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A Distinctness account of the distribution of relativizers in English and Romance

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Abstract:

This paper attempts to develop a unifying analysis of the distribution of relativizers in English and Romance by building on Richards' (2010) "Distinctness Condition". The distribution is argued to be best analyzed under the Strong Minimalist Thesis (SMT) as a constraint holding at the Sensory-Motor (SM) interface against the multiple realizations of occurrences of the same feature. However, Richards's account faces some empirical difficulties, which I attempt to resolve by adopting a different set of assumptions than Richards'. I assume that the locality domain relevant for the computation of Distinctness, EXT, includes the whole phase (Bošković 2016), rather than only its complement, as in standard Phase Theory (e.g., Chomsky 2001). Moreover, building on Richards (2010), I argue that Distinctness in Romance (and in English, to some extent) is sensitive to φ-features alongside categorial labels. I further extend the analysis to cover the distribution of "complementizers" under their treatment as DPs (e.g., Manzini and Savoia 2003; Kayne 2014). The observed intra- and cross-linguistic distribution of relativizers is thus captured at SM, upholding SMT.

Keywords: *English, Externalization, Morphosyntax, Relativizers, Romance*

1. Introduction

Under the Strong Minimalist Thesis, Merge applies freely in Narrow Syntax (NS) (Chomsky *et al.* 2019). Whether the output of Merge is ultimately licensed is established at the Conceptual-Intentional (CI) and Sensory-Motor (SM) interfaces. From this perspective, we can understand the distribution of a particular set of elements by placing its licensing conditions outside of NS.

Questions abound about the mapping from NS to the interfaces (TRANSFER). Focusing on the morphophonological component (i.e., EXT, PHON, and SM),[1] questions arise as to the

[1] I adopt the terminology of Chomsky *et al.* (2019). EXT(ernalization) characterizes the Spell-Out operation of earlier models, namely, mapping

nature of the operations applying in each (sub-)module and the representations that they bleed and/or feed (e.g., Halle and Marantz 1993, Manzini and Savoia 2011, 2018). For instance, it is unclear what the domain of EXT is, i.e, whether the structure handed over from NS includes the specifier of the phase head (e.g., Bošković 2016) or only the complement (e.g., Chomsky 2001). It also remains a matter of dispute how to formalize the relevant locality domains for morphophonological operations, i.e., whether such operations strictly adhere to the syntactic cycle (e.g., Fox and Pesetsky 2005), or whether they rather apply to global representations (e.g., Cheng and Downing 2016). More generally, there is a lack of consensus on the formal implementation of the licensing conditions of syntactic objects.

Against this backdrop, the present contribution analyzes the distribution of Romance and English relativizers in order to shed light on issues of externalization. The study of the distribution of relativizers is relevant in this regard as it requires a precise characterization of the interaction between NS and SM as well as a formalization of the licensing conditions that apply after TRANSFER. More concretely, this paper seeks to develop a formal account of the sort of contrasts in (1)-(2) and of the source of variation between English and Romance (see Section 2 for further empirical details; cf. Cinque 1978, 1982).

(1) a. The woman (who)/(that) John married
b. The woman (whom)/(that) John danced with

(2) a. The woman (*who)/(*that) to marry
b. The woman (*who)/(*that) to dance with (cf. The woman with whom to dance)

While contrasts like those in (1)-(2) and their Romance analogues were amply debated during the Government and Binding era (e.g., Chomsky and Lasnik 1977, Cinque 1978, 1982), there still lacks a comprehensive analysis of the distributions of relativizers from a minimalist standpoint. The assumption that Merge operates freely raises the issue why an object either may appear overtly in some particular domain or must be completely ruled out in others. This is the situation found, for instance, in the distribution of relativizers in English Infinitival Relatives (IRs) (cf. (3)-(4)). (3a) represents the object generated by NS via free iteration of Merge (irrelevant details omitted). The DP at the clausal edge should be expected to be at least marginally available in the externalized content, contrary to what we observe (cf. (3b)). On the other hand, the same DP (*mutatis mutandis*) is allowed to occur under pied-piping (4b), and only under pied-piping (cf. the unavailability of P-stranding in (2b)).

(3) a. $[_{NP}\, N\, [_{CP}\, [DP]_k\, C\, [_{TP}\, [T_{-inf}[\, \ldots\, <DP>_k]]]]$
b. man (*who) to see

(4) a. $[_{NP}\, N\, [_{CP}\, [_{PP}\, P\, [DP]]_k\, C\, [_{TP}\, [T_{-inf}\, [\, \ldots\, <[_{PP}\, P\, [DP]]>_k\,]]]]$
b. man with whom to play

As argued in Pesetsky (1998), Bianchi (1999: 158f.), contrasts of this sort are difficult to relate to a notion of (semantic) "recoverability" (e.g., Chomsky 1980 and references therein).[2]

(TRANSFER) of the structure generated by NS to the phonological representation, PHON (the latter accessed by SM).

[2] The notion of recoverability has as well-known never been formulated properly. The relevant literature (e.g., Chomsky 1980 and references cited therein) seems to imply recoverability of semantic content. A problem with this

In fact, it is unclear why CI should be involved at all in governing the overt realization of DPs in relative clauses (RCs).

In this paper, I follow Richards (2010) in assuming that the type of distribution in (1)-(2) relates to a notion of Distinctness (cf. Section 3.2) or morphosyntactic haplology (cf. Nevins 2012). The underlying intuition that I share with Richards (2010) is that the distribution of relativizers is conditioned by whether certain morphosyntactic features are found in too local a relation at EXT. However, I argue for a modification of Richards' proposal which crucially adopts Bošković's (2016) formulation of EXT as containing the edge of the phase as well as its complement. I moreover attempt to extend the analysis to cover the distribution of so-called "complementizers" under their treatment as D(P)s (e.g., Manzini and Savoia 2003, Kayne 2014; cf. Rugna 2022), as it offers potential for unification over the distribution of all relativizers.[3]

The present paper is structured as follows. Section 2 describes the distribution of relativizers in Romance and English and formulates the generalizations to be captured. Section 3 discusses some recent minimalist analyses of the phenomenon (Gallego 2007, Richards 2010) and argues that they face empirical problems. Section 4 aims at deriving the relevant generalizations by modifying Richards' (2010) analysis. Section 5 concludes the discussion.

2. The distribution of relativizers in English and Romance

This section describes the distribution of relativizers in English and Romance and formulates the generalizations to be captured by any formal analysis. To keep the description as theory-neutral as possible, I use the term "relativizer" to refer to both so-called "relative pronouns" (traditionally treated as DPs) and "complementizers" alike.[4]

I take relativizers to be either inflected for φ-features (e.g., Romance Det + *qual/cual* inflects for gender and number, Sp. *quien* / Fr. *qui* / En. *who* inflects for animacy), or not (e.g. Romance *che/que*, En. *that*), or they might be zero (Ø) (in English). Relativizers may be realized as bare (i.e., with no accompanying element), or they may be embedded within larger phrases (such as under PP/KP pied-piping).

As shown in (1)-(2) (repeated below as (5)-(6)), bare relativizers are optional in English Restrictive Tensed Relatives (RTRs),[5] while they are barred in IRs unless they are embedded within a larger constituent (notice the pied-piping requirement in (6b)). Note that the distribution of bare relativizers in English RTRs and IRs does not make a distinction between inflected (*who(m)*/*which*) and non-inflected (*that*) relativizers.

notion in the distribution of relativizers was noted in Pesetsky (1998) and pertains to the ungrammaticality of cases like **A man whose daughter to marry*, where the *wh*-DP should be expected under a "recoverability" account to undergo externalization given its semantic contribution (and hence irrecoverability; cf. Bianchi 1999: 158f., Landau 2006).

[3] The standard hypothesis for non-inflected relativizers as Cs (e.g., Kayne 1976, Cinque 1987) could account for at least some of the distribution of such relativizers. Since it does not strictly matter for the purposes of this paper, I defer to a future occasion a full-fledged discussion of how the C- and D-hypotheses compare when faced with the analysis of the distribution of (non-)inflected relativizers.

[4] *che/que* is therefore glossed as 'what'.

[5] I put aside here the so-called anti-that-trace effects under subject relativization, namely the ban against Ø-relativization in cases like (i). See Douglas (2017) for recent discussion.

(i) The man *(who/that) did it

(5) a. The woman (who)/(that) John married
b. The woman (whom)/(that) John danced with

(6) a. The woman (*who)/(*that) to marry
b. The woman (*who)/(*that) to dance with (cf. The woman with whom to dance)

In Romance, on the other hand, only the non-inflected relativizer *che*/*que* can appear bare at the edge of RTRs (cf. (7a)-(8a)). Relativizers inflected for φ-features must be embedded within larger phrases (cf. (7b)-(8b), and cannot occur bare at the edge of RTRs.[6]

(7) a. La donna (*la quale) /*(che) Gianni ha sposato
The woman Det.fem.sg. which-sg / what G. has married
'The woman who Gianni married'
b. La donna con la quale Gianni ballava
The woman with Det.fem.sg. which-sg G. danced
'The woman Gianni danced with' (Italian)

(8) a. *La mujer* (**la cual*) /(**quien*) /*(*que*) *Juan* *vio*
The woman Det.fem.sg. which-sg /who /what J. saw
'The woman who Juan saw'
b. *La mujer* *con* *la* *cual* */ quien* *Juan* *bailaba*
The woman with Det which / who J. danced
'The woman Juan danced with' (Spanish)

With respect to IRs, Italian and French pattern with English in barring bare relativizers (cf. (9ab); but see fn. 6), while Spanish seems to allow the use of the non-inflected relativizer *que* (cf. (9c), adapted from Táboas 1995: ex. (2)). As in English, inflected relativizers are grammatical under pied-piping in Romance IRs, illustrated with Italian in (10).

(9) a. *Cerco un libro* (**il quale*) / *(*che)* /*da leggere* (Italian)
b. *Je cherche un livre* (**lequel*) / *(*que)* /*à lire* (French)
c. *Busco un libro* (**el cual*) / *que* /*para leer* (Spanish)
look-for.1sg.PRES a book Det + which /what /to read
'I'm looking for a book to read'

(10) *Una* *ragazza* *con* *la quale* *ballare*
A girl with the which dance-INF
'A girl with whom to dance'

[6] Certain formal registers (at least in Italian and French) allow the use of the complex relativizer Det + *which* at the edge of TRs and IRs), as in (i)-(ii) (Cinque 1982: 282):

(i) I cittadini i quali abbiano riscontrato problemi…
'The citizens who might have had problems…'
(ii) ?Cercavo una ragazza la quale poter invitare alla cerimonia di inaugurazione
'I was looking for a girl to be able to invite to the inauguration ceremony'

The distribution of relativizers in Appositive Tensed Relatives (ATRs) follows a different pattern in both English (11) and Romance (12). In particular, English bars Ø-relativization and the use of the non-inflected relativizer *that*, while Romance removes the restriction on φ-inflected bare relativizers, which can be used alongside the non-inflected relativizer (though the two types of relativizers do not seem to be in free distribution in all cases; see Cinque 2008). Pied-piping remains available (13).

(11) The man, *(who) / (*that) John saw…

(12) a. *La donna, la quale / che Gianni ha sposato…*
The woman Det.fem.sg. which-sg / what G. has married
'The woman, who Gianni married…'

b. *La mujer, la cual/ quien / que Juan vio…*
The woman Det.fem.sg. which-sg / who / what J. saw
'The woman, who Juan saw…'

(13) La ragazza, con la quale Gianni ha parlato…
The girl, with the which G. has spoken
'The girl, with whom John spoke…"

The relevant descriptive generalizations can then be summarized as follows.

(14) *Generalizations on the distribution of relativizers in Romance:*
a. Relativizers inflected for φ-features are barred from occurring bare at the edge of RTRs (in the relevant registers). The non-inflected relativizer must be used in these cases.
b. All relativizers may occur in ATRs (whether bare or embedded within larger phrases).
c. All relativizers are barred from occurring bare in IRs (with the exception of Spanish *que*).
d. Relativizers inflected for φ-features may occur under pied-piping in TRTs, ATRs, and IRs.

(15) *Generalizations on the distribution of relativizers in English:*
a. All relativizers may appear overtly at the edge of RTRs. Ø-relativization is available.
b. Only φ-inflected relativizers may occur in ATRs.
c. All relativizers are barred from occurring bare in IRs.
d. Relativizers inflected for φ-features may occur under pied-piping in TRTs, ATRs, and IRs.

As can be noted, Romance and English share generalizations c and d (abstracting away from Sp. *que*). Where Romance and English differ is in the distribution of relativizers in RTRs and ATRs. This distribution raises several questions. In this paper, I attempt to address the following:

(A) Why does Romance, but not English, bar φ-inflected relativizers from occurring at the edge of RTRs (with the exception of the relevant registers; cf. fn. 6)?
(B) Why is the ban lifted in Romance ATRs?
(C) Why are φ-inflected relativizers the only option in English ATRs, but not in Romance?
(D) Why are bare relativizers barred in IRs in both English and Romance (with the exception of Spanish *que* and the relevant registers; cf. fn. 6)?
(E) Why can φ-inflected relativizers occur freely under pied-piping?

Before proposing our own answers to the above questions in Section 4, the following section discusses some recent minimalist analyses of the distribution of relativizers in English and Romance and evaluates how well they fare with respect to such issues.

3. Previous analyses

3.1 Gallego (2007)

Gallego (2007) develops an analysis of the distribution of relativizers in English and Romance based on Pesetsky & Torrego (2001). I will not discuss here all aspects of Gallego's analysis of RCs, focusing instead only on those that are strictly relevant for an account of the distribution of relativizers.

The major claim of Gallego (2007) is that the distribution of relativizers must be related to Case assignment, which under his assumptions is a narrow syntactic operation. In particular, Case corresponds to an instance of T in Pesetsky and Torrego's (2001) framework, borne amongst other categories by Ds and Cs as uninterpretable [*u*T]. Under this system, [*u*T] on C can be deleted via checking with an analogous T-feature. This could be done via either T itself (under T-to-C movement), via complementizers (assumed to be a form of T), via (subject) DPs (whose [*u*T] can check C's [*u*T] in PT's system), or via P (P also being assumed to be a form of T in being able to assign Case). Moreover, Gallego proposes that besides requiring checking of [*u*T], C also bears an uninterpretable relative feature [*u*Rel] that must be checked via an interpretable instance of the same feature borne by relativizers. Hence, in English, φ-inflected subject relativizers in RTRs are a means of deleting C's [*u*T] and [*u*Rel]. In the case of object relatives, it is assumed that object DPs can only delete [*u*Rel] as their own [*u*T] has already been deleted within the vP; [*u*T] on C is deleted via SpecTP in these cases. This is roughly illustrated in (16)-(17) (irrelevant details omitted):

(16) a. The man who kissed Mary
b. $[C_{[u\text{Rel}]\ [u\text{T}]}\ [[_{\text{DP}}\ \textit{who}_{[i\text{Rel}]\ [u\text{T}]}]\ \text{T}\ [...]]]$
c. $\text{man}\ [[_{\text{DP}}\ \text{who}_{[i\text{Rel}]\ \sout{[u\text{T}]}}]_j\ C_{\sout{[u\text{Rel}]}\ \sout{[u\text{T}]}}\ [<[_{\text{DP}}\ \text{who}_{[i\text{Rel}]\ [u\text{T}]}]>_j\ \text{T}\ [...]]]$

(17) a. The man who Mary kissed
b. $[C_{[u\text{Rel}]\ [u\text{T}]}\ [[_{\text{DP}}\ \text{Mary}_{[u\text{T}]}]\ \text{T}\ [...\ \text{kissed}\ [_{\text{DP}}\ \textit{who}_{[i\text{Rel}]}]\ ]]]$
c. $\text{man}\ [[_{\text{DP}}\ \text{who}_{[i\text{Rel}]}]_k\ [_{\text{DP}}\ \text{Mary}_{\sout{[u\text{T}]}}]_j\ C_{\sout{[u\text{Rel}]}\sout{[u\text{T}]}}\ [t_j\ \text{T}\ [...\ \text{kissed}\ <[_{\text{DP}}\ \textit{who}_{[i\text{Rel}]}]>_k]]$

In order to account for the lack of φ-inflected relativizers in the RTRs of Romance, Gallego (2007) proposes that in Romance T constitutes a strong phase. This is assumed to cause the [*u*T] on DPs to be deleted within the TP. Hence, [*u*T] on C cannot be checked via SpecTP in Romance, and object DPs are likewise useless having had their Case deleted within the vP-phase. Gallego thus assumes that C's [*u*T] can be checked via T itself (spelled out as a complementizer, in line with PT's assumption that complementizers are a form of T), or via P.

Without delving into the technical problems with this system, let us note, first, that it is unclear under this approach why, in the case of object *wh*-relatives, C's [*u*T] cannot be deleted by merging a complementizer, itself an instance of T in Gallego's framework (as indeed acknowledged for cases like (18a) by Gallego (2007: 84)). In other words, we would expect sentences (18a)-(19a) to be grammatical under their respective analyses in (18b)-(19b).

(18) a. **The man who that Mary kissed*
b. $[_{DP}$ the $[_{NP}$ man $[_{CP}$ $[_{DP}$ who$_{[i\text{Rel}]}]_j$ $[_T$ that$_{\sout{[u\text{T}]}}]_k$ $C_{\sout{[u\text{Rel}]}\sout{[u\text{T}]}}$ [... t_k … t_j]]]]
(19) a. **L'uomo il quale che Maria ha baciato*
b. $[_{DP}$ il $[_{NP}$ uomo $[_{CP}$ $[_{DP}$ il quale$_{[i\text{Rel}]}]_j$ $[_T$ che$_{\sout{[u\text{T}]}}]_k$ $C_{\sout{[u\text{Rel}]}\sout{[u\text{T}]}}$ [... t_k … t_j]]]]

Perhaps more seriously, the assumption that T is a strong phase in Romance would lead to the prediction that the distribution of φ-inflected relativizers should pattern alike in both RTRs and ATRs (which Gallego 2007 does not discuss). In other words, if φ-inflected relativizers cannot be attracted to check C's [*u*T] in Romance RTRs because their own [*u*T] feature has already been deleted within the TP, then we would expect the same conclusion to carry over to ATRs. But this prediction is not borne out: as discussed in Section 2, φ-inflected relativizers can appear bare at the edge of Romance ATRs.

3.2 Richards (2010)

Richards (2010) develops a theory concerned with morphosyntactic identity avoidance (cf. Nevins 2012 and the collection of papers in Nasukawa and van Riemsdijk 2014).

The gist of his proposal is that a linearization statement of the form <α, α> may be barred after TRANSFER in order to avoid a problematic instruction for the Linear Correspondence Axiom (Kayne 1994). The condition whereby the generation of <α, α> causes the derivation to crash is referred to as "Distinctness" (DC). What α amounts to for the computation of Distinctness is language-particular, and may therefore be subject to parametric variation.

For English and French, Richards assumes that α may simply amount to a syntactic label (i.e., X(P)), although, as he stresses (p. 6), DC may be sensitive to further morphosyntactic specifications. Importantly, however, the ban on such non-distinct linearization statements is sensitive to locality conditions. In particular, <α, α> is barred whenever it is part of the same EXT (Spell-Out, in Richards' terminology) domain. Richards moreover follows the standard assumption that the domain of EXT includes the complement – and only the complement – of a (strong) phase head (Chomsky 2001). Consequently, under Richards' approach, two non-distinct labels in English cannot be part of the complement of the phase head when this is transferred to the interfaces. The only way for two non-distinct labels to be linearized is if they are separated by an intervening phase head, which would cause the two labels to be part of distinct EXT domains. Finally, Richards takes CP, v*P, PP and KP to be strong phases, but crucially not DP.

Assuming that IRs do not contain intervening phase boundaries, Richards accounts for the ungrammaticality of IRs with bare relativizers in English (20a) and Romance (21a) with the underlying analyses in (20b)-(21b). Specifically, the crash is caused by the presence of two DPs within the same EXT domain (graphically represented via underlining in the representations below).

(20) a. **The man whom to marry*
b. $[_{\underline{DP}}$ the man $[_{\underline{CP}}$ $[_{\underline{DP}}$ whom] [C [to marry]]]]→ <DP, DP> ruled out by DC
(21) a. **L'uomo il quale sposare*
b. $[_{\underline{DP}}$ l'uomo $[_{\underline{CP}}$ $[_{\underline{DP}}$ il quale] [C [sposare]]]] → <DP, DP> ruled out by DC

The possibility of spelling out the *wh*-DP under pied-piping is accounted for assuming that P is a phase head, which thus separates the *wh*-DP from the upper DP, as in (22) (strong phase heads are boldfaced in the representations below). The impossibility of P-stranding with an overt *wh*-DP in English IRs is therefore straightforwardly captured under Richards' account.

(22) a. *The man with whom to speak*
b. [$_{DP}$ the man [$_{CP}$ [$_{PP}$ [**P** with [$_{DP}$ whom]]] [C [to speak]]]] → no DC

Richards follows Bianchi (1999) in assuming that in RTRs the *wh*-DP is separated from the upper DP by an intervening functional head (Force, in Bianchi's terms). By assuming that this head is a strong phase, Richards accounts for the availability of bare *wh*-DPs in English RTRs: the *wh*-DP is linearized in a different Spell-Out domain from the upper DP (cf. (23b)). Note that for Richards it is irrelevant whether the NP reaches SpecForceP via Internal Merge (e.g., Kayne 1994, Bianchi 1999), whether it is externally merged there (e.g., Boef 2013), or whether it is merged outside the RC altogether (as in the traditional 'head-external' analysis, e.g., Chomsky 1977); what is crucial under DC for capturing the distributional asymmetry of relativizers in RTRs and IRs is that the upper D and the relativizer are not part of the same EXT domain in RTRs.

(23) a. *The man whom I invited*
b. [$_{DP}$ the [$_{ForceP}$ [$_{NP}$ man] **Force** [$_{TopicP}$ [$_{DP}$ whom] [Topic [I invited]]]] → no DC

This proposal is in line with the framework adopted in this paper, as the distribution is derived not by conditions on Merge but rather on SM. An advantage of Richards' analysis is that it can offer a simple account of the grammaticality of sentences like (21a) in the relevant registers (cf. fn. 6) by assuming that their I-languages have different settings for the parameter that dictates what features count as relevant for Distinctness (cf. Rugna 2022). Note that this is also in line with recent views on parametric variation, whose locus is identified in the externalization component of grammar (e.g., Berwick and Chomsky 2011).

However, as it stands, Richards' (2010) solution does not cover the full range of distribution described in Section 2. For instance, Richards does not discuss ATRs, and it remains unclear what should rule out Ø-/*that*-relativization in English in these cases.[7] Richards' analysis can however be extended to cover the distribution of relativizers in Romance ATRs if we make the reasonable assumption that the ATR as a whole (including the relativizer) constitutes its own phase (cf. Cinque 2008, Griffiths 2015, Del Gobbo 2017), as will be discussed in Section 4.

Furthermore, Richards does not discuss the case of Romance RTRs, which in fact remain unaccounted for under his approach. Specifically, assuming that *wh*-DPs are ruled out in IRs because of categorial Distinctness, the question arises why only the non-inflected relativizer can appear bare at the edge of Romance RTRs. While the availability of *che*/*que*/*that* can be accounted for under the standard hypothesis that such elements are Cs (e.g., Kayne 1976),[8] it remains unclear what should rule out the presence of φ-inflected relativizers in cases like (24a), assuming a structure like (24b) à la Bianchi (1999) and Richards' (2010) DC.

(24) a. **El hombre quien Juan vio*
The man who J. saw
'The man who Juan saw.'
b. [$_{DP}$ el [$_{ForceP}$ [$_{NP}$ hombre] **Force** [$_{TopicP}$ [$_{DP}$ quien] [Topic [Juan vio]]]]

[7] To the best of my knowledge, these remain in fact open questions in the literature. We return to a potential solution in Section 4.

[8] Which would however raise further questions, such as how to account for the availability of Spanish *que* in IRs.

4. The proposal

I adopt the hypothesis that Merge operates freely. As a consequence, the unattested occurences of relativizers must be filtered out at the interfaces. I dismiss the possibility that the crash arises at CI (via, e.g., labeling), as that would entail a difference in the semantico-pragmatic properties of relativizers and/or RCs of English on the one hand and those of Romance on the other (a difference which does not seem to have ever been detected).

This leaves SM as the locus of the problem. This conclusion can be supported further via the observation that the morphophonological shape of relativizers is clearly language-dependent. For instance, while Romance employs the *wh*-element *che*/*que* 'what' as a relativizer, English uses the non-*wh* version *that*; furthermore, while English as well as French and Spanish can use a relativizer inflected for [+human] features (*who*/*qui*/*quien*), Modern Italian has no analogous lexical item in the headed relative paradigm.[9] If such variation is to be attributed to the externalization interface, then an analysis along the same lines for their overt distribution seems to be favorable from our perspective.

If this is on the right track, then the question that arises is what sort of constraint could hold at SM such that it rules out relativizers from being overtly realized under certain circumstances. In this paper, I basically follow Richards (2010) in assuming that the kind of distribution discussed in Section 2 should be treated as an instance of morphosyntactic haplology. In other words, I assume that the empirical facts are caused by some form of DC sensitive to morphosyntactic features. Contrary to Richards (2010), however, I crucially assume that the domain of EXT includes the entire phase, and not just its complement (as argued in Bošković 2016). With Richards, I assume that the set of strong phase heads includes (finite) C, K, P and v*, though crucially not D. I further propose, expanding on Richards on this point, that in Romance (and in English, to some extent) Distinctness is sensitive to φ as well as D. Moreover, I suggest that this type of featural anti-locality (Distinctness) arises not because it causes a problem for linearization, but rather because it is conditioned by general principles of economy (e.g., by some statement of the form "externalize as few occurrences of a feature as possible"). What feature counts as relevant for the computation of Distinctness is established at the externalization interface, according to language-particular rules.[10]

Assuming that the distribution is due to morphosyntactic haplology, we are now faced with the following two questions: (a) what is the offending feature; and (b) where (i.e., in what locality domain) do the occurrences of the same feature cause the derivation to crash, and where do they not?

As mentioned in Section 3.2, Richards' answers to these questions are difficult to extend to the full range of distribution described in Section 2. Specifically, assuming that the offending feature is the categorial label, and that the statement <D, D> is barred when it is part of the same EXT domain (namely, the complement of the phase head under Richards' assumptions), then the question remains why bare φ-inflected relativizers may be overtly realized in RTRs in English, though not in Romance. One way in which this asymmetry could be obtained would be to appeal to a difference in landing site for the *wh*-DP in Romance vs. English. For instance, the *wh*-DP could undergo Internal Merge to the edge of the phase head in Romance, as in (25),

[9] The [+human] *wh*-DP *chi* 'who' is only available in interrogatives and free relatives in Modern Italian. Old Italian differed: the element *cui* (a non-nominative version of *who* in Old Italian) was restricted to [+human] antecedents in older stages of the language (cf. Benincà 2010). This property is lost in Modern Italian, where *cui* distributes as (an oblique form of) *che* 'what' (Rugna 2022).

[10] In fact, some form of this principle could be argued to be at play in the constraint against the overt realization of multiple links in an *wh*-chain, which, as expected under our approach, is cross-linguistically subject to morphophonological idiosyncrasies (as in, e.g., *wh*-copying phenomena; cf. Rugna 2020 for recent discussion).

whereas in English the *wh*-DP would target the specifier of the *complement* of the phase head, as in (26). Thus the sequence <D, D> would be part of the same EXT domain in Romance RTRs (causing a violation of Distinctness), though not in English, where the sequence is separated by an intervening phase head (as in Richards 2010).

(25) $[_{DP}$ D $[_{CP}$ $[_{NP}$ N] $[_{DP}$ *wh*]] **C** …]] (*wh*-movement in Romance)
(26) $[_{DP}$ D $[_{C1P}$ $[_{NP}$ N] **C1** $[_{C2P}$ $[_{DP}$ *wh*] C2 …]]]] (*wh*-movement in English)

While this analysis could in principle derive some of the observed asymmetries between English and Romance RTRs, I nonetheless reject it as it essentially rests on a stipulation. From these assumptions it follows that D is not a potential offending feature in Romance (as in English) RTRs. This conclusion is independently enforced under the treatment of non-inflected relativizers as D(P)s (e.g., Manzini and Savoia 2003, Kayne 2014) – which I assume –, given that *que*/*che*/*that* is clearly available as a bare relativizer in RTRs. At the same time, I assume with Richards (2010) that D causes Distinctness in IRs (cf. Rugna 2022), as will be discussed below.

The approach I would like to pursue here for Romance RTRs capitalizes on the observation that bare relativizers are barred when they are φ-inflected. This suggests another potential candidate as a trigger for Distinctness, namely φ. Suppose, then, that Distinctness can be sensitive to identity in φ-features – in particular those expressed by N and their corresponding occurrences borne by the *wh*-DP. If so, the conclusion we are forced to draw in light of the previous discussion is that NP must be within the same EXT domain as the *wh*-DP in RTRs to the exclusion of the upper/external D.

If this line of reasoning is on the right track, then the question that arises is how to include NP (without the external D) and the *wh*-DP within the same EXT domain. Note that the standard phase-theoretic assumption that the portion of structure subject to EXT includes only the complement of the phase head raises certain issues from our perspective. A (more or less standard) configuration like (27) may derive the desired result for Romance RTRs (by having multiple instances of the same φ-features included in the same EXT domain, ruled out by Distinctness). However, (27) is problematic at least for English: EXT includes both the external D and the *wh*-DP in (27); the sequence <D, D> should therefore cause a crash under Distinctness. Following this approach we would then lose a potential account of the asymmetry in the distribution of relativizers between English RTRs and IRs.

(27) $[_{DP}$ D $[_{NP}$ $N_{+\varphi}$]] $[_{CP}$ $[_{DP}$ $D_{+\varphi}$]] **C** …]]

To solve this issue I assume, first, an analysis of RCs where the nominal head is part of the RC, as in Richards (2010) (cf. Kayne 1994, Bianchi 1999), and as illustrated in (28). Note that it is irrelevant at this point what labels we assign to the C-heads, as well as whether the NP is merged in SpecC1 internally or externally. These details aside, the assumed structure is identical to what Richards (2010) assumes for RTRs following Bianchi (1999). As pointed out, it is problematic under our approach to assume that EXT includes only the complement of the phase head (as in Chomsky 2001). Here I thus follow Bošković's (2016) proposal that the domain of EXT includes the whole phase (i.e., the edge as well as the complement), as indicated via underlining in the representations below.

(28) $[_{DP}$ D $[_{\underline{C1P}}$ $[_{\underline{NP}}$ $\underline{N_{+\varphi}}]$ **C1** $[_{\underline{C2P}}$ $[_{\underline{DP}}$ $\underline{D_{+\varphi}}]$ C2 …]]

The assumed structure (28) and the EXT mechanism can then capture the distribution of relativizers in English and Romance RTRs, as I will now show.

In Romance RTRs, the φ-features of N and those of the *wh*-DP end up being in the same EXT domain in (29), causing a violation of Distinctness. The availability of such relativizers under pied-piping follows from the assumption that Ps constitute their own EXT domain (30). The availability of non-inflected relativizers in RTRs follows straightforwardly from the proposed analysis, as such elements do not express φ-features (cf. (31)).

(29) a. *La ragazza la quale Gianni ha invitato a cena
b. $[_{DP}$ la $[_{C1P}$ $[_{NP}$ ragazza$_{+\varphi}$] **C1** $[_{C2P}$ $[_{DP}$ la quale$_{+\varphi}$] C2 …]] → <φ, φ> ruled out by DC

(30) a. La ragazza con la quale Gianni ha ballato
b. $[_{DP}$ la $[_{C1P}$ $[_{NP}$ ragazza$_{+\varphi}$] **C1** $[_{C2P}$ $[_{PP}$ **P con** la quale$_{+\varphi}$] C2 …]] → no DC

(31) a. La ragazza che Gianni ha invitato a cena
b. $[_{DP}$ la $[_{C1P}$ $[_{NP}$ ragazza$_{+\varphi}$] **C1** $[_{C2P}$ $[_{DP}$ che] C2 …]] → no DC

In English RTRs, contrary to Romance RTRs, identity in φ-features between N and the *wh*-DP does not cause the derivation to crash. Moreover, the *wh*-DP is not part of the same EXT domain of the external D. All bare relativizers may thus be spelled-out (cf. (32)-(33)). I would like to suggest, however, that English is indeed sensitive to identity of φ-features, though to a lesser extent than Romance. In particular, while identity in φ-features between the nominal antecedent and the *wh*-DP does not cause a complete crash of the derivation, the EXT component of English can choose to minimize the output by employing either Ø-exponence (abstracting away from anti-that-trace effects) or by *impoverishing* (in the sense of Distributed Morphology; e.g., Halle and Marantz 1993, Arregi and Nevins 2012) the content of the φ-features alone, thereby obtaining the realization of the relativizer as *that* (cf. (33)). If the use of Ø-/*that*-relativization is licensed by some (weak) form of φ-feature Distinctness, then we can understand the unavailability of such strategies in ATRs, to which I turn below. Note incidentally that this treatment of relative *that* could also account for its unavailability under pied-piping: being shielded by P, the *wh*-DP cannot enter into the computation of Distinctness with the antecedent (34).

(32) a. The girl who John invited for dinner
b. $[_{DP}$ the $[_{C1P}$ $[_{NP}$ girl$_{+\varphi}$] **C1** $[_{C2P}$ $[_{DP}$ who$_{+\varphi}$] C2 …]] → no DC

(33) a. The girl (that) John invited for dinner
b. $[_{DP}$ the $[_{C1P}$ $[_{NP}$ girl$_{+\varphi}$] **C1** $[_{C2P}$ $[_{DP}$ D$_{+\varphi}$] C2 …]] → <φ, φ> licenses Ø/*that*-relativization

(34) a. *The girl with (that) John danced
b. $[_{DP}$ the $[_{C1P}$ $[_{NP}$ girl$_{+\varphi}$] **C1** $[_{C2P}$ $[_{PP}$ **P** with D$_{+\varphi}$] C2 …]] → no DC: Ø/*that*-relativization cannot be licensed

In ATRs, Distinctness does not arise. This follows from the standard analysis of ATRs (e.g., Demirdache 1991; cf., more recently, Griffiths 2015, Del Gobbo 2017), where the NP is contained in a distinct EXT domain as that of the *wh*-DP (cf. (35)). This analysis is suggested by several properties of ATRs, such as their prosodic and propositional independence from the matrix clause, in which the antecedent is included (cf. also Cinque 2008). In Romance, then, all relavitizers can be externalized as bare (cf. (36)).

(35) $[_{DP}\ [_{DP}\ D\ [_{NP}\ N_{+\varphi}]]\ [_{CP}\ [_{DP}\ \underline{D_{\pm\varphi}}]]\ \mathbf{C}\ \ldots]]$

(36) a. La ragazza, la quale Gianni ha invitato a cena…
b. $[_{DP}$ la $[_{NP}$ ragazza$_{+\varphi}]]\ [_{CP}\ [_{DP}\ \underline{\text{la quale}_{\pm\varphi}}]]\ \mathbf{C}\ \ldots]] \rightarrow$ no DC

In English, on the other hand, only φ-inflected relativizers can be externalized in ATRs (37). I suggested above that English may license Ø-/*that*-relativization only under Distinctness for φ-features. If this hypothesis is tenable, then the unavailability of such strategies in ATRs is immediately captured, as the relevant conditions for Distinctness simply cannot arise in ATRs (38).

(37) a. The girl, who John invited for dinner…
b. $[_{DP}$ the $[_{NP}$ girl$_{+\varphi}]]\ [_{CP}\ [_{DP}\ \underline{\text{who}_{\pm\varphi}}]]\ \mathbf{C}\ \ldots]] \rightarrow$ no DC

(38) a. *The girl, (that) John invited for dinner…
b. $[_{DP}$ the $[_{NP}$ girl$_{+\varphi}]]\ [_{CP}\ [_{DP}\ \underline{D_{\pm\varphi}}]]\ \mathbf{C}\ \ldots]] \rightarrow$ no DC: Ø/*that*-relativization cannot be licensed

Finally, we may assume that IRs are not strong phases (as it is sometimes assumed for infinitival clauses; e.g., Landau 2015). Consequently, the external DP, the NP, and the *wh*-DP are all part of the same EXT domain, regardless of whether the nominal antecedent is part of the RC or not. Following Richards in assuming that Distinctness for D is at stake in these cases, we can account for the unavailability of all bare relativizers in both English (39) and Romance IRs ((40); cf. Rugna 2022 for further discussion).

(39) a. *The girl who/that to invite
b. $[_{DP}$ the $[_{NP}$ man$]\ [_{CP}\ [_{DP}$ who/that$]\ \ldots]] \rightarrow$ <D, D> ruled out by DC

(40) a. *La ragazza che/la quale invitare
b. $[_{DP}$ la $[_{NP}$ ragazza$_{\pm\varphi}]\ [_{CP}\ [_{DP}$ che/la quale$_{\pm\varphi}]\ \ldots]] \rightarrow$ <D, D>/<φ, φ> ruled out by DC

In order to model the fact that Spanish allows *que* in IRs, I suggest that EXT in Spanish is not sensitive to Distinctness for categorial features (recall that we are assuming the D-hypothesis for relativizers), but only for φ.

An objection that might be raised against the present account is that it seemingly rules out cases of multiple realization of φ-features occurring in the same EXT domain, as in, e.g., nominal concord (e.g., *los*$_{[+masc,\ +pl]}$ *hermanos*$_{[+masc,\ +pl]}$ 'the brothers'). Deferring a full-fledged treatment of this issue to a future occasion, here I tentatively propose that Distinctness for φ-features arises only when the features are in Agree (or *shared*, in the sense of Pesetsky and Torrego 2007). If we further assume that Agree proper is reserved for DP-external agreement (e.g., Chomsky 2001: fn. 6; Norris 2014; Baier 2015) then the lack of Distinctness for φ-features within the DP can be accounted for.

5. Conclusion

This paper analyzed the distribution of relativizers in English and Romance across the headed relative paradigms. The distribution is argued to arise at SM, in particular under a principle of economy that disfavors morphosyntactic haplology arising in conditions of locality,

i.e., when the offending features are part of the same EXT domain (as in Richards 2010). I argued that the distribution can be captured by the proposed account, which relies on three assumptions: (I) Romance (and English, to some extent) bars multiple occurences of φ-features (in Agree); (II) the nominal head is part of the RCs in RTRs (though not in ATRs); and (III) the domain of EXT includes the whole phase (Bošković 2016).

If the analysis proposed here is tenable, then it can provide independent evidence for the hypothesis that EXT functions as claimed in Bošković (2016). Moreover, the analysis would also provide support for the hypothesis that the nominal antecedent is part of the RC in RTRs (as in Kayne 1994, *et seq.*). However, these assumptions are not uncontroversial (see, e.g., Salzmann 2017: 87ff. for problems with assumption (II)), and we leave it to future research to determine whether they are strictly necessary for capturing the relevant generalizations under SMT.

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