9) do not have as their subjects an element which could be actively involved in establishing such relations, a trace (a copy) being only a part of a discontinuous syntactic object, viz. a chain.

Due to the rich morphology of Latin nouns, adjectives and participles (which may function as attributive or predicative participles, but which also appear as components of analytic verbal forms), there are elements of an infinitival clause which exhibit overt distinctions of case and $\phi$-features that covary with nonovert properties of the subject of their clauses: predicative adjectives and participles exhibit both case and number and gender features, nouns used predicatively exhibit case differences and, if possible and required, also number and gender. Consider (11):

(11)  Charisi $vult$ Hegesias, $[\Delta$, Charisius,GEN.SG want.IND.PRS.ACT.3.SG Hegesias,NOM.SG

$esse$ similis

‘Hegesias wants to be like Charisius.’ (Cic. Brut. 286)

The infinitival clause is a subject control infinitival structure, with $\Delta = \text{PRO}$ and a predicatively used adjective $\text{similis}$, the latter being marked nominative and bearing [masculine] and [singular] $\phi$-features, thus apparently agreeing with its subject PRO, there being no other local source of such features. It may be noted that it is impossible to interpret the structure in (11) as being an instance of an accusative and infinitive construction: even in cases in which the latter has a silent $\text{pro}$ subject, a predicative adjective appears with the accusative case marking. Such properties of control structures may be used to argue that PRO carries case of the same kind as overt nominals do, thus being neither caseless nor endowed with a special null Case of Chomsky & Lasnik (1993).

Furthermore, relevant properties of agreeing elements are sensitive to properties of the controller of PRO: $\text{Hegesias}$ in (11), an NP bearing nominative case and being [+mas-}
culine]. Once the case properties of the subject of a clause with $\text{velle}$ change, e.g. when a clausal structure analogous to the matrix clause in (11) becomes embedded under a verb selecting an accusative and infinitive structure, case and $\phi$-features of predicative elements (and thus arguably also of the PRO subject) change accordingly:
(12) *Non arbitror* [te] velle
    neg think.IND.PRS.PASS.1.SG you.ACC.SG want.INF.PRS.ACT

*PRO* similem esse Epicureorum
    similar.MASC.ACC.SG be.INF.PRS Epicurean.GEN.PL
reliquorum]]...
    other.GEN.PL

‘I do not imagine that you wish to be like the other Epicureans.’ (Cic. ND 1.111)\(^4\)

_Similem_ in (12), an adjective used predicatively, is an accusative singular form, much as the controller of PRO, viz. the pronominal accusative *te*, is (see further Cecchetto & Oniga (2004) for a discussion of the importance of such data as counterevidence to the null Case theory of PRO, and Gallego (2011: 338 n.23)). Such relationships may be thus given a schematic representation in (13) (where ϕ stands for the complex of person, number and gender features):

(13) ... NP\(_{(\text{Case, } \phi; \beta)}\) ... [CP PRO\(_{(\text{Case, } \phi; \beta)}\) ... XP\(_{(\text{Case, } \phi; \beta)}\) ]

The pattern in (13) appears to be followed quite consistently in Latin; beside subject and object control with the controllers bearing structural cases accusative or nominative, it is attested also in structures in which there is a controller marked with an oblique case, viz. dative. Consider the following examples:

(14) \_Qui sibi licere\_ vult tuto esse in foro...
    REL.NOM.MASC.SG REFL.DAT.SG be.allowed.INF.PRS.ACT
    want.IND.PRS.ACT.3.SG safe.ADV be.INF.PRS.ACT LOC

‘Who desires that he may be allowed to appear without danger in the Forum...’ (Cic. Sest. 90)

(15) \_Mihi negligenti esse non licet.\_
    I.DAT negligent.MASC.DAT.SG be.INF.PRS NEG be.allowed.IND.PRS.ACT.3.SG

‘I am in duty bound not to neglect.’ (Cic. Att. 1.17.6)

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\(^4\) It might be noted that the text has not been transmitted here by our manuscripts unanimously, the codex Nostradamensis having the vocative *Vellei* instead of the infinitive *velle* of the rest of the manuscript tradition, and it was even suggested that the original reading might have been *Vellei, velle* (the error being due to haplography); but the general editorial consensus seems by now to be to adopt the majority reading *velle*. Cicero’s *De natura deorum* is quoted according to the edition of Plasberg-Ax (M. Tulli Ciceronis *De natura deorum*, Teubner: Leipzig 1933; the translation comes from *Cicero. The nature of the gods*, Translated by P.G. Walsh, Clarendon Press: Oxford 1997).
The verb *licet* ‘to be allowed’ admits a control infinitival clause as its complement, as exemplified in (14) (on properties of *licet* and its kin with regard to complementation and case properties of predicative elements in the complement infinitival, see further the data and discussion in Ernout & Thomas (1964: 132-133), Kühner & Stegmann (1966: 679-680), Hofmann & Szantyr (1972: 349-350), Menge (2012: 695-696)). The controller, *mihi* in (15), appears in the dative case. Its structural position is subject to controversy; it may be hypothesized to be the canonical subject position, *mihi* being an instance of the quirky subject phenomenon (notice the lack of agreement in $\phi$-features between *mihi* and *licet*), although this assumption is not essential for the present discussion (the existence of quirky subjects in Latin remains an open research question, see Jøhndal (2012: 23-27) for an argument against their presence and Bardhdal, Cattafi & Bruno (2020) for an opposite view), the crucial point being that the dative controller is able to enter into a syntactic relationship with a local functional head (be it the C-T complex in the case of quirky subjects or the v head if the dative remains lower in the verbal phase).

Structures with dative controllers are a rare phenomenon in Latin, verbs selecting a dative object taking regularly a finite complement clause introduced by the complementizer *ut* as the construction equivalent to control infinitival (see Cecchetto & Oniga (2004: 143 n.2) for remarks on this property of Latin); on the other hand, verbs of the “promise”-type (like *promitto*) select for either a direct object NP or an accusative with infinitive structure in the presence of a dative indirect object (hence, not a control structure either). When there is a predicative expression in the control infinitive (*neglegenti* in (15), *incolunibus* in (16)), it bears the dative case, suggesting that case transmission from the controller (*mihi* in (15), *illis* in (16)) took place. No wonder, then, that Latin came to be characterized as a language in which the transmission of case (and concomitantly of $\phi$-features) in control structures is obligatory (see Cecchetto & Oniga (2004), Jøhndal (2012: 95), Landau (2013: 107)).

The picture is complicated by the presence of examples like (17) and (18):

(17)  
\[
\begin{array}{l}
\text{Civi} & \text{Romano} & \text{licet} \\
\text{citizen.DAT.SG} & \text{Roman.MASC.DAT.SG} & \text{be.allowed.IND.PRS.3.SG} \\
\hline
\text{esse} & \text{Gaditanum.} \\
\text{be.IND.PRS} & \text{Gaditanian.MASC.ACC.SG} \\
\end{array}
\]

‘A Roman citizen may become a citizen of Gades.’ (Cic. Balb. 28)

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\[5\] The clause is part of an *oratio obliqua*, the translation has been modified so that it could be clear outside its context.
Case transmission in Classical Latin control structures

(18) vos quiBUS licet iam
you.NOM.PL REL.DAT.PL be.allowed.IND.PRS.3.SG already.ADV

esse fortunatissimos
be.INF.PRS happy.MASC.ACC.PL
‘You now have the chance of the utmost fortune.’ (Caes. BG 6.35.9)

Such structures (attested, to be noted, in the same authors as structures exemplified in (15) and (16)) do not exhibit case transmission, although there is agreement with regard to $\phi$-features between a dative NP in the matrix clause and a predicative element in an infinitival clause. It is to be noted that the lack of case transmission is possible only with dative controllers—nominative and accusative ones transmit their case obligatorily. Relevant properties of such structures may be thus given the following schematic analysis:

(19) ... NP $\langle$Case, $\alpha$,$\phi$, $\beta$ $\rangle$ ... $\Delta$ $\langle$Case, $\gamma$,$\phi$, $\beta$ $\rangle$ ... XP $\langle$Case, $\gamma$,$\phi$, $\beta$ $\rangle$

There are two basic lines along which to approach such structures within a framework which couples operations consisting in establishing a relationship between two or more objects and those involving copying feature values as both syntactic in nature, possibly being only distinct facets of the same syntactic operation. One is to assume that the structure in (13) is the only one available for control structures, hence the pattern in (19) is a schematic representation of a different kind of structure, viz. an accusative and infinitive with $\Delta = pro$ (not PRO) and predicative elements agreeing with the pro subject, which receives the accusative case as every subject of an accusative and infinitive does. This hypothesis is adopted (in passing) in recent research on Latin control structures, see Cecchetto & Oniga (2004: 144 n.2), Jøhndal (2012: 96); let it be noted, incidentally, that it would be probably be the expected way to explain the phenomenon under the movement theory of control of Hornstein (1999) and related work, which dispenses with the notion of a lexical element like PRO entirely, assimilating control structures to raising structures as far as the relationship between the controller and the subject position of the infinitival clause is concerned (though not the only way, since it is possible to introduce chain-splitting mechanisms of the kind contemplated in Lasnik & Uriagereka (2005)).

Although attractive in that it allows maintaining that control structures in Latin uniformly involve both $\phi$-feature and case transmission, the hypothesis posits a difference in complement structures where there is no evidence for such except for case transmission properties. In particular, first, in both (15)-(16) and (17)-(18) the infinitival clause has the same interpretive properties; second, $\Delta$ in (19) is as much obligatorily interpreted as coreferent with the NP controller as PRO in (13) is—in other words, there is no sign of the referential independence characteristic of the subject of an accusative and infinitive structure.

Another way to handle the presence of both (13) and (19) patterns is to follow the lines of the analysis of Icelandic control data in Ussery (2008) and to hypothesize that there is an obligatory direct syntactic Agree relations between the controller and the PRO subject in both cases, thereby accounting for the compulsory nature of agreement with
respect to $\phi$-features in both kinds of structures, but also to assume that there is an optional relation of syntactic Agree involving the controller and the PRO subject, the relationship being mediated by a functional head simultaneously probing both the controller and PRO—an instance of Multiple Agree of Hiraiwa (2001, 2005)—and being responsible for case transmission. This approach has as its virtue that it does not assume structural or lexical differences between the infinitival clauses in (13) and (19), both being control CPs with PRO subjects, as expected given their interpretive and morphological makeup. It is possible, furthermore, to justify the obligatoriness of $\phi$-feature transmission in control structures and the apparent optionality of case transmission. These virtues come at a cost, though: $\phi$-feature dependencies and case-related ones are entirely dissociated; and, unless further provisions are made, it remains unclear why the optionality of case transmission affects only structures with dative controllers, the dependency being obligatorily created when the controller is marked with a structural case.

Both kinds of approach to (13) and (19) have, then, their virtues and drawbacks. An analysis of the phenomenon seems required which would retain the virtues of the alternatives discussed above without incurring problems which they encounter, and thus which would account for (i) the obligatoriness of $\phi$-transmission in both (13) and (19); (ii) the obligatoriness of case transmission when the controller is either nominative or accusative; (iii) the apparent optionality of case transmission when the controller is dative, while (iv) maintaining a syntactically uniform nature of (13) and (19), both belonging to the class of control structures, and (v) allowing for the appearance of both (13) and (19) not only synchronically, but in a single idiolect (witness examples from Cicero and Caesar above). The following discussion presents an alternative to an analysis in terms of the standard syntax-centered variant of the PRO theory: section 2 will develop an account which attempts both to provide a unified account of all Latin control structures and to eliminate from the syntactic component sources of linguistic variation, moving them to the morphological component while retaining elements of the standard, PRO-based theory of control.

2. Control structures and the division of labour between narrow syntax and morphology

2.1. Multiple Agree and Feature Transmission

The principal property of the second of the approaches sketched above worth preserving in developing an alternative analysis seems to be to maintain that both (13) and (19) schematize control structures in Latin, with $\Delta$ in (19) being PRO. The syntactic underpinning that underlies both interpretive properties of control structures and their morphological shape, $\phi$-feature agreement and case transmission in particular, should be then common to both (13) and (19). An analysis utilizing the mechanism of Multiple Agree, understood as an operation which relates a syntactic item (a probe) bearing unvalued features to more than one syntactic objects bearing requisite features simultaneously (see Hiraiwa (2001, 2005), Anagnostopoulou (2005), Nevins (2007, 2011)), seems to be an
appreciate direction. Multiple Agree itself is a mechanism independently postulated to account for various syntactic phenomena, hence not a device introduced *ad hoc*. Instead of restricting its theoretical import to the case transmission phenomenon, however, it might be promising to exploit its potential to account for syntactic relationships in control structures in general; see, in particular, Gallego (2011) for this way of approaching syntactic control (with an extensive comparison of the Multiple Agree theory of control with its main competitors, viz. the movement theory of control and the classic GB theory, is presented), building upon the proposal to analyze binding-theoretic relations in terms of Multiple Agree in Gallego (2010).

Consider first the following schematic representation:

\[(20) \quad [\text{XP} \quad \text{X}_{(F, \varnothing)} \quad \ldots \quad [\text{YP} \quad (F, \alpha) \quad \ldots \quad [\text{ZP} \quad (F, \alpha) \quad \ldots \quad ]]]\]

When a probe X with an unvalued feature F is merged into a syntactic structure (on the assumptions of recent developments of the minimalist framework in Chomsky (2013, 2015b, 2020), X is a phasal head, distinguished by hosting unvalued features) and syntactic operations at the phase level take place, the operation Agree operates under minimal search, establishing a relation between a probe and a goal—a syntactic object hosting a matching valued occurrence of the feature F; in (20), the relationship in question may be established simultaneously with both YP and ZP, being an application of the operation Multiple Agree, which subsequently involves copying of feature values found under minimal search. The pattern seen in (20) may be found in control structures, with X = v in object control and X = C in subject control cases, and YP being the controller NP. As for ZP, it is arguably = PRO, although it does not seem warranted to suppose that it hosts an unvalued occurrence of the $\phi$-feature complex; suppose tentatively that it is radically underspecified. Following the line of research which proposes a close similarity in featural specification between SE-type anaphors and PRO, contemplated briefly for the Latin case in Cecchetto & Oniga (2004: 147) suppose that both classes of objects lack $\phi$-features entirely (see Burzio (1986, 1991) and cp. Raposo & Uriagereka (1996)), bearing merely the categorial specification $[+N]$ (the alternative, which is to take PRO to be specified [Person], as in Gallego (2011), would either incur difficulties with differentiating the underspecified nature of PRO and bearing unvalued [Person] feature or would incur the risk of leading to the idea that PRO bears a 3rd person specification in all configurations, contrary to facts; see also Gallego (2010: 175 n.8) for some comments in the context of binding theory for anaphors). Anticipating partly the discussion in section 2.3 regarding the mechanics of the syntactic operation Agree-Link, let it be already remarked that the following discussion leads into a specific direction with respect to features involved in this operation as well as the mechanism which makes syntactic objects visible and accessible for Agree. The standard view of the operation Agree takes it to rely on the procedure of minimal search for specific features—in the domain of A-relations, $\phi$-features—so as to establish an appropriately local relationship between an unvalued occurrence thereof and a valued one, the search being initiated by the presence of unvalued features (whence the probe-goal metaphor, which captures the initiating role of unvalued features and the direction of the information flow; see however the reserva-
tions in Chomsky (2015a: 81)). Instead of the search for $\phi$-features, we propose that the search in question, initiated by the presence of an unvalued occurrence of $\phi$-features, involves merely the search for the categorial [+N] specification so as to establish a local relationship between the former and an occurrence of the latter. The output of the operation Agree-Link will serve subsequently as the input to the morphological operation Agree-Copy, which, on the basis of the pointer inserted by the operation Agree-Link, accesses the morpheme bearing the [+N] specification and copies its $\phi$-feature specification so as to value the unvalued occurrence of $\phi$-features (constituting a bundle, but valued simultaneously).

Keeping to the syntactic operation Agree in a more standard setting for the time being, it would operate in a structure along the lines of (21) in search for relevant occurrence(s) of features (we represent $\phi$-features as a single attribute-value pair for legibility), leading to a valuation subsequently to establishment of $\phi$-N relationship, if possible (i.e. if items bearing [+N] specification either have specified $\phi$-features or lack them entirely).

(21) \[
[\vdots \text{XP}_{\ldots (\phi, \emptyset)} \cdots \text{YP}_{\ldots N} \cdots \text{CP}_{\text{PRO}}_{\ldots N}]\]

The ultimate output of Multiple Agree with regard to $\phi$-features would be therefore as in (22):

(22) \[
[\vdots \text{XP}_{\ldots (\phi, a)} \cdots \text{YP}_{\ldots N(\phi, a)} \cdots \text{CP}_{\text{PRO}}_{\ldots N(\phi, a)} \cdots ]\]

An account of control phenomena which relies exclusively on syntactic operations should assume that as a reflex of the $\phi$-feature relationship, Case is assigned to both goals in (21) simultaneously, with the X phase head receiving the feature values as determined by the featural makeup of YP (the controller); in the case of subject control, this is the standard relationship between C and the NP subject (before the process of Feature Inheritance, lowering the $\phi$-feature occurrence from C to T, occurs; see already Chomsky (2007, 2008) on Feature Inheritance within the theory of phases), in the case of object control the relationship is established between the phasal head v and the object NP (again before Feature Inheritance takes place). The X-head, be it C or v, on the other hand, would be assumed to act as a mediator in the dependency between the controller and PRO, a process of Feature Transmission, acting parasitically on the Multiple Agree operation, enriching the bare [+N] specification of PRO with the full $\phi$-feature specification provided by the NP controller. The process of Feature Transmission operating along such lines was proposed for a wide range of structures in Kratzer (2009) (where, however, a feature unification mechanism instead of feature copying is adopted, and a local C head is involved in determining properties of PRO; see also Landau (2015) for a theory on which local C heads play a crucial role in establishing relationships relevant for at least a part of control configurations).

There are two issues that an account of Latin control structures along such lines has to face. First, in a framework which exploits the concept of a derivation proceeding by chunks of syntactic structure, thereby accounting for cyclicity effects and restrictions on the application of syntactic operations, it is to be explained why a control CP in (21)
does not constitute a boundary which would make it impenetrable for operations attempting to reach the PRO subject from the outside, while CPs are standardly assumed to be domains for cyclic applications of syntactic operations, with the Phase Impenetrability Condition forbidding later access to the domain of a phasal head: “the cycle is so strict that operations cannot “look into” a phase α below its head H” (Chomsky 2000: 108) (see also Chomsky (2008: 143); note that this is the “strong” version of the Phase Impenetrability Condition, as opposed to the “weak” version of Chomsky (2001, 2004)). One route might possibly lead through weakening the phasal status of control CPs, which might be due to the C-T complex head being created before the structure building operation Merge integrates it into the structure (which would be a phase cancellation effect along the lines of Epstein, Kitahara & Seely (2016)) or T-to-C raising before operations at the phase level begin to take place (which would be a de-phasing effect of “head hiding” along the lines of Blümel and Goto (2019)); yet another possibility might be to reconsider the determination of the phasal status of a syntactic object entirely and employ a convergence-based approach to phases (which in this case might probably lead to the non-phasal status of the CP as a result of the underspecified nature of PRO; see Grano and Lasnik (2018) on neutralization of phasal boundaries in the context of bound pronouns). Another route, one which would not involve tampering with the general properties of the derivational structure building procedure (although prospects for analyses along such lines and their consequences may be worth exploring in themselves), might pertain to the division of labour between syntax and the morphological component.

Before turning to a possible alternative characterization of the operation Agree and processes involving case and ϕ-feature values in section 2.2, let the second issue be also signalled. The empirical coverage of the analysis is so far not sufficient to count as an explanation of the existence of the patterns in (13) and (19), being restricted to those instances of (13) in which the NP controller is assigned a structural case (nominative in subject control and accusative in object control cases). It is in such instances that the operation Agree as standardly conceived, acting upon a structure with properties delineated in (21), is able (i) to have the ϕ-featural specification copied from the NP controller (witness ϕ-feature agreement with nominative subjects), and simultaneously (ii) to assign the relevant Case to both the controller NP and the PRO subject. Dative controllers, given their inability to agree in ϕ-features with the verb, remain unaccounted for, as much as the existence of the pattern in (19) does. After reconsidering the character of the operation Agree and related properties of syntactic objects, it is therefore necessary to widen the coverage of the data in section 2.3.

2.2. Linking in syntax, copying in morphology

The Phase Impenetrability Condition together with the phasal character of the control CP are not compatible with the understanding of the workings of the operation Agree as assumed in the framework of Chomsky (2000) and related work. An operation comprising the minimal search procedure to find relevant features and subsequently changing featural specification of syntactic objects will be sufficiently local as far as the relation-
ship between a phasal head and an NP controller in (21) is concerned, but it would also
have to cross a phase boundary to reach the PRO subject, affecting it subsequently in
endowing it with the $\phi$-feature content provided by the phasal head agreeing with the
controller (a predicative element in the control clause will undergo featural change as
well in virtue of agreeing with the PRO subject, with which it presumably originally
stands in a small clause configuration). The PIC may be understood, however, as a condition
preventing changes in both structure and featural content of an already transferred
domain of a phasal head while allowing establishing an Agree-based relation between
a probe and a goal as long as changes affect exclusively the current phasal cycle—in the
case at hand, any changes should then affect only X in (21) (see e.g. Chomsky, Ott &
Gallego (2019: 241) for this understanding of the PIC). This suggests that a division
of labour between the syntactic part of the operation Agree and the post-syntactic part
thereof may be a suitable solution of the problem of phase impenetrability. The idea that
there is a distinction between a strictly syntactic operation belonging to the realm of
narrow syntax, establishing only a link between probes and their goals, and a post-
syntactic operation which effects copying of relevant feature values, has been explored
in various directions e.g. in Arregi & Nevins (2012), Chung (2012), Marušić, Nevins
Kalin (2020) a.o.

Following the proposal in Atlamaz & Baker (2018), Atlamaz (2019), suppose that the
narrow syntax operation Agree-Link establishes the relation between a probe, bearing
unvalued feature(s), and a goal, bearing relevant features (in the Multiple Agree case,
there are several goals), and—instead of copying feature values—inserts pointers to
syntactic objects bearing requisite valued features. The output of Multiple Agree-Link
applying to the structure in (21) would be then as in (23):

\[
(23) \quad [\text{XP} \ldots \langle(\theta, \omega) \rightarrow \text{YP} \rightarrow \text{PRO}\rangle \ldots \text{[YP} \ldots \text{N} \ldots \text{]} \text{[CP \ PRO} \ldots \text{]]]}
\]

The details of a specific implementation are not as important for the present discussion
as general properties of the operation with the output in (23) are. First, only the probe
(X in (23)) undergoes any changes during the workings of the Agree-Link operation; the
PRO subject, in particular, remains unaffected by the operation belonging to narrow
syntax.

Agree-Link, despite reaching as far as the subject position of an embedded CP phase,
remains therefore compatible with the understanding of the Phase Impenetrability Con-
dition delineated above, viz. as a condition which permits long-distance dependencies
across phases as long as only the probe present in the current cycle is affected by an
operation (obeying, obviously, also such rules as the principle of minimal computation).
Second, the identity of both goals is recorded on the probe—in the specific execution of
this idea in the representation in (23), as an ordered tuple of pointers. A relationship
between YP and PRO is thereby created which, given the featural makeup of both syn-
tactic objects, the defective nature of PRO in particular, is a dependency relation of PRO
on its controller. No further operations need be assumed for the interpretive component
to handle this relationship when the structure is ultimately transferred to the interfaces;
in particular, no operations of feature copying are required for the semantic properties of a control structure to arise as a consequence of (23) being delivered to the conceptual-intentional interface. Third, as a consequence of leaving (Multiple) Agree-Link as the syntactic part of the Agree-complex, operations involving $\phi$-feature values are removed from narrow syntax and assigned a place in the post-syntactic morphological component as much as the operation of case assignment is, following much recent work on the syntax-morphology relationship (as in Bobaljik (2008) and related work, building upon ideas going back to the proposal in Marantz (1992)). In particular, nominal licensing is dissociated from morphological case assignment, the latter being operative at a post-syntactic stage of a derivation. On the picture delineated here, it is the result of m-case assignment that is relevant for patterns schematized in (13) and (19): rather than the abstract Case, a feature present in narrow syntax, being valued during the derivational process in narrow syntax, it is a morphological case value that is assigned (and transmitted) in control structures in a morphological component, in accord with the basic idea of Marantz (1992), Bobaljik (2008), Sigurdsson (2009), a.o.

Once the structure along the lines of (23) is therefore handed over from narrow syntax to the morphological component, there are several operations waiting to be performed on it, including in particular Agree-Copy (the morphological part of the former syntactic operation Agree), which replaces pointers in (23) with the $\phi$-feature set of the controller NP; morphological case assignment, which inserts m-case features into NPs; Feature Transmission, which, modified in an appropriate way, has to follow other operations on $\phi$-features and be transferred to the morphological component; as well as familiar operations like Fusion, Linearization and Vocabulary Insertion (adopting a Distributed Morphology framework as the point of reference; see Embick & Noyer (2007) for an overview).

Operations like Agree-Copy, m-case assignment and Feature Transmission may be reasonably suggested to occur at an early stage of post-syntactic derivation: m-case assignment, in particular, is sensitive to structural properties of the syntactic object transferred to the morphological component, hence it must take place before Linearization and Vocabulary Insertion apply. The operation of Feature Transmission itself, although it may be assumed to apply basically along the lines of Kratzer (2009), may need a reconceptualization which would follow the route of the reconceptualization of the operation Agree, viz. it may be illuminating to take it to involve two components: Feature Transmission-Link and Feature Transmission-Copy, both belonging to the morphological component (in contrast to the pair Agree-Link and Agree-Copy, only the latter of which belongs to morphology). The former establishes the link between syntactic objects taking as its input a pair of objects indicated by the ordered tuple of pointers in (23); in other words, it is the output of Multiple Agree-Link that provides a specification of objects entering into a dependency and subject to the operation of Feature Transmission-Link. It may be observed that there is nothing more to the phase head being a mediator in establishing the relationship in question; in particular, $\phi$-features are not copied onto the PRO subject from X in (23), and the relationship between the controller NP and the PRO subject becomes independent of the Multiple Agree configuration once Feature Transmission-Link enters into play. The other part of the Feature Transmission complex, Feature Transmission-Copy, would on this approach consist in copying both $\phi$-features and m-case
features from the controller NP to the PRO subject insofar as possible; in other words, the operation would result in transmitting as much of the relevant featural specification as possible (note that in the control case, the copying operation involves not merely feature value copying, but rather copying of the entire attribute-value specification). The operation Feature Transmission, operating on the basis of the relationships established by the operation Agree, may be hypothesized to take the output of the operation Agree-Link as its input.

The Feature Transmission-Link operation, in particular, takes the output of Agree-Link and prepares it for an actual “transmission” of features in that it provides a link between an output of the search for specific features located at both syntactic objects (the controller and PRO in the case at hand). Suppose that Agree-Link has provided as its output an ordered triple $\langle X_{\{\phi,\alpha\}\rightarrow\gamma P, PRO}\rangle, \langle Y_{\gamma P, PRO}\rangle \rangle$. The operation Agree-Copy proceeds then to unifying the content of the $\phi$-bearing morphemes at both goals with the morpheme bearing unvalued $\phi$-features of the probe via copying. Feature Transmission-Link, on the other hand, will perform a search procedure over both objects, searching for $\phi$-feature and case bundles so as to locate their occurrences; in the most straightforward case, it will then give as its output an ordered pair $\langle Y_{\{\phi,\alpha, CASE, \beta\}}, PRO\rangle$, followed by Feature Transmission-Copy copying relevant feature bundles. As the operations of feature transmission involve more steps, including a search over both $\gamma P$ and PRO, their scope extends beyond the domain accessible for the Agree-Copy operation, reaching possibly deeper into their structure. Accessibility of syntactic objects for the operation Agree requires further comments. The Activity Condition of Chomsky (2000: 123, 127), Chomsky (2001: 6) requires that the goal of an Agree search procedure be active in virtue of bearing an uninterpretable (unvalued) feature, which in the domain of A-relationships is effected by NP bearing an unvalued occurrence of the Case feature. The Activity Condition itself has been subject to criticism and dispensed with in various analyses, for both conceptual and empirical reasons (see in particular Nevins (2005), Bošković (2007), Bobaljik (2008), Preminger (2014), a.o.). The current setting does not allow adoption of the Activity Condition as a principle regulating availability of syntactic objects for Agree already for the reason that case is proposed to be considered a morphological phenomenon and no place for an abstract Case feature is provided; furthermore, the operation Agree-Link also operates in a manner different than the standard Agree operation. On the other hand, the condition as such provides a plausible way to account for unavailability of Multiple Agree involving objects which have already entered into an Agree relationship. Given that case is assumed here to be a purely morphological phenomenon, and that Agree-Link works in the domain of A-relationships so as to link an unvalued occurrence of $\phi$-features and an occurrence of a $[+N]$ categorial feature, let us suppose that a version of the Activity Condition consistent with the present assumptions should state that an object remains accessible for the operation Agree until a pointer linking to its occurrence has been inserted by the operation Agree-Link to valuate a non-defective bundle of $\phi$-features. In other words, entering into the Agree-based relationship puts an end to the visibility for further application of Agree provided that the $\phi$-features of the goals are used all at once. It is a corollary of such web of assumptions that, since PRO in control structures, although apparently entering into an Agree-based relationship with-
in the embedded clause with its C-based set of $\phi$-features (inherited by T), remains active and visible for Multiple Agree reaching it from the matrix clause, the embedded C as the probe is defective, i.e. not endowed with a full set of $\phi$-features, which is also consistent with the surface shape of infinitives in control structures.

The phase as such may be assumed to remain strong, i.e. constituting a boundary for displacement, with the head C triggering Transfer (see Gallego (2009) for further discussion compatible with present assumptions). Case, being a morphological phenomenon, is dissociated from Agree—it is no longer a reflex of the Agree operation, as it is on the standard picture of the relationship between $\phi$-agreement and Case, and its assignment to PRO becomes a matter of morphological operations parasitic on relations established during syntactic derivation.

The relative ordering of the operations would begin with Agree-Link, taking place in the syntax proper; given that it is with a specified case value that the controller in (23) enters the process of Feature Transmission and the case value is preserved during the process, the operation Feature Transmission-Link may be hypothesized to take place early in the morphological component, before case assignment takes place and before Agree-Copy enters the stage, since the latter operation replaces pointers in (23) with the $\phi$-features, obliterating thereby the information about addresses at which objects entering Feature Transmission are to be found, giving the order as in (24):

(24) \text{Agree-Link} < \text{Feature Transmission-Link} < \text{case assignment} < \text{Agree-Copy}

It is the place of Feature Transmission-Copy among the operations in (24) that remains to be determined. Insofar as the scenario in (13) with regard to controllers bearing a structural case (nominative or accusative) is concerned, the ultimate shape given to the structure by the morphological component is compatible with Feature Transmission-Copy either being a part of the stage at which case assignment operates or being applied after case assignment:

(25) \text{Agree-Link} < \text{Feature Transmission-Link} < \text{case assignment} ⇐ \text{Feature Transmission-Copy} < \text{Agree-Copy}

(26) \text{Agree-Link} < \text{Feature Transmission-Link} < \text{case assignment} < \text{Feature Transmission-Copy} < \text{Agree-Copy}

On both (25) and (26), an NP controller receives its structural case, which undergoes transmission together with the $\phi$-feature set, resulting in obligatory case transmission attested for structural cases in (13); the place of Feature Transmission-Copy is therefore underdetermined by such data and solely on their basis may be settled one way or another. The behaviour of dative controllers, on the other hand, may reflect the difference between (25) and (26).
2.3. Dative controllers and their structure

The properties of NPs bearing accusative or nominative case differ in Latin from the properties of NPs marked with dative, genitive or ablative in a crosslinguistically familiar way; in particular, the latter group does not participate in overt $\phi$-agreement with the verb and does not undergo shift to nominative subjects with finite verbs or accusative subjects in the accusative and infinitive structure under passivization. On a decompositional approach to the Latin case system which takes morphological cases to be exponents of complexes of underlying feature values, as e.g. in Halle & Vaux (1998), the two groups differ in the value of a feature $[\pm$oblique], the group to which dative case marked nominals belong being marked as $[+$oblique]. The assignment of such feature value, as an assignment of a property which is present and interpretable only in the morphological component, may be assumed to track morphosyntactic properties of a nominal; Halle & Vaux (1998) tentatively assume that a $[+$oblique] feature value is assigned to nominals which are not arguments of the verb. Another route with regard to the $[+$oblique] feature to take would be to assume that its presence reflects a difference in syntactic structure between nominals belonging to the two groups; in particular, nominals assigned the $[+$oblique] specification might receive this feature value in the morphological component in virtue of being structurally richer than nominals assigned $[-$oblique] (alternatively, if it turns fruitful to analyze this feature as a privative one, the difference would be between nominals bearing a feature $[oblique]$ and those lacking it).

The hypothesis that (at least a subset of) nominal phrases which ultimately bear one of morphological cases realizing a feature bundle containing a $[+$oblique] specification have a structural layer above the NP proper may be traced back to ideas which have a long pedigree in the generative tradition, details varying to a considerable degree. A major strand in thinking about such structures develops the idea that oblique cases instantiate a complex prepositional structure, with a prepositional shell above the NP proper hosting a null preposition, as proposed already in Emonds (1985) (who posits a null prepositional element *inter alia* in Latin datives) and applied in various ways to double object structures, bare NP adverbials, relative clauses, properties of (a subset of) experiencers (see e.g. Kayne (1984), Pesetsky (1995), Dikken (1995), Baker (1997), Landau (2010), a.o.; see also Pesetsky (2013) for an analysis of the Russian case system on which obliques have attached an affix of the category $P$). Another kind of approach to the analysis of oblique nominal phrases and their properties stems from an exploration of the CP—DP parallelism and the omissibility of case markings in syntactic contexts analogous to the phenomenon of complementizer omissibility, developed in Lamontagne & Travis (1986, 1987), Travis & Lamontagne (1992). On this approach, (a subset of) case-marked nominal phrases instantiate a Kase Phrase, consisting of a functional category $K$ selecting a nominal phrase (in accordance with the DP hypothesis taken to be a DP). Although originally intended to account for the availability of “Case-drop” under adjacency with a verb in languages like Japanese, it was posited in Bittner & Hale (1996) for “marked cases” (accusative, ergative, and oblique in their proposal) in general, the “unmarked case” (nominative) being supposed to involve a bare DP, deprived of Case
as far as syntactic properties are concerned. The basic idea has been therefore pursued in various directions and implemented in various ways; if applied to the [+oblique] vs. [–oblique] distinction introduced above, the hypothesis might in the simplest case invoke a difference in structure consisting in the presence or absence of a lexical item above the common core of the NP structure, endowed with a specification as [+N]—in more traditional wording, a nominal projection with a minimal featural specification, which may be labelled “KP” (thus following the analysis of the German case system in Bayer, Bader & Meng (2001), but also the spirit—although not the letter—of the analysis of the structural–oblique distinction in McFadden (2014, 2018)). On this view, the presence of a [+N] head, otherwise devoid of featural specification, is required by the morphological component at the case assignment stage in either (25) or (26) for a nominal phrase to be able to receive and carry the [+oblique] specification.

An analysis of oblique cases along such lines has several consequences which may be only briefly mentioned here as far as they are of direct importance for the present discussion. The (syntactic) operation Agree-Link cannot be understood as involving a minimal search procedure for valued counterparts of unvalued features of a probe: whereas the probe will still carry unvalued φ-features in our case, obliquely case-marked goals will be merely specified as [+N] in the syntax proper, with φ-features hidden below the K-layer (in contrast to nominative or accusative goals, which will carry both [+N] feature specification as well as the φ-feature set at the topmost layer of their structure). Following Atlamaz & Baker (2018), it may be therefore necessary to reformulate Agree-Link as involving a minimal search procedure for a [+N] goal, i.e. for a potential source of feature values (see Atlamaz & Baker (2018: 210-211)). Notice, incidentally, that if dative controllers are analyzed as quirky subject KPs, their structural complexity may account for the lack of morphological φ-agreement with the verb. The assumption that structural complexity of syntactic objects which have an NP structure prevents them from participating in an overtly realized agreement relationship is common to hypotheses which posit such an additional layer for a subset of nominal phrases: the presence of an additional layer which does not include the set of φ-features, be it as a silent prepositional element or as a K-head, provides on such assumption an explanation of the behaviour of nominal phrases with such structure. The presence of an additional projection (as the traditional parlance would have it) accounts for the unavailability of the embedded nominal phrase for mechanisms like specifier–head agreement (or its various counterparts).

Once agreement phenomena are hypothesized to result from processes taking place in two distinct components, viz. in narrow syntax and in the morphological component, it becomes necessary to distinguish the syntactic part and the morphological parts thereof. On the analysis adopted above, Agree-Link will establish a link with a nominative/accusative subject as much as with a dative one; but if one follows Atlamaz & Baker (2018: 209) in assuming that only the outermost layer of a phrase is available for Agree-Copy to operate with, a dative nominal will not be a possible source of φ-feature values for the verb until the process of Fusion combines the K and n/N layers. Given that dative noun phrases never agree with verbal heads in Latin, it may be tentatively proposed that the ordering of relevant operations in the morphological component is as in (27):
Recall that the postulated mechanism of feature transmission involves search over objects linked by the Feature Transmission-Link operation, which is therefore able to access features hidden from the view of Agree-Copy by the presence of additional structure. This property of the feature transmission mechanism may be hypothesized to be responsible for availability of $\phi$-features of a KP, i.e. a nominal with the layer K, for feature transmission: the search over KP will not stop at the K layer, as it has done for the purpose of the syntactic operation Agree-Link, but locates both the categorial [+N] specification at K and the bundle of $\phi$-features at the n head below.

It may be also observed that a reformulation of the syntactic part of the Agree operation (Agree-Link) as involving, in the case of $\phi$-agreement, unvalued $\phi$-features on the probe and nominal features on the goal makes it necessary to revisit the details of the labeling procedure. The basic cases thereof as analyzed in Chomsky (2013, 2015b) include, first, a complex object of the type \{H, \{XP\}\}, wherein the labeling procedure identifies H as providing the label of the complex object; second, an object of the type \{XP, YP\} in which the minimal search procedure attempts to find “shared prominent features”—a feature hosted by both X and by Y, with an unvalued occurrence at one of lexical items linked to a valued occurrence at the other by the syntactic operation Agree. With regard to $\phi$-features, the latter operation is initiated by a phase head, C or v, bearing unvalued $\phi$-features and searching for the closest goal bearing their valued counterparts in its domain, with Feature Inheritance operating subsequently so as to transfer $\phi$-features to the head of the phase complement (i.e. T or Root, respectively; see Epstein, Obata & Seely (2017) and Chomsky (2020)). With all reconceptualizations sketched above, the “shared prominent features” option would be probably replaced with labeling by pairs of unvalued features and potential sources of feature values, so as to cover both \{NP, YP\} and \{KP, YP\} cases.

The consequences of the analysis of [+oblique] noun phrases as involving a KP layer for an account of the patterns in (13) and (19) may be assumed to follow from an interaction of the structural properties of dative controllers and the orderings of morphological operations in (25) and (26). In particular, whereas nominative and accusative controllers may freely transmit both their $\phi$-feature specification and case (case feature bundles under a decompositional analysis of morphological case) to the PRO subject on the ordering in (25), it is impossible for a dative controller to transmit its case to the controller—the PRO subject lacks the structural complexity required for a nominal to receive and carry the [+oblique] specification. On the ordering in (25) only $\phi$-features undergo Feature Transmission-Copy, whereas PRO has to be case licensed in its Spec-TP position, due to the fact that strong phase is (in Latin at least) the domain to which case licensing due to syntactic Agree is restricted, whence even under Multiple Agree with a matrix $\phi$-probe the latter cannot determine the morphological case of the element embedded within a CP (as it is the case not only with control, but also with accusative and infinitive structures). On the assumptions about the relationship between PRO and $\phi$-defective C/T made in section 2.2, PRO enters into an Agree-Link relationship with
unvalued $\phi$-features of C, crucially defective, so that PRO remains active under our understanding of the Activity Condition. The morphological case assignment to PRO in cases without feature transmission, while dissociated from the syntactic relationship, may be hypothesized to be partly parasitic on the latter.

With regard to accusative case assignment it has been proposed that there are two distinct flavours of nonfinite T heads: one without case assigning capabilities and one which licenses accusative (see Lasnik (2019) for this proposal within the syntax-centered framework of Case and Agree); we propose instead that $\phi$-defective T in Latin is capable to license accusative case assignment to a head of an A-chain in case there is no other source of case for the latter, as a semi-default case, as it were. Thus, in structures with case transmission there would be no case assignment to this position, since case would be established on another basis; yet in cases like (18) there is apparently no possibility to transmit the dative case, hence the mechanism of default case under restricted conditions may apply. It might be speculated that the mechanism in question finds its counterpart in the assignment of the nominative case in Icelandic control structures (although the debate on the source of case in these cases remains open; see already Andrews (1990: 226), Hornstein (1990: 220) for the view that PRO in Icelandic gets nominative as the default case). The ordering in (25) thus gives rise to the pattern in (19) with regard to dative controllers and to the pattern in (13) with respect to nominative or accusative ones. On the other hand, when the operation Feature Transmission-Copy operates when case assignment is no longer at work, as in (26), both groups of controllers may transmit their case feature bundles, restrictions operative during case assignment being no longer relevant. The order in (26) gives therefore rise to the pattern in (13) with respect to case transmission for both nominative-accusative controllers and for dative ones.

The behaviour of predicative adjectives in (11), (12), (14), (15), (16), (17) and (18) follows from properties of the structure so established on the assumption that they begin their derivational life together with PRO in a small clause structure $\left[_{\text{SC}} \text{PRO, AP}\right]$, from which raising of the PRO subject is required to occur for labeling reasons (as discussed in Chomsky (2013: 43-44)). As a matter of Latin morphological requirements, adjectives need a case and $\phi$-specification to be successfully targeted by Vocabulary Insertion rules. Although in cases in which case transmission occurs it seems in principle possible to implement case and $\phi$-properties transmission to adjectival predicates in terms of Multiple Agree and subsequent morphological operations, there are reasons to have it established solely in the morphological component. First, a Multiple Agree account could not extend to cases without case transmission, in which both case and $\phi$-feature specification depends solely on the featural content of PRO, which would run counter a unified syntactic analysis of all control structures. Second, the behaviour of predicative adjectives is apparently purely externalization-related, without consequences either for their syntactic behaviour or for interpretive purposes, hence most plausibly understood as a shallow morphological phenomenon (although see Wurmbrand (2017), Anagnostopoulou (2017) for the view that predicative adjectives come with unvalued features and require therefore Agree to be valued). Let it be hypothesized that Latin adjectives have their case and $\phi$-features copied from the closest occurrence of their subject which is endowed with a full case and $\phi$-specification as a result of strictly morphological operation parasitic on
the predication structure of a small clause. Their surface shape in (11), (12), (14), (15), (16), (17) and (18) then follows; note that the assumption that such morphological operation is at work in the case of predicative adjectives is justified independently of the analysis of control structures, since Latin adjectives behave in this way across all structures—there is neither a special predicative case available in Latin, nor is there any possibility to leave an adjective uninflected.

The analysis delineated above requires therefore that both (25) and (26) be allowed in the grammar, constituting a part of the morphological component. A change in the relative ordering of morphological operations results in the case at hand in variation with regard to a small corner only of morphological properties of Latin, apparent optionality in case transmission with regard to dative controllers reflecting the difference between (25) and (26). Recalling the postulates for an analysis of Latin data formulated in section 1.2, the obligatoriness of \( \phi \)-transmission in both (13) and (19) is accounted for under the present proposal: subject to Feature Transmission-Copy, \( \phi \)-features of the controller NP can be transmitted on both scenarios in (25) and (26). The obligatoriness of case transmission when the controller is either nominative or accusative also follows in both cases, there being no difference in this regard under either ordering of morphological operations. The apparent optionality of case transmission when the controller is dative, on the other hand, is explained as a result of the difference between (25) and (26) with respect to the place of the operation Feature Transmission-Copy, its relationship to the stage of case assignment in particular.

The analysis above may be compared with the analysis of case transmission effects in Landau (2008) (who takes Latin to be a uniformly case-transmitting language, apparently tacitly adopting the stance of Cecchetto & Oniga (2004), who take structures without case transmission to involve an accusative and infinitive rather than control; see also Landau (2013: 103-108)): on this theory, availability of case transmission depends on the featural specification of the complementizer, which in case transmission structures is not specified for Case, whereas clitic-like properties of C determine the exact pattern of case transmission (C having the ability to cliticize to a higher verbal head). Taking complementizers to cliticize on verbal heads has been postulated otherwise for an analysis of infinitival structures (see Bošković & Lasnik (2003) for a classic analysis along such lines), but the disadvantage of this approach to Latin structures under discussion seems to be that it ties the apparent optionality to hypothesized differences in the featural specification of the complementizer while divorcing the pattern of case transmission from otherwise empirically attested properties of the specific case which is involved in the non-transmission case: datives never agree with verbal heads nor do they undergo change to nominatives under passivization (note that the Ancient Greek pattern is much more free in this respect, as discussed in Sevdali (2013), which may be connected to differences in properties of the case system, on which see Anagnostopoulou and Sevdali (2015, 2020)). It is on this cluster of properties of Latin datives that the current proposal capitalizes.

The proposed analysis maintains a syntactically uniform nature of (13) and (19), with both belonging to the class of control structures, in contrast to an analysis which assumes a syntactic difference between (13) as a control structure and (19) as an accusative and
infinitive one. Finally, the fact that the analysis concerns ordering of morphological operations without affecting workings of narrow syntax squares well with the minimalist assumptions about the nature of linguistic variation as being due to externalization-related properties of language. Given that the behaviour of nominative and accusative controller NPs leaves the relative ordering of the stage of case assignment and the operation Feature Transmission-Copy underdetermined, the oscillation between (25) and (26) arises, a phenomenon attested even for single idiolects.

3. Concluding remarks

The adoption of the hypothesis that both case and \( \phi \)-feature related copying operations take place in a postsyntactic component of the grammar makes it possible to capture properties of Latin control structures with regard to case and agreement. The obligatoriness \( \phi \)-feature agreement between the controller and the controllee and the apparent optionality of oblique case transmission are explained without postulating syntactic differences between structures with case transmission and those in which it does not take place. An orthodox strictly syntax-based account posits in such cases two distinct syntactic structures involving distinct lexical items (viz. a control structure with a \( \text{PRO} \) subject on the one hand and an infinitival clause of the accusative and infinitive type with a \( \text{pro} \) subject on the other). It is thus unable to explain the obligatoriness of the interpretive dependency between the NP in the matrix and the covert subject in the infinitival structure in both cases and it disregards the absence of expected differences in interpretive terms between the two types of structures.

An alternative account which keeps some features of the standard theory—in particular, the presence of \( \text{PRO} \) in control structures—but assigns both case assignment and \( \phi \)-feature copying processes cleans the syntactic part of the derivation from operations which may be supposed to belong to the morphological component and to underly the surface variety observed in Latin control. Simultaneously, it allows to provide a unified analysis of the whole class of control structures. The phenomena discussed above are susceptible to an account which distinguishes between an application of \( \text{Agree-Copy} \) with concomitant \( \text{Feature Transmission} \) between the controller and the controllee at the stage of postsyntactic morphological processing at which case-related features are assigned, hence constraints on their assignment, including structural ones, are operative, and an application of the copying operation after the stage of case assignment, but before operations like \( \text{Fusion} \) apply. In the former case, only the transmission of \( \phi \)-features takes place if a dative controller is present, \([+\text{oblique}]\) case feature requiring that there be a nominal shell above the NP, whence \( \text{PRO} \) receives its case features in the embedded clause; in the latter case, transmitting the complex of case features together with \( \phi \)-features becomes possible and thus takes place on the assumption that a process occurs whenever it can. In neither case is it possible, on the other hand, to copy \( \phi \)-features of a dative subject NP so as to obtain agreement with the T head due to their being hidden below the KP-shell at these stages. The default agreement exhibited by the matrix verb indicates therefore that both options are realized before the operation of \( \text{Fusion} \) enters the stage.
An account relying on an interaction and ordering of morphological operations occurring after the syntactic derivation proper opens a way to attribute the same syntactic analysis to both structures with and without oblique case transmission, capturing their interpretive behaviour and avoiding positing a syntactic distinction for a rarely occurring phenomenon. This line of analysis conforms with the hypothesis that linguistic variation—in this particular case, variation occurring synchronically, in some cases within the confines of a single idiolect (Cicero’s Latin, for example)—is restricted to belong to the mapping from narrow syntax to representation(s) that are accessed by sensorimotor systems (EXT), as discussed in Berwick & Chomsky (2011, 2016) (see also Chomsky, Ott & Gallego (2019) for a recent discussion). It may be hypothesized that further investigation of similar phenomena, open to explanations in terms of purely externalization-related small-scale differences in the setup of the morphological component, will pave the way to fine-grained charting of the territory partly explored with regard to the ordering of such operations like the $\phi$-feature copying procedure, Fusion, linearization and Vocabulary Insertion in much recent work (see e.g. Bhatt & Walkow (2013), Arregi & Nevins (2012), Atlamaz & Baker (2018), Willer Gold et al. (2018), Kalin (2020), a.o.).

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