

# DISTINCTNESS AND THE STRUCTURE AND SIZE OF ENGLISH RELATIVE CLAUSES \*

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## 1. INTRODUCTION

Relative clauses (RCs) have been a subject of study within generative frameworks for decades. The syntactic literature has been primarily concerned with how the RC head, i.e. the noun modified by the RC, is related to the RC-internal gap. However, in this article, I wish to refocus attention back on the RC itself, in particular on the structural size of English RCs.

The literature typically recognises two distinct structural sizes of RC: clausal RCs, as in (1), and reduced RCs, as in (2).

- (1) Clausal RCs  
the man [(who(m)/that) I met yesterday]
- (2) Reduced RCs  
the man [(being) arrested by police yesterday]

Here I will focus exclusively on *clausal* RCs, simply calling them RCs from now on (see Douglas 2016, Chapter 6; Harwood 2016 for recent discussion of reduced RCs). I argue that these are *not* homogeneous in their structural size, i.e. they vary in terms of how much syntactic structure they contain. The six types of RC to be investigated are illustrated below:

- (3) Finite *wh*-RCs
  - a. The man [who saw me] is John.
  - b. The house [which I lived in] fell down.
  - c. The house [in which I lived] fell down.
- (4) Finite *that*-RCs
  - a. The man [that saw me] is John.
  - b. The man [that I saw] is John.
  - c. The house [that I lived in] fell down.
- (5) Finite  $\emptyset$ -RCs
  - a. The man [I saw] is John.
  - b. The house [I lived in] fell down.
- (6) Infinitival *wh*-RCs
  - a. The man [to whom to speak] is John.
  - b. The house [in which to live] is that one.
  - c. For a beginner, the course will likely provide a good atmosphere [in which for you to fire your first shots].<sup>1</sup>

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<sup>1</sup> This example is from: <http://hunting.about.com/od/hunting-for-beginners/a/Hunting-For-Beginners.htm>. Such examples are not acceptable to all speakers (see the judgements in, e.g., Chomsky & Lasnik 1977; Huddleston, Pullum & Peterson 2002), but there are speakers for whom these are acceptable.

- (7) Infinitival *for*-RCs
- a. The man [for you to see] is John.
  - b. The man [for her to speak to] is John.
- (8) Infinitival  $\emptyset$ -RCs
- a. The man [to see] is John.
  - b. The man [to speak to] is John.

The names for the different types of RC should be reasonably transparent. I do not refer to *wh*-RCs with and without preposition pied-piping as different types. Furthermore, I classify examples like (6c) as infinitival *wh*-RCs rather than infinitival *for*-RCs because the *wh*-phrase is further to the left.  $\emptyset$ -RCs are those without an overt *wh*-relative pronoun, *that* or *for*.

The idea that RCs may vary in structural size is not entirely new, with a number of authors claiming a size difference between finite RCs introduced by an overt relative pronoun or complementiser and those not (see, e.g., Weisler 1980; Doherty 1993, 2000; Bošković 1994, 1996, 1997, 2016), or between infinitival RCs relativising on subjects and those relativising on non-subjects (see Bhatt 1999). However, previous studies tend not to consider finite and infinitival RCs together, nor to consider the issue from a serious cartographic perspective (though see Haegeman 2012 for such an approach to a range of English clause types).

I will therefore investigate the degree of articulation of the left periphery in the RC types illustrated above. To do so, I follow Haegeman (2012) in testing whether the RC types are compatible with adverbial and argument fronting (including negative preposing). I will present new RC data which differ systematically from those reported in Haegeman (2012). Such variation is explicitly recognised by Haegeman (2012:54):

“In the following discussion judgments are based on the literature and on a number of informants, all speakers of British English. There is, however, interspeaker variation, and some speakers are much more liberal when it comes to the distribution of fronted arguments in English. These speakers may well find that their judgments deviate systematically from those discussed here. Given that the divergence is systematic, I tentatively conclude that their grammar must differ from that of the speakers on whom this work is based.”

My data is based on speakers, including myself, who permit argument fronting in RCs. This is different from the judgements forming the basis of Haegeman’s work, which essentially rejects argument fronting in all English RCs (see also Chomsky 1977; Bak 1984). My data show that argument fronting is permitted, but only in some types of RC. Furthermore, when it is permitted, it is constrained. I will argue that argument fronting in RCs (where allowed) is subject to a *categorial distinctness effect* in the sense of Richards (2010).

The structure of this article is as follows: the adverbial fronting data are presented in Section 2, whilst the argument fronting data and the categorial distinctness effect are presented in Section 3. My analysis of the distribution of adverbial and argument fronting and of the categorial distinctness effect is presented and discussed in Section 4. Finally, Section 5 concludes.

## 2. ADVERBIAL FRONTING

Adverbial fronting and adverbial negative preposing seem to behave in the same way, except that negative preposing triggers subject-auxiliary inversion. In this section, we will see

that adverbial fronting is permitted in finite *wh*-RCs, *that*-RCs and infinitival *wh*-RCs, but is not permitted in the other RC-types.

### 2.1. Finite *wh*-RCs

Adverbial fronting is permitted in *wh*-RCs, both in non-subject RCs, as in (9), and in subject RCs, as in (10) (see also Doherty 1993, 2000). This also applies to adverbial negative preposing, as in (11) (non-subject RCs) and (12) (subject RCs). Fronted adverbials are in boldface.

- (9) a. I met a man who **next year** Mary might actually date.  
 b. I bought a dress which **next year** Mary might actually wear.
- (10) a. I met a man who **next year** might actually date Mary.  
 b. I bought a dress which **next year** might actually make Mary popular.
- (11) a. I met a man who **under no circumstances** would Mary ever date.  
 b. I bought a dress which **under no circumstances** would Mary ever wear.
- (12) a. I met a man who **under no circumstances** would ever go out with Mary.  
 b. I bought a dress which **under no circumstances** would ever make Mary popular.

The *wh*-relative pronoun may or may not pied-pipe a preposition. Adverbial fronting and negative preposing are compatible with either option, as in (13) and (14) respectively.

- (13) a. I met a man who **next week** Mary might actually grant a second date to.  
 b. I met a man to whom **next week** Mary might actually grant a second date.
- (14) a. I met a man who **under no circumstances** would Mary ever grant a date to.  
 b. I met a man to whom **under no circumstances** would Mary ever grant a date.

### 2.2. Finite *that*-RCs

Adverbial fronting is permitted in *that*-RCs, both in non-subject RCs, as in (15), and in subject RCs, as in (16) (see also Doherty 1993, 2000). This also applies to adverbial negative preposing, as in (17) (non-subject RCs) and (18) (subject RCs).

- (15) a. I met a man that **next year** Mary might actually date.  
 b. I bought a dress that **next year** Mary might actually wear.
- (16) a. I met a man that **next year** might actually date Mary.  
 b. I bought a dress that **next year** might actually make Mary popular.
- (17) a. I met a man that **under no circumstances** would Mary ever date.  
 b. I bought a dress that **under no circumstances** would Mary ever wear.
- (18) a. I met a man that **under no circumstances** would ever go out with Mary.  
 b. I bought a dress that **under no circumstances** would ever make Mary popular.

*That*-RCs do not permit preposition pied-piping at all, hence (19b) and (20b) are ungrammatical for reasons unrelated to adverbial fronting.

- (19) a. I met a man that **next week** Mary might actually grant a second date to.  
 b. \* I met a man to that **next week** Mary might actually grant a second date.
- (20) a. I met a man that **under no circumstances** would Mary ever grant a date to.  
 b. \* I met a man to that **under no circumstances** would Mary ever grant a date.

### 2.3. Finite $\emptyset$ -RCs

Unlike in finite *wh*-RCs and finite *that*-RCs, adverbial fronting and negative preposing are not permitted in finite  $\emptyset$ -RCs (see also Doherty 1993, 2000). This applies to both non-subject RCs, as in (21) and (23), and to subject RCs, as in (22) and (24). However, note that finite subject  $\emptyset$ -RCs are generally impossible in (standard) English (the so-called anti-*that*-trace effect, see Douglas 2016, 2017 for recent discussion). In other words, the examples in (22) and (24) are ungrammatical independently of adverbial fronting and negative preposing.<sup>2</sup>

- (21) a. \* I met a man **next year** Mary might actually date.  
 b. \* I bought a dress **next year** Mary might actually wear.
- (22) a. \* I met a man **next year** might actually date Mary.  
 b. \* I bought a dress **next year** might actually make Mary popular.
- (23) a. \* I met a man **under no circumstances** would Mary ever date.  
 b. \* I bought a dress **under no circumstances** would Mary ever wear.
- (24) a. \* I met a man **under no circumstances** would ever go out with Mary.  
 b. \* I bought a dress **under no circumstances** would ever make Mary popular.

Like *that*-RCs,  $\emptyset$ -RCs do not permit preposition pied-piping at all, hence (25b) and (26b) are ungrammatical independently of adverbial fronting or negative preposing.

- (25) a. \* I met a man **next week** Mary might actually grant a second date to.  
 b. \* I met a man to **next week** Mary might actually grant a second date.
- (26) a. \* I met a man **under no circumstances** would Mary ever grant a date to.  
 b. \* I met a man to **under no circumstances** would Mary ever grant a date.

### 2.4. Infinitival *wh*-RCs

In English, infinitival *wh*-RCs obligatorily involve preposition pied-piping (see Section 4.5). Consequently, only elements relativised from a PP can form infinitival *wh*-RCs. As can be seen in (27) and (28), adverbial fronting and negative preposing are permitted.

- (27) Mary is the woman to whom **next week** to hand these documents.

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<sup>2</sup> There are apparent counterexamples such as *there's a man sells vegetables at the market*. However, there is good reason to believe that these are not genuine  $\emptyset$ -RCs (see Harris & Vincent 1980; Lambrecht 1988; McCawley 1998; Henry 1995; den Dikken 2005), so I set these aside (*pace* Doherty 1993, 2000).

(28) Mary is the woman to whom **under no circumstances** to ever hand these documents.

Some speakers allow the complementiser *for* and an overt subject in infinitival *wh*-RCs, though even then it is typically judged as somewhat degraded. Other speakers judge it ungrammatical (see Chomsky 1977; Huddleston, Pullum & Peterson 2002:1067). Those who do accept such structures permit adverbial fronting, as in (29a), and negative preposing, as in (30a), in such contexts. The fronted adverbial obligatorily precedes *for*, as shown by the contrast between the (a) and (b) examples.

(29) a. ? Mary is the woman to whom **next week** for you to hand these documents.  
b. \* Mary is the woman to whom for you **next week** to hand these documents.

(30) a. ? Mary is the woman to whom **under no circumstances** for you to ever hand these documents.  
b. \* Mary is the woman to whom for you **under no circumstances** to ever hand these documents.

## 2.5. Infinitival *for*-RCs

Unlike in infinitival *wh*-RCs (with or without *for*), adverbial fronting and negative preposing are not permitted in infinitival *for*-RCs, i.e. infinitival RCs with overt *for* but no *wh*-relative pronoun, as shown in (31) and (32).

(31) a. ?\* I met a man **next year** for you to bring to the party.  
b. \* I met a man for you **next year** to bring to the party.

(32) a. \* I met a man **under no circumstances** for you to ever bring to the party.  
b. \* I met a man for you **under no circumstances** to ever bring to the party.

Infinitival *for*-RCs do not permit preposition pied-piping, so the examples in (33) are ungrammatical independently of adverbial fronting and negative preposing.

(33) a. \* Mary is the woman to **next week** for you to hand these documents.  
b. \* Mary is the woman to **under no circumstances** for you to ever hand these documents.

## 2.6. Infinitival $\emptyset$ -RCs

Finally, like in infinitival *for*-RCs, adverbial fronting and negative preposing are not permitted in infinitival  $\emptyset$ -RCs, i.e. infinitival RCs with neither *for* nor a *wh*-relative pronoun, as in (34). Furthermore, like infinitival *for*-RCs, preposition pied-piping is not permitted in infinitival  $\emptyset$ -RCs, hence the examples in (35) are ungrammatical independently of adverbial fronting and negative preposing.

(34) a. \* I met a man **next year** to bring to the party.  
b. \* I met a man **under no circumstances** to ever bring to the party.

(35) a. \* Mary is the woman to **next week** to hand these documents.  
b. \* Mary is the woman to **under no circumstances** to ever hand these documents.

## 2.7. Summary

Adverbial fronting and adverbial negative preposing are permitted in finite *wh*-RCs, finite *that*-RCs and infinitival *wh*-RCs (with and without *for*). They are not permitted in finite  $\emptyset$ -RCs, infinitival *for*-RCs and infinitival  $\emptyset$ -RCs. Furthermore, they do not seem to interact with preposition pied-piping in any way.

## 3. ARGUMENT FRONTING

In this section, I consider argument fronting. As will be seen, argument fronting is more constrained than adverbial fronting. Indeed, as pointed out in Section 1, there are English speakers for whom argument fronting in RCs is generally impossible (see Haegeman 2012). This is true for some of my consultants as well. However, other consultants, including myself, are ‘more liberal’ in that argument fronting is permitted in at least some RCs, namely finite *wh*- and *that*-RCs. Nevertheless, even in these types of RC, argument fronting is constrained by a *categorial distinctness effect* in the sense of Richards (2010), at least for my consultants. It is the judgements of these ‘more liberal’ consultants that I report below.<sup>3</sup>

### 3.1. Finite *wh*-RCs

Argument fronting is permitted in finite *wh*-RCs, as in (36). The fronted argument obligatorily follows the relative pronoun, as the contrast between (36) and (37) shows. Fronted arguments are in small capitals.

- (36) a. I met a man to whom A SECOND DATE Mary might actually grant.  
 b. I bought a car in which MUDDY SHOES I would never allow.
- (37) a. \* I met a man A SECOND DATE to whom Mary might actually grant.  
 b. \* I bought a car MUDDY SHOES in which I would never allow.

However, argument fronting is restricted. Observe that in (36) the *wh*-relative pronouns have pied-piped a preposition. Interestingly, without such pied-piping, the examples become degraded or unacceptable, as in (38).

- (38) a. ?\* I met a man who(m) A SECOND DATE Mary might actually grant to.  
 b. ?\* I bought a car which MUDDY SHOES I would never allow in.

The same effect can be seen when it is the fronted argument, rather than the relative pronoun, that has the option of pied-piping a preposition. In (39a), the fronted argument has pied-piped a preposition and the result is acceptable, whilst in (39b), it has not pied-piped a preposition and the result is unacceptable.

- (39) a. I witnessed the second date which TO THAT MAN Mary should never have granted.  
 b. \* I witnessed the second date which THAT MAN Mary should never have granted to.

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<sup>3</sup> I am not necessarily claiming that the patterns identified in Haegeman’s (2012) or the present study are exhaustive, but I have generally found that my consultants exhibit one of these two patterns. In laying out my data, I hope that readers who systematically diverge from both Haegeman’s and my reported judgements may be able to localise the source of the divergence more effectively, thereby adding more meaningfully to our knowledge of the typology of variation.

These data tell us that the relative pronoun and fronted argument cannot both be nominal phrases, i.e. DPs. If one is a DP, the other must pied-pipe a preposition, i.e. be a prepositional phrase (PP). To my knowledge, this is a novel empirical generalisation concerning English RCs. Adopting Richards' (2010) terminology, I refer to this as a *categorial distinctness effect*.

This raises the questions of what happens when both the relative pronoun and fronted argument pied-pipe a preposition. The result is grammatical (adapted from Totsuka 2014).

(40) I met a man with whom ABOUT LINGUISTICS I could talk all day.

However, there are various analytic issues with such examples. I therefore set them aside for now and will return to them in Section 4.5.

The categorial distinctness effect is particularly important when it comes to argument fronting in subject RCs. It has been claimed that fronted arguments are impossible in subject RCs in particular (Rizzi 1997:307; Haegeman 2012:58). The following examples, taken from Rizzi (1997:307), are intended to show that fronted arguments are permitted in non-subject RCs, as in (41), but prohibited in subject RCs, as in (42) (judgements as in the original).<sup>4</sup>

(41) a. ?? the man to whom THAT BOOK I gave  
b. ? a man to whom LIBERTY we should never grant<sup>5</sup>

(42) a. \* the man who THAT BOOK gave to me  
b. \* a man who LIBERTY should never grant to us

However, there is a confound in these data. Observe that the non-subject RC examples in (41) exhibit categorial distinctness between the fronted argument and relative pronoun, whilst the subject RC examples in (42) do not. If the categorial distinctness effect is responsible for the ungrammaticality of (42), the prediction is that subject RCs will permit argument fronting provided that the fronted argument pied-pipes a preposition. As the contrast between the minimal pairs in (43) and (44) shows, this prediction is borne out.

(43) a. \* I met a man who MARY might actually grant a second date to.  
b. \* I bought a car which CHILDREN can give hours of entertainment to

(44) a. ? I met a man who TO MARY might actually grant a second date.  
b. I bought a car which TO CHILDREN can give hours of entertainment

These data thus show that argument fronting *is* permitted in subject RCs, contrary to previous claims, but the fronted argument must be a PP to satisfy categorial distinctness.

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<sup>4</sup> Haegeman (2012, Chapter 2, note 6) notes via personal communication with Andrew Radford that he accepts the following (whether this is a systematic divergence is unclear, see fn 4):

(i) He's the kind of person who, a noble gesture like that, would simply not appreciate.

I, and other I have consulted, find this example odd. We feel that it needs a subject resumptive pronoun to be even marginally acceptable, as in (iia). Interestingly, an object resumptive pronoun does not seem even marginally possible, as in (iib). I return to this observation in Section 4.4.

(ii) a. ? He's the kind of person who, a noble gesture like that, he would simply not appreciate.

b. \* He's the kind of person who, a noble gesture like that, would simply not appreciate it.

<sup>5</sup> This example is adapted from Baltin (1982:17). Baltin judges it as acceptable, but notes that not all speakers find it totally acceptable.

The categorial distinctness effect can be seen with argument negative preposing as well. As the contrasts between the minimal pairs in (45) and (46) show, if the relative pronoun is a DP, the fronted argument must pied-pipe a preposition. This applies to both non-subject RCs, as in (45a,b) and (46a,b), and subject RCs, as in (45c,d) and (46c,d).

- (45) a. I met a man who(m) TO NO WOMAN would I ever recommend as a date.  
 b. I bought a dress which TO NO WOMAN would I ever give as a present.  
 c. I met a man who TO NO WOMAN would ever give roses.  
 d. I bought a dress which TO NO WOMAN would ever be given as a present.
- (46) a. \* I met a man who(m) NO WOMAN would I ever recommend to as a date.  
 b. \* I bought a dress which NO WOMAN would I ever give to as a present.  
 c. \* I met a man who NO WOMAN would ever give roses to.  
 d. \* I bought a dress which NO WOMAN would ever be given to as a present.

As above, the negative preposed argument can only be a DP if the relative pronoun pied-pipes a preposition, as the contrasts between (47) and (48) show.

- (47) a. I met a man to whom NO ADVICE would I ever give.  
 b. I met a woman to whom NO ROSES would a man ever give.
- (48) a. \* I met a man who(m) NO ADVICE would I ever give to.  
 b. ?? I met a woman who(m) NO ROSES would a man ever give to.

To summarise, argument fronting is permitted in finite *wh*-RCs but is subject to a categorial distinctness effect. The categorial distinctness effect says that a relative pronoun and a fronted argument cannot both be DPs. If one is a DP, the other must be a PP. This is schematised in (49).

(49) Categorial distinctness effect

Relative pronoun	Fronted argument	Configuration permitted?
DP	DP	*
DP	PP	✓
PP	DP	✓
PP	PP	See Section 4.5

### 3.2. Finite *that*-RCs

Argument fronting is also permitted in finite *that*-RCs. As pointed out in Section 2.2, preposition pied-piping is not possible with *that*. In other words, the options in (49) where the relative pronoun (or null operator in this case) is a PP can be ignored. If argument fronting is subject to the categorial distinctness effect, the prediction is thus that a fronted argument in a finite *that*-RC can only ever be a PP, never a DP. As illustrated by the contrasts between (50) and (51), this is precisely what we find, and this applies equally to non-subject and subject RCs.<sup>6</sup>

<sup>6</sup> I am assuming that *that* is a complementiser rather than a relative pronoun (see Douglas 2016 for discussion), though this does not matter much for present purposes. If *that* is a relative pronoun, the categorial distinctness effect would be between the fronted argument and *that*, which would be analysed as a DP, rather than a null relative operator.



- (50) a. I bought a dress that TO MARY I might consider giving as a present.  
 b. I bought a dress that TO MARY could be given as a present.  
 c. I bought a car that TO CHILDREN would give hours of entertainment.
- (51) a. \* I bought a dress that MARY I might consider giving to as a present.  
 b. \* I bought a dress that MARY could be given to as a present.  
 c. \* I bought a car that CHILDREN would give hours of entertainment to.

The same applies to argument negative preposing, as shown by the contrasts between (52) and (53).

- (52) a. I bought a dress that TO NO WOMAN would I ever give as a present.  
 b. I bought a dress that TO NO WOMAN would ever be given as a present.
- (53) a. \* I bought a dress that NO WOMAN would I ever give to as a present.  
 b. \* I bought a dress that NO WOMAN would ever be given to as a present.

Furthermore, if preposition pied-piping is unavailable because there is no preposition to pied-pipe in the first place, argument fronting and argument negative preposing are correctly predicted to be unavailable, as shown in (54) and (55).

- (54) a. \* I bought a car that MUDDY SHOES I would never allow in.  
 b. \* I bought a car that HOURS OF ENTERTAINMENT would give to children.  
 c. \* I bought a car that THE CHILDREN can keep entertained.
- (55) a. ?? I bought a car that NOT A SINGLE MUDDY SHOE would I ever allow in.  
 b. \* I bought a car that NOT A SINGLE HOUR OF ENTERTAINMENT would ever give to any child.  
 c. \* I bought a car that NO CHILD can keep entertained.

### 3.3. Finite $\emptyset$ -RCs

Unlike in finite *wh*-RCs and finite *that*-RCs, argument fronting is not permitted in finite  $\emptyset$ -RCs at all, even if the fronted argument is a PP, as in (56) and (57). Since subject  $\emptyset$ -RCs are generally impossible (see Section 2.3), only non-subject  $\emptyset$ -RCs are illustrated.

- (56) a. \* I met a man MARY I might recommend to as a date.  
 b. \* I bought a dress MARY I could give to as a present.
- (57) a. \* I met a man TO MARY I might recommend as a date.  
 b. \* I bought a dress TO MARY I could give as a present.

As with finite *that*-RCs, preposition pied-piping is not permitted with finite  $\emptyset$ -RCs. Therefore, if argument fronting were possible at all in finite  $\emptyset$ -RCs, we would expect fronted PP arguments to be possible, as they were with finite *that*-RCs. Since they are not, I conclude that argument fronting is generally impossible in finite  $\emptyset$ -RCs.

Argument negative preposing is also prohibited in finite  $\emptyset$ -RCs, as in (58) and (59).

- (58) a. \* I met a man NO WOMAN would I ever recommend to as a date.  
 b. \* I bought a dress NO WOMAN would I ever give to as a present.

- (59) a. \* I met a man TO NO WOMAN would I ever recommend as a date.  
 b. \* I bought a dress TO NO WOMAN would I ever give as a present.

### 3.4. Infinitival *wh*-RCs

Argument fronting is not permitted in infinitival *wh*-RCs, regardless of whether *for* is present or not, and even if the fronted argument is a DP, as in (60) and (61). Since infinitival *wh*-RCs obligatorily involve preposition pied-piping, if argument fronting were at all possible, we would expect fronted DP arguments to be possible. Since they are not, I conclude that argument fronting is generally impossible in infinitival *wh*-RCs.

- (60) a. \* I found an ideal venue in which MARY to propose to.  
 b. \* I found an ideal venue in which MARY for you to propose to.  
 c. \* I found an ideal venue in which for you MARY to propose to.
- (61) a. \* I found an ideal venue in which TO MARY to propose.  
 b. \* I found an ideal venue in which TO MARY for you to propose.  
 c. \* I found an ideal venue in which for you TO MARY to propose.

Argument negative preposing is also prohibited in infinitival *wh*-RCs, as in (62) and (63).

- (62) a. \* This is a place in which NO MAN to ever give one's real name to.  
 b. \* This is a place in which NO MAN for you to ever give your real name to.  
 c. \* This is a place in which for you NO MAN to ever give your real name to.
- (63) a. \* This is a place in which TO NO MAN to ever give one's real name.  
 b. \* This is a place in which TO NO MAN for you to ever give your real name.  
 c. \* This is a place in which for you TO NO MAN to ever give your real name.

### 3.5. Infinitival *for*-RCs

As with infinitival *wh*-RCs, argument fronting is not permitted in infinitival *for*-RCs at all, regardless of whether the fronted argument is a DP or a PP, as in (64) and (65).

- (64) a. \* I found an ideal venue MARY for you to propose to in.  
 b. \* I found an ideal venue for you MARY to propose to in.
- (65) a. \* I found an ideal venue TO MARY for you to propose in.  
 b. \* I found an ideal venue for you TO MARY to propose in.

Argument negative preposing is also prohibited in infinitival *for*-RCs, as in (66) and (67).

- (66) a. \* I saw a venue NO WOMAN for one to propose to in.  
 b. \* I saw a venue for one NO WOMAN to propose to in.
- (67) a. \* I saw a venue TO NO WOMAN for one to propose in.  
 b. \* I saw a venue for one TO NO WOMAN to propose in.

### 3.6. Infinitival $\emptyset$ -RCs

Finally, like in the other types of infinitival RC, argument fronting is not permitted in infinitival  $\emptyset$ -RCs, regardless of whether the fronted argument is a DP or a PP, as in (68).

- (68) a. \* I found an ideal venue MARY to propose to in.  
 b. \* I found an ideal venue TO MARY to propose in.

Argument negative preposing is also prohibited in infinitival  $\emptyset$ -RCs, as in (69).

- (69) a. \* I saw a venue NO WOMAN for one to propose to in.  
 b. \* I saw a venue TO NO WOMAN for one to propose in.

### 3.7. Summary

Argument fronting is permitted in finite *wh*-RCs and *that*-RCs, and is prohibited in finite  $\emptyset$ -RCs and all infinitival RCs. For my consultants, where argument fronting is permitted, it is subject to a categorial distinctness effect. The relative pronoun (or relative operator in the case of *that*-RCs) and fronted argument cannot both be DPs. If one is a DP, the other must be a PP. Furthermore, exactly the same pattern is found with argument negative preposing.

The fact that adverbial and argument negative preposing pattern with their non-negative counterparts with respect to the fronting possibilities in English RCs speaks against the idea that negative elements (whether adverbial or argumental) target a single position in the left periphery, such as SpecFocP (as in Haegeman 2012). Instead, fronted adverbials (negative and non-negative) and fronted arguments (negative and non-negative) target distinct positions. In the next section, I turn to an analysis and discussion of the distribution of fronted elements in RCs and of the categorial distinctness effect seen in finite *wh*- and *that*-RCs.

## 4. ANALYSIS AND DISCUSSION

### 4.1. The distribution of adverbial and argument fronting

Combining the conclusions of Sections 2 and 3, we schematise the distribution of adverbial and argument fronting (and their negative counterparts) in English RCs in (70).

(70) Distribution of adverbial and argument fronting in English RCs

	Finite <i>wh</i> -RCs	Finite <i>that</i> -RCs	Infinitival <i>wh</i> -RCs	Finite $\emptyset$ -RCs	Infinitival <i>for</i> -RCs	Infinitival $\emptyset$ -RCs
Adverbial fronting	✓	✓	✓	*	*	*
Argument fronting	(✓)	(✓)	*	*	*	*

✓ = allowed; (✓) = allowed (subject to categorial distinctness effect); \* = not allowed

I propose that this distribution can be captured by positing (at least) three distinct sizes of RC in English, which I will describe in cartographic terms.

Rizzi (2004:242) proposes the following articulation of the C-domain (\* here means ‘iterable’):

(71) Force > Top\* > Int > Top\* > Focus > Mod\* > Top\* > Fin > IP

SpecTopP hosts topic phrases, SpecFocusP hosts focus phrases, SpecIntP hosts high *wh*-elements such as Italian *perché* ‘why’, and SpecModP hosts fronted adverbials in all but ‘very special discourse contexts’ (Rizzi 2004). Because (i) I am not concerned with Int in the present paper; (ii) English does not permit multiple topics (see Haegeman 2012 and references therein); and (iii) English topics can never follow foci (see Haegeman 2012 and references therein), I adopt the simplified articulation of the C-domain in (72) as the basis for the analysis and discussion in the following sections (Foc = Focus).

(72) Force > Top > Foc > Mod\* > Fin > IP

I assume that argument fronting targets either SpecTopP or SpecFocP in general. Below, I consider whether fronted arguments in RCs are topics or foci.

We are now in a position to account for the distribution of argument fronting and adverbial fronting in RCs. The intuition I am pursuing is that RCs may vary in structural size, i.e. some RCs may contain more syntactic structure in their left periphery than other types of RC. I assume that relativisation, i.e. the A'-movement involved in the formation of RCs (see Chomsky 1977; Rizzi 1997), targets a high position *within the left periphery available*. This means that, in RCs with less structure in the C-domain, relativisation will target a lower position *relative to* the position targeted by relativisation in RCs with more C-domain structure. Specifically, I propose that relativisation targets: (i) SpecTopP in finite *wh*-RCs and *that*-RCs; (ii) SpecFocP in infinitival *wh*-RCs; and (iii) SpecFinP in finite  $\emptyset$ -RCs, infinitival *for*-RCs and infinitival  $\emptyset$ -RCs. For exposition, I will refer to these types as TopP RCs, FocP RCs and FinP RCs respectively. These labels are intended to describe the relative heights targeted by relativisation in the different types of RC; they do not describe the structural upper bound of the RC itself (see Section 4.5).

I believe that this proposal correctly captures the distribution of fronted adverbials and arguments in English RCs, and makes some interesting and correct predictions for the distribution of categorial distinctness effects in the English C-domain, as I will argue below. I will consider FinP RCs, FocP RCs and TopP RCs in this order.

## 4.2. FinP RCs

FinPs are too small to contain TopP, FocP or ModP. Consequently, both argument and adverbial fronting are prohibited. I assume that in finite  $\emptyset$ -RCs, Fin is  $\emptyset$ , whilst in infinitival *for*-RCs, Fin is lexicalised as *for*, in line with previous proposals (Rizzi 1997; Radford 2009; Haegeman 2012). If infinitival  $\emptyset$ -RCs are also FinPs, Fin is also  $\emptyset$  in these cases.

However, there is potentially a size difference between finite  $\emptyset$ -RCs and infinitival *for*-RCs on the one hand, and infinitival  $\emptyset$ -RCs on the other. The evidence comes from the observation that finite  $\emptyset$ -RCs and infinitival *for*-RCs can relativise out of embedded finite clauses, as in (73) and (74), whilst infinitival  $\emptyset$ -RCs seemingly cannot (see Longenbaugh 2016), as in (75), at least for some speakers.<sup>7</sup> The following examples are taken or adapted from Longenbaugh (2016).

(73) Finite  $\emptyset$ -RCs

- a. I found a play you can prove was written by Shakespeare.
- b. I found a play you can prove (that) Shakespeare wrote.

<sup>7</sup> My consultants gave variable judgements for the data in (75).

- (74) Infinitival *for*-RCs
- a. I found a play for you to prove was written by Shakespeare.
  - b. I found a play for you to prove (that) Shakespeare wrote.
- (75) Infinitival  $\emptyset$ -RCs
- a. \* I found a play to prove was written by Shakespeare.
  - b. ?\* I found a play to prove (that) Shakespeare wrote.

For those speakers who detect a contrast, infinitival  $\emptyset$ -RCs seem to exhibit A'-properties in that arguments can be relativised without higher arguments intervening with such movement, as well as A-movement properties in that such movement seems to be clause-bound, as in (75). In contrast, finite  $\emptyset$ -RCs and infinitival *for*-RCs exhibit only A'-properties. Longenbaugh (2016) suggests that the hybrid A'/A-properties are the result of a composite probe, i.e. one seeking both A'- and A-related features. We could hypothesise that, if a C-domain is absent, both A'- and A-features are present on I, whilst if a C-domain is present, the A-features are on I and the A'-features in the C-domain. If this is correct, it suggests that, although finite  $\emptyset$ -RCs, infinitival *for*-RCs and infinitival  $\emptyset$ -RCs all lack the requisite structure to host fronted adverbials and fronted arguments (i.e. their C-domains contain no structure higher than FinP), finite  $\emptyset$ -RCs and infinitival *for*-RCs do have at least some portion of the C-domain, whilst infinitival  $\emptyset$ -RCs may lack a C-domain altogether.

### 4.3. FocP RCs

According to my proposal, FocPs are large enough to contain ModP and hence permit adverbial fronting. Argument fronting is not permitted because relativisation targets SpecFocP in infinitival *wh*-RCs and FocPs are too small to contain TopP, i.e. there is no available position for argument fronting. However, it has also been claimed that argument fronting is generally impossible in infinitival clauses (see Bianchi 1999:206ff). Evidence comes from the impossibility of argument fronting in raising and control infinitivals, as in (76) (Hooper & Thompson 1973:484-485; Haegeman 2012:67-68) and in ECM complements, as in (77) (Haegeman 2012, Chapter 2, note 20).

- (76) a. \* My friends tend, the more liberal candidates, to support.  
(Hooper & Thompson 1973:485)
- b. \* I have decided, your book, to read.
- (77) a. \* I really want, that solution, Robin to explore thoroughly.  
(Culicover & Levine 2001:297, fn 14)
- b. \* Police believe, the London area, the suspect to have left.

However, this evidence does not necessarily rule out the relevance of structural size since raising, control and ECM infinitivals could themselves be too small to host fronted arguments. Instead, we need to test an infinitival clause that is independently considered to be quite large. In this respect, consider embedded questions. It is typically said that *wh*-phrases in embedded *finite* contexts target a higher position in the left periphery (SpecForceP) than in matrix contexts (SpecFocP) (see Pesetsky 1995; Haegeman 2012), thereby capturing the observation that matrix *wh*-phrases follow matrix topics but embedded *wh*-phrases precede embedded topics. The high position of *wh*-phrases in embedded clauses is potentially related to clause-typing (Cheng 1991). Now, assuming that *wh*-phrases in embedded infinitival questions also occupy a high left peripheral position for clause-typing, observe that argument fronting seems to be

possible, as in (78). The examples may not be perfect, but my consultants certainly judge them as better than those in (76) and (77).

- (78) a. ? John didn't know what TO MARY ESPECIALLY to say at a time like that.  
 b. ? I asked to whom THIS PARTICULAR FORM to give so it'd be processed promptly.

Therefore, it seems that argument fronting is *not* incompatible with infinitival contexts *per se* (*pace* Bianchi 1999). I thus conclude that infinitival *wh*-RCs do not permit argument fronting because they are structurally too small and not because they are infinitival.

Another potential problem is that infinitival *wh*-RCs do not seem to be associated with focus interpretations (Luigi Rizzi p.c.). This may be due to my erroneously associating the lowest fronted argument position in the C-domain with SpecFocP. What is crucial to my proposal is that infinitival *wh*-RCs have only a single fronted argument position in their left-periphery. This is targeted by relativisation and hence blocks all other argument fronting. If it turns out that there is a position for fronted arguments below FocP (see Douglas 2016:83, fn 15), the essence of the present proposal would remain unaffected.

#### 4.4. TopP RCs

Returning to finite *wh*- and *that*-RCs, I propose that these are TopPs. I assume that Top is lexicalised as *that* in *that*-RCs and as  $\emptyset$  in finite *wh*-RCs. TopPs are large enough to contain ModP and so permit adverbial fronting. They are also large enough to contain FocP and so permit argument fronting. This predicts that argument fronting in RCs is focalisation rather than topicalisation. I argue that this is indeed the case.

Firstly, in English, multiple argument fronting is permitted in non-RC contexts always in the order topic-focus (Culicover 1991; Haegeman 2012), as in (79a), but RCs only permit a single argument to be fronted, as in (79b).<sup>8</sup>

- (79) a. [<sub>Topic</sub> That book] [<sub>Focus</sub> to John] Mary gave in 1979.  
 b. \* the year in which [<sub>Topic</sub> that book] [<sub>Focus</sub> to John] Mary gave

Since Top is higher than Foc in English, the presence of a Top position implies the presence of a Foc position (at least in principle), but not vice versa. Therefore, if only a single fronted argument position is available, we would expect it to be the Foc position since, if RCs were large enough to contain Top, we would predict that they could contain Foc as well, i.e. two argument fronting positions would be available (in principle).

Secondly, applying two of Rizzi's (1997) topic/focus diagnostics, namely Weak Crossover (WCO) and resumption, the fronted argument in RCs seems to pattern as a focus rather than as a topic phrase. Rizzi shows that foci exhibit WCO effects whilst topics do not. Judgements may be subtle, but the contrasts between (80) (with WCO) and (81) (without WCO) suggest that the fronted argument in RCs is sensitive to WCO.

- (80) a. ?\* the school to which JOHN SMITH<sub>i</sub> his<sub>i</sub> mother is planning to send  
 b. ? the person to whom THIS BOOK<sub>i</sub> its<sub>i</sub> author is happy to give for free

- (81) a. the school to which JOHN SMITH Mary is planning to send  
 b. the person to whom THIS BOOK Mary is happy to give for free

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<sup>8</sup> The standard claim is that multiple topics are not permitted in English (see Haegeman 2012 and references therein), and that multiple foci are not permitted generally (Rizzi 1997; Haegeman 2012).

As a second diagnostic, Rizzi notes that topics can be resumed by resumptive pronouns, whilst foci cannot (at least in Italian). English does not typically make use of resumptive pronouns (unless with hanging topics or to repair certain island violations), but it seems that the fronted argument in RCs is not readily resumed by a resumptive pronoun, as in (82). In fact, if anything can be resumed, it is the RC head or relative pronoun (recall fn 5), as in (83), suggesting that, if anything is a topic, it is the RC head or relative pronoun (see also Section 4.5 below).

- (82) a. ?\* a man to whom UNFETTERED LIBERTY we would never grant it  
 b. ?\* a man to whom THIS BOOK Mary would happily give it

- (83) a. ? a man to whom UNFETTERED LIBERTY we would never grant to him  
 b. ? a man to whom THIS BOOK Mary would happily give to him

Although none of these considerations is conclusive in isolation, the diagnostics nevertheless both seem to converge on the conclusion that argument fronting in English RCs is focalisation rather than topicalisation. This in turn suggests that the ban on multiple argument fronting in RCs in English, as in (79b), is due to the idea that SpecTopP is targeted by relativisation and so cannot be targeted by topicalisation as well. In other words, relativisation and topicalisation seem to compete for the same position, i.e. SpecTopP. This formally captures the long-standing intuition that relativisation and topicalisation are intimately related (see Kuno 1973, 1976; Bianchi 1999; Williams 2011; Abels 2012; Douglas 2016, 2017), at least for finite RC contexts.

#### 4.5. Categorical distinctness

We have seen from the investigation of finite *wh*- and *that*-RCs (Sections 3.1 and 3.2) that there is a categorial distinctness effect between the relative pronoun or operator and a fronted argument. In the previous section, we located these elements in SpecTopP and SpecFocP respectively. We can thus say that the categorial distinctness effect holds between the elements in SpecTopP and SpecFocP. If correct, this predicts that categorial distinctness effects should be found with topics and foci beyond RC contexts. As (84) and (85) show, this prediction is borne out.

- (84) a. [Topic This present] [Focus TO MARY] I would give.  
 b. \* [Topic This present] [Focus MARY] I would give to.

- (85) a. [Topic To Mary] [Focus THIS PRESENT] I would give.  
 b. \* [Topic Mary] [Focus THIS PRESENT] I would give to.

If the topic phrase is a DP, the focus phrase must be a PP, as in (84a), and cannot be a DP, as in (84b). If the focus phrase is a DP, the topic phrase must be a PP, as in (85a), and cannot be a DP, as in (85b). As far as I am aware, this is a novel observation and lends important, independent support to the present proposal.

Developing the idea that there is a categorial distinctness effect between the elements in SpecTopP and SpecFocP further, recall that infinitival *wh*-RCs obligatorily involve preposition pied-piping. Richards (2010) attributes this to a categorial distinctness effect. Adopting the spirit of Richards' analysis (but not the exact details), I propose that there is a categorial distinctness effect between the relative pronoun, which targets SpecFocP in infinitival *wh*-RCs (independently argued for on the basis of the distribution of adverbial and argument fronting),

and the RC head, which I will assume is a DP in SpecTopP (see Borsley 1997; Bianchi 2000).<sup>9</sup> This yields the following configurations:<sup>10</sup>

(86) Infinitival *wh*-RCs

- a. \* [TopP [DP RC head] Top [FocP [DP *wh*-rel. pro.] Foc [FinP Fin ...]]  
 b. [TopP [DP RC head] Top [FocP [PP P [DP *wh*-rel. pro.]] Foc [FinP Fin ...]]

According to Richards (2010), a phasal spellout domain cannot contain a linearisation statement with two non-distinct elements since, by hypothesis, this would be uninterpretable at the interfaces. In (86a), assuming that Top is not a phase head, the RC head DP and the *wh*-relative pronoun DP are in the same spellout domain. This yields the linearisation statement <D,D>, where the two D elements are categorially non-distinct. Consequently, this linearisation statement is uninterpretable at the interfaces and the result is ungrammatical. In contrast, in (86b), the *wh*-relative pronoun DP is embedded within a PP. Assuming that P is a phase head, the *wh*-relative pronoun will be linearised in a separate spellout domain from the RC head DP. Consequently, the illicit <D,D> linearisation statement is not generated and the result is grammatical. The obligatory preposition pied-piping in infinitival *wh*-RCs can thus be viewed in some sense as a strategy to avoid violating categorial distinctness.

What about finite *wh*- and *that*-RCs? Recall that we see a categorial distinctness effect between a fronted argument, which was argued to be a focus phrase in SpecFocP, and the relative pronoun or operator, which was argued to be in SpecTopP.<sup>11</sup> I claim that this is configurationally directly analogous to the categorial distinctness effect witnessed in infinitival *wh*-RCs and to that witnessed between topics and foci in non-RC contexts. In other words, the three instances of categorial distinctness presented in this paper are manifestations of single categorial distinctness effect holding between elements in SpecFocP and SpecTopP.

There is no categorial distinctness effect in finite *wh*- and *that*-RCs between the relative pronoun or operator and the RC head. I have proposed that the relative pronoun or operator is in SpecTopP in such cases, and assume that the RC head is in SpecForceP (whether via movement or not does not matter for present purposes, see fn 10).

(87) Finite *wh*-/*that*-RCs

- a. [ForceP [DP RC head] Force [TopP [DP *wh*-rel. pro.] Top [FocP Foc [FinP Fin ...]]]  
 b. [ForceP [DP RC head] Force [TopP [PP P [DP *wh*-rel. pro.]] Top [FocP Foc [FinP Fin ...]]]

Assuming that Force, unlike Top, *is* a phase head, the RC head DP will be in a separate spellout domain regardless of whether the *wh*-relative pronoun or operator is embedded in a PP or not. Consequently, preposition pied-piping is an available option in finite *wh*- and *that*-RCs, but is not obligatory as it is in infinitival *wh*-RCs. However, a fronted argument in SpecFocP must be categorially distinct from the relative pronoun or operator in SpecTopP.

Finally, I would like to return to those cases of finite *wh*-RCs where both the relative pronoun and fronted argument pied-pipe a preposition. Recall (40), repeated below in (88).

(88) I met a man with whom ABOUT LINGUISTICS I could talk all day.

<sup>9</sup> Whether the RC head is base-generated in SpecTopP (the Matching Analysis, see Douglas 2016) or moves into this position (the Raising Analysis, see Bianchi 2000) is not particularly important for present purposes.

<sup>10</sup> I assume that the RC becomes the complement of an external determiner (see Kayne 1994 among many others).

<sup>11</sup> I assume that the relative operator in finite *that*-RCs is always categorially a DP, perhaps because base-generated empty categories (as opposed to derived ones) cannot serve as the complements of prepositions. See Douglas (2016, Chapter 3) for more discussion.



Totsuka (2014) concludes on the basis of such examples that there is *no* categorial distinctness effect between the relative pronoun and a fronted argument. However, given the categorial distinctness effects we have seen involving DPs (rather than PPs), which are not discussed by Totsuka (2014), this conclusion seems incorrect. But this raises the question of why there is no categorial distinctness effect between PPs. A number of possibilities present themselves.

Firstly, there is some doubt that the fronted ‘argument’ PP is an argument (Rizzi 1997:294, 322ff). If it is in fact an adverbial, we might expect it to occupy the lower position SpecModP rather than SpecFocP. Potential evidence for this conclusion comes from the fact that, although it is generally difficult to front a lot of material simultaneously in English, it seems possible to front the RC subject for focus in an example like (89).

(89) I met a man with whom MARY **about linguistics** could talk all day.

Crucially, both the focussed subject DP *Mary* and the fronted PP *about linguistics* can co-occur, suggesting that they are not competing for the same position, i.e. SpecFocP. Furthermore, this suggests that the PP *about linguistics* is lower than FocP, plausibly in SpecModP where fronted adverbials are generally located. Consequently, the fronted PP *about linguistics* may be in a separate spellout domain from the relative pronoun PP, either because there is a phase head in the C-domain between SpecTopP and SpecModP, or because adverbial phrases are embedded within additional silent phasal structure.

Alternatively, it may be the case that English Ds are not categorially distinct whilst English Ps are more fine-grained in categorial terms. Richards (2010:42ff) shows that multiple sluicing in English cannot involve multiple DPs, i.e. English Ds are categorially non-distinct. However, Richards shows that multiple sluicing in Japanese is possible with multiple DPs provided that those remnant DPs have different cases, i.e. Japanese Ds can be distinguished by case, unlike English Ds. Furthermore, Richards notes that, for some Japanese speakers, multiple remnant DPs with the same case are allowed provided that the two remnants differ in animacy, i.e. for some Japanese speakers, Ds with the same case can be distinguished by animacy. There is thus cross-linguistic and interspeaker variation with respect to distinctness, and one could well imagine some categories being more fine-grained than others within a single language.

Therefore, although I will refrain from making any concrete proposals for the absence of categorial distinctness effects when multiple PPs are involved, this discussion should highlight the fact that, on Richards’ (2010) original proposal, the absence of categorial distinctness effects does not necessarily tell us as much as the presence of such effects. Consequently, the absence of such effects with multiple PPs does not necessarily threaten an account based on the presence of such effects with multiple DPs. Nevertheless, these issues remain and deserve further attention in future work.

## 5. CONCLUSION

I have argued that the different types of English RC vary in structural size, with relativisation targeting different positions in the C-domain depending on how much of the C-domain is structurally present. I proposed that finite *wh*-RCs and *that*-RCs are the largest type of RC with relativisation targeting SpecTopP. As such they permit fronted adverbials and fronted (focus) arguments (subject to the categorial distinctness effect). Infinitival *wh*-RCs are the next largest type of RC with relativisation targeting SpecFocP. As such they permit adverbial fronting but not argument fronting since SpecFocP is occupied by the relativised element. Finite  $\emptyset$ -RCs, infinitival *for*-RCs and infinitival  $\emptyset$ -RCs are the smallest type of RC with relativisation targeting SpecFinP (or perhaps an even lower position in the case of infinitival  $\emptyset$ -RCs). As such they permit neither adverbial fronting nor argument fronting.

I argued that argument fronting in RCs, where speakers allow it, is focalisation rather than topicalisation, and went on to conclude that the categorial distinctness effect uncovered in finite *wh*-RCs and *that*-RCs between the fronted argument and relative pronoun or operator thus holds between elements in SpecFocP and SpecTopP. I proposed that this categorial distinctness effect between SpecFocP and SpecTopP is also manifested between topic and focus phrases in non-RC contexts, as well as in infinitival *wh*-RCs, following Richards (2010), where the relative pronoun obligatorily pied-pipes a preposition thereby avoiding a categorial distinctness violation between the RC head and relative pronoun.

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