Anti-locality and preposition stranding in a variety of Ontario French

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Dissertation Submitted in Partial Fulfillment of the Requirements
for the Doctorate of Philosophy Degree in Linguistics

Abstract

This thesis investigates and documents the existence of preposition stranding in a dialect of Canadian French. The French spoken in the small Franco-Ontarian town of Lafontaine (LFF) allows prepositions to be stranded (i.e. without a following overt complement) in various scenarios. Taking bona fide P-stranding to be derivable only via leftward movement of prepositional complements, I show that LFF has true P-stranding equivalent to that observed in English. I argue that although LFF parallels Standard French in having *orphan prepositions*–where this phenomenon is best analyzed as non-movement derived P-stranding with the gap following the preposition being the instantiation of a null pronoun (Authier 2016; Zribi-Hertz 1984)–it is incontrovertible that P-stranding takes place under syntactic movement in LFF (e.g. *wh*-movement). Following Abels (2003b, 2012), I assume that prepositions constitute phase heads and their complements cannot be extracted without violating the principle of anti-locality. My central argument in this thesis is that in order to void violations of anti-locality, PPs in P-stranding languages must contain an extra layer of structure between prepositions and their complements in order to allow extraction. Evidence for this extra layer of structure is found in LFF in the form of the invariant morpheme *de-* which appears on the prepositions *dans*, *sur* and *sous* when these are used in stranding constructions (e.g. *dedans*). Again, following Abels (2012), I label the *de-* element that appears on these prepositions under stranding as a 'DR-morpheme'; this morpheme constitutes the head of a DRP which intervenes between prepositions and their complements, allowing extraction. I further show that evidence for the existence of bona fide P-stranding in LFF comes in the form of the ability to strand prepositions under ellipsis in this dialect. LFF, like English, allows prepositions to be stranded in *swiping* constructions, where swiping is a sub form of sluicing wherein a prepositions and its *wh*-complement surface in inverse order (e.g.ẁho from'/*qui de*) as the sole remnants of ellipsis. Given the existence of swiping in LFF, I discuss certain ramifications this has for current theories of sluicing and swiping, ultimately arguing that swiping in LFF is best analyzed as being derived via deleting prosodically redundant material between a *wh*-phrase which has moved to the left periphery, and its selecting preposition which has been left stranded in its base position.

Dedication

To my parents, without whose unwavering love and support none of this would have been possible.

Acknowledgements

For help in navigating the many difficulties and the arduous journey of completing this thesis, I wish to thank, first and foremost, my supervisor Dennis Ott for his patience and guidance throughout this long process. I also wish to thank all the faculty members and fellow students at the University of Ottawa Linguistics department who have provided guidance and assistance, shared their knowledge with me, their friendship and made my time at this university a rich and rewarding experience. This includes but is not limited to, Éric Mathieu, Laura Sabourin, Marc Brunelle, Andrés Salanova, Tania Zamuner, Anna Arregui, Myriam Lapierre, Mahsa Morid, Myriam Dali and Basile Roussel.

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Chapter 1

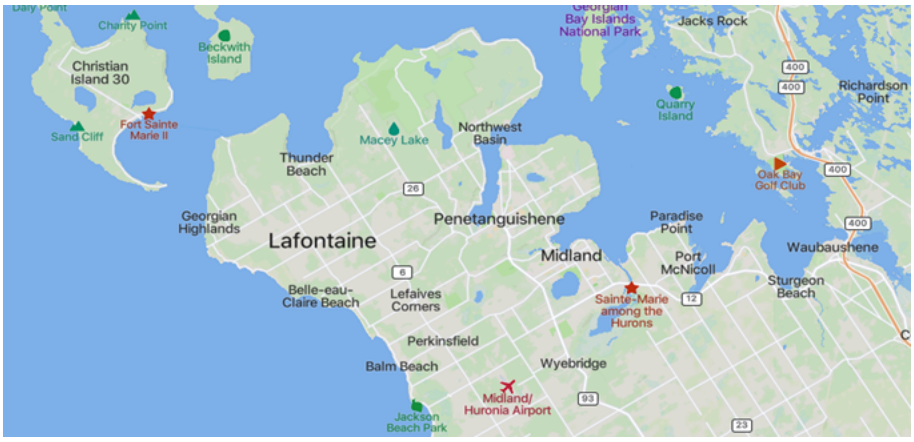
Introduction

This thesis investigates the theoretical implications of the stranding of prepositions in a dialect of Canadian French. My study focuses on speakers from a small francophone community called Lafontaine who speak a dialect of Ontario French, which for the purposes of this thesis I will label as Lafontaine French (henceforth LFF).

1.1 Lafontaine French: Some history

The small town of Lafontaine Ontario was initially settled in 1830 by French Canadian and Métis voyageurs from Drummond Island and subsequently by different waves of immigrants originating from Quebec (Ontario Heritage Trust, 2007). This isolated francophone community is located on a small peninsula jutting out into Georgian Bay, which comprises a part of Lake Huron, being roughly one hundred and fifty kilometers north of Toronto and four hundred and fifty kilometers west of Ottawa. Lafontaine is hemmed in on three sides by water and bordered on the landward side by predominantly anglophone communities, as shown below (Map carta, 2023):

Figure 1.1: The isolated francophone community of Lafontaine.



Like other dialects of Canadian French (henceforth CF), LFF can trace its origins back to France. Being a dialect of Ontario French, LFF is one of many dialects that comprise one of the two central varieties of CF, standardly labelled as Laurentian French (see e.g. Grimm 2015; Stevenson 2015, among many others). The second variety of CF is known as Acadian French and is spoken in the four provinces of Atlantic Canada (i.e. Nova Scotia, New Brunswick, Newfoundland and Prince Edward Island). Grimm (2015) notes that Acadian and Laurentian French differ in three respects: where in France the settlers originated from; the socio-economic background of the settlers; and how much contact the respective settlers had with both external varieties of French as well as English.

Historically, Laurentian and Acadian French have taken different evolutionary paths (Balcom, Beaulieu, Butler, Cichocki, and King 2008; Côté 2012, a.o.). Settlers comprising the diaspora of Acadian French speakers were primarily from the lower classes and emigrated from the centre-west of France (Grimm, 2015). Due to the 'Grand Dérangement' of 1755-1756, which saw the displacement of many Acadian French settlers due to a refusal to swear allegiance to the British Crown, and a subsequent resettlement in 1760, many Acadian communities were settled in close proximity to English ones. This resettlement cut off Acadian settlers from contact with external varieties of French and put them in an intense contact situation with English (Grimm, 2015).

Laurentian French on the other hand originates from the French immigrants who settled the Laurentian Valley in Quebec, hence its name. The majority of these settlers came from the French provinces north of the Loire Valley and were made up of people from all levels of the socio-economic hierarchy (Grimm, 2015). Other dialects of Laurentian French spoken in the provinces west of Quebec originate with settlers that migrated from Quebec in different waves beginning in the seventeenth century.

Given the oceanic divide between Canada and Europe, CF was thus isolated from its origins and differs from Standard French (henceforth SF). [1] CF is distinguished from SF by having retained certain traditional vernacular features and archaisms, along with innovations and borrowings from First Nations languages as well as English that are not present is SF (Grimm 2015; Poirier 1980, a.o.).

In regards to Acadian and Laurentian French, Acadian French is said to be distinguished from Laurentian varieties by being more innovative due to the duration and intensity of contact with English (Grimm 2015). Research on Laurentian French varieties themselves, according to Grimm (2015), show that a high degree of similarity exists in their morphosyntactic, lexical and phonological features. Nevertheless, important differences exist between those dialects spoken in Quebec (i.e. Quebec French) and those spoken in other provinces. The variety that is of primary concern to this

[1] I note here that throughout this thesis, Standard French (SF) is to be defined as those dialects spoken throughout France.

thesis is Ontario French. Aside from Quebec, Ontario has the largest population of francophones in Canada (Choquette 1980, a.o.), but like all other predominantly English-speaking provinces, this population has been on the decline since 1961 (Grimm, 2015). Besides there being lexical differences between Ontario and Quebec French, along with more borrowings from English (Haden 1973; Mougeon, Nadasdi, and Rehner 2005; Papen 1998, a.o.), the key feature that distinguishes Ontario French (and other varieties west of Quebec) from Quebec French is the degree of contact with English and the high degree of bilingualism in its speakers (Mougeon and Beniak 1991; Papen 1998; Poirier 1994, a.o.). Papen (1998) notes that at least eighty-four percent of French speakers in Ontario are active bilinguals. Use of French thus tends to be more restricted (to varying degrees depending upon the given community) and a high degree of bilingualism is the key feature distinguishing Ontario French from Quebec French.

In terms of LFF, available data suggests there are approximately one thousand native speakers of this dialect in Lafontaine (Ontario Heritage Trust, 2007). Like with other dialects of Ontario French, use of the French language is more restricted in this community and bilingualism is the norm. Given its location as a small, isolated community surrounded by predominantly English speaking communities, Lafontaine and its LFF speakers are in close contact with English and subject to pressures of assimilation. This has only increased over the years as Lafontaine's demographic nature has changed with the times, comprising families with mixed language backgrounds and many more anglophones settling into the area and mixing in with the population. Even for children who learn LFF as an L1, English in many cases becomes the predominant language of use inside and outside the household as these children get older. Even for the LFF speaking children who attend a French school in the area, exposure to English in other settings (including in school when outside of the classroom) is typically high. To the best of my knowledge, LFF speakers are fluently bilingual; the monolingual speakers that settled the area in the nineteenth century are now a thing of the past. LFF is thus characteristic of the bilingualism seen in other dialects of Ontario French. Given this fact, it is likely that the observations made regarding the stranding of prepositions in LFF (as already noted for Acadian French by Roberge and Rosen 1999, a.o.) can be directly extended to other dialects of not only Ontario French, but also those spoken in the other predominantly anglophone provinces west of Ontario and Quebec.

1.2 A brief introduction to preposition stranding

In investigating the LFF dialect in this thesis, I look to answer two central research questions. The first is to determine what preposition stranding (P-stranding) generally is and why a dialect like LFF differs from Standard French in productively allowing this phenomenon to take place. The second is to determine where LFF fits in within the typology of P-stranding languages that I develop and

go over in detail in chapter 2 of the thesis. To answer these research questions, I will investigate the use of prepositions in LFF in cases where the the preposition is followed by a gap (1-a)/(1-c), rather than the usually expected overt complement (1-b)/(1-d), as exemplified below:

(1) a. Cette boîte, le chat se cache souvent *dedans*.
this box the cat itself hides often inside.of
'This box, the cat often hides inside of *(it).'

b. Le chat se cache souvent *dedans* cette boîte .
the cat itself hides often inside.of this box
'The cat often hides inside of this box.'

c. Qui est-ce qu'elle est partie *avec*?
who is.it that.she is left with
'Who did she leave with?'

d. Elle est partie *avec* Marc.
she is left with Marc
'She left with Marc.'

Both of the cases above in which the preposition lacks an overt complement following it in linear order are perfectly acceptable in LFF. Crucially, only (1-a) is acceptable in Standard French (SF) (Jones 1996; Zribi-Hertz 1984, a.o.). Analytically, there is an important difference between the two structures in (1-a) and (1-c). (1-a) is assumed to be a structure that is specific to French. As the translation shows, the English equivalent cannot leave the preposition *of* stranded in such cases; the presence of a resumptive pronoun (i.e. 'it' in this instance) following the preposition is obligatory. The structure in (1-a) is typically referred to as *orphaning*, and is syntactically analyzed as having a null resumptive pronoun following the preposition (represented by *pro* below) (Zribi-Hertz 1984):

(2) $[_{CP}$ Cette boîte$_i$ ... $[_{PP}$ $[_{P}$ *dedans* $[_{DP}$ *pro*$_i$]]]]

As the above shows, the gap in these structures is assumed to be occupied by a pronominal element that remains phonologically unrealized, being co-referent with an element in the previous discourse. The presence of the null *pro* is assumed to be what allows the preposition to appear without a complement. These cases are thus analyzed as instances of null resumption and are considered non-movement derived P-stranding.

Cases like those represented in (1-b) on the other hand are standardly analyzed as movement derived P-stranding (van Riemsdijk 1978; Abels 2003b a.o). Investigations into the syntax of P-stranding go back as far as Ross (1967), who was the first to discuss the phenomenon and its implications for syntactic theory. English is well known as a language that can freely strand prepositions in a wide array of $\overline{\text{A}}$-movement scenarios (e.g. Stanton 2016 a.o.). Below are typical cases of P-stranding in English in a matrix question (3-a), a long distance question (4-a), and a relative clause (5-a). Examples (3-b), (4-b), and (5-b) provide their equivalent pied-piping counterparts

(example (5) from Hoffmann 2005). Fronting of the entire PP (i.e. pied-piping), although usually sounding somewhat stilted in English, and additionally subject to certain constraints, is a restricted but acceptable option (Cable 2010; Heck 2008, 2009; Hudson 2018 a.o.).

(3) a. Who did she go out *with* last night?
b. *With* whom did she go out last night?

(4) a. Who did you say she went out *with* last night?
b. *With* whom did you say she went out last night?

(5) a. They found the knife which the victim had been killed *with*.
b. They found the knife *with* which the victim had been killed.

The standard syntactic analysis of the English P-stranding examples above assumes $\overline{\text{A}}$-movement has taken place, leaving the trace of a moved element in the position of the gap following the preposition (Abels 2003b a.o.). This movement leaves the prepositional head 'stranded' under question formation. This standard analysis is illustrated for a case of P-stranding under *wh*-movement in question formation below:

(6) Who$_i$ was she [$_{\text{PP}}$ *with* t_i]?

Cross-linguistically, P-stranding is a rare phenomenon, said to occur in only a small subset of languages, the majority of them, like English, being in the Germanic language family (van Riemsdijk, 1978, a.o.). I give a few representative cases below (example (7-a) from Law 2017; (7-b) from Herslund 1984; (7-c) from Den Dikken and Næss 1993):[2]

(7) a. Vad talade du *om*?
what talked you about
'What did you talk about?' *Swedish*

b. Hvem var han gået i teatret *med*?
who had he gone to the.theatre with
'Who had he gone to the theatre with?' *Danish*

c. Hann spurði hvern ég hefði talað *við*.
he asked whom.ACC I had talked to
'He asked who I had talked to.' *Icelandic*

Out of this small group of languages, P-stranding has been most extensively studied in English, due to its productive nature in this language. A generalization commonly made in the literature, and one that is of core importance to this thesis is that P-stranding of the type seen in English is illicit in

[2]Some other languages outside of the Germanic language family have been claimed to allow P-stranding. I will discuss these languages and the full empirical picture of P-stranding in depth in Chapter 2.

all Romance languages (van Riemsdijk 1978; Law 2017, a.o.). LFF, being a dialect of a Romance language, falsifies this claim, as my original example in (1-c) clearly shows.

An interesting facet of P-stranding which has been well studied but insufficiently accounted for on a theoretical level is that this phenomenon is also possible outside of $\overline{\text{A}}$-movement. A subset of P-stranding languages allow prepositions to be stranded under passivization (i.e. A-movement):

(8) John$_i$ was talked *about* t_i (by his friends).

As in standard passivization, an object (of a preposition rather than a verb) is promoted to subject position while the agent argument is demoted to an optional *by*-phrase. The group of languages known to permit prepositional passives (henceforth P-passives) is a subset of the languages which allow P-stranding under $\overline{\text{A}}$-movement. This type of P-stranding is thus even rarer, being attested in only roughly about half a dozen languages (Law, 2017). Of significance to this thesis and the analysis to be developed herein is that LFF productively allows this type of P-stranding as well (9-a), where even some Germanic languages that have P-stranding under $\overline{\text{A}}$-movement do not (9-b) (example (9-b) from Sigurðsson 2011):

(9) a. Jean$_i$ a été parlé *de* t_i au meeting.
Jean has been talked about at.the meeting
'Jean was talked about at the meeting.' *LFF*

b. *Þá var Ólafur$_i$ oft talaður *um* t_i.
then was Olaf.N often talked about
'Then, Olaf was often a talked about person.' *Icelandic*

1.3 Thesis outline

Again, the central question this thesis seeks to answer is what allows the productive P-stranding observed in LFF under both A and $\overline{\text{A}}$-movement and how can this be theoretically accounted for within modern syntactic theory. My analysis will show that LFF cases of P-stranding are in fact bona fide movement derived P-stranding of the type found in English and are not reducible to being analyzed as cases of orphaning with a null *pro*.

Chapter 2 of the thesis will provide a synopsis of the state of the art on P-stranding. A look at both the empirical and theoretical side of P-stranding in those languages that to some extent or another allow this phenomenon in their grammar will be provided.

To begin, I will first classify what I take to be bona fide P-stranding, showing that to qualify as such, the preposition must be followed by the trace of a moved element. Crucially, the movement under question must be leftward movement of the prepositional complement to a higher clausal position; rightward movement cannot derive bona fide P-stranding.

In turn, I will provide a cross-linguistic classification of the world's languages. I will show that some languages can strand prepositions under both A and $\overline{\text{A}}$-movement, while a subset can strand prepositions under $\overline{\text{A}}$-movement only. A third group allows P-stranding under both types of movement, but in restricted circumstances, while the remainder of the world's languages are said to disallow P-stranding altogether. This leads me to group languages into four classes: Class 1: productive; Class 2: semi-productive; Class 3: restricted; Class 4: illicit. A core argument throughout this thesis will be that the empirical P-stranding facts observed in LFF show that, like English, it must be placed within the inventory of Class 1 languages.

Following this, I will discuss what has been proposed to constrain P-stranding, looking at some generalizations and restrictions that have been proposed in the literature. In this context I will discuss both A and $\overline{\text{A}}$-movement.

The remainder of the chapter provides a review and critique of the different proposals that have attempted to theoretically account for P-stranding. These fall into three distinct categories. The first type relies on the notion of government, proposing that only in languages where prepositions can properly govern their complements can P-stranding take place (e.g. Kayne 1984). A second type of approach proposes that a verb and the prepositional head of its PP complement can be reanalyzed, creating a new syntactic element out of the two heads, freeing the preposition's complement (e.g. Hornstein and Weinberg 1981). Lastly, some approaches take a structuralist view, assuming that the internal structure of PP is what allows complements of P to move, leaving their prepositional head stranded (e.g. van Riemsdijk 1978). The conclusion I reach is that an analysis of P-stranding which uses a PP-internal syntactic approach promises to be our best option in accounting for P-stranding in LFF. In my syntactic analysis in chapter 4, I will ultimately adopt concepts from Abels (2003b, 2012), who suggests that PPs in P-stranding languages contain an extra layer of structure within the PP architecture that separates prepositional heads from their immediate complements, allowing extraction.

Chapter 3 examines the empirical picture of P-stranding in LFF. In section 3.1 I provide a selective empirical survey of LFF P-stranding under both A and $\overline{\text{A}}$-movement. In the discussion I show that LFF parallels English where P-stranding is concerned as it productively allows prepositions to be stranded under both types of movement, as exemplified below:

(10) a. Quel banc est-ce qu'il s'est assis *dessus*?
which bench is.it that.he himself.is sat on
'Which bench did he sit on?' $\overline{\text{A}}$-*movement*

b. La chambre a été marchée *à travers* plusieurs fois.
the room has been walked at through several times
'The room has been walked through several times.' *A-movement*

My discussion and the empirical evidence provided argues that LFF, like English, belongs within

the inventory of Class 1 languages within the typology of P-stranding languages that I establish in chapter 2.

Section 3.2 then examines the phenomenon of *orphaning*, or *orphan prepositions* (OPs) in Standard French, where prepositions are followed by a gap and so on the surface look very much like P-stranding. The discussion here lays out the facts surrounding OPs, showing that there are two types, as exemplified below (from Zribi-Hertz 1984):

(11) a. Pendant que nous visitons Notre-Dame, Pierre est passé *devant* ___.
during that we were.visiting Notre-Dame Pierre is passed in.front.of
'While we were visiting Notre-Dame, Pierre passed in front of *(it).'

b. Les arbres, Pierre se cache toujours *derrière* ___.
the trees Pierre himself hides always behind
'Trees, Pierre always hides behind *(them) .'

In examining the above structures , I show that each has its own defining characteristics. My investigation into OPs will show that although LFF also uses this system of (apparent) P-stranding, it differs in sometimes allowing the use of animate antecedents in OPs, having English-like topicalization structures. In this manner, LFF thus again parallels English, adding to the body of evidence that LFF is a bona fide Class 1 P-stranding language.

In section 3.3 I then use diagnostics on movement and facts surrounding the interpretive properties of pronouns to test whether the gap following stranded prepositions in LFF is best analyzed as the trace of a moved element, as in English, or the instantiation of a null pronoun, as seen in OPs. The evidence here will show that P-stranding in LFF under A and $\overline{\text{A}}$-movement is in fact bona fide movement derived P-stranding and cannot be reduced to the null resumption seen in OPs.

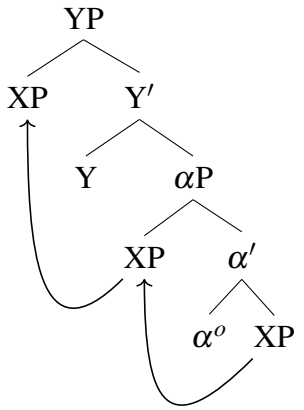
In section 3.4 I provide a brief discussion showing some further differences between LFF prepositions and their SF counterparts, showing that in many ways, LFF prepositions display English-like characteristics. Section 3.5 follows with a cursory discussion of language transfer and some preliminary results from a pilot study testing the acceptance of P-stranding among speakers of English, LFF and Quebec French via a reading time experiment. I show that the initial data appears to possibly reveal a trend that LFF and English pattern together in being more accepting of P-stranding structures. Nevertheless, I conclude that no solid assumptions or generalizations can be drawn from the data at this time and a more refined and thorough data analysis is required, possibly along with more sophisticated experimental work to be completed in the future.

Even though the relatively intense contact situation with English seen with LFF and many other dialects of Ontario French and others spoken in the provinces west of Ontario seem on the surface to suggest an English influence, I make no strong claims in this thesis that this is in fact the answer to why P-stranding is possible in LFF. The issue of proving that structural change in a language has occurred due to contact with another language remains a complex issue that must be approached

with very careful consideration of many factors (Hickey 2020; Thomason 2001, a.o.). Although my personal intuition is that contact with English has played a role, I remain open to the possibility that other language internal motivations may have contributed to the emergence of movement derived P-stranding in LFF. The issue of language contact, although I touch upon it in section 3.5 of chapter 3, is not the focus of this thesis and determining the degree to which contact with English may have induced change in LFF remains a puzzle that I will have to leave to future work.

Chapter 4 lays out my syntactic analysis of P-stranding. In my analysis, I assume that PPs are phases, and by extension that prepositions are phase heads. As PPs are phases (in the sense of Chomsky 2001), anything moving out of this domain must move (successive-cyclically) through the specifier position of PP. A central property of phase heads is that they induce a locality condition on movement. That is, the immediate complement of a phase head cannot undergo syntactic movement, leaving its phase head stranded without a complement since this movement is considered to be 'too local' in nature. This is exemplified below (where α^o represents a phase head and αP the phase) (from Abels 2003b):

(12) *



This locality condition on movement, known as anti-locality (Grohmann 2000, 2003, 2011) in combination with the phase head nature of prepositions, essentially renders prepositional complements immobile. This is exemplified for Greek below (from Merchant 2001):

(13) a. *Pjon milise *me*?
who she.spoke with
'Who did she speak with?'

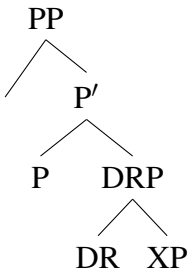
b. *Me* pjon milise?
with who she.spoke
'With whom did she speak?'

The above constraint on locality of movement is of course (on the surface) violated by those few languages of the world that allow P-stranding. The syntactic analysis I present in chapter 4 will address this puzzle, providing an account for why LFF, like English, can productively strand prepo-

sitions, while Standard French cannot.

Adopting theoretical concepts from Abels (2003b, 2012), I provide evidence for an additional layer of structure within PP in LFF that allows extraction of a preposition's complement. I begin by looking at P-stranding facts in German and Dutch discussed by Abels (2012). P-stranding takes place in these two languages under restricted circumstances. In Dutch and German only a special class of pronouns called R-pronouns can be extracted from PPs and yield P-stranding. The data and evidence presented by Abels suggests that a special morpheme intervenes between adpositions and R-pronouns in Dutch and German when P-stranding takes place under R-pronoun movement, an element which Abels labels as a DR-morpheme. The presence of this morpheme is observable in a morphological change that takes place on the adposition itself in German and on the R-pronoun in Dutch when P-stranding occurs. The extra layer of structure created by this morpheme is posited to allow adpositional complements to cycle successive-cyclically out of PPs by circumventing a violation of anti-locality, thus allowing prepositions to be stranded. The general idea, to be sketched out in detail in chapter 4, is illustrated below:

(14)



Building on Abels' suggestions about the DR-morpheme, I extend this analysis to LFF. I provide evidence that a DR-morpheme is realized on the LFF prepositions *dans*, *sur* and *sous*. In P-stranding scenarios, these prepositions always obligatorily incorporate a *de-* morpheme. The case below exemplifies:

(15) Quelle table est-ce qu'il a mis le livre *dessus*/**sur*?
which table is.it that.he has put the book on
'Which table did he put the book on.'

My analysis argues that the *de-* morpheme seen in LFF P-stranding is an instantiation of Abels' DR-morpheme. To begin, I apply the DR-morpheme approach to P-stranding under $\overline{\text{A}}$-movement and discuss how it accounts for P-stranding. Subsequently, I extend the DR-morpheme approach to A-movement. I discuss how the presence of this morpheme allows movement of NP/DP complements to derive cases of P-stranding under passivization in P-passives. Conversely, I also show that equivalent case of P-stranding are not possible with clitics as these are heads; the leftward movement that derives P-stranding can take place only with phrasal elements.

To round off the analytical discussion, I look at pied-piping and show that LFF always has true

optionality when it comes to choosing between pied-piping a PP or stranding its preposition. Using a feature percolation approach, I show how the DR-morpheme fits in where pied-piping is concerned. I also provide a brief discussion on the issue of non-strandable prepositions. I tentatively suggest that idiosyncratic properties of individual prepositions may contribute to their inability to be stranded, but that ultimately this remains an open puzzle.

Chapter 5 provides an investigation into the elliptical phenomena dubbed *sluicing* and *swiping*. In sluicing, ellipsis takes place leaving only a *wh*-remnant, as in (16-a). Swiping is a sub form of sluicing, where under ellipsis, a PP remnant remains, but the *wh*-phrase is inverted with and precedes its selecting preposition (16-b):

(16) a. He lost something, but I don't know **what**.
b. Anne left, but I have no idea **who** *with*.

Importantly, a generalization regarding the data above states that only languages that allow P-stranding under *wh*-movement in non-elliptical clauses will allow P-stranding under sluicing (see Merchant's (2002) Preposition Stranding Generalization, henceforth PSG). In chapter 5, I show that since LFF has P-stranding available in its grammar via merger of the DR-morpheme, equivalent constructions are licit in this dialect:

(17) a. Elle a vu quelqu'un, mais je ne sais pas **qui**.
she has seen someone but I NEG know not who
'She saw someone, but I don't know who.'
b. Elle est sortie, mais je ne sais pas **qui** *avec*.
She is gone.out but I NEG know not who with
'She went out, but I don't know who with.'

Of particular interest is the case of swiping in (17-b). To the best of my knowledge, documentation of swiping in LFF, a dialect of French, is novel empirical data showing that this structure exists outside of the Germanic languages.[3] The ramifications this has on current theories of sluicing and swiping will be the focus of the discussion and theoretical analysis in chapter 5.

Standard accounts of sluicing and swiping assume there is an underlying syntactic structure present in the site of ellipsis, with remnants vacating the TP domain which is then elided at PF (Hartman and Ai 2009; Merchant 2001; Radford and Iwasaki 2015, a.o.). The general idea is exemplified for the sluicing case in (17-a) and the swiping case in (17-b) below:

(18) a. Elle a vu quelqu'un mais je ne sais pas $[_{DP}$ **qui**$]_i$ ~~$[_{TP}$ elle a vu t_i]~~.
b. Elle est sortie, mais je ne sais pas $[_{PP}$ **qui** *avec*$]_i$ ~~$[_{TP}$ elle est sortie t_i]~~.

[3]The data and discussion in this chapter is based on Ott and Therrien (2020). I discuss this factor in more detail in fn. 1 of chapter 5.

Regarding the inversion seen in swiping cases, two approaches exist. The first, which in my analysis in chapter 5 I label as *internal*-inversion, assumes head movement of the *wh*-phrase to either the preposition (e.g. Merchant 2002) or the edge of PP (e.g. Lobeck 1995) (19). An alternative view (which I label as *external*-inversion) assumes the PP in swiping is extracted to some left peripheral position above TP (labeled as XP in (20)), with the *wh*-phrase then being extracted to an even higher position (Hartman and Ai 2009; Radford and Iwasaki 2015; Richards 2001; van Craenenbroeck 2004). These two analyses are illustrated for the swipe in (16-b) below:

(19) *Internal inversion*
$[_{CP}\ [_{PP}\ qui_i\ avec\ t_i\ ]_k\ \ldots\ \sout{[_{TP}\ \ldots\ t_k\ \ldots\ ]}\ ]$

(20) *External inversion*
$[_{CP}\ qui_i\ [_{XP}\ [_{PP}\ avec\ t_i\ ]_k\ \ldots\ \sout{[_{TP}\ \ldots\ t_k\ \ldots\ ]}\ ]]$

The above analyses make important predictions for theories of sluicing and swiping. Crucially, these analyses fail in establishing a meaningful link between swiping and P-stranding, failing to account for Merchant's PSG. I discuss the issues that swiping in LFF raises for both the *internal* and *external*-inversion analyses. I argue that accounts of swiping insisting that all remnants evacuate TP before ellipsis takes place are inherently problematic in view of the LFF data. Instead, I argue that swiping can best be accounted for by assuming non-constituent deletion. That is, swiping is derived by standard P-stranding under *wh*-movement, with deletion of all given and prosodically demoted material in the clause. The general idea, to be sketched out in more detail in Chapter 5, is given below for the example in (17-b):

(21) Elle est sortie, mais je ne sais pas **qui**$_i$ ~~qu'elle est sortie~~ [*avec* t_i]

The analysis above, unlike those relying on TP-deletion, is able to draw a meaningful link between P-stranding and sluicing and swiping, thus accounting for Merchant's PSG. I defer any further discussion to chapter 5.

Chapter 6 reviews the thesis as a whole, looking at what questions the analysis and discussion provided were able to answer and what issues still remain open. Possible future avenues of research and inquiry are suggested in summing up the work as a whole.

Chapter 2

Preposition stranding: state of the art

This chapter provides a synopsis on P-stranding. Firstly, I qualify what bona fide P-stranding is and establish that leftward movement of a preposition's complement is the key criterion necessary to distinguish it from cases of apparent P-stranding. Secondly, I look at the empirical side of P-stranding; based on the criteria I established to identify bona fide P-stranding I present a typology of P-stranding for the world's languages. This typology consists of four classes: **Class 1** (productive); **Class 2** (semi-productive); **Class 3** (restricted); **Class 4** (illicit). Following this I will look at some generalizations and constraints on P-stranding that have been noted in the literature.

A review and critique of the different proposals on P-stranding that have been developed in order to account for this phenomenon is then provided as necessary background to the discussion and analysis to come in the remainder of the thesis. My argumentation will show that proposals based on the concepts of government and reanalysis are burdened with a number of theoretical weaknesses that render them untenable in accounting for P-stranding in LFF. I will argue that the most promising way to account for P-stranding not only in LFF, but cross-linguistically, lies in a structural approach that posits that PPs in P-stranding languages have an additional layer of structure separating prepositions from their complements in P-stranding scenarios. This additional layer provides a buffer between prepositions and their complements, circumventing violations of anti-locality and allowing extraction to take place, leading to P-stranding.

2.1 Defining P-stranding

In this thesis, I take bona fide P-stranding to be a movement derived phenomenon, as in (1):

(1) [What crime]$_i$ did John get away *with* t_i?

The above example is a clear case of extraction, where *wh*-movement to the Spec-CP position leaves the preposition *with* stranded. This is an exemplar of bona fide P-stranding under $\overline{A}$-movement. In

qualifying bona fide P-stranding as a movement derived phenomenon, I will also state that I take P-stranding to be derivable not only through movement of overt complements, as in (1), but also by relative operators (OP), as in (2):[1]

(2) The crime [$_{CP}$ OP$_i$ that John got away *with* t_i].

To be explicit, bona fide P-stranding is *defined* via syntactic movement of either an overt complement or relative operator to a left peripheral position in clause structure, leaving the selecting prepositional head stranded in situ.[2] I return to this matter in detail in Chapter 3 when I discuss the phenomenon of orphan prepositions and provide diagnostics for identifying and differentiating between bona fide movement derived P-stranding and prepositions which take null pronominal complements.

I will also clarify here that I take P-stranding to be derived by movement, whether the moved complement originates in a complement PP or an adjunct PP. Adjuncts are typically claimed to be strong islands (i.e. an element cannot be extracted from such a domain) (J. Huang 1982; Ross 1967, a.o.). Based on this idea, the claim has often been made that P-stranding derived from adjunct PPs is illicit (Bennis and Hoekstra 1984; DeArmond and Hedberg 1998; Hornstein and Weinberg 1981, a.o.). This claim has been shown to be mostly erroneous (Huddleston and Pullum 2002; McInnerney 2022; Takami 1988, 2012; Truswell 2007, a.o.). Various types of adjunct PPs have been shown to allow P-stranding, as exemplified in (3) (from McInnerney 2022):

(3)
a. Who$_i$ are you waiting in line [for t_i]? (benefactive)
b. Who$_i$ did you go to the store [with t_i]? (comitative)
c. What$_i$ did you clean the oven [with t_i]? (instrument)
d. [How long]$_i$ have you been working [for t_i]? (durational)
e. [Which room]$_i$ did you read the newspaper [in t_i]? (locative)
f. [What time]$_i$ should we meet [at t_i]? (temporal)
g. Who$_i$ was this house designed [by t_i]? (passive by-phrase)
h. [Which window]$_i$ can you see into the garden [from t_i]? (source)
i. [Which shoes]$_i$ are easiest to run [in t_i]? (manner)

[1] In taking instances of relativization such as (2) to be derived via operator movement, I follow Foley (1996), Kayne (1994), Mitchell (2001), Perpiñán (2015) and Rizzi (1990), among others.

[2] Stanton (2016) notes the following cases as instances of P-stranding:
(i) Which session did you dislike ___ without leaving *after*?
(ii) The first session will be too good to leave *after*___.
The cases in (i) (parasitic gap) and (ii) (gapped degree phrase) are less central A-bar constructions. In this thesis I will focus primarily on cases of P-stranding under *wh*-movement (and to a lesser extent in relative clauses) as these cases are the clearest instances of movement derived P-stranding. Throughout the remainder of my discussion in this thesis, I abstract away from discussing cases such as those seen in (i) and (ii).

Although the PPs here are all adjuncts, these are clearly cases of movement derived P-stranding; the status of PP as an adjunct or complement is irrelevant.[3]

Furthermore, not all instances of stranded prepositions qualify as bona fide P-stranding. As already briefly mentioned in the introductory chapter, Standard French has cases of orphan prepositions (OPs) which appear without complements, as exemplified below (examples from Zribi-Hertz 1984):

(4) a. Pendant que nous visitons Notre-Dame, Pierre est passé *devant* ___.
during that we were.visiting Notre-Dame Pierre is passed in.front.of
'While we were visiting Notre-Dame, Pierre drove past it.'

b. Les arbres, Pierre se cache toujours *derrière* ___.
the trees Pierre himself hides always behind
'Trees, Pierre always hides behind them.'

The gap following the preposition in these cases has been analyzed as containing a null pronominal element rather than a trace (Zribi-Hertz, 1984, a.o.). This analysis is based on the fact that the gap in cases of orphan prepositions violates constraints on movement by being island insensitive and additionally has the characteristics of a pronoun rather than a trace. Cases of orphan prepositions, as they are not movement derived, are thus not instances of bona fide P-stranding. I will discuss the analysis of these cases and the diagnostics that allow us to differentiate them from true movement derived instances of P-stranding in detail in Chapter 3.

The take away from the data in (4) is that sometimes what appears to be P-stranding may not be movement derived. We see something similar in right node raising (RNR) structures, where it is generally unclear that these are actually cases of movement derived P-stranding (Agafonova 2014; Barros and Vicente 2011; Bošković 2004; Citko 2017; McCloskey 1986, a.o.). Note the English case of RNR below:

(5) John gave a gift *to*___, and Greg bought a gift *for*___, Bill.

Since English is a productive P-stranding language, we might naively assume that RNR is bona fide movement derived P-stranding. McCloskey (1986) provides an essential argument against such an analysis using data from Modern Irish. P-stranding is unequivocally illicit in this language (McCloskey, 1986):

[3]McInnerney (2022) provides evidence that the ability to extract a prepositional complement is not restricted by a PPs' status as either a complement or an adjunct. There is thus no argument/adjunct distinction in P-stranding. Rather, the internal structure of PP is what restricts the ability of a prepositional complement to undergo movement or not, this being the same essential core argument that will be presented in this thesis. I return to this point and discuss it in more detail in section 2.4.2.

(6) *Ba í [an ghirseach bheag rua]$_i$ aN raibh Tarlach de Brún ag caint *le* t_i.
was her the girl little red-haired COMP was Charlie Brown at talking with
'It was the little red-haired girl that Charlie Brown was talking to'.

Nevertheless, it has RNR in the same manner English does (recall (5) above), exemplified below (from McCloskey 1986):

(7) Brian Mag Uidhir ... ag glacadh *le* agus ag cabhrú *le* plandá'il a dtailte féin.
Brian Maguire ... take.PROG with and help.PROG with planting their lands REFLEX
'Brian Maguire ... accepting, and helping with, the planting of their own lands.'

Although a preposition can be followed by a gap in (7), this is the only such construction where this is allowed. Any other scenario where movement leaves a preposition stranded is illicit, whether it is leftwards movement as in the P-stranding seen in (6), or rightwards movement as in the case of Heavy NP-shift seen in (8) below (from McCloskey 1986):

(8) *Bhí mé ag éisteacht *le* inné clár mór fada ar an ráidió faoin toghachán.
was I listen.PROG with yesterday program great long on the radio about.the election
'I was listening yesterday to a great long program on the radio about the election.'

Rightwards movement of the complement of the preposition *le* past the adverb *inné* in (8) yields an illicit sentence. The contrast in acceptability between (7) and (8) casts doubt on movement being the mechanism that derives RNR in Irish since rightwards movement of the complement of P is illicit outside of RNR structures.

Citko (2017) notes a somewhat similar contrast exists in English. As noted by Ross (1967), although English is a P-stranding language, such constructions cannot be derived by rightward movement (9-a). Nevertheless, Citko (attributing the argument and data to Bošković 2004) points out that like Irish, English allows prepositions to be stranded in RNR (9-b)/(9-c), thus casting doubt on the notion that RNR is derived via rightward movement (from Citko 2017):

(9) a. *John talked about t_i yesterday [the man you met in Paris]$_i$.
b. John talked about __, and Mary ignored __, the man you met in Paris.
c. Mary ignored __, and John talked about __, the man you met in Paris.

The data above forces us to further narrow the criteria for identifying bona fide P-stranding. For purposes of my analysis in this thesis, true P-stranding must be qualified as not only being movement derived, but derived strictly by leftward movement. Identifying cases of movement derived P-stranding can be achieved through a number of diagnostics, the details of which I defer to Chapter 3 where they will be applied to LFF in order to show this dialect has productive P-stranding.

Given my definition of what characterizes bona fide P-stranding, my focus in this thesis will

be on *wh*-questions (both direct and indirect, as well as in matrix and long distance construals), since these are clear cases $\overline{\text{A}}$-movement. Given this factor, I provide a brief survey of *wh*-questions and *wh*-movement in French as background for what is to come in looking at P-stranding under $\overline{\text{A}}$-movement in LFF.

French is well-known as a language that allows questions to be formed using both a *wh*-ex situ as well as a *wh*-in situ strategy, with a fair amount of variation in how questions can be constructed (Tailleur 2013, a.o.). Below I provide a sample of some of the possible ways that questions can be worded in French, where these examples are all meaning equivalent (examples from Tailleur 2013):[4]

(10) a. Où vas-tu?
where go-you

b. Où tu vas?
where you go

c. Où est-ce que tu vas?
where is-it that you go

d. Où c'est que tu vas?
where it-is that you go

e. Où que tu vas?
where that you go

f. Tu vas où?
you go where
'Where are you going?'

As (10) shows, the *wh*-phrase can undergo movement to the left periphery (10-a)-(10-e) or remain in situ (10-f). Under *wh*-movement stylistic inversion of subject and verb can optionally take place (10-a) or the subject can remain in its canonical position (10-b). Additionally, the *wh*-phrase can be followed by the copular element *est-ce que* or variants of this element (10-c)-(10-e).[5]

Although all the variants in (10) are licit in LFF, as they are in Standard French, by far the most common and highly preferred variant is (10-c), where the full realization of the *est-ce que* element is used. This method of forming ex situ *wh*-questions is the standard in LFF.[6] In examining LFF

[4]For a more thorough survey of possible *wh*-constructions in French see Behnstedt (1973), Elsig (2009), Lefebvre (1982), among others.

[5]The exact status of the *est-ce que* element is debatable. Rowlett (2007) for instance analyzes it as a complex complementizer. Whatever the correct analysis of this element is, it need not concern us here as nothing within the DR-morpheme analysis I present in this thesis hinges on its status. For a detailed discussion on the historical evolution and status of this element see Tailleur (2013).

[6]The status of *wh*-in situ in French is still to this day a contentious issue in generative syntax (e.g. Adli 2006). Several syntactic restrictions have been claimed to apply to *wh*-in situ constructions in French (e.g. Bošković 1998) and they have additionally been claimed to be subject to a different interpretation than their ex situ counterparts (e.g. Mathieu 2004), as well as having particular intonational characteristics (e.g. Cheng and Rooryck 2000). Given that this

P-stranding in this thesis, the style of *wh*-question exemplified in (10-c) will constitute the majority of examples illustrating P-stranding under $\overline{\text{A}}$-movement.

2.2 Classifying P-stranding languages

Since I qualify bona fide P-stranding as occurring only under leftward movement of adpositional complements, a survey of what is allowable in P-stranding languages under both $\overline{\text{A}}$-movement (e.g. *wh*-movement) as well as A-movement (passivization) is necessary.[7] The following sections detail what is permissible with regards to P-stranding in different P-stranding languages and I accordingly inventory each individual language into the class whose characteristics best suit it.

2.2.1 Class 1 (productive)

Class 1 includes languages which have productive P-stranding under both A and $\overline{\text{A}}$-movement. Using English as an exemplary case, we find P-stranding is permissible in a significantly wide array of $\overline{\text{A}}$-movement scenarios (11) (examples from Stanton 2016), as well as being productive

thesis is focused on P-stranding and therefore extraction of *wh*-phrases, I abstract away from any detailed discussion of *wh*-in situ constructions in French. For a more detailed discussion on this topic see Adli (2006), Elsig (2009), Faure and Palasis (2021) and Mathieu (2009), among others.

[7] I make note here of a claim made by Abels, (2003a, 2003b) in regards to the ability of some P-stranding languages to take clitics as prepositional complements. Abels makes the following generalization:

(i) A language allows clitic pronouns as the complement of P iff that language allows P-stranding and has clitic pronouns.

Abels relegates the claim above to the internal structure of PP. That is, languages that allow P-stranding are structurally different than languages that disallow it. Abels assumes clitics are bare heads, and unlike other NPs and DPs, must always undergo movement, either overt or covert. P-stranding languages have a PP-internal position to which clitics can move, which allows them to host clitics. In almost all P-stranding languages (except Gbadi) this movement is covert and so the clitic can be phonologically realized as the complement of P, as the Norwegian example below shows (Hellan and Platzack, 1999 in Abels, 2003a):

(ii) Den lå under 'a.
it lay under her.cl
'It lay under her.'

Since non-P-stranding languages do not have a PP-internal position to host clitics, examples like (ii) are not possible in these languages.

Despite his claims, Abels notes there are exceptions. Greek, Bulgarian, Hebrew, Arabic, some Celtic languages, as well as Old Church Slavonic and Hausa all provide counter-evidence. Abels proposes some (but not all) of these can be explained away by assuming that clitics are agreement heads in these languages. Nevertheless, this generalization is also problematically counter exemplified by Prince Edward Island French and Lafontaine French. Both of these are P-stranding languages with clitics, but robustly disallow clitics as complements to P. I will not adopt this claim or defend it in this thesis as nothing within my analysis hinges on the validity of Abels' claims where clitics are concerned. I will discuss clitics in further detail in the context of LFF P-stranding in Chapter 4 and account for why clitics cannot be complements to prepositions in LFF in the discussion provided there.

under A-movement (i.e. P-passives) (12):

(11)
a. Where did she come *from*? — *wh*-movement
b. This subject is difficult to talk *about*. — *tough*-movement
c. That particular problem, Mary totally forgot *about*. — topicalization
d. Not a single session will I leave *after*. — negative inversion
e. The country that he comes *from* is very poor. — restrictive relative
f. I hear that the session to leave *after* is the afternoon one. — infinitival relative
g. Whatever session we left *after* was very boring. — free relative
h. The last session, which we left *after*, was boring. — appositive relative

(12)
a. John was talked *about*.
b. The instructor was paid attention *to*.
c. The awning was sat *under*.
d. The ant was stepped *on*.

In addition to English, languages that have P-stranding under both $\overline{\text{A}}$-movement and A-movement include Swedish (13), Danish (14), Norwegian (15) (see e.g. Engdahl and Laanemets 2015 for relevant discussion),[8] the Gbadi and Vata dialects of the Kru language of the Niger-Congo language family (see Koopman 1984) (16), as well as Prince Edward Island French (PEIF) (see e.g. King 2000; Roberge 2012; Roberge and Rosen 1999 for discussion) (17) (In examples (13)-(17), instances of (a) show an example of P-stranding under $\overline{\text{A}}$-movement, while (b) shows A-movement):

(13) *Swedish*

a. Vad talade du *om*?
what talked you *about*
'What did you talk about?' (Law, 2017)

b. Begåvningar ska tas hand *om*.
talents shall take hand *about*
'Gifted people should be looked after.' (Engdahl & Laanemets, 2015)

(14) *Danish*

a. Hvem var han gået i teatret *med*?
wha had he gone to the.theatre *with*
'Who had he gone to the theatre with?' (Herslund, 1984)

[8] On a standard analysis of V2, the moved constituent *Ola* in (15-b) may have moved directly to Spec-CP, making this a case of $\overline{\text{A}}$-movement. But, in this instance, we can assume *Ola* moved to Spec-TP first, in order to satisfy the EPP condition, and so this is in fact a case of A-movement.

b. De blev set 'ned *på*.
they.NOM became looked down *on*
'People looked down on them.' (Engdahl & Laanemets, 2015)

(15) *Norwegian*

a. Brevet ble klistret frimerker *prå*.
letter.the be pasted stamps *on*
'There were stamps pasted on the letter.' (Den Dikken & Næss, 1993)

b. Ola vart snakka to gonger *med*.
Ola became talked two times *with*
'Ola was talked to twice.' (Engdahl & Laanemets, 2015)

(16) *Gbadi*

a. táɓlɛ̄ yɪ̀ wà kɛ́ -lɔ̀ lɪ̄lɛ̀ *klʊ̀* jɪ̀lɛ̀.
table WH they FUT-A -FOC food *on* put
'It is the table they will put the food on.'

b. táɓlɛ̄ kɛ́ lɪ̄lɛ̀ *klʊ̀* jɪ̀ʊɔ̀.
table FUT-A food on put.PAS
'The food will be put on the table.' (Koopman, 1984)

(17) *PEIF*

a. Qui tu as fait le gâteau *pour*?
who you have baked the cake for
'Who did you bake the cake for?'

b. Le ciment a été marché *dedans*.
the cement has been stepped in
'The cement was stepped in.' (Roberge & Rosen, 1999)

Aside from the Gbadi dialect and PEIF, the languages in (13)-(17) all belong to the Germanic language family. All of the above languages are bona fide P-stranding languages where P-stranding is productive under $\overline{\text{A}}$-movement as well as A-movement. I place these languages into the inventory of Class 1 P-stranding languages. A central argument I will return to time and again throughout this thesis is that LFF must be added to the inventory above as a bona fide Class 1 P-stranding language.

2.2.2 Class 2 (semi-productive)

Class 2 includes all languages where P-stranding is permissible under $\overline{\text{A}}$-movement only, lacking the P-passive.[9] These languages include Icelandic[10] (18) (example (18-a) from Maling and Zaenen, 1985; example (18-b) from Sigurðsson, 2011) , colloquial Welsh (19) (from Jones and Thomas, 1977 in Hirata, 2012), as well as Frisian (20) (example (20-a) from Abels, 2012; (20-b) adapted from Sata, 2020):

(18) a. Hann spurði hvern ég hefði talað *við*.
he asked whom.ACC I had talked *to*
'He asked who I had talked to.' P-stranding

b. *Þá var Ólafur oft talaður um.
then was Olaf.N often talked about
'Then, Olaf was often a talked about person.' P-passive

(19) a. Lle dach chi 'n dod *o*?
where be.PRES.2P you PROG come from
'Where do you come from?' P-stranding

b. *Mae 'r gadair wedi cael eistedd arni gan John.
be.PRES.3S the chair PERF get.INF sit on.3FS by John
'The chair has been sat on by John.' P-passive

(20) a. Hoefolle jild hie se *op* rekkane?
how.much money has she on counted
'How much money did she count on?' P-stranding

b. *Marie wordt naar gekeken.
Marie AUX.PRS.3SG at look.PP
'Marie is looked at.' P-passive

[9] P-passives are a cross-linguistically marked construction, being attested in only about half a dozen languages (Law, 2017). As the discussion so far has shown, Class 1 permits P-stranding under both A and $\overline{\text{A}}$-movement, while Class 2 languages have no P-passives. These facts yield the following generalization (Law, 1998, 2017):

(i) There is no language that allows P-stranding under A-movement, but not $\overline{\text{A}}$-movement.

Having P-stranding under $\overline{\text{A}}$-movement is thus a necessary precondition for a language to have P-passives, but does not guarantee that the language will allow this structure.

[10] Sigurðsson (2011) notes Icelandic has a type of pseudopassive called the stative pseudopassive, where the preposition incorporates into the participle (i):

(i) Þá var Ólafur oft *um*talaður.
then was Olaf.N often about.talked
Then, Olaf was often a talked about person.

As these cases involve incorporation of V and P, it is not a standard P-passive of the type seen in English. As it is furthermore lexically restricted, only being possible with certain V + P combinations, I will still qualify Icelandic as lacking a true P-passive construction, as is the general consensus in the literature (Maling and Zaenen, 1985, a.o.)

These languages all belong in the Class 2 inventory; although they productively derive P-stranding structures, the key is that they lack the P-passive.

2.2.3 Class 3 (restricted)

In Class 3 languages, apparent P-stranding is possible under both A and $\overline{\text{A}}$-movement, but occurs only with a specific class of complements called R-pronouns (van Riemsdijk, 1978, a.o.). Since extraction of the complement of P is restricted to cases involving R-pronouns, the status of P-stranding is less certain and more hotly debated (Abels, 2003b; 2012, Koopman, 2010; van Riemsdijk, 1978, a.o.). Class 3 is comprised of Dutch and German.[11] Although P-stranding in these languages differs from English, the syntactic details will be of importance in the analysis of P-stranding in LFF to come in Chapter 4.

Unlike what is permissible in English, Dutch and German do not allow full DPs to extract and leave their selecting prepositional head stranded (21-a); pied-piping of the entire PP is the only licit option (21-b), as exemplified in the German data below (from Abels, 2012):

(21) a. *Welchen Kandidaten hast du *für* gestimmt?
which candidate have you for voted
'Which candidate did you vote for?'

b. *Für* welchen Kandidaten hast du gestimmt?
for which candidate have you voted
'For which candidate did you vote?'

As noted, apparent cases of P-stranding in Dutch and German all involve R-pronouns (emboldened), as exemplified by the varied $\overline{\text{A}}$-extractions in German given below (from Abels 2012):

(22) a. **Wo** hast du *für* gestimmt?
where have you for voted
'What did you vote for?' *wh-movement*

b. **Da** habe ich nicht *mit* gerechnet.
there have I not with counted
'I didn't expect that.' *topicalization*

c. Das ist das Ergebnis, **wo** keiner *mit* gerechnet hat.
this is the result where nobody with reckoned has
'This is the result that nobody expected.' *relativization*

An equivalent example under *wh*-movement is given for Dutch below (Koopman, 2010):

[11] Afrikaans purportedly has a restricted type of P-stranding involving circumpositional phrases (Oosthuizen, 2000) but the data provided bears more the hallmarks of preposition doubling of the type seen in English (Radford, 2010, 2011, 2012) and also Flemish (Aelbrecht and Den Dikken, 2013). For purposes of this thesis, I will refrain from adding it to the list of Class 3 languages, given the uncertain nature of the data.

(23) **Waar** heb jij dat boek *op* gelegd.
where have you that book on put
'What did you put that book on?'

Although the cases shown above bear all the hallmarks of P-stranding (i.e. a preposition without an overt complement leaving a gap and a moved element that is associated with that gap) the moved constituent can only ever be an R-pronoun. These distinct elements are commonly viewed as the pronominal forms of a full DP complement (see e.g. van Riemsdijk 1978, a.o.). R-pronouns are also distinguished by having homophonous locative counterparts (e.g. the R-pronoun *waar*/'what' has the homophonous locative form *waar*/'where'). Crucially, the two forms are not identical in meaning. R-pronouns have the semantic and syntactic characteristics of personal, non-human pronouns such as 'what' and 'it'. Their homophonous counterparts on the other hand have a different semantic interpretation, strictly denoting locations. Unlike R-pronouns, these locative forms only ever follow their selecting adpositions; they cannot precede to yield a postpositional phrase. (I refer the interested reader to Griffiths, Güneş, Lipták, and Merchant 2021 and sources cited therein for a more detailed discussion of these facts).

While DP complements in German and Dutch follow the adpositional head that selects them, R-pronouns are special in always preceding their selecting adpositional head, yielding postpositional phrases. This paradigm is illustrated for Dutch below (adapted from Koopman, 2010):

(24) a. op de tafel
on the table
'on the table'

b. *de tafel op
the table on
'on the table'

(25) a. *op het
on it
'on it'

b. *het op
it on
'on it'

(26) a. er op
there on
'on there'

b. *op er
on there
'on there'

As (24) shows, a full DP like *de tafel* can only ever follow the preposition *op* (24-a), never precede

it (24-b). When this DP is pronominalized to the form *het* (25), it cannot be used either in a prepositional (25-a) or postpositional phrase (25-b). The form *het* undergoes morphological change, becoming *er* (i.e. an R-pronoun) (26), which must then precede its selecting adposition *op* (26-a), yielding a postpositional phrase. It can never follow the adposition to form a prepositional phrase (26-b).

P-stranding in Dutch and German can thus only occur in postpositional phrases with adpositions that take a class of DP complements that can be pronominalized into a distinct morphological class of pronouns (i.e. R-pronouns). P-stranding in Dutch is thus very restricted, with its occurrence in German being even scarcer, purportedly only occurring in certain Northern German dialects (Abels, 2012).

2.2.4 Class 4 (illicit)

Class 4 comprises all other languages that do not allow P-stranding under either A or $\overline{\text{A}}$-movement under any circumstances (van Riemsdijk, 1978; Law, 2017, a.o.).[12] I illustrate with the class 4 language of Spanish (example (27-a) from Y Cabo and Soler, 2015):[13]

(27) a. *¿Quién bailó Marta *con*?
Who danced.3SG Marta *with*
'Who did Marta dance with?' *$\overline{A}$-movement*

b. *Ese hombre no se supo nunca más *de*.
that man himself NEG was.heard never more *from*
'That man was never heard from again.' *A-movement*

A point to keep in mind is that even in Class 4 languages we can find isolated instances of prepositions appearing without complements (recall right node raising in Irish (7) and orphan prepositions (4) in Standard French). Crucially, these of course do not qualify as bona fide movement derived P-stranding of the type seen in classes 1-3, but must receive an alternative analysis.

2.3 Interim Summary

At this stage of the discussion, we have established that prepositions without complements are not always cases of bona fide P-stranding. To take any case of a preposition followed by a gap as true

[12]There is evidence that some non-P-stranding languages have constructions that allow certain adpositions to appear without complements (Philippova 2022; Podobryaev 2009; Sener 2006, a.o.). The languages in question might tentatively be added to Class 3, but at this time this is a matter that requires further research. I will discuss these cases in further detail in section 4.1.1 of Chapter 4.

[13]Thanks to my consultant Claudia Palacio, a native speaker of Colombian Spanish for constructing the (illicit) P-passive case in (27-b).

P-stranding, we must show that the gap was derived by leftward movement of Ps complement.

We have also seen that there are languages with productive P-stranding, semi-productive P-stranding, restricted P-stranding and others that (purportedly) do not allow this construction under any circumstance. I divided these languages into four separate classes.

The first group of languages I labelled as Class 1 (productive). Again, Class 1 is defined by the following criteria: P-stranding occurs productively under various $\overline{\text{A}}$-movement scenarios; P-stranding occurs under A-movement (i.e. the P-passive is allowed in the language's grammar). Class 1 comprises the following languages: English, Norwegian, Swedish, Danish, the Kru dialects of Vati and Gbadi, as well as Prince Edward Island French. A main goal of this thesis will be to argue that the LFF dialect must be analyzed as a Class 1 language and added into its inventory.

Class 2 (semi-productive) is comprised of those languages which productively allow P-stranding, but only under $\overline{\text{A}}$-movement. This group includes Icelandic, Frisian and Faroese.[14]

Class 3 (restricted) is comprised of Dutch and German. The crucial factor in setting these languages apart into their own distinctive class is that they are subject to additional, specific lexico-syntactic restrictions which Class 1 and 2 languages are not. That is, adpositions may only appear without complements in cases involving R-pronouns.

Class 4 (illicit) comprises other languages, where cases of P-stranding are commonly claimed to be wholly illicit in the grammar of theses languages (i.e. Romance, Japanese-Korean, Afro-asiatic, Slavic etc.). Table 1 below gives a summary of the established typology:

Table 1: Typology of P-stranding

Class	Languages	$\overline{\text{A}}$-movement	A-movement
Class 1	e.g. English; Swedish; Danish; Norwegian; Kru; PEIF	Yes	Yes
Class 2	e.g. Icelandic; Welsh; Frisian	Yes	No
Class 3	e.g. Dutch and German	Yes (R-PNs only)	Yes (R-PNs only)
Class 4	e.g. others (Standard French; Irish; Japanese; Mandarin)	No	No

The crucial group to take note of for purposes of this thesis is the Romance language family in Class 4, specifically French. PPs are said to be robust islands in Standard French (Jones, 1996, a.o.), rendering P-stranding in dialects of this language impossible. The empirical picture of what is permissible in the stranding of prepositions in Canadian French is less certain and still requires study and documentation (Giancarli, 2017; Otheguy, 2012; Poplack, Zentz, and Dion, 2012, a.o.). The goal of this thesis is to contribute to our understanding of what is possible in terms of extraction from PPs in the LFF dialect of Ontario French and provide novel insights by looking into the

[14] Abels (2012) suggests that Papamientu and Cape Verdean Creole could possibly be added to this group of languages, but this remains an open question at this time requiring further research into these dialects.

empirical facts of LFF in order to determine what is actually permissible. In doing so, I will provide an analysis of the syntactic structure of PP in LFF as well as suggestions as to why acceptability of P-stranding differs so markedly from what has been observed in SF, where P-stranding is generally claimed to be illicit. Again, my conclusion will be that LFF, like English and other P-stranding languages, has additional structure within PP that allows extraction to take place by circumventing violations of anti-locality.

2.4 A-movement in P-stranding

Even in languages where P-stranding is a productive option, this phenomenon is not unconstrained, whether P-stranding takes place under A or $\overline{\text{A}}$-movement. In what follows, subsection 2.4.1 examines the constraints on P-passives that have been noted in the literature and in 2.4.2 I review the different theoretical approaches that have been proposed in accounting for this phenomenon.

2.4.1 P-stranding constraints under A-movement

P-passives closely resemble standard passives. In these structures, an object is promoted to subject position, the only difference being that it is the object argument of a preposition, rather than that of a verb. In the same manner as a standard passive construction, the lexical subject is demoted to an optional *by*-phrase. An English case of a prepositional passive (henceforth P-passive) is exemplified in (28) (from Findlay 2016):[15]

(28) [This pen]$_i$ has been written [$_{\text{PP}}$ *with* t_i] (by somebody famous).

The central syntactic constraint attributed to P-passives is that they are subject to an adjacency condition (Hornstein and Weinberg, 1981; McInnerney, 2022; Richards, 2017, a.o.). The claim is that no element can intervene between the verb and the preposition that is the head of the PP undergoing passivization.[16] This claim is exemplified by cases using adverbs (29-a), which robustly

[15] P-passives are of course subject to the same restrictions as regular passives. A relevant example is that like in regular passives, unaccusative verbs are generally excluded in forming P-passives (from Padovan 2016):

(i) *Chicago was come from (by John).

As noted by Abels (2012), whether there are in actuality syntactic constraints within passivization that are specific to the P-passive remains a contentious issue (for relevant discussion see Åfarli, 1989; Lødrup, 1991; McInnerney, 2022; Mills, 2007; Takami, 1992; Truswell, 2009; Ziv and Sheintuch, 1981).

[16] A few purely syntactic proposals have been created to account for the P-passive by using the adjacency condition as the basis of their account (McInnerney, 2022; Richards, 2017). These assume that adjacency of V and P is universally adhered to in all cases of the P-passive, which, as the discussion to follow shows, is not borne out. It is not possible to reconcile these proposals with the empirical facts where the P-passive is concerned. Drummond and Kush (2015) also have a purely syntactic proposal but their implementation has certain crucial technical flaws (see McInnerney

resist passivization. Furthermore, this adjacency condition is argued to be a defining characteristic of the P-passive, as it can be violated in equivalent active sentences (29-b):

(29) a. *The carpet was *stepped* **repeatedly** *on*.
b. John *stepped* **repeatedly** *on* the carpet.

Problematically, as with all constraints that have been proposed to apply to the P-passive, counter-examples exist. There are several types of intervening elements that can separate the verb from its prepositional complement in P-passives (Alsina, 2009; Huddleston and Pullum, 2002; Lødrup, 1991; Mills, 2007; Schwarz, 2019; Tseng, 2006, 2007, a.o.). These include some adverbs (30-a) (from Truswell, 2009)[17], modifiers (30-b) such as *right*, *straight*, and *clear*, as well as some instances of bare nouns (30-c) and DPs (30-d) (examples (30-c) from Tseng, 2006; (30-d) from Mills, 2007):

(30) a. John was *spoken* **sternly** *to*.
b. The ditch was *jumped* **right** *over* by the running child.
c. We were *opened* **fire** *on*/*made* **fools** *of*/*paid* **attention** *to*/*taken* **unfair advantage** *of*.
d. This cutting board was *chopped* **ginger** *on*.

Along with the elements exemplified in (30), direct objects intervening between verbs and a PP are said to robustly render pseudopassivization illicit. This is demonstrated in the example below by the contrast in acceptability between the active sentence in (31-a) and its P-passive counterpart (31-b) (from Tseng, 2006):

(31) a. Samuel explained a complicated theorem to David.
b. *David was *explained* **a complicated theorem** *to*.

Again, problematic counterexamples to this claim exist (32) (example from Tseng, 2006):

(32) ?To be *whispered* **such dirty innuendos** *about* would be enough to drive anyone crazy.

It is clearly not always the case that V-DO-PP combinations can never undergo pseudopassivization,

2022 for discussion), including the use of reanalysis, which as will be discussed in 2.6.2, is an untenable approach to P-stranding.

[17]Where adverbs are concerned, I have no issues with the following example (my own) which uses the same adverb as (29-a):

(i) John was *talked* (**repeatedly**) *about* during the meeting.

Granted, I feel these examples require a particular pacing and intonation to sound acceptable, but in my opinion they are possible. The problem with many examples of the P-passive (the one above included) is that they are constructed by linguists and are subject to very subtle judgements and intra-speaker variation and their use in natural and spontaneous speech is arguable (see Schwarz, 2019 for discussion of this issue). This is just one of the many aspects that makes any kind of universal account of the P-passive problematic.

further undermining the claim that P-passives are strictly adherent to an adjacency condition.[18]

2.4.2 Accounting for P-stranding under A-movement

An outstanding issue in accounting for preposition stranding is finding a way to link this phenomenon together under a single theoretical approach for both A and $\overline{\text{A}}$-movement. As Abels (2012) argues though, there are no accounts of P-stranding that are able to draw a meaningful theoretical link between P-stranding under these two different types of syntactic movements.[19] Whatever approach we take to P-stranding, some additional mechanism over and above that which we take to derive P-stranding under $\overline{\text{A}}$-movement will be needed to derive cases of pseudopassivization.[20]

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[18] Data from Norwegian shows that an adjacency condition becomes even more problematic cross-linguistically. P-passives are known to be a productive option in the grammar of Norwegian (Christensen, 1986; Hestvik, 1986; Lødrup, 1991, a.o.). Not only can different material readily intervene between V and P in Norwegian P-passives, as shown in (i-a) and (i-b), but in this case (and others) direct adjacency of the verb and preposition leads to unacceptability (i-c) (see Lødrup, 1991 for the examples cited here and relevant discussion):

(i) a. De må bli *passet* bedre *på*.
they must be looked better after
'They must be looked after better.'
b. Hvorfor *passes* de ikke bedre *på*?
why look.PASSIVE they not better after
'Why are they not looked after better?'
c. *Hvorfor *passes* *på* de ikke bedre?
why look.PASSIVE after they not better
'Why are they not looked after better?'

Any account basing their proposal on the claim that V and P must be strictly adjacent in P-passives thus fails on an empirical level in accounting for what constrains the P-passive cross-linguistically.

[19] Truswell (2009) argues that a link between P-stranding under A and $\overline{\text{A}}$-movement does in fact exist. He examines bare present participial adjuncts (BPPAs) which allow extraction under $\overline{\text{A}}$-movement in English (from Truswell 2009):

(i) a. Johh came back [whistling polkas].
b. What$_i$ did John come back [whistling t_i]?

Truswell draws a correlation between BPPAs and P-passives. Both of these structures are very rare cross-linguistically. Furthermore, Norwegian and Swedish pattern with English in allowing extraction out of BPPAs as well as P-stranding under A and $\overline{\text{A}}$-movement. Problematically, his claim cannot be extended to a language like LFF which allows P-stranding under A and $\overline{\text{A}}$-movement, but does not allow extraction out of BPPAs.

[20] Abels (2012) argues that a theoretical link between P-stranding under A and $\overline{\text{A}}$-movement may be unnecessary, as there exists a historical link between these two types of P-stranding. His line of argumentation is that the emergence of P-stranding in English is a historical accident due to the gradual loss of case and agreement morphology in the language along with the decline of the impersonal passive without expletive subjects. Abels points to modern Frisian examples like the following as evidence:

(i) De jonge wurdt net nei harke.
the boy is.SG not to listened
'The boy, people didn't listen to him.'
'*The boy wasn't listened to.'

As pointed out by McInnerney (2022), there are two puzzling aspects of P-passives that need to be theoretically accounted for. Citing Polinsky (2016) and Rezac (2008), McInnerney argues that PPs are generally opaque to outside probes for Agree operations. This opacity is evidenced by the fact that PPs are generally robustly illicit as subjects (e.g. Davies and Dubinsky 2001). The second factor to be accounted for in P-passives is the Case puzzle. Prepositions are typically assumed to be able to assign case to their complements (Biskup 2019; Law 2006; McInnerney 2022, among many others). In P-passives, it is then puzzling why the prepositional object is required to raise to Spec-TP. Even though the verbal head is assumed to lack case assigning capabilities under passivization, the prepositional head should still be able to fulfill this role. Accounting for these factors is the central problem faced by any account of pseudopassivization.

Syntactically, three types of implementations have been put forward to account for P-passives: 1) reanalysis; 2) pP-shell analysis; 3) case suppression. Approaches assuming a reanalysis process propose that the verb and material immediately to its right (i.e. a preposition) can be reanalyzed into a single syntactic constituent, in a sense freeing the prepositional object (e.g. van Riemsdijk, 1978; Hornstein and Weinberg, 1981):

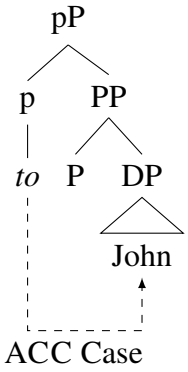
(33) Who$_i$ is John [$_{\text{VP}}$ [$_{\text{V}}$ talking *to*]] t_i?

This type of approach and its inherent empirical and theoretical shortcomings will be discussed in detail in 2.6.2. and I will defer further discussion until then so as not to unnecessarily repeat myself. The discussion to come in 2.6.2 will convincingly show that we can set reanalysis style approaches aside as viable candidates for accounting for P-stranding under both A and $\overline{\text{A}}$-movement.

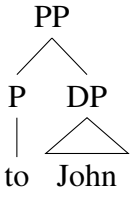
The pP-shell analysis assumes that PPs, like vPs have a functional head (i.e.little-p) that assigns accusative case. In non-passivization scenarios, the structure of PP is assumed to be that of (34-a), with little-p assigning case to the prepositional complement. To solve the case puzzle noted above, these types of approaches assume that in P-passives this head is missing or inert (e.g. Ramchand and Svenonius, 2004). The head P in these approaches is to be distinguished from little-p by being unaccusative in nature and unable to assign case. In P-passives, the structure of PP is assumed to be as in (34-b). Since P is unable to assign case to its complement (and with the verbal head also being deficient in case assigning capabilities in passivization scenarios), the prepositional object must receive case from the nearest case assigning head, this being T. In this manner the prepositional object becomes nominative and moves to Spec-TP to satisfy the EPP.

Abels notes that although only the topicalization interpretation is possible in modern day Frisian (as the translations show), equivalent examples would have been possible in Middle English, where the analytical uncertainty surrounding such cases may have led to the emergence of the pseudopassive. Of course, Abels admits this is a conjecture only at this time and remains an open question as this would require further investigation by experts on the historical evolution of English. Furthermore, it is not clear if this claim could be extended to the French language. Given the uncertain nature of Abels' claims about the P-passive, I will abstract away from any further discussion of it in the remainder of this thesis.

(34) a.



b.



Problematically, such pP-shell analyses lack an account of why little-p is absent under passivization. There does not seem to be any principled reason why the structure in (34-a) cannot happen under passivization. Essentially, there is a look ahead problem inherent in any pP-shell analysis as the presence/absence of little-p is dependent upon whether case assigning little-v is merged or not in a higher position in the tree structure. Given these facts, I set these types of proposals aside as they are few in number and also add additional complexity to the structure of PPs only in order to derive this rare phenomenon. As already noted (see fn. 16), most of these proposals also rely on the claim that an adjacency condition obtains in the P-passive, a claim that the discussion in 2.2.1 showed is clearly not the case. Furthermore, it is not clear whether English actually has unaccusative prepositions, particularly in P-passives (see Klingvall 2012 for relevant discussion).

The case suppression approach posits that the case assigning capabilities of the prepositional head are either suppressed or absorbed by some other element (typically the past participle morpheme *-ed/-en*) (e.g. Aoun, 1979; Chomsky, 1981; Jaeggli, 1986; Baker, 1988; Baker, Johnson, and Roberts, 1989; Åfarli, 1992; Law, 2006). A wide variety of implementations exist but I will not review these as the basic idea behind them is the same. In my own proposal I will follow the smuggling approach of Collins (2005) which implements the idea of case absorption. His implementation assumes the PP argument of the verb in P-passives is smuggled out of the vP phase inside a past participle phrase, moving to the specifier position of a VoiceP which contains the external argument of the verb. The Voice head of VoiceP absorbs the case assigning capabilities of the preposition. I defer further discussion of Collins (2005) to section 4.2.2 of chapter 4, where I will apply the smuggling approach in conjunction with the DR-morpheme analysis of P-stranding to derive the P-passive in LFF.[21]

[21] Again, I note here that there are a large number of proposals that attempt to account for P-passives via semantic or pragmatic constraints. These include, but are not limited to the notion that the verb and preposition must form a semantically cohesive unit (Bach, 1980; Bolinger, 1975; Brinton and Traugott 2005; Couper-Kuhlen, 1979; Quirk, 1985; Svartvik, 2011, a.o.). Others claim there is an *affectedness* constraint on pseudopassivization, where the subject referent that is promoted from object position must be viewed as somehow being affected by the action of the verb (Bolinger, 1977, 1978; Davison, 1980; Riddle, Sheintuch, and Ziv, 1977; Sinha, 1978, a.o.). All of these proposals

2.5 Constraints on P-stranding under $\overline{\text{A}}$-movement

Identifying what exactly constrains P-stranding syntactically has been notoriously difficult to pin down.[22] A core issue is that even in productive P-stranding languages not all prepositions are strandable and there are certain prepositions that resist stranding to varying degrees. This variation can be observed with certain temporal prepositions like *during*, *before/after* and *until* (examples from McInnerney 2022):[23]

(35) a. ?This is a movie that I always fall asleep *during*.
b. ?This is an activity that you'll need to finish your homework *before/after*.
c. ?April 21st you can sign up *until*. (attested in COCA)

One thing to note is that the extractions in (35) are taking place out of PP adjuncts. This has led to claims that the variability in the ability to strand prepositions is constrained by an argument/adjunct divide (Bennis and Hoekstra, 1984; DeArmond and Hedberg, 1998; Hornstein and Weinberg, 1981, a.o.) The following case (example and judgement from Hornstein and Weinberg, 1981) is said to exemplify this claim:

(36) *[What time]$_i$ did he arrive *at* t_i?

Problematically, the above judgement is not typically shared by most English speakers (including myself), with this case of P-stranding being perfectly licit and in fact commonly used. In my own analysis, I will argue that it is not the structural position of the PP that constrains P-stranding (i.e.

that rely on semantic and/or pragmatic constraints are problematic in that counter-examples to the notions they rely on to constrain the P-passive can easily be found. Furthermore, all of these types of approaches rely on semantic or pragmatic notions that are difficult to clearly define and restrict, and are not formalizable on a theoretical level. Crucially, these accounts also have nothing to say as to why P-stranding is cross-linguistically constrained to a certain subset of languages and is illicit in the remainder of the world's languages.

[22]Stanton (2016) claims there is a correlation between the ability to extract a preposition's complement (i.e. P-stranding) and the ability to pronominalize a preposition's complement. She notes that some prepositions can take a pronominal complement (i-a), while others cannot (i-b) (examples from Stanton, 2016).

(i) a. I left after John's party, and Mary left *after* **it**, too.
b. *I went swimming in December, and John went swimming *in* **it**, too.

Stanton's claim is that the above factors restrict what type of $\overline{\text{A}}$-movement a preposition can be stranded under. Prepositions which cannot take pronominal complements are said to be strandable only under *wh*-movement and in relative clauses (i.e. restrictive, infinitival and free relatives). Prepositions that accept pronominal compliments on the other hand can be stranded by any type of $\overline{\text{A}}$-movement (including *wh*-movement, relative clauses, topicalization, tough-movement etc.). Why a preposition's ability to accept a pronominal complement should restrict its ability to strand under $\overline{\text{A}}$-movement remains unclear. Even if Stanton's claims are correct these have not been investigated cross-linguistically. Furthermore, her proposal has nothing to say about bona fide unstrandable prepositions which robustly resist stranding under any type of $\overline{\text{A}}$-extraction.

[23]The judgements for such cases vary considerably (see e.g. Takami, 1988, 1992, 2012; Truswell, 2011, a.o.). My own judgements for (35-a) and (35-b) are that they are perfectly licit, while (35-c) is illicit.

argument vs. adjunct position), but rather the internal structure of PPs themselves.

The fact that an argument/adjunct divide does not restrict P-stranding has been shown in recent work (McInnerney, 2022; Truswell, 2009 a.o.). McInnerney (2022) shows that contra the standard assumption that adjuncts are islands for extraction, adjunct PPs with NP complements are in fact typically not islands. I provide a few exemplary cases below (I refer the reader back to the discussion in section 2.1 and the relevant examples given in (3) for a more complete overview of cases):

(37) a. Who$_i$ are you waiting in line [for t_i]? (benefactive)
b. Who$_i$ did you go to the store [with t_i]? (comitative)

A number of other good arguments against the argument/adjunct divide exist. McInnerney notes the following contrasts in acceptability when extracting out of an argument PP headed by the locative preposition 'on':[24]

(38) a. *What does he live *on*?
b. Which street does he live *on*?

(39) a. *What did he put the book *on*?
b. Which shelf did he put the book *on*?

Clearly it is not the argument/adjunct divide that renders the sentences in (38-a) and (38-b) illicit. Rather, there seems to be some oddity in questioning locations with *what*, where McInnerney suggests it may be some pragmatic constraint.

Another case can be seen with the stranding resistant prepositions *despite/in spite of*, *because of/owing to*, *concerning/regarding/with respect to* and *via* (examples from McInnerney, 2022):

(40) a. ??This is the problem that we came out ok *despite/in spite of*.
b. ??This is the kind of weather that school usually lets out early *because of*.
c. ??This is the kind of behaviour that a preacher would rebuke you *concerning*.
d. ??This is a path that I'd like not to proceed *via*.

Crucially, similar cases with PP arguments using *because of*, as well as *before/after* show that

[24] I note here that these types of examples raise further problems for the claims made by Stanton (2016) (see fn. 22 above). A preposition like 'on' in English can take a pronominal complement:

(i) John put a book on the table and Mary put a book *on* **it** too.

According to Stanton's claims, this preposition should then be able to strand under any type of $\overline{\text{A}}$-movement. Her account can offer no explanation for the contrast seen in (39). Since both (39-a) and (39-b) are equivalent cases of *wh*-movement, her account falsely predicts that both examples should be perfectly licit. Given Stanton's assumptions, it is not clear to me that there is any way to explain this contrast within the contexts of her proposal.

the argument/adjunct divide cannot be what constrains P-stranding (examples from McInnerney, 2022):

(41) a. Their anger is probably [$_{PP}$ because of the rent increase].
b. ??What$_i$ is their anger [$_{PP}$ *because of* t_i]?

(42) a. The party is [$_{PP}$ before/after the show].
b. ?[Which show]$_i$ is the party [$_{PP}$ *before/after* t_i]?

McInnerney also shows there are a number of cases where patterns of extraction out of certain types of PPs remains the same whether they are arguments or adjuncts. A first case is observed with tensed clausal PPs. This class of PP remains a strong island whether it functions as an adjunct (43-a) or as an argument (43-b) (examples adapted from McInnerney, 2022):

(43) a. *Who$_i$ did John go home [$_{PP}$ before he talked to t_i]?
b. *Who$_i$ did the detective place the murder [$_{PP}$ before Lee visited t_i]?

A similar pattern is observed with gerundive PPs. These PPs are weak islands as they allow extraction of some NPs, but usually not PPs or other constituents (see McInnerney, 2022; Truswell, 2011). Crucially, McInnerney shows this is the case whether the gerundive PP functions as an adjunct or an argument. Extraction in the relative clauses below shows that an NP but not a PP can be extracted out of a gerundive PP which functions as an adjunct (examples adapted from McInnerney, 2022):

(44) a. He's the kind of guy who$_i$ you should think twice [$_{PP}$ before arguing with t_i].
b. *He's the kind of guy [with whom]$_i$ you should think twice [$_{PP}$ before arguing t_i].

The same pattern holds when the gerundive PP is an argument (examples adapted from McInnerney, 2022):

(45) a. Lee is the one who$_i$ they kept me [$_{PP}$ from collaborating with t_i].
b. *Lee is the one [with whom]$_i$ they kept me [$_{PP}$ from collaborating t_i].

Clearly, it is not the case that P-stranding is constrained to extraction out of arguments, given the numerous counterexamples. My own analysis will argue that the internal structure of PPs is the syntactic factor allowing a language to have P-stranding. The fact that there is variation in the ability of some prepositions to be stranded is a more complex issue. Likely there may be semantic or pragmatic factors that at times constrain P-stranding (perhaps even prosodic ones as well), as can be observed with cases of extracting *what* out of locative PPs (recall (38-a) and (38-b) above). In section 4.4 of Chapter 4 I will (tentatively) suggest that some prepositions may not be able to

strand due to the idiosyncratic nature of the prepositions themselves, but in the end this admittedly remains an open question not only within my own proposal, but to the best of my knowledge, all other current accounts of P-stranding. I defer further discussion until chapter 4.

Aside from the claim made regarding the argument/adjunct divide, the factors constraining P-stranding have been claimed to be related to either the internal structure of PP or to prepositions themselves. The approaches that rely on the nature of prepositions claim on one view that P-stranding can only take place if prepositions can properly govern their complements, and on another view that P-stranding is only possible if prepositions can undergo incorporation with another element (typically a verb) via a process of reanalysis.[25]. As I have already mentioned, my own analysis will take a PP-internal structural approach. In the section that follows, I compare and analyze each of these approaches and how they fare in accounting for constraining P-stranding.

2.6 Previous syntactic accounts of P-stranding

Various types of proposals have been put forward in order to account for P-stranding cross-linguistically. These can be subcategorized into 3 separate types: 1) government-theoretic approaches; 2) reanalysis/incorporation approaches; 3) structural approaches.

Government-theoretic approaches rely on the intuition that prepositional heads differ in their

[25] Stowell (1982) proposes P-stranding languages are distinguished by having a process of reanalysis in their grammars in which prepositions can be incorporated into their selecting verb. He bases this on the following generalization about P-stranding languages:

(i) All languages that allow P-stranding also have verbal particles.

He argues his claim is further backed by the fact that most P-stranding languages are Germanic and typically have verbal particles. English provides exemplary cases that Stowell uses as evidence for his claim (from Stowell, 1982):

(ii) a. John **called** *up* his friend.
b. Kevin **turned** *off* the stereo, .
c. Sandra **threw** *away* the receipt.

Given these particle constructions, Stowell assumes they are generated by a word formation rule that constructs new verbs with the following internal structure (from Stowell, 1982) :

(iii) $[_V$ V – Prt]

Stowell claims this is evidence for the existence of a reanalysis process in P-stranding languages, with prepositions being able to be reanalyzed into a new constituent with their selecting verbs.

Although the dialect of Prince Edward Island French (PEIF) seems to conform to this claim, using terms such as *layé off/lay off* and *plugé in/plug in* (King and Roberge, 1990), Lafontaine French (LFF) does not. To the best of my knowledge there are no instances of verbs with particle-like elements in LFF such as there are in PEIF. The above generalization thus does not hold for LFF. As Abels (2003b) discusses, it is also not clear, if this generalization is true, what exactly this tells us about P-stranding languages. As this generalization clearly does not hold in LFF, I will not discuss it further in the context of my analysis. This is besides the fact that reanalysis is plagued with many issues that make it an untenable approach to P-stranding, as the discussion in 2.5.4 will show

ability to properly govern their complements, which regulates whether a preposition's complement can undergo movement operations or not.[26]

Reanalysis/incorporation proposals argue that P-stranding is a product of the availability in a language's grammar to reanalyze multiple lexical items into single, complex units, thereby affecting the ability of a preposition's complement to undergo movement.

Finally, Structural approaches rely on aspects of the internal syntax of adpositional phrases to explain the availability or lack thereof of P-stranding in a given language. As my analysis in Chapter 4 will argue, this type of approach offers the most theoretically comprehensive account of P-stranding to date and my analysis will build off of intuitions and theoretical concepts from within this framework.

2.6.1 Government-theoretic approaches

Government-theoretic approaches, pioneered by Kayne (1984), assume that only languages that have prepositions that can properly govern their complements are able to have P-stranding. There are in fact only two core government-theoretic proposals, Kayne (1984) and Bennis and Hoekstra (1984). I will briefly review both these proposals and the problems inherent to each.

Based on certain differences between the French prepositional complementizer *de* and its English equivalent 'for', Kayne (1984) assumes that prepositions are proper governors in English but not in French. Kayne shows that English prepositional complementizers can assign case to subjects of infinitival clauses (46-a), while their French equivalents cannot (46-b) (from Kayne, 1984):

(46) a. It would be a pity [$_{CP}$ [$_{C}$ *for* [$_{TP}$ something to happen to him]]]

b. *Ce serait dommage [$_{CP}$ [$_{C}$ *de* [$_{TP}$ quelque chose lui arriver]]]
it would.be a.pity for some thing him to.happen
'It would be a pity for something to happen to him.'

Additionally, the prepositional complementizer *de* is compatible with control constructions (47-a), while 'for' is not (47-b). Since PRO cannot be assigned case and English 'for' is a case assigner, (47-b) is illicit. In French on the other hand, *de* must not be a case assigner as it is compatible with PRO (from Kayne, 1984):

(47) a. Ce serait dommage [$_{CP}$ [$_{C}$ *de* [$_{TP}$ PRO partir maintenant]]]
it would.be a.pity to leave now
'It would be a pity to leave now.'

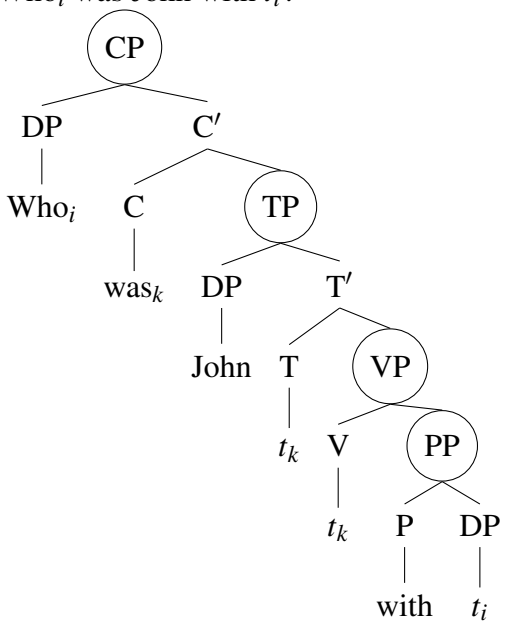
b. *It would be a pity [$_{CP}$ [$_{C}$ *for* [$_{TP}$ PRO to leave now]]]

[26]The term *government* refers to the syntactic relationship between a head and its dependants and is a concept which existed within the parameters of Government and Binding Theory (Chomsky 1980; Lasnik and Lohndal 2010). Government has mostly been subsumed under Agree and c-command.

Based on the above facts, Kayne argues that prepositions in English are case assigners, while those in French are not. As such, only English prepositions are proper lexical governors and can license the presence of an Empty Category, allowing P-stranding. Kayne further posits that to derive P-stranding the maximal projection of the preposition governing the gap (i.e. PP) and all subsequent maximal projections (i.e. XPs) that govern this PP must be right-branching (circled XPs). This is exemplified in (48-b) below:

(48) a. Who$_i$ was John with t_i?

b.



A first crucial problem with Kayne's approach is that it cannot account for P-stranding in dialects of Canadian French (e.g. Prince Edward Island French and LFF). The facts seen in (47) are directly extendable to LFF. These types of control constructions are equally permissible in LFF, as the following shows:

(49) Ce serait dommage [$_{CP}$ [$_{C}$ *de* [$_{TP}$ PRO partir maintenant]]]
it would.be a.pity to leave now
'It would be a pity to leave now.' *LFF*

The fact that there is no difference between SF and LFF in the ability of the complementizer *de* to appear with PRO means that Kayne has not identified the relevant factor that allows/disallows P-stranding. This is a critical flaw in the theory.

As pointed out by Law (2017), there is also the fact that the differences in government Kayne discusses concern only prepositional complementizers, not prepositions themselves. Law argues that prepositions govern and assign case in French in the same manner as their English counterparts. It is not clear under Kayne's theory why the government properties of regular prepositions should

match those of prepositional complementizers, thus ruling out P-stranding.[27]

Furthermore, Law notes that the empirical coverage of Kayne's account is limited to Romance and English. The assumptions made in his theory cannot explain why a preposition in Dutch can only appear without a complement in cases involving R-pronouns. This issue I argue carries over straightforwardly to other languages that have been argued to have mixed P-stranding behaviour (Philippova 2014; Podobryaev 2009; Sener 2006).[28] Kayne's theory would have great difficulty explaining why, within the same language, a select few prepositions can be proper governors, while the vast majority of others are not, thus rendering his approach cross-linguistically inadequate.

As I have pointed out several times already, an argument/adjunct distinction cannot be what restricts P-stranding. In many cases, extraction out of a PP adjunct is perfectly licit (recall 2.1 and 2.4.2). Kayne's theory can account for such cases given that his theory allows PPs to be sister to XP. Nevertheless, as Bennis and Hoekstra (1984) point out, in instances where extracting out of an adjunct PP is illicit, Kayne's theory fails in ruling out these cases as it predicts *all* extractions out of adjuncts to be licit, contra to fact. Kayne's stipulations on government state that only the governor/sister of the gap must be a proper lexical governor (i.e. an X and never an XP). The other maximal projections governing PP need not be governed by a lexical governor (i.e. an X); these projections can be sister to an XP. Given his assumptions, Kayne's theory cannot rule out cases

[27] Based on Kayne's observations regarding the differences between the French and English complementizer systems, Roberge and Rosen (1999) argue that some varieties of Canadian French (e.g. Prince Edward Island French, a.o.) allow P-stranding because prepositions have become case assigners. Their argument is based on the phenomenon of *que*-deletion in certain varieties of popular French. They posit that the deletion of the complementizer in certain environments has in essence forced a shift in the prepositional system, where prepositions have taken on case assigning capabilities. Unfortunately, this argument cannot be extended to LFF, where speakers find *que*-deletion illicit, or at the very least extremely marginal. Examples that Roberge and Rosen give as acceptable in dialects of popular French were judged as illicit by myself and another LFF consultant, requiring the presence of the complementizer *que*:

(i) a. *Je crois pas ∅ on parle de la même femme.
I believe not we talk of the same woman
'I don't believe that we're talking about the same woman.'
b. Je crois pas **qu**'on parle de la même femme.
I believe not that.we talk of the same woman
'I don't believe that we're talking about the same woman.'

(ii) a. *C'est là ∅ ma mère à moi vivait.
it.is there my mother to me lived
'That's where my mother lived.'
b. C'est là **que** ma mère vivait.
it.is there that my mother lived
'That's where my mother lived.'

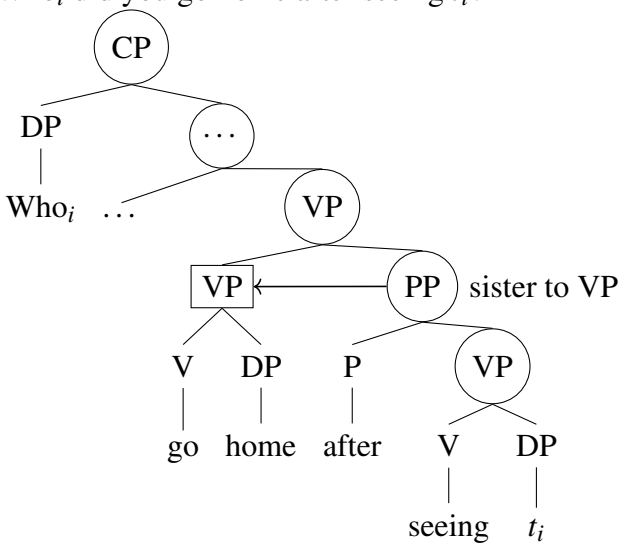
The above data show that Roberge and Rosen, like Kayne, have not correctly identified the relevant factor that allows/disallows P-stranding. Furthermore, it is not clear that prepositions in French do not assign case. Law (2017) for instance, as noted in the discussion above, argues that prepositions in French assign case in the same manner as English ones do. Although Roberge and Rosen state prepositions are not typically case assigners in French and that the PEIF system has shifted, they fail to provide any convincing evidence that French prepositions are not in fact case assigners.

[28] I discuss these languages and their importance to my own theory of P-stranding in Chapter 4.

like (50) below, making his account empirically inadequate (example from Bennis and Hoekstra 1984).[29]

(50) a. *Who$_i$ did you go home after seeing t_i?

b.



Bennis and Hoekstra's 1984 (henceforth BH) proposal is a successor to Kayne's. Given the inability of Kayne's theory to rule out case like (50), BH extend Kayne's restrictions to include the gap and its structural governor (i.e. in a VO language, the governor of the gap must always be left-branching, and in a OV language right-branching). They further stipulate that the sister of each maximal projection must be a lexical category (i.e. an X and never an XP).

Although BH's modifications rule out cases like (50), their solution only creates another problem of similar nature. Whereas Kayne's theory allows extraction out of adjuncts, thus not being able to account for illicit cases of extraction out of adjuncts, BH's assumptions encounter the opposite problem, as exemplified in (51) (from Truswell, 2007):

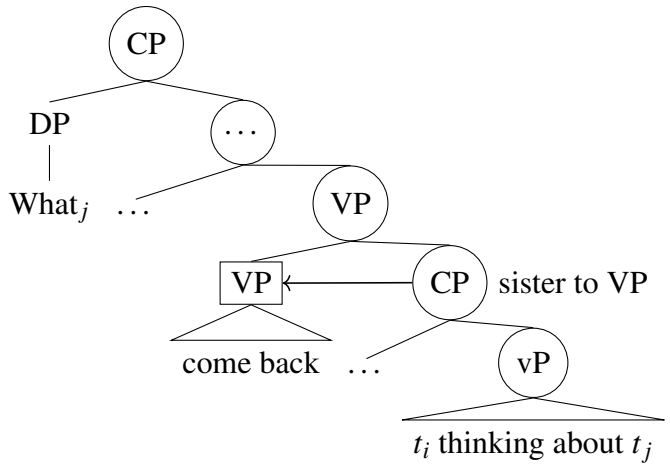
(51) a. What$_i$ did John come back thinking about t_i?

[29] I also note here that Kayne claims the following example to be illicit (from Kayne 1984):

(i) *[Which book]$_i$ do you believe the first chapter of t_i to be full of lies?

Kayne states his theory can account for the illicit nature of (i) since the DP *the first chapter of*, from which the *wh*-phrase has been extracted is in the subject position of the embedded CP (i.e. in Spec-TP). This position constitutes a left branch. Although the gap is properly governed by the preposition, the final, maximal projection of this PP (i.e. [$_{DP}$ *the first chapter of* t_i]) ends in a left branch (i.e. in Spec-TP) and this is explicitly ruled out in Kayne's theory. The problem I have is that in my own judgement, this sentence is perfectly acceptable. Other native speakers of English that I have consulted also had no issues with this particular sentence. With such examples being acceptable in English, Kayne's theory stipulating that maximal projections can only be right-branching makes false predictions and is empirically insufficient.

b.



As (51) shows, BH's revised implementation of linear canonical government rules out all cases of licit extraction out of adjuncts since the sister of a maximal projection can never be an XP. This factor nullifies any advantage they gained by ruling out illicit extractions out of adjuncts, rendering their proposal no more theoretically adequate than Kaynes' original implementation. This is in addition to the fact that their proposal inherits all the weaknesses latent in the government theoretic approach to P-stranding.[30]

Given the problems inherent to these theories and their inability to account for P-stranding cross-linguistically, I set aside all proposals relying on government. Government-theoretic approaches are plainly incapable of theoretically accounting for P-stranding, especially in any dialect of French, a factor that renders them especially unsuitable in the contexts of this thesis.

2.6.2 Incorporation approaches

Two different types of incorporation approaches exist. In reanalysis approaches, it is proposed that a verb and a following preposition can be reanalyzed into a single syntactic constituent. (e.g. Hornstein and Weinberg 1981; Stowell 1981, 1982; Sugisaki 2003, 2008: Sugisaki, Lasnik, and Snyder 2001; Sugisaki and Snyder 2002, 2006). Suppletion approaches on the other hand claim that P-stranding is possible in only those languages that do not have a suppletion process that incorporates prepositions and determiners into single morphological units (e.g. French: *à* + *le* → *au*) (Law 1998, 2006, 2017; Salles, 1997).

I begin by reviewing the reanalysis proposal of Hornstein and Weinberg (1981) (henceforth HW). HW assume that contiguous verbal and prepositional elements can be reanalyzed into new syntactic units they call 'semantic words'. (52) below gives a general illustration of the concept.

[30] I also note here that although their theory accounts for the unacceptability slightly differently (the details of which need not concern us here), BH also claim Kayne's (i) (see fn. 29 above) to be illicit. Again, I disagree strongly and claim it is acceptable. Their theory thus cannot account for the whole of the empirical facts where such examples are concerned.

(52-a) gives the base sentence before reanalysis. (52-b) shows reanalysis applying, creating a new verbal unit made up of the verb and the preposition, thus freeing the DP which is now considered as being independent of the preposition (i.e. no longer a prepositional complement, but rather a complement of the verb). (52-c) shows the subsequent ability to move the freed DP under question formation.

(52) a. Sarah [$_{VP}$ [$_{V}$ **talked** [$_{PP}$ [$_{P}$ *to* [$_{DP}$ John]]]]].
b. Sarah [$_{VP}$ [$_{V}$ **talked** *to*] [$_{DP}$ John]].
c. Who$_i$ did Sarah [$_{VP}$ [$_{V}$ **talk** *to*]] t_i?

The reanalysis process is enforced in their implementation by Case-marking rules. HW claim that complements c-commanded by prepositions must be marked with oblique Case, while complements c-commanded by verbs are marked with objective Case. They assume DPs can only ever leave behind traces marked with objective Case, never oblique Case. This is enforced by the following filter (adapted from Hornstein and Weinberg, 1981):

(53) *[$_{DP}$ $e_{\textit{oblique}}$]

Anything Case-marked by a preposition will thus violate the filter in (53), rendering it immobile. Crucially, HW claim reanalysis creates new words (i.e. lexical items/constituents). These reanalyzed strings are considered to be absolute barriers to further movement operations. These assumptions make important predictions that essentially render reanalysis an untenable approach in dealing with P-stranding.

HW claim reanalysis is required as a syntactic operation to account for the variability observed in being able to extract out of PPs in different domains. Their claim is that extracting out of PP adjuncts is always illicit, and cannot be accounted for by a PP-internal approach to P-stranding.[31] HW use the following contrast to exemplify (their judgements):

(54) a. *[What time]$_i$ did John arrive at t_i?
b. Who$_i$ did John talk to Harry about t_i?

[31] Although this is an important observation, their criticism towards PP-internal syntactic approaches to P-stranding is arguably unwarranted. As Abels (2003b) notes, the ability to extract out of a constituent can depend on its position, whether the constituent is a PP, a DP or a CP. The contrast below shows just such a case, where extracting out of an object DP is licit (i-a), while extracting out of the same DP, but in subject position, is illicit (i-b) (from Ceplova, 2001):

(i) a. What$_i$ did you buy a picture of t_i?
b. *What$_i$ did a picture of $_i$ please John?

The issue is not the syntax of the constituent itself, but rather the domain in which it appears. As Abels points out, attributing the inability to extract out of a PP within a certain domain should not be relegated to a theory of P-stranding but rather to a theory of the conditions on extraction domains (i.e. CED: J. Huang 1982) since these issues on extraction apply not only to PP, but also to DP and CP.

They claim that reanalysis cannot apply to adjuncts since these are not in the c-command domain of the verb, while arguments are, thus accounting for the contrast in (54). Again, the claim that extraction cannot take place out of adjuncts is just plain wrong. It is now well known that extraction out of adjuncts is in many instances acceptable (Huddleston and Pullum, 2002; McInnerney 2022; Takami, 1988, 2012; Truswell, 2007, a.o.) (again I refer the reader back to 2.1. and 2.4.2). As a native speaker of English, I find (54-a) perfectly acceptable. HW's proposal fails in accounting for this factor in any language that has P-stranding. The filter HW claim exists to derive P-stranding is also purely stipulative and it is not clear what restricts it cross-linguistically or if its application varies across languages.

Reanalysis theories as a whole face two other insurmountable issues. Firstly, reanalyzed strings, contra to what HW propose, are not akin to lexical words since they can be extracted out of via various syntactic processes. Secondly, in many transformational processes, the DP objects of prepositions that have been supposedly absorbed into the verb show the characteristics not of a verbal object, but those of a prepositional object. I will give a select sample of relevant cases exemplifying these two issues.[32]

Let us first examine a case of extraction (from Abels 2003b):

(55) [Which problems]$_i$ has Harry$_k$ been talked to t_k about t_i? *Multiple P-stranding*

Within the parameters of HW's theory, to derive (55), the string *talk to* and *talk to Harry about* must be reanalyzed concurrently to permit extraction of the DP *Harry* and the DP *which problems* respectively. Abels (2003b) correctly notes that this entails that *Harry* is extracted out of the new 'word' *talk to Harry about*. Extraction out of 'words' created via reanalysis is explicitly ruled out by the theory.

We can also use verb movement to show that reanalysis cannot be said to have applied in P-stranding (Dennis Ott, p.c.). Note the following contrast:

(56) a. Who$_i$ are you *with* t_i?
b. *[$_{CP}$ Who$_i$ [$_C$ [$_V$ are *with*]$_k$ [$_{VP}$ t_k] you t_i]]?

As the above shows, subject-auxiliary inversion must take place to form the case of P-stranding seen in (56-a), with the verb moving to C. Reanalysis incorrectly predicts that a sentence like (56-b) should be derivable. Since (56-a) is a case of P-stranding and reanalysis must have applied in order to allow this, [$_V$ are *with*] must be a constituent and so (56-b) should be the result when this newly formed verbal element moves to C under question formation. This is of course not borne out.

[32]For a more comprehensive discussion I refer the reader to the vast body of literature on these issues (with notable sources including Abels, 2003b and Baltin and Postal, 1996, a.o.).

The second crucial problem with reanalysis approaches comes from a vast body of literature presenting evidence that the objects of prepositions in reanalysis scenarios do not have the syntactic characteristics of the direct object of a verb, but rather that of a prepositional complement (Baltin and Postal, 1996; Koster, 2016; Newmeyer, 1998; Postal, 1986, a.o.). I will provide a single relevant case here to illustrate the point. For a full account of the depth of the problems reanalysis approaches face with regards to this issue I refer the reader to the works cited above.

In Heavy NP-Shift (HNPS), DPs that are legitimately the direct object of a verb are known to be able to undergo movement, as shown in (57-a). Conversely, objects of prepositions cannot (57-b). As (57-c) shows, reanalysis hypotheses would predict that *argue with* must be a reanalyzed 'word' in order to allow *wh*-movement and stranding of the preposition (from Abels 2003b).

(57) a. I [$_{VP}$ *discussed* t_i] with Lorenzo [$_{DP}$ the problems he was having with deliveries]$_i$.
b. *I argued [$_{PP}$ *with* t_i] about such problems [$_{DP}$ the drivers' union leader]$_i$.
c. Who$_i$ did you argue with t_i about such problems?

The point illustrated above is that (57-b) clearly shows *argue with* cannot possibly be a complex verb as its object cannot undergo Heavy NP-Shift, ergo we are dealing with a prepositional and not a verbal object complement.

The problems faced by any reanalysis theory are numerous and there exists sufficiently strong argumentation in the literature that such proposals become untenable in accounting for P-stranding.[33] I will therefore set them aside as a whole, including those which have only been mentioned through citation at the beginning of this section. Since HW's proposal is the core proposal on reanalysis and has already been reviewed along with its inherent problems, I will not review these additional accounts as they all incorporate and rely on reanalysis as a core syntactic principle.

I conclude this subsection by reviewing suppletion proposals (Salles, 1997; Law, 1998, 2006, 2017). Suppletion proposals posit that if a language has cases of preposition and determiner incorporation, then these elements can never be separated, and consequently P-stranding is ruled out. The Standard French case in (58) exemplifies suppletion, where the preposition *de* and the determiner *le* heading the DP *le sujet* undergo morphological change to form the element *du* (from Law, 2017):

(58) Jean a parlé *du* sujet le plus difficile.
Jean has talked about.the subject the most difficult
'Jean talked about the most difficult subject.'

[33] As pointed out by Abels (2003b), HW state that their filter (53) is universal and not restricted to traces. Although this is not a problem where true P-stranding languages are concerned, I make note of it here since HW's filter would rule out so called orphan prepositions in Standard French, where the gap is claimed to be occupied by a null pronoun, further rendering their proposal cross-linguistically inadequate.

Adopting the assumption that *wh*-phrases like *que*, *qui* and *quel* are determiners, Law claims suppletion accounts for the impossibility of P-stranding in Standard French (SF) (59-a).[34] The assumption is that the *wh*-phrase, which is a determiner, incorporates with the preposition, even though they don't morphologically fuse into a single unit, as seen in (59-b). This rules out the possibility of separating the *wh*-phrase from the preposition, leading to P-stranding, as in (59-a). This leaves pied-piping of the entire PP (59-c) as the only option in forming constituent questions in SF (from Law, 2017).

(59) a. *Qui$_i$ as-tu parlé [$_{PP}$ *de* t_i]?
who have-you talked about
'Who did you talk about?'

b. … [$_{PP}$ [[de + qui$_i$] [$_{DP}$ t_i]]]

c. [$_{PP}$ De qui]$_i$ as-tu parlé t_i?
about who have-you talked
'Who did you talk about?'

Law claims this same principle explains why Romance languages lack the P-passive (60-a). Since D to P incorporation takes place (60-b), promoting the DP *le sujet* to subject position via A-movement can never take place, it must always remain in object position (60-c) (from Law, 2017).

(60) a. *Le sujet a été parlé *de*.
the subject has been talked about
'The subject was talked about.'

b. … [$_{PP}$ [[de + le$_i$] [$_{DP}$ t_i [$_{NP}$ sujet]]]]

c. Ils ont parlé du sujet.
they have talked about.the subject
'They talked about the subject.'

Although the intuition seems sound, there are significant problems with the suppletion approach to P-stranding. First and foremost, if suppletion of P + D rules out P-stranding, why do we not see P-stranding in all languages where P and D do not amalgamate? Following Law's line of reasoning, any language that does not have suppletion should have P-stranding. This prediction is of course not borne out. There are no provisos in Law's approach that would seem to account for why some languages without suppletion do not have P-stranding, rendering such an approach cross-linguistically inadequate.

These proposals are furthermore immediately debunked by dialects of Canadian French like Prince Edward Island French and LFF which have P-D suppletion like Standard French but also

[34] Although the account in Salles (1997) differs in certain respects from Law's in proposing a layered PP as well as the existence of a null P in English to account for Double Object Constructions, the core of the proposal relies on suppletion, and in this sense does not differ significantly from Law's account and consequently suffers all the same deficiencies.

have bona fide P-stranding. It is not possible within the assumptions made in suppletion proposals to derive even simple examples like (61-a) and (61-b), which as far as I am aware, are commonly used in many dialects of Canadian French.

(61) a. Qui est-ce qu'il a voté *pour*?
who is.it that.he has voted for
'Who did he vote for?'

b. Qui est-ce qu'elle est sortie *avec*?
who is.it. that.she is gone.out with
'Who did she go out with?'

The above poses an insurmountable problem for suppletion theories; the simple fact is they cannot account for cases of P-stranding in Canadian French. Taken together, I argue that these issues are sufficient enough to render suppletion proposals untenable in accounting for P-stranding.

2.6.3 Structural approaches

The proposals presented in this section rely on the intuition that there is a structural position within PP which serves as a landing site for a preposition's complement. Movement to this position serves as an 'escape hatch' that allows the complement of a preposition to undergo further movement, leaving the preposition stranded. In this thesis, I will ultimately follow the intuitions raised by structural proposals, primarily those of Abels (2003b, 2012). I will show through an analysis of LFF in Chapter 4 that an approach based on the internal structure of PP is best suited in being able to account for the empirical facts observed in LFF P-stranding. I begin by discussing van Riemsdijk (1978). Abels (2003b, 2012), which establishes the core theoretical concepts to be implemented in my analysis, will be discussed last.

In his work on Dutch, van Riemsdijk (1978) (henceforth VR) claims that the specifier position of an XP can serve as a local landing site for the complement of X, allowing the complement to undergo further upward movement in structure building operations. The intuition is simple enough; if PP has this escape hatch position, its complement will be able to move here and escape (successive-cyclically) to a higher position. This is exemplified for a case of *wh*-movement in question formation below in (62):

(62) $[_{CP}$ Who$_i$ $[_{C}$ was $[_{TP}$ she $[_{PP}$ t_i $[_{P}$ with $[_{DP}$ t_i]]]]]]

VR formalizes the idea behind (62) into a constraint he calls The Head Constraint, which simply states that complements of prepositions must cycle through the Spec-PP escape hatch position in extraction scenarios, otherwise a violation of The Head Constraint is incurred.

VR's proposal is an attempt to account for why P-stranding can only occur with R-pronouns

in Dutch.[35] As we can see in (63) below (and as the reader may recall from the discussion in 2.2.3) only R-pronouns like *er* may appear to the left of adpositions in Dutch (63-a). VR makes the assumption that the R-pronouns seen in Dutch P-stranding occupy the Spec-PP position, having moved here from complement position to P. Under the theoretical assumptions of the time, which used transformational rules, VR proposed that Dutch has an r-movement rule which allows R-pronouns to invert with their selecting prepositional head by moving to the specifier of P, yielding a postpositional phrase.

VR's account thus sees the specifier of PP as being restricted to hosting R-pronouns. His assumptions are essentially that if something can move out of PP, given the Head Constraint, we should see overt evidence of its ability to occupy Spec-PP. Furthermore, if something can appear in Spec-PP, there must be some transformational rule within the given language that allowed it to move there. Thus, given the ability of R-pronouns in Dutch to move to Spec-PP via the r-movement rule (63-a), the Head Constraint is not violated and R-pronouns can be extracted (63-b). Conversely, since non-R-pronouns like *hem* (63-c) never appear in Spec-PP (63-d), the language must lack a transformational rule allowing non-R-pronouns (i.e. regular pronouns and NPs/DPs) to move to this position. Given their inability to move to Spec-PP, these elements can thus never undergo extraction (63-e). (examples from Law, 2017):

(63) a. Ik had niet [$_{PP}$ er$_i$ [*op* t_i]] gerekend.
I had not it on counted
'I had not counted on it.'

b. Ik had er$_i$ niet [$_{PP}$ t_i [*op* t_i]] gerekend.
I had it not on counted
'I had not counted on it.'

c. Ik had niet [$_{PP}$ [*op* hem]] gerekend.
I had not on him counted
'I had not counted on him.'

d. *Ik had niet [$_{PP}$ hem$_i$ [*op* t_i]] gerekend.

e. *Ik had hem$_i$ niet [$_{PP}$ t_i [*op* t_i]] gerekend.

In addition to the Head Constraint and r-movement rule, VR incorporates multiple stipulations that

[35] Koopman (2010) is a proposal also focused primarily on Dutch. She proposes an articulated PP structure with two additional projections (AgrP and PlaceP). She assumes PlaceP has a strong feature that can be checked by either an R-pronoun(in Dutch)/DP(in English) or a PP. Spec-Place serves as an escape hatch for R-pronouns(in Dutch)/DPs(in English), yielding P-stranding as well as full PPs, yielding pied-piping. I relegate my critique here to a footnote as it is not clear how Koopman's proposal can account for anti-locality, as prepositional complements can freely move directly out of PP to a higher position (i.e. Spec-Place). This suggests that prepositions cannot be taken as phase heads in her implementation and predicts that DP complements should be able to extract out of PP in any language. There is nothing in her proposal that would bar movement of DPs out of PPs in non-P-stranding languages. Additionally, Abels (2003b) notes that her assumptions and articulated PP structure cannot account for extraction out of complex PPs in English, incurring violations of the LBC.

are unique to Dutch in order to account for the apparent P-stranding found in this language, but these need not concern us here.[36]

A central issue with VR's proposal is that it predicts that for a language to have an escape hatch position in PP, complements which can move and leave prepositions stranded must independently be able to appear in the specifier of PP, as R-pronouns do in Dutch via his r-movement rule. This naturally predicts that *wh*-phrases should independently appear in the specifier position of PPs in English since this is a P-stranding language which allows DPs to move and strand prepositions under question formation. VR claims this prediction is borne out in *swiping*, a sub form of *sluicing*.

Sluicing (as well as swiping) was first discussed by Ross (1969) and is a form of clausal ellipsis that takes place in constituent questions, leaving only a *wh*-remnant to be pronounced, as in (64):

(64) John saw someone, but *who*?

Swiping is a subform of sluicing, wherein a sluiced *wh*-phrase along with its selecting preposition remain after ellipsis, with the *wh*-phrase preceding the preposition in linear order.

(65) John was talking, but I don't know *who with*.

VR claims swiping provides evidence that *wh*-phrases can appear to the left of their selecting prepositions (i.e. in specifier of PP) in English. To this effect, he assumes swiping is derived as follows (66):

(66) Bill went to the mall, but I don't know [$_{PP}$ who$_i$ [$_{P}$ *with* [$_{DP}$ t_i]]].

As (66) shows, VR assumes that a *wh*-phrase can move to the specifier position of a PP in sluicing and remain here without cycling out of this position. This, he argues, is how the inverse order seen in swiping is derived.

Problematically, several significant issues arise in assuming that swiping is derived as in (66) (Law, 2017; Ott and Therrien, 2020, a.o.). Firstly, a verb like *know* subcategorizes only for DP (67-a) or CP complements (67-b), never PPs (67-c):

(67) a. I know [$_{DP}$ that man].
b. I know [$_{CP}$ that he left yesterday].
c. *I know [$_{PP}$ on the porch].

[36]I note here that VR incorporates an analysis of the P-passive in his proposal. I will not review it here as it is a reanalysis approach, which section 2.5.4 has already shown is an untenable approach to P-stranding. VR's reason for resorting to reanalysis is, as noted above, that he assumes Spec-PP is a position reserved for R-pronoun movement only, thus ruling out DPs from cycling through this position in pseudopassivization. His proposal is thus further impeded by the fact that The Head Constraint is unable to account for P-passives in English and other languages where DPs may be passivized, leaving their prepositional head stranded.

The swiped remnant in (66) clearly cannot be analyzed as a PP, since *know* can never select for a PP complement.

In addition, independent evidence that *wh*-phrases do not appear in Spec-PP can be seen in the following contrast:

(68) a. *[Who with]$_i$ did Bill go to the mall t_i ?
b. [With whom]$_i$ did Bill go to the mall t_i ?

The type of exceptional PP-internal inversion suggested above only ever occurs under ellipsis, never in non-elliptical scenarios.[37]

It quickly becomes evident that deriving swiping structures in the manner suggested in (66) is untenable. Any instance of P-stranding under *wh*-movement in English will thus violate the central tenet of VR's proposal: the Head Constraint. Since *wh*-phrases cannot independently appear in Spec-PP in English, under VR's assumptions, we would have to posit that the transformational rule that allows *wh*-movement in English does not move *wh*-phrases to this position. By default, P-stranding in English must then take place by DPs moving directly out of PP without cycling through the specifier position, violating the Head Constraint.

VR's assumption that non-P-stranding languages categorically lack a specifier position within PP (i.e. an escape hatch) further renders PPs in all Class 4 languages strict islands for extraction (Abels, 2003b). For example, VR's assumption makes the prediction that extraction out of PP in any dialect of French is illicit, a prediction which is falsified by some dialects of Canadian French (Giancarli, 2017). Some dialects of Canadian French do in fact allow P-stranding (e.g. LFF), contra to what VR's assumptions predict. Furthermore, like English, *wh*-phrases do not independently appear in Spec-PP. VR's account runs into the same problem here as noted above for English.[38]

Abels (2003b) has further noted that even in languages like Russian (another Class 4 language), subextraction out of a PP embedded in another PP is not ruled out, as shown in (69) (from Abels 2003b):

(69) ?[$_{PP}$ Na čto]$_i$ sleduet otkazat'sja [$_{PP}$ ot vsjačeskih pretenzij t_i].
on what follows give.up-self of whatsoever hopes
'What should one rid oneself of any kind of hope for?'

VR's prediction is that extraction out of PP in dialects of French and in Russian violate the Head

[37] This is a simplified account of the problems inherent with deriving swiping in the manner described by VR. In chapter 5, which focuses on swiping in LFF, I will give a more thorough account of this PP-internal type of approach to swiping and the theoretical issues it raises.

[38] Although the LFF dialect has been shown to accept swiping constructions (see chapter 5 as well as Ott and Therrien 2020), this claim cannot be extended to other dialects of Canadian French. But, as already noted, the acceptance of swiping in this dialect does not change the fact that VR's analysis of this structure, with *wh*-phrases independently appearing in the specifier of PP, is untenable.

Constraint since PP in these languages should not have an escape hatch position, a prediction which is clearly not borne out, making his proposal cross-linguistically inadequate.[39]

Given the problems inherent in VR's proposal, I argue that we must set aside his particular implementation in accounting for P-stranding. This being said, I will retain the intuition that PPs have

[39]Law also notes that a problem for the Head Constraint arises in Dutch. Law claims that instances of extraction of non-R-pronouns out of PPs do exist (from Law 2017):

(i) a. Je zei dat hij [$_{PP}$ de boom *in*] geklommen is.
you said that he the tree in climbed is
'You said that he has climbed into that tree.'
b. [Welke boom]$_k$ zei je dat hij [$_{PP}$ t_k in] geklommen is?
which tree said you that he in climbed has
'Which tree did you say that he has climbed into?'

To avoid a violation of the Head Constraint, VR would have to posit that the *wh*-phrase moves through the specifier of PP in (i), even though non-R-pronouns in Dutch are typically barred from appearing in postpositional phrases.

VR accounts for this data by proposing that the preposition moves rightward to incorporate with the V, as in (ii-a). With the head of the PP now being vacant, the DP is free to be extracted without violating the Head Constraint (ii-b) (from Law 2017).

(ii) a. Je zei dat hij [$_{PP}$ t_j de boom] [in$_j$ + geklommen] is.
you said that he the tree in climbed is
'You said that he has climbed into that tree.'
b. [Welke boom]$_k$ zei je dat hij [$_{PP}$ t_j t_k] [in$_j$ + geklommen] is?
which tree said you that he in climbed has
'Which tree did you say that he has climbed into?'

Law claims that VR's solution for the data in (ii) cannot account for the data set in (iii) (from Law 2017):

(iii) a. [Welke boom]$_k$ klom Jan [$_{PP}$ in t_k]?
which tree climbed Jan into
'Which tree did Jan climb into?'
b. Ik geloof dat Jan [de boom]$_k$ gisteren [$_{PP}$ in t_k] t_i is geklommen$_i$.
I think that Jan the tree yesterday in is climbed
'I think that Jan climbed into that tree yesterday.'
c. [Welke boom]$_k$ zei je dat hij [$_{PP}$ in t_k] t_i is geklommen$_i$?
which tree said you that he in is climbed
'Which tree did you say that he climbed into?'

In each of the extractions above, Law argues the head of PP cannot be said to be empty. If the element *in* is truly a preposition selecting a DP complement, as Law claims, the data in (iii) would violate the Head Constraint and could not be accounted for within the confines of VR's proposal.

I will point out here that this last argument given by Law is not a serious encumbrance to a structural approach to P-stranding, as it is not clear that *in* is in fact a preposition. It is likely that VR's intuition that this element is tied to the verb is on the right track. Separable prefix verbs are common in Dutch and German, where verb movement leaves the separable prefix stranded in a lower structural position within the sentence. The German example below with the verb *vorstellen* illustrates (from Walter and MacWhinney 2018):

(iv) a. Ich muss mich deinen Eltern *vorstellen*.
I have myself your parents introduce
'I have to introduce myself to your parents.'
b. Ich *stelle* mich deinen Eltern *vor*.
I place myself your parents in.front.of
'I am introducing myself to your parents.'

a particular architecture in P-stranding languages that PPs in non-P-stranding languages lack. This intuition, combined with refinements to the theory made in Abels (2003b, 2012) will be adopted in accounting for P-stranding in LFF.

The final approach to be reviewed in this section is the modernized escape hatch proposal of Abels (2003b, 2012). His implementation is phase-based, with prepositions being phase heads. In phase theory (Chomsky, 2001), a derivation is broken up into smaller syntactic computational domains called phases. Phases are essentially intermediate points in a given derivation where the structure up to that point is 'spelled-out' (i.e. computed) and the information sent to the semantic (i.e. Logical Form (LF)) and phonological (i.e. Phonological Form (PF)) interfaces to be interpreted. These smaller chunks of the larger syntactic structure in derivations are considered as complete domains and become inaccessible to further operations once spelled-out. Each phase is posited to possess an *edge* domain (i.e. specifier position) and only this domain and the phase head remain accessible once a phase is spelled-out. Constituents which move upwards in syntactic structure must cycle through phases via the edge domain. The above is encapsulated in Chomsky's 2001 Phase Impenetrability Condition (PIC) which derives successive-cyclic movement by forcing anything moving upwards to first move to the edge of each phase in a given derivation. (for relevant discussion see e.g. Citko 2014; Gallego 2010; Müller 2011, a.o.). Since Abels proposes PPs are phases, any constituent cycling out of this domain must move to the edge of PP (i.e. Spec-PP) in order to be visible to further syntactic operations in a derivation and escape the phase domain as per the PIC.

In his work, Abels proposes a central theoretical tenet which he calls the Stranding Generalization (henceforth SG) (from Abels 2003b):[40]

(70) *Stranding Generalization*
Given a phase head α^o and a constituent X in α^o's c-command domain, extraction out of the c-command domain of α^o may occur, as long as the extraction does not leave α^o without a complement.

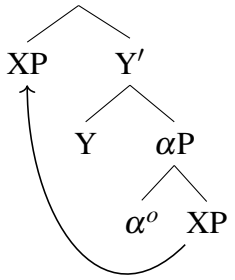
Given that prepositions are phase heads, Abels' SG blocks extraction of prepositional complements either directly out of the phase by bypassing the specifier position (71-a), or by first cycling through

The fact that *in* is the prefix in many separable prefix verbs in Dutch robs Law's argument of any real strength and we may set it aside as a serious contention against VR's structural approach. Whatever the best analysis of (iii) may be, it remains a fact that these are the limited exception and not the rule when it comes to P-stranding in Dutch and German. The generalization that P-stranding may only occur with R-pronouns in these languages remains intact.

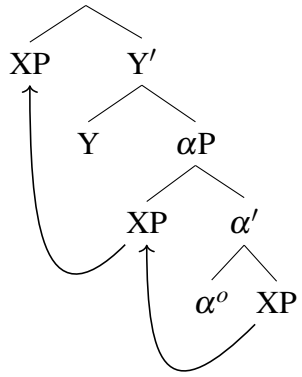
[40] Abels (2003b, 2012) provides independent evidence for this generalization using empirical evidence from a variety of languages showing that both TPs and VPs (as well as DPs in non-p-stranding languages) are robustly unable to move in syntactic structure to leave their respective phase heads (i.e. C, v and P) stranded. I further note that I take Abels's Stranding Generalization to be a restriction on moving the complement of a phase head to the specifier position of that phase and not a ban on phase heads lacking a phonologically overt complement, otherwise this would rule out the orphan preposition cases seen in dialects of French, including LFF.

the specifier of the phase and then on to a higher position (71-b). Complements to phase heads are thus frozen in place (from Abels, 2003b):

(71) a. *



b. *



Abels (2003b, 2012) derives the illicit nature of the derivation in (71-a) by adopting the PIC. The movement in (71-a) is too non-local (i.e. non-cyclic), moving directly out of the phase without cycling through the edge (i.e. specifier) position in direct violation of the PIC. The derivation in (71-b) on the other hand is too local. Abels (2003b, 2012) blocks this derivation via a principle called Last Resort (LR) and a constraint which is essentially a corollary of LR resort called the Anti-Locality Constraint (ALC) (from Abels 2003b):

(72) *Last Resort* (LR)
A constituent α may only be merged (i.e. base-merged or remerged) if that leads to the immediate satisfaction of a previously unsatisfied feature.

(73) *Anti-Locality Constraint (ALC)*
The complement of a phase head may never move to the specifier of that head's maximal projection, leaving the phase head stranded.

Essentially, LR and its corollary the ALC prevent a movement that is too local, ruling out (71-b) by disallowing any merge operation that is not motivated by the need to value a feature. To be explicit, Abels assumes that when XP merges directly with a phase head, as in (71-a), any feature needing to be valued is satisfied at this point. There is thus no need for XP to move in terms of feature valuation and as such, if XP did move both Last Resort and the ALC would be violated.

The crucial question raised by Abels' assumptions is how a prepositional complement can ever be extracted. In Abels (2003b) phase heads were taken to be parametric. That is, in non-P-stranding languages, prepositions are phase heads and so stranding is disallowed, as per the SG. In P-stranding languages, prepositions are not phase heads and so prepositional complements can be

extracted out of PP.[41] Assuming phase heads are parametric is problematic as it is not stable across languages. Dutch and German as we have already seen show a mixed P-stranding behaviour, only allowing P-stranding with R-pronouns. Why some prepositions should be phase heads when taking an R-pronoun complement but not a DP complement cannot be accounted for under a parametric approach.[42]

In Abels (2012), the parametric nature of prepositional phase heads is eliminated. All prepositions are phase heads and movement out of a PP phase is allowed (successive-cyclically) only if structure intervenes between the preposition and its complement. Abels provides evidence to corroborate this claim by looking at morphological facts observable in German and Dutch P-stranding with R-pronouns.[43] In German, vowel-initial prepositions must appear with the prefix *dr-* in extraction scenarios (15-a), while consonant-initial prepositions appear in their regular form (15-b) or with the prefix *da-* (15-c) (from Abels, 2012):

(74) a. Wo hast du [*in/**dr***in*] geschlafen?
where have you in/DR.in slept
'What did you sleep in?'

b. Wo hast du *mit* gerechnet?
where have you with counted
'What did you count on?'

c. Da habe ich nicht **da***mit* gerechnet.
there have I not DR.with counted
'I didn't expect that.'

Noonan (2017) notes that a similar morpheme obligatorily appears in cases of Dutch P-stranding with R-pronouns, with the morphological change taking place on the R-pronoun rather than on the preposition (e.g. *da* → *daar*) (example from Noonan 2017):

[41] Both Abels (2003b) and Abels (2012) are mainly focused on P-stranding under $\overline{\text{A}}$-movement. Abels (2003b) viewed pseudopassivization as an instance of case suppression, where a preposition's case could be suppressed in a manner that allowed its complement to undergo A-movement to subject position under passivization to receive nominative case. As I have already noted in fn.20, Abels (2012) departs from this view, relegating P-passives to a historical accident due to the gradual loss of impersonal passives without expletive subjects in English, which I pointed out is an untenable approach for LFF.

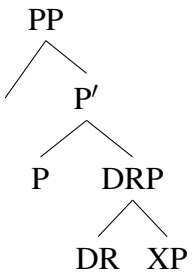
[42] Other languages (e.g. Turkish, Russian, a.o.) also show a mixed P-stranding behaviour, allowing P-stranding with certain types of adpositions, making a parametric approach to phase heads cross-linguistically untenable. I discuss these languages in more detail in Chapter 4.

[43] Abels (2012) also looks at additional evidence from Turkish (Sener, 2006) and Russian (Podobryaev, 2009), where there is mixed stranding behaviour (i.e. these are non-P-stranding languages yet certain adpositions can in reality be stranded). The strandable adpositions in these languages are argued by the authors cited above to have additional structure that other adpositions in the language lack. Additionally, in Papiamentu (Muysken, 1977) and Cape Verdean Creole (Alexandre, 2009) there is an overtly realized element in place of the gap in P-stranding constructions that cannot be analyzed as a resumptive pronoun, but could provide evidence for the presence of additional structure within PP. I discuss this in more detail in section 4.2.1 of chapter 4.

(75) Daa**r** heb ik dat boek *op* gelegd.
there have I the book on put
'I put the book on that.'

In my own analysis I follow both Abels (2012) and Noonan (2017) in assuming this morpheme constitutes a head that imposes itself structurally between prepositions and their complements in cases of P-stranding with R-pronouns in Dutch and German. Abels proposes that the extra morpheme in German, which is realized as either *dr-*, *da-*, or a phonologically empty morpheme (∅) constitutes an additional projection in PP that he labels DR. The general idea is illustrated below and represents what I will argue is the universal structure of PPs in P-stranding scenarios, regardless of what language this takes place in:[44]

(76)

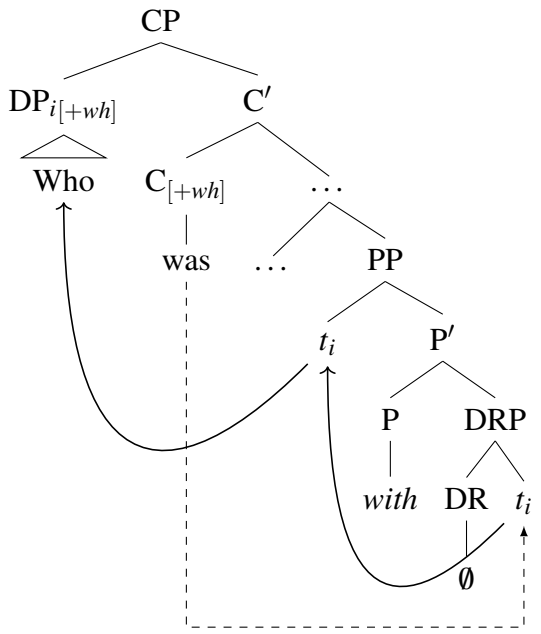


The extra layer of structure instantiated by the DR-morpheme separates a phase head P from its complement and circumvents anti-locality, allowing extraction. Given that the prepositional complement merges with the DR-head in these scenarios and not directly into a sisterhood relationship with P, we can further assume that it may have features still needing to be valued. When the complement then moves to the edge of the PP phase, it becomes accessible to higher probes for feature valuation. Last Resort is therefore not violated. In a P-stranding language like English, it is assumed that the DR-morpheme is still present in order to void anti-locality and derive P-stranding, albeit it remains phonologically unrealized, as exemplified below:

(77) a. Who was he *with*?

[44] For Dutch and German Abels (2012) proposes a different structure than what I am suggesting in (76). I will discuss his reasons for doing so, as well as my reasons for not adopting his structure for Dutch and German PPs in section 4.1 of chapter 4.

b.



The structural approach to P-stranding suggested above has several advantages over the government and reanalysis/incorporation approaches, as well as other structural approaches such as van Riemsdijk (1978) and Abels (2003b). Firstly, the status of P and PP is uniform across all languages. There is no parameter to the phase head status of P; P is a phase in all languages, period. There is also no need to suppose, as Van Riemsdijk does, that PP in some languages has a specifier position for successive-cyclic movement while in other languages it does not, with the additional and problematic assumption that this position is somehow available for some constituents but not others (e.g. R-pronouns versus DPs in Dutch and German). As Abels (2003b, 2012) has shown, even in non-stranding languages, subextraction out of Ps complement is possible (recall (69) and accompanying discussion); Spec-PP must then be projected and available to host successive-cyclic movement even in these languages. Additionally, the proposal does not suffer from the flawed assumption that P-stranding is restricted by prepositions being able to properly govern their complements in some languages but not others, an assumption that is falsified for French by the empirical facts observed in LFF. In adopting the structural approach I am suggesting here (to be fleshed out in chapter 4), we further avoid all the inherent problems faced by proposals that assume a process of reanalysis or those that assume that only languages which do not have P-D incorporation can strand prepositions, again an assumption that is falsified by LFF.

Given that I have already extensively discussed the weaknesses of these proposals, I refrain from repeating the details here. Suffice it to say that the structural approach I develop in chapter 4 avoids all the theoretical and empirical shortcomings already noted for these competing analyses. The discussion so far serves as sufficient background to prepare us for the analysis to come in Chapter 4, where I will discuss in detail the modifications I make to Abels (2012) and my reasons

for doing so as well as how the DR-morpheme approach accounts for P-stranding in LFF.

2.7 Conclusion

This chapter has reviewed the facts of P-stranding in the languages in which this syntactic phenomenon is possible. I established that the working definition of P-stranding for this thesis is leftward movement of prepositional complements. Based on empirical facts, I furthermore provided a cross-linguistic classification of the world's languages into four classes (Class 1: productive; Class 2: semi-productive; Class 3: restricted; Class 4: illicit). My argument, which will be laid out in more detail throughout the remainder of the thesis is that LFF must be added to the list of Class 1 languages. A survey of constraints on P-stranding and P-passives then provided a discussion and background for the critique of proposals on P-stranding to come in the final section of the chapter.

The discussion in the final section of the chapter showed that proposals based on the notions of government and reanalysis/incorporation were fraught with serious problems and are untenable in accounting for P-stranding. The argumentation I presented was in favour of an analysis that relies on the internal syntax of PP, namely the proposals of Abels (2003b, 2012), with some revisions to be implemented in Chapter 4.

In the next chapter, I will take the empirical facts of P-stranding in English as a baseline for an analysis of LFF, showing that this dialect has bona fide movement derived P-stranding and is not simply an extension of the phenomenon of orphan prepositions noted in Standard French. Chapter 4 will then present the core syntactic analysis of P-stranding. Using an approach that adopts principles from Abels (2012), I will show that LFF provides novel evidence for an added layer of structure within PP that allows the complements of prepositions in this dialect to obviate Last Resort and the ALC and extract from out of the domain of their phase heads.

Chapter 3

Beyond orphan prepositions: LFF as a Class 1 language

This chapter examines the empirical picture of P-stranding in LFF. In section 3.1, I first discuss what is possible in LFF P-stranding under both A and $\overline{\text{A}}$-movement. The discussion will show that although LFF has OPs like in SF, it also parallels English, allowing true P-stranding. Section 3.2 focuses on OP constructions. Here I define the two types of OP constructions that exist in SF and their defining characteristics. I further provide an analysis of OP gaps using diagnostics provided by Zribi-Hertz (1984) and Authier (2016). The discussion will show that the gap in OP constructions is best analyzed as being occupied by a null pronoun and not a trace. More accurately, OP gaps are occupied by a null inanimate pronoun because French does not contain an equivalent overt item in its lexical inventory. In turn, I show that LFF parallels SF in having OPs but that there is a crucial asymmetry between the two. Notably, whereas SF only ever allows a gap following a preposition in order to rectify a lexical deficiency (i.e. the lack of an inanimate pronoun in its pronoun system, essentially an equivalent to English 'it'), LFF differs in allowing animate antecedents as referents for the gap in OP constructions. LFF thus sometimes allows English-style cases of P-stranding under topicalization, diverging significantly from SF.

In section 3.3 I examine the gap that follows prepositions which have been stranded via movement. Using diagnostics on movement and the identification of pronouns, I show that the gap in these instances instantiate the trace of a moved element and not the null pronoun realized in OPs. The evidence I provide demonstrates that P-stranding in these LFF cases is bona fide movement derived P-stranding as defined in chapter 2. Given this fact, I conclude that LFF must be added to the inventory of Class 1 languages. Section 3.4 then provides a survey of a select set of prepositions in LFF, showing that they diverge in significant ways from their Standard French counterparts. In 3.5 I provide a brief overview and discussion of the preliminary results of a pilot study consisting of a reading experiment that looks at reaction times following stranded prepositions among speakers of

English, LFF and Quebec French. I conclude that although the initial data possibly hints towards a trend of LFF and English speakers patterning together in being more accepting of P-stranding than speakers of Quebec French, ultimately these preliminary results do not allow any firm conclusions to be made. Section 3.6 concludes the chapter.

3.1 LFF P-stranding: an empirical survey

This section examines the empirical picture where LFF P-stranding is concerned. The bona fide P-stranding that takes place in English via leftward movement of prepositional complements under both A and $\overline{\text{A}}$-movement has been shown time and again to be illicit in SF (Jones, 1996; Law, 2017; van Riemsdijk, 1978 a.o.). The contrast between (1) and (2) below exemplifies:

(1) a. Which bed did you sleep *in*?
b. This bed has been slept *in*.

(2) a. *Quel lit as-tu dormi *dedans*?
what bed have-you slept in
'What bed did you sleep in?'
b. *Ce lit a été dormi *dedans*.
this bed has been slept in
'This bed has been slept in.'

Nevertheless, SF allows prepositions to appear without (overt) complements in specific circumstances in orphan preposition structures (OPs). In these instances, LFF and SF converge. A standard case is provided below (from Zribi-Hertz 1984):

(3) Cette valise, je voyage souvent *avec*.
this suitcase I travel often with
'This suitcase, I often travel with *(it).' *SF/LFF*

Although the OP structure is available in the grammar of LFF, as it is in SF, LFF differs significantly from SF by matching English in allowing P-stranding under various $\overline{\text{A}}$-movement constructions such as question formation (4-a), relative clauses (4-b), comparatives (4-c), as well as under A-movement (i.e. passivization) (4-d):

(4) a. Qui est-ce qu'elle a voté *pour*?
who is.it that.she has voted for
'Who did she vote for?'
b. Le pays qu'il est venu *de* est vraiment pauvre.
the country that.he is come from is very poor
'The country that he came from is really poor.'

c. Jean a rejeté plus de filles que Marc est sorti *avec*.
Jean has rejected more of girls than Marc is gone.out with
'Jean rejected more girls than Marc went out with.'

d. Le ciment a été marché *dedans* avant qu'il puisse sécher.
the cement has been walked inside.of before that.it could dry
'The cement was walked in before it could dry.'

The following sections provide a survey of relevant data sets of LFF P-stranding under both A and $\overline{\text{A}}$-movement.[1]

3.1.1 P-stranding under $\overline{\text{A}}$-movement

In direct contradiction to what is observed in SF under *wh*-movement, LFF prepositional complements can productively move out of PP to Spec-CP under question formation. Below, I provide a relevant data set of P-stranding with various prepositions under *wh*-movement in matrix clauses.[2]

[1] I make note here of the fact that P-stranding under tough-movement is possible in LFF in the same manner as it is in English:

(i) Jean est difficile de s'accorder *avec*.
Jean is difficult to oneself.get.along with
'Jean is difficult to get along with.'

There exists much debate in the literature on whether this construction is best analyzed as A or $\overline{\text{A}}$-movement as it has characteristics of both types (Authier and Reed 2009; Hicks 2003; Sportiche 2006, a.o.). In this thesis I remain agnostic on how to best analyze this structure as nothing in my analysis hinges on whether this is A or $\overline{\text{A}}$-movement, as both are types of phrasal movement.

Regardless of the best analysis (i.e. A versus $\overline{\text{A}}$-movement), I will note here that the gap cannot be a null resumptive, as Zribi-Hertz (1984) claims for Standard French orphan prepositions and so these cases of P-stranding under tough-movement are in fact movement derived. As shown below, examples of tough-movement with animate subjects do not show resumptive pronouns in the gap; in fact they become illicit if a resumptive pronoun is inserted in this position:

(ii) *Jean est difficile de s'accorder *avec* lui.
Jean is difficult to himself.get.along with him
'Jean is difficult to get along with *(him).'

I simply make note of these facts here, as the tough-movement construction is peripheral to the cases of $\overline{\text{A}}$-movement we see in question formation and relative clauses. These core cases of $\overline{\text{A}}$-movement are the clearest indicator that P-stranding in LFF is movement derived and will remain the focus throughout this thesis and the syntactic analysis to come in Chapter 4.

[2] I emphasize here that the main goal of this thesis is to make a contribution by providing evidence that bona fide, movement derived P-stranding exists in a dialect of Canadian French and provide a theoretical account of how this takes place in the syntax. In what follows, I will not be providing a complete empirical survey of what is possible or not possible where P-stranding is concerned with every single preposition in the French lexicon. Such a step would make this chapter unnecessarily data heavy and after all, it is well known that even in English, not all prepositions can participate in P-stranding (Takami, 1992; Stanton, 2016, a.o.). As is often discussed in the literature, there are numerous cases where prepositions cannot be stranded that seem to fall outside the purview of a syntactic account (see e.g. Takami, 1988, 1992, a.o.). In this chapter I focus on prepositions that are strandable in LFF and provide only enough data to make my point throughout. The issue of unstrandable prepositions is something that I will address in section 4.4 of chapter 4.

Of course, this list is not an exhaustive compilation, but suffices to show that LFF clearly has P-stranding under *wh*-movement in matrix clauses:

(5) a. Où$_i$ est-ce qu'il est venu *de* t_i?
where is.it that.he is come from
'Where did he come from?'

b. [Quelle heure]$_i$ est-ce qu'il est arrivé *à* t_i hier soir?
what time is.it that.he is arrived at yesterday night
'What time did he arrive at last night?'

c. Qui$_i$ est-ce qu'il a été arrêté *par* t_i?
who is.it that.he has been arrested by
'Who was he arrested by?'

d. Qui$_i$ est-ce que les policiers cherchaient *pour* t_i?
who is.it that the police were.searching for
'Who were the police searching for?'

e. [Quelle chaise]$_i$ est-ce qu'il a sauté *par-dessus* t_i?
which chair is.it that.he has jumped over
'Which chair did he jump over?'

f. [Quel mur]$_i$ est-ce qu'il s'est penché *contre* t_i?
which wall is.it that.he himself.is leaned against
'Which wall did he lean against?'

g. [Quelle plume]$_i$ est-ce qu'elle a écrit la lettre *avec* t_i?
which pen is.it that.she has written the letter with
'Which pen did she write the letter with?'

h. [Quelle boîte]$_i$ est-ce que le chat s'est caché *dedans* t_i?
which box is.it that the cat itself.is hidden inside.of
'Which box did the cat hide in?'

The above sentences show clear cases of *wh*-movement to the Spec-CP position.[3] The data above cannot be reduced to orphaning, which as section 3.2 will show, clearly does not involve movement. Furthermore, (5) provides cases of P-stranding involving the prepositions *de*, *à* and *par*, prepositions which are robustly illicit in OP constructions, as exemplified below (from Zribi-Hertz 1984:

[3]As discussed at the end of section 2.1 of chapter 2, although *wh*-question formation in LFF highly prefers the *est-ce que* variant used throughout (5) above, cases where *wh*-phrases are not immediately supported by the *est-ce que* element are still licit (i-a), as well as those where some reduced variant of *est-ce que* is used (i-b):

(i) a. [Quelle boîte]$_i$ s'est-il caché *dedans* t_i?
which box himself.is-he hidden inside.of
'Which box did he hide in?'

b. Qui$_i$ que les policiers cherchaient *pour* t_i?
who that the police were.searching for
'Who were the police searching for?'

(6) a. *Paris, J'adore aller *à*.
Paris, I.love to.go to
'*Paris, I love going to.'

b. *Paris, je viens de rentrer *de*.
Paris, I just of came.back from
'*Paris, I just came back from.'

c. *Paris, je suis passé *par*.
Paris, I am drove through
'*Paris, I drove through.'

We can also note as an aside that both the preposition and its complement can be either simplex or complex; the complexity of the preposition and the complement that undergoes movement does not seem in any way to affect the ability to strand a preposition in LFF. This is of course no different than what can be observed of P-stranding in English.

P-stranding in LFF is thus clearly licit under *wh*-movement. If the above were not evidence enough, the data set below shows that P-stranding in LFF can just as easily take place with various prepositions under long-distance *wh*-movement, again with both simplex and complex prepositions and complements:[4]

(7) a. Qui$_i$ est-ce que tu as dit qu'il s'est assis *avec* t_i?
who is.it that you have said that.he himself.is sat with
'Who did you say he sat with?'

b. Qui$_i$ est-ce que tu crois qu'il pensait *de* t_i?
who is.it that you believe that.he was.thinking about
'Who do you believe he was thinking about?'

c. [Quel lit]$_i$ est-ce que tu as dit qu'il s'est couché *dedans* t_i?
which bed is.it that you have said that.he himself.is slept inside.of
'Which bed did you say he slept in?'

d. [Quelle roche]$_i$ est-ce que tu as dit qu'il s'est caché *derrière* t_i?
which rock is.it that you have said that.he himself.is hidden behind
'Which rock did you say he hid behind?'

e. [Quelle porte]$_i$ est-ce que tu as dit qu'il a glissé la lettre *dessous* t_i?
which door is.it that you have said that.he has slid the letter under
'Which door did you say he slid the letter under?'

f. Qui$_i$ est-ce que tu penses qu'elle s'inquiétait *pour* t_i?
who is.it that you think that.she herself.worried about
'Who do you think she's worried about?'

[4]The reader should note that I also vary the usage of the verbs which select the PP complements from which extraction takes place. I do this to show that P-stranding with commonly stranded prepositions in LFF like *avec* and *pour* are not simply the result of fossilization, where certain cases such as *sortir avec* and *voté pour* are accepted only because these specific cases have been commonly used in the language over a long period of time.

g. [Quelle muraille]$_i$ est-ce que tu crois qu'il s'est placé *devant* t_i?
which mural is.it that you believe that.he himself.has placed in.front.of
'Which mural do you believe he stood in front of?'

h. Qui$_i$ est-ce que tu penses qu'elle s'est assise *à côté de* t_i hier soir?
who is.it that you think that.she herself.is sat at side of last night
'Who do you think she sat beside last night?'

We can note in the above data set that in example (7-h), a complex preposition ending with *de* functions as the stranded preposition. Examples of this type in LFF provide additional argumentation in favour of a movement analysis of LFF P-stranding. Zribi-Hertz (1984) observes that all complex prepositions containing *de* at the end lose this final element when used as OPs. In (8) below, we see the complex preposition *autour de* first with an overt complement (8-a). Example (8-b) then shows that this preposition realized in an OP structure in its complex form yields an illicit sentence. Only when the *de* is dropped can it be followed by a gap, yielding an OP structure (8-c).:

(8) a. Il y avait des arbres tout *autour de* la maison.
there CL were some trees all around of the house
'There were trees all around the house.'

b. *La maison avait des arbres tout *autour de*.
The house had some trees all around of
'The house had trees all around *(it) .'

c. La maison avait des arbres tout *autour*.
The house had some trees all around
'The house had trees all around *(it) .'

The facts above thus provide another compelling piece of evidence that cases like (7-h) are clearly movement derived and not cases of orphaning. Even if we ignore the overwhelming fact that *wh*-movement has taken place in the above data set, (7-h) would surely be illicit if what was taking place here were in fact some kind of orphaning with a null resumptive element, as the final *de* would not be able to be realized phonetically in these instances.

Just as we see in English, P-stranding in LFF also takes place in a variety of relative clause constructions (example (10-a) adapted from Stanton, 2016; (10-c) adapted from Authier, 2016):

(9) *restrictive relatives*

a. Le pays qu'il est venu *de* est vraiment pauvre.
the country that.he is come from is very poor
'The country that he came from is really poor.'

b. La charité qu'il a quêté *pour* n'était pas bien connue.
the charity that.he has collected for NEG.was not well known
'The charity that he collected for was not well known.'

c. Le gars qu'il a craché *dessus* s'est vraiment mis en colère.
the guy that.he has spit on himself.is really put in anger
'The guy that he spit on got really angry.'

(10) *infinitival relatives*

a. Pierre a dit que la session à partir *après* est celle de cet après-midi.
Pierre has said that the session to leave afer is the.one of this afternoon
'Pierre said that the session to leave after is the afternoon one.'

b. Jean a dit que la fille à sortir *avec* est Marie.
Jean has said that the girl to go.out with is Marie
'John said that the girl to go out with is Marie.'

c. Lucie a acheté une baignoire à patauger *dedans*.
Lucie has bought a bathtub to splash.around insinde.of
'Lucie bought a bathtub to splash around in.'

(11) *free relatives*

a. J'ai trouvé ce qu'il cherchait *pour*.
I.have found that which.he looked for
'I found what he was looking for.'

b. J'ai vu ce qu'elle jouait *avec*.
I.have seen that which.she played with
'I saw what she was playing with.'

(12) *appositive relatives*

a. Cet arbre là, quelle s'était cachée *derrière*, est tombé pendant la tempête.
that tree there which herself.was hid behind is fallen during the storm
'That tree, which he hid behind, fell during the storm.'

b. Cette fille là, qu'il avait sorti *avec* plusieurs fois, est tombée malade.
that girl there which.he had gone.out with several times, is fallen sick
'That girl, who he went out with several times, got sick.'

c. Le juge, qu'il s'est présenté *devant* mardi, est cruel.
the judge who.he himself.is presented in.front.of Tuesday is cruel
'The judge, whom he stood before on Tuesday, is cruel.'

Finally, I provide below a few examples of P-stranding in LFF in comparatives, another structure that is assumed to involve $\overline{\text{A}}$-movement (Bacskai-Atkari, 2012; Fults, 2005; Lechner, 1999, a.o.).

(13) a. Paul a cassé plus de chaises que Luc s'est assis *dessus*.
Paul has broken more of chairs than Luc himself.is sat on
'Paul broke more chairs than Luc sat on.'

b. Marie a acheté plus de boîtes que le chat de Lucie s'est caché *dedans*.
Marie has bought more of boxes than the cat of Lucie itself.is hidden inside.of
'Marie bought more boxes than Lucie's cat hid in.'

c. Pierre a abattu plus d'arbres que Marc s'est caché *derrière*.
Pierre has felled more of.trees than Marc himself.is hid behind
'Pierre felled more trees than Marc hid behind.'

The discussion in this subsection has reconfirmed the fact that SF and LFF converge in having OPs in their grammar. Nevertheless, LFF diverges significantly from SF in productively allowing movement derived P-stranding under various types of $\overline{\text{A}}$-movement. LFF thus stands out as a dialect of French that displays significant similarities with English in allowing extraction of prepositional complements leading to P-stranding, a distinct characteristic of Class 1 languages.

3.1.2 P-stranding under A-movement

Like English, P-stranding in LFF is productive not only under $\overline{\text{A}}$-movement, but also under A-movement in prepositional passives. Below I provide a relevant set of data from LFF:

(14) a. La chambre a été marchée *à travers* plusieurs fois.
the room has been walked at through several times
'The room has been walked through several times.'

b. Le ciment a été marché *dedans* avant qu'il puisse sécher.
the cement has been walked in before that.it could dry
'The cement was walked in before it could dry.'

c. Jean a été parlé *de* au meeting l'autre jour.
Jean has been talked about at.the meeting the.other day
'Jean was talked about at the meeting the other day.'

d. Le tapis a été marché *dessus* par quelqu'un qui avait les pieds sales.
The rug has been walked on by someone who had the feet dirty
'The rug was walked on by someone who had dirty feet.'

e. Le lit a été dormi *dedans*.
the bed has been slept in
'The bed has been slept in.'

That LFF parallels English in having the P-passive available in its grammar is more than a passing coincidence. This is accented by the fact that even Icelandic, another Germanic language with P-stranding, does not allow this phenomenon to take place under A-movement. As the example below shows, LFF, which is a Romance language, patterns with English in allowing P-passives, while Icelandic, a Germanic language does not (example (15-b) from Sigurðsson, 2011):

(15) a. Olaf was often talked about with scorn. *English*

b. *Þá var Ólafur oft talaður um.
then was Olaf.N often talked about
'Then, Olaf was often a talked about person.' *Icelandic*

c. Olaf a souvent été parlé *de* avec mépris.
Olaf has often been talked about with scorn
'Olaf was often talked about with scorn.' *LFF*

The question the asymmetry in (15) raises is why should a Romance language pattern with a Germanic one, when another language in the same family branch does not. The strong parallels between LFF and English where P-stranding is concerned seems to suggest a possible effect of reverse transfer (see e.g. Cook 2003, a.o.) from English to LFF due to a long standing and heavy contact situation between the two languages. Although providing irrefutable evidence for language transfer from English to LFF is beyond the scope and ambitions of this thesis, I will provide some modest discussion on this issue in section 3.5.

3.1.3 Interim summary

Section 3.1 has provided us with a data set of movement derived cases of P-stranding in LFF. I have done this by first providing examples of P-stranding under $\overline{\text{A}}$-movement. The data sets demonstrated that LFF P-stranding can take place using simplex and complex prepositions and prepositional complements under various types of $\overline{\text{A}}$-movement. I further showed that LFF parallels English by having the prepositional passive available in its grammar, an important correlation to make as this structure is absent even in some other Germanic P-stranding languages.

3.2 Orphaning

The discussion in this section focuses on the phenomenon of orphan prepositions (OPs). I present evidence that shows that Standard French (SF) OPs lack the characteristics of movement derived P-stranding. Unlike English, where P-stranding is uncontrovertably a movement derived phenomenon, OPs differ significantly as the gap following these prepositions is best analyzed as being occupied by a null pronominal element. In my discussion, I reiterate yet again that LFF has OPs of the SF type. Nevertheless, I show LFF differs from SF in sometimes allowing animate antecedents in OPs, having cases which resemble English topicalization.

3.2.1 Orphan prepositions

Prepositions lacking overt complements (i.e. OPs) are productive in SF in two different types of constructions. I discuss each case in turn. The discussion will show that in both types of OPs, the

gap cannot be said to have the characteristics of the trace of a moved element. Zribi-Hertz (1984) and Authier (2016) provide two key arguments that favour an analysis of OP gaps being occupied by a phonologically null pronoun. The first argument relies on movement diagnostics, showing that OP cases robustly prove to be island insensitive. The second argument relies on different tests that show that the gap in OP scenarios has the characteristics of a pronoun, rather than a trace. In the discussion that follows, I will show these arguments applied to both types of orphaning structures.

To begin, I note that there is no correlation between French and English where OPs are concerned, even though English has similar constructions. As noted by Authier (2016), English has a limited set of prepositions that can appear without complements in non-movement derived scenarios which look much like cases of SF orphaning. I give a few exemplary cases below (from Authier 2016):

(16) a. Check out this box! I wonder if there is something *inside*.
b. The house had trees (all) *around*.

Although English has a limited set of what appear to be OPs, this process is much more productive in French.[5] As the selected data set below shows, the English equivalent of typical French OP cases require a resumptive pronoun after the preposition (from Authier 2016):

(17) a. Il y avait un mur. Pierre était appuyé *contre*.
there CLIC was a wall Pierre was leaning against
'There was a wall. Peter was leaning against *(it).'
b. Je connais bien ce fusil parce que je chasse toujours *avec*.
I know well this gun because I hunt always with
'I know this gun well because I always hunt with *(it).'
c. Ils parlent de réduire les taxes. Moi, je suis à 100% *pour*.
they talk of reducing the taxes me I am to 100% for
'They're talking about lowering taxes. I'm 100% for *(it).'

What English seems to have are not OPs in the SF style, but rather a limited set of true intransitive prepositions and only these can appear without a complement (Authier, 2016). In all other cases, a resumptive pronoun must follow.

As noted above, French OPs come in two styles. The first is exemplified below (from Zribi-Hertz 1984):

[5]Zribi-Hertz (1984) claims that almost any preposition in SF can productively be used to derive a preposition + gap scenario. Her claim is that the only prepositions that are strictly illicit in these scenarios are *à (jusqu'à)*, *de*, *par*, *en*, *chez*, and *vers*. Only these six prepositions cannot be used as OPs (but see Authier (2016) for discussion and claims that the matter is more nuanced than Zribi-Hertz's original work would suggest).

(18) Pendant que nous visitions Notre-Dame, Pierre est passé *devant* __.
during that we were.visiting Notre-Dame Pierre is passed in.front.of
'While we were visiting Notre-Dame, Pierre passed in front of it.'

In OP cases of the type shown above, the gap seems to have the characteristics of a free pronoun, being able to pick up an antecedent from the previous discourse. Clearly, the gap here cannot be said to have been occupied by its antecedent, in this case *Notre-Dame*. The DP *Notre-Dame* in (18) is clearly the object of the verb *visitions* in this sentence. It is not possible to analyze this DP as having originated as an object of the preposition and undergone syntactic movement to a position as complement to the verb.

In OP scenarios like (18), the gap is not only discourse anaphoric, but also proves to be island insensitive. Two cases involving islands are given below (examples from Zribi-Hertz 1984). In (19-a), the gap is contained within a clause headed by a *wh*-phrase, thus being within a *wh*-island. In (19-b), the gap is situated inside a complex noun phrase, another structure know to block extraction. If these gaps were in fact occupied by the trace of a moved element (either an overt element or a null operator) rather than a null pronominal element, they would incur island violations, contrary to fact.

(19) a. Quand j'ai vu **la cathédrale Notre-Dame**, je me suis demandé [$_{CP}$
when I.had seen the cathedral Notre-Dame I myself am asked
combien de touristes pourraient bien passer *devant* chaque jour].
how.many of tourists could well pass in.front.of each day
'When I saw the Notre-Dame cathedral, I wondered how many tourists might pass by (*it) each day.'

b. Quand j'ai vu **cet arbre**, j'ai conçu [$_{DP}$ l'hypothèse que Marie pouvait
when I.had seen that tree I.have conceived the.hypothesis that Marie could
se cacher *derrière*].
herself hide behind
'When I saw that tree, I conceived the hypothesis that Marie could hide behind *(it).'

The evidence given above for the first type of OP structure shows that the gap here is occupied by a null pronominal, rather than a trace. Nothing more need be said here.

Unlike the type of OPs seen in (18), the second style of OP cases appear at first glance to be movement derived as they resemble English topicalization, which is typically analyzed as involving overt movement (Koopman, Sportiche, & Stabler, 2013, a.o.). Like English topicalized structures, these cases have a sentence initial constituent that co-refers with a gap and appears to have been left-dislocated from this position. These structures also bear some resemblance to French Hanging Topic Left Dislocation/Clitic Left Dislocation, in that there is a topicalized, left-dislocated element, albeit with an absence of the resumptive pronoun/clitic that is typically obligatory in these structures

(see Cruschina 2021, a.o.). A representative case is given below (from Zribi-Hertz 1984):

(20) Les arbres, Pierre se cache toujours *derrière* __.
the trees Pierre himself hides always behind
'Pierre always hides himself behind trees.'

These topicalization-like cases of OPs are tested in much more detail by both Zribi-Hertz and Authier. Like the first type of OPs, the gap in these cases proves to be island insensitive and discourse anaphoric. I give a few select cases that exemplify each argument.[6]

The island insensitive nature of the gap in these structures can be observed in cases of complex noun phrase islands (21-a) and *wh*-islands (21-b) (from Zribi-Hertz 1984):

(21) a. **Cette valise**, j'ai conçu [$_{DP}$ l'hypothèse que Marie pourrait voyager *avec*].
this suitcase I.have conceived the.hypothesis that Marie could travel with
'This suitcase, I've conceived the hypothesis that Marie could travel with *(it).'

b. **Cette valise**, j'aimerais bien savoir [$_{CP}$ qui pourrait voyager *avec*].
this suitcase I.would.like much to.know who could travel with
'This suitcase, I'd really like to know who could travel with *(it).'

Again, given the ability of these gaps to appear within islands and yield licit sentences suggests that neither an overt constituent nor a null operator can be hypothesized to have moved from the gap position, leaving a trace. Only the presence of a null resumptive pronoun can explain this.

The gap also proves to be discourse anaphoric, as exemplified below. In (22), the gap has the characteristics of a pronoun in being able to pick up a referent and be anaphoric with an element in the previous discourse (example from Authier 2016).

(22) **Cette chaise**, je m'assois souvent *dessus*.
this chair I myself.sit often on
'This chair, I often sit on *(it).'

The anaphoric nature of the gap is given further credence by the fact that it can pick out a referent from previous discourse, even if that referent is a part of discourse uttered by a different speaker (from Authier 2016):

(23) A: J'ai peint **cette chaise** hier. – B: Je peux m'asseoir *dessus*?
I.have painted this chair yesterday I can myself.sit on
A: 'I painted this chair yesterday.' – B: 'Can I sit on *(it)?'

In (23), the context of the exchange between the two hypothetical interlocuters shows that speaker B's question is in regards to the chair that speaker A painted. The OP gap following the preposition

[6]For a more detailed account of these arguments I refer the reader to the work of Zribi-Hertz (1984) and also Authier (2016), who discusses in depth the discourse anaphoric status of the gaps in OP structures.

dessus in speaker B's question is clearly intended to pick out and refer to the object *cette chaise* from speaker A's previous statement. It is clear that these OP gaps, just like pronouns, can pick out a referent from previous discourse and be coreferential with this element.[7] The evidence where OP gaps are concerned support Zribi-Hertz's original argument in favour of a null pronominal analysis of OP gaps. As Zribi-Hertz (1984) originally noted, since French lacks an inanimate/[-human] non-clitic pronoun equivalent to English 'it' in its lexicon, it must resort to using a null pronoun in OP structures.

In this subsection I have shown that OP gaps are best analyzed as being occupied by a null pronominal element and are not movement derived cases of P-stranding. Despite the fact that English has limited cases of what appear to be OPs, there is no correlation between these cases and French OPs; the English prepositions in these instances are true intransitive prepositions and form a very limited set. Where OPs are concerned, English and French clearly diverge and there exists no correlation between these structures and the type of P-stranding observed in English (or for that matter in any of the languages which comprise Classes 1-3 in my typology). Furthermore, LFF converges with Standard French in OPs; if an OP case is licit in SF, it will be equally felicitous in LFF. In the next subsection I show that the converse is not true. That is, LFF has some cases of orphaning that do not carry over to Standard French.

3.2.2 The Animacy Constraint

Zribi-Hertz (1984) observes that the gaps in OPs are robustly restricted to a non-human interpretation. In French, full, strong pronouns (e.g. *elle*, *il*, *lui*, *eux* etc.) standardly receive a [+human] interpretation. Zribi-Hertz claims this restriction leads to the following asymmetry (examples from Zribi-Hertz, 1984):

(24) a. **La bouteille**, le liquide doit rester *au-dedans* ___ / *d'elle.
the bottle the liquid must remain inside of.her
'That bottle, the liquid must remain inside of it.'

[7] Zribi-Hertz presents an additional argument claiming that OP gaps obey Principle B of Binding Theory. She claims that (i) below exemplifies this. Zribi-Hertz states that the gap in (i) is co-referential with the antecedent *la serviette*. Being contained within the DP *des taches dessus*, it is thus free within its binding domain and can be bound by the DP *la serviette*.

(i) [La serviette]$_i$ avait des taches *dessus* ___.
the napkin had some stains on
'The napkin had stains on it.'

If the gaps in OP structures did in fact abide by Principle B of the Binding theory, this could be further strong evidence for the null resumption analysis. Unfortunately, this argument does not seem to be a very strong one. For this argument to hold weight, we would have to be able to show that OP gaps can violate Principle B. Unfortunately, such examples seem impossible to construct with prepositional phrases in French, and so this argument is a rather weak one and peripheral to the stronger evidence already presented throughout this section.

b. Quand ce chien voit **une pelouse**, il court tout *autour* ___ / ?d'elle.
when this dog sees a lawn he runs all around of.her
'When this dog sees a lawn, he runs all around it.'

(25) a. **Marie**? Je croyais que tu étais venu *avec* *___ / elle!
Marie I thought that you had come with her
'Mary? I thought that you had come with her!'

b. **Pierre** était installé sur l'herbe et des enfants jouaient *autour* ?___ / de lui.
Pierre was settled on the.grass and some children were.playing around of him
'Pierre was settled on the grass and some children were playing in front of him.'

The data above shows that OP gaps with inanimate antecedents are acceptable (24-a)/(24-b) but animate ones are not (25-a)/(25-b), being rated as either unacceptable or degraded.[8] I encompass this asymmetry on animacy in the constraint below:

(26) *The Animacy Constraint*
Gaps following prepositions in SF must receive an interpretation that is [+pronominal/-animate].

In applying the Animacy Constraint to LFF, we can note that it seems to hold for the first type of OP construction examined in the preceding subsection, just as it does in SF. A gap in these types of OPs in LFF cannot be coindexed and coreferent with an animate antecedent:

(27) a. Pendant que Jean se disputait avec **Marc**, il a craché *dessus* *___ / lui.
while that Jean himself argued with Marc he has spit on him
'While Jean was arguing with Marc, he spit on him.'

b. Jean s'est mis debout derrière **Marc**, et Luc s'est mis debout *devant* *___ / lui.
Jean himself.is put standing behind Marc and Luc himself.is put standing in.front.of him
'Jean stood behind Marc and Luc stood in front of him.'

[8]Zribi-Hertz notes that a mismatch in animacy features between a referent and a gap/pronoun affects the degree of acceptability of the sentence. She claims that both uses of the pronouns in (24) and the OP gaps in (25) are unacceptable, but it is a matter of a syntactic versus a semantic deviance. Where the pronoun in (24-a) and the gap in (25-a) are said to be syntactically illicit, the pronoun in (24-b) and the gap (25-b) are said to be semantically deviant because the pronoun and OP gap are misassigning the feature [+human] and [-human], respectively, to their antecedents, leading to a mismatch in animacy features between antecedent and pronoun in (24-b) and the antecedent and the null resumptive said to be occupying the OP gap in (25-b). It is not clear to me why one use of a pronoun or OP gap should be syntactically deviant in one case but semantically deviant in the others. Zribi-Hertz claims this is reducible to some prepositions being more likely to be able to take animate/[+human] complements than some other prepositions. I have no insightful comments to make here on the legitimacy of this claim, since what is important in the bigger picture, is that whether it is a matter of a syntactic or semantic deviance, OPs in SF are claimed to robustly resist having animate antecedents.

Conversely, in the second type of OP, given the right context, the Animacy Constraint can be violated in LFF. I illustrate this with (28) below. The context for the example is as follows: *The boys always play hide-and-go-seek during recess. The girls gather in a group to talk. During the games, one of the boys, Pierre, likes to use the strategy of remaining out of sight by hiding behind the group of girls*:

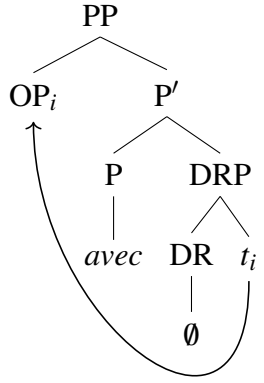
(28) **Les filles**, Pierre se cache toujours *derrière* (elles).
the girls Pierre himself hides always behind them
'The girls, Pierre always hides behind *(them).'

Even without being given relevant contextual information, these constructions can violate the Animacy Constraint in LFF:

(29) **Le garçon du voisin**, mon fils aime souvent jouer *avec* (lui).
the boy of.the neighbour my son likes.to often play with him
'The neighbour's boy my son often likes to play with *(him).'

The above shows that the preposition in LFF in these cases can be followed by a gap or an overt pronoun; both options are licit. I suggest that this indicates that LFF likely has two options available in its grammar where this type of OP is concerned. Like SF, it can choose resumption and an overt pronoun will be realized. Alternatively, the preposition can merge with a DRP headed by a DR-morpheme (in the manner suggested in my discussion in 2.6.3). For the sake of explicitness, I adopt the assumption that in these cases of English-like topicalization, there is movement of an empty topic operator to Spec-CP (Miyagawa 2017; Rizzi 1997, a.o.). What is of importance for my purposes here is that I assume that something moves out of PP in these cases. Merger of the DR-morpheme allows the element undergoing movement to cycle to the edge of the PP phase and subsequently escape the phase by moving to a higher position in clausal structure, leaving the preposition stranded. This initial movement to the edge of PP is illustrated in (30) below:

(30)



I reserve any further discussion of this type of derivation and the DR-morpheme approach to LFF P-stranding to the syntactic analysis of LFF presented in chapter 4.

LFF thus shows characteristics of both French and English where cases such as (29) are concerned, diverging significantly from what is possible in Standard French. Again, although this may seem to suggest an English influence on LFF, this must remain conjecture at this stage of investigating the syntax of LFF and would have to be validated by further future work on contact and language transfer in this dialect.

Evidence corroborating my claim that movement takes place in these (non-resumptive) cases of English-style topicalization in LFF is provided by looking at standard diagnostics on movement. In the LFF data set below, OP cases with animate antecedents obey typical movement constraints in being unbounded (31-a) and demonstrating sensitivity to island constraints, as shown in the case of a complex noun phrase island (31-b) and a *wh*-island (31-c). Only if a resumptive pronoun is realized in place of the gap are cases with islands licit:

(31) a. **Cette fille**, j'ai demandé à Jean de convaincre Marc de sortir *avec* (elle).
this girl I.have asked to Jean to convince Marc to go.out with her
'This girl, I asked Jean to convince Marc to go out with *(her).'

b. **Cette fille**, j'accepte l'argument selon lequel Jean est rarement sorti *avec* *(elle).
this girl I.accept the.argument along which Jean is rarely gone.out with her
'This girl, I accept the argument that Jean rarely went out with *(her).'

c. **Cette fille**, je me demande qui est rarement sorti *avec* *(elle).
this girl I myself wonder who is gone.out rarely with her
'This girl, I wonder who rarely went out with *(her).'

There is thus a clear and important asymmetry between Standard French and LFF. What we see in (31) is in direct opposition to what is seen in this type of OP scenario in Standard French; these cases may never contain an animate antecedent and they are robustly island insensitive. Although LFF matches Standard French in having both of the styles of OP observed in this language, cases of English-style topicalization with P-stranding are possible in LFF, showing use of a type of movement derived P-stranding that is robustly illicit in Standard French. I contend that these facts add to the body of evidence that LFF clearly belongs within the inventory of Class 1 P-stranding languages.

3.2.3 Interim summary

Section 2 of this chapter has reviewed the empirical picture as well as the characteristics that define OP structures in SF. I provided argumentation from the literature showing that OP structures are

best analyzed as cases of null resumption. This evidence came in the form of the island insensitivity displayed by the gaps in OP structures, as well as the fact that these gaps have pronominal characteristics in being able to be coreferent with an antecedent in previous discourse. As originally hypothesized by Zribi-Hertz, SF only resorts to gaps following prepositional heads in order to rectify a lexical deficiency, namely the lack of availability of a [-human] tonic pronoun.

I then compared the empirical status of OPs in Standard French to those found in LFF. The discussion showed that LFF has the same style of OP structures found in Standard French. Furthermore, LFF perfectly matches Standard French where the first type of OP structures are concerned. This only makes sense, as these cases cannot be derived via movement, whether in Standard French, LFF, or English. Since English has pronominal 'it', this element will be overtly realized in this type of structure, except in a select number of cases where English has a set of syntactically intransitive prepositions. Standard French and LFF, having no such lexical item, will resort to null resumption in these scenarios.

As for the second type of OP structure available to Standard French, I showed that LFF also has equivalent cases, but that it can violate the Animacy Constraint operable in Standard French. In these non-resumptive cases, I assumed a derivation where an operator moves out of PP, this movement being allowed via merger of a DR-morpheme. My argument was backed by using islands to test for movement, the results showing that these are in fact movement derived cases of P-stranding. These special cases appear to be equivalent to English-style topicalization, directly matching a type of P-stranding available in English.

3.3 LFF P-stranding gaps: movement or null resumption?

In this section, I look to build upon the empirical picture provided in 3.1 and 3.2. In what follows, I provide more concrete evidence that the cases of LFF P-stranding I provided in 3.1 are in fact movement derived case of P-stranding and cannot be reduced to instances of orphaning as detailed in 3.2. To accomplish this I will use standard diagnostics on *wh*-movement as well as diagnostics provided by Abels (2003b, 2012). In his comprehensive work on P-stranding, Abels uses a series of diagnostics to determine whether the gap following a stranded preposition can be said to be occupied by a trace or a null resumptive PN in English. In what follows, I examine each of these diagnostics and apply them to LFF. The results show that LFF must be analyzed as having movement derived P-stranding in its grammar and consequently belongs in the inventory of Class 1 P-stranding languages.

3.3.1 Island sensitivity

Using islands as a test for movement of a constituent is a standard diagnostic in syntactic analyses. It is well known that some islands are 'strong' in nature (see e.g. Szabolcsi and Lohndal 2017, a.o), inducing a syntactic violation if a constituent is extracted out of that island (Abels, 2019, a.o.). Well studied resumption languages on the other hand show that resumptive pronouns within islands negate island violations (Borer, 1984, a.o.). This is exemplified with a case of resumption within a complex noun phrase island in Hebrew (from Borer 1984):

(32) raʔiti ʔet **ha-yeled** she-/asher dalya makira ʔet ha-ʔisha he- ʔohevet **ʔoto**.
saw.I ACC the-boy that Dalya knows ACC the-woman that loves him
'I saw the boy that Dalya knows the woman that loves *(him).'

Given these facts, we can use extraction out of PPs situated within different islands to test whether the gaps following stranded prepositions are occupied by a trace or a null pronoun. If extraction incurs a violation, we can assume syntactic movement and presence of a trace. If there is no violation, we can assume no movement has occurred and the gap must be occupied by a null resumptive pronoun.

In the two examples below, I provide minimal pairs where a PP, with its compliment remaining in situ is within a *wh*-island in the first case (33-a)/(34-a), and then extracted via *wh*-movement to a position outside of the island in the second case (33-b)/(34-b).

(33) a. Je me demande [qui pourrait bien vouloir se cacher *derrière* cet
I myself wonder who might well want themselves to.hide behind this
arbre].
tree
'I wonder who might want to hide behind this tree.'

b. *Qu'est-ce$_i$ que je me demande [qui pourrait bien vouloir se cacher
what that I myself wonder who might well want themselves to.hide
derrière t_i]?
behind
Intended: 'What is the place *x* such that I wonder whether there is a person *y* who might want to hide behind *x*.'

(34) a. Je me demande [qui pourrait bien vouloir préparer un gâteau *pour* Marie].
I myself wonder who might well be.able to.prepare a cake for Marie
'I wonder who might want to prepare a cake for Marie.'

b. *Qui$_i$ je me demande [qui pourrait bien vouloir préparer un gâteau *pour* t_i].
who I myself wonder who might well want to.prepare a cake for
Intended: 'Who is the person *x* such that I wonder whether there is a person *y* who might want to prepare a cake for *x*.'

As the results above show, extraction here leads to an illicit sentence; clearly movement has occurred in these cases and the gap is instantiated by a trace and not a null resumptive pronoun.

The same test using minimal pairs as above is applied below to complex NP/DP islands (35)/(36), sentential subject islands (37)/(38) and adjunct islands (39)/(40):

(35) a. Marie est [la femme qui s'est tenue debout *sur* la table].
Marie is the woman who herself.is held standing on the table
'Marie is the woman who stood on the table.'

b. *Qu'est-ce$_i$ que Marie est [la femme qui s'est tenue debout *dessus* t_i]?
what.is.it that Marie is the woman who herself.is held standing on
Intended: 'What is the thing *x* such that I wonder whether Marie is the woman who stood on *x*.'

(36) a. Marie est [la femme qui s'est cachée *derrière* un arbre].
Marie is the woman that herself.is hidden behind a tree
'Marie is the woman who hid herself behind a tree.'

b. *Qu'est-ce$_i$ que Marie est [la femme qui s'est cachée *derrière* t_i]?
what.is.it that Marie is the woman that herself.is hidden behind
Intended: 'What is the thing *x* such that I wonder whether Marie is the woman who might have hid behind *x*.'

(37) a. [Le fait que Jean va se tenir debout *sur* cette table] est évident.
the fact that Jean will himself hold standing on this table is evident
'The fact that Jean is going to stand on this table is evident.'

b. *Qu'est-ce$_i$ que [le fait que Jean va se tenir debout *dessus* t_i] est évident?
what.is.it that the fact that Jean will himself hold standing on is evident
Intended: 'What is the thing *x* such that it is evident that John will stand on *x*.'

(38) a. [Le fait que Jean va voter *pour* ce candidat] est évident.
the fact that Jean will vote for this candidate is evident
'The fact that Jean will vote for this candidate is evident.'

b. *Qui$_i$ est-ce que [le fait que Jean va voter *pour* t_i] est évident?
who is.it that the fact that Jean will vote for is evident
Intended: 'Who is the person *x* such that it is evident that John will vote for *x*.'

(39) a. Marie était camouflée [car elle s'est cachée *derrière* un arbre].
Marie was camouflaged because she herself.is hidden behind a tree
'Marie was camouflaged because she hid behind a tree.'

b. *Qu'$_i$est-ce que Marie était camouflée [car elle s'est cachée *derrière* t_i]?
what.is.it that Marie was camouflaged because she herself.is hid behind
Intended: 'What is the thing *x* such that Marie was camouflaged because she hid behind *x*.'

(40) a. Marie est venue [parce qu'elle voulait voter *pour* Jean].
Marie is come because that.she wanted.to vote for Jean
'Marie came because she wanted to vote for John.'

b. *Qui$_i$ est-ce que Marie est venue [parce qu'elle voulait voter *pour* t_i]?
who is.it that Marie is come because that.she wanted.to vote for
Intended: 'Who is the person *x* such that Marie came because she wanted to vote for *x*.'

Again, the above examples show that all the cases involving extraction of a *wh*-phrase incur an island violation, again disfavouring a null pronominal analysis. The empirical evidence shows that it is more theoretically plausible to posit that the trace of a moved element occupies the gap following these prepositions, rather than a null resumptive pronoun, which would obviate island effects. We will not stop here though in our testing, as this is only a first piece of evidence favouring the movement analysis over the resumptive one.

3.3.2 P-stranding with non-pronominals

Abels highlights another test involving pronouns that shows that prepositional gaps in English cannot be taken to be occupied by a null resumptive element. Abels points out that resumptives are generally restricted to being personal pronouns like *her*, *him* etc. Given this restriction on resumptives, Abels logically deduces that if the gap in P-stranding in English were in fact a resumptive pronoun, then a non-pronominal element should never be able to head a movement chain that leaves a preposition stranded. To test this theory, Abels uses the adverbial modifier *where*, an element that cannot be resumed by a personal pronoun, and uses this element in a P-stranding scenario in English, as exemplified below:

(41) Where$_i$ did that come *from* t_i?

As (41) shows, the gap in English P-stranding can be occupied by an element that is analytically not a resumptive pronoun. The adverbial modifier *where* in English can clearly head a movement chain that originates in the complement position of a preposition, yielding P-stranding. The gap here arguably hosts a trace rather than a null resumptive pronoun.

Using the logic above, we can apply the exact same test to LFF P-stranding, as shown below:

(42) a. Où$_i$ est-ce qu'il est venu *de* t_i?
where is.it that.he is come from
'Where did he come from?'

b. [Quelle heure]$_i$ est-ce qu'il est arrivé *à* t_i hier soir?
what time is.it that.he is arrived at yesterday night
'What time did he arrive at last night?'

Yet again, we can observe in (42) that LFF P-stranding parallels English rather than SF, where such examples would be uncontrovertably illicit. Like English, the evidence here suggests the presence of a trace in the gap position in P-stranding, rather than that of a null resumptive pronoun, as is standard in OP structures in both SF and LFF. What we see here is thus a case of true movement derived P-stranding and not one of null resumption.

3.3.3 Comparatives of Inequality

Finally, in diagnosing movement versus null resumption in P-stranding, Abels looks at comparatives of inequality. Work in languages like Hebrew, where resumption is a common strategy have shown that resumptive pronouns are incompatible with comparatives of inequality (Sharvit, 1999). Abels argues that if the gap following a preposition in P-stranding were in fact occupied by a null resumptive pronoun, then P-stranding in comparatives of inequality should lead to an illicit case of P-stranding. Again, this prediction favouring a null resumptive analysis is not borne out in English, as exemplified below:

(43) John has read more books than Frank has talked *about* __.

As (43) demonstrates, P-stranding is perfectly acceptable in comparatives of inequality in English.

Given this diagnostic, let us apply the same test to some LFF data:

(44) a. Jean a rejeté plus de filles que Marc est sorti *avec* __.
Jean has rejected more of girls than Marc is gone.out with
'Jean has rejected more girls than Marc has gone out with.'

b. Jean a lu plus de livres que Marc a parlé *de* __.
Jean has read more of books than Marc has talked about
'Jean has read more books than Marc talked about.'

c. Jean a assisté à plus de danses que Marie s'est préparée *pour* __.
Jean has attended to more of dances than Marie herself.is prepared for
'Jean's been to more dances than Mary's gotten ready for.'

As the cases in (44) show, LFF once again patterns with English in allowing P-stranding in comparatives of inequality. If resumptive pronouns are in fact incompatible with comparatives of inequality as Abels suggests, then we have here another diagnostic and clear cases which show that the gap in LFF P-stranding is not an instantiation of a null resumptive pronoun.

3.3.4 Interim summary

In the preceding section, I have provided evidence that unlike SF, LFF parallels English in having P-stranding derived via leftward movement of prepositional complements. This evidence came in the

form of extraction out of islands. Three cases were presented that clearly showed that extraction out of an island-bound PP leading to P-stranding in LFF consistently incurs island violations, just as it does in English. This evidence shows that the gap in LFF P-stranding is instantiated by a trace rather than a null pronominal element. I additionally provided evidence that the gap in LFF P-stranding can contain the trace of adverbial modifiers like *où* and *quand*, elements which cannot be replaced with resumptive pronouns. I then went on to show that the gap in LFF P-stranding differs from personal pronouns in an important way. Unlike personal pronouns, the gap in LFF P-stranding can appear in comparatives of inequality, a characteristic which does not apply to resumptive pronouns. Taken together, this evidence provides sound argumentation that the gap in LFF P-stranding is in fact occupied by the trace of a moved constituent, rather than the null pronominal element we find in OP structures. Like English, LFF clearly has movement derived P-stranding available in its grammar. This P-stranding is further productive under both A and $\overline{\text{A}}$-movement, qualifying LFF as a Class 1 P-stranding language.

3.4 The divergent behaviour of LFF prepositions

In what follows I look at some claims Authier (2016) has made about prepositions in OP structures in SF. He argues some prepositions are true OPs, being syntactically transitive prepositions that take an argument, realized as a silent pronominal. Others are lexically restricted intransitive prepositions and not true OPs at all. Authier performs a minimal survey of SF prepositions, looking specifically at *dans/dedans*, *sur/dessus*, *pour* and *avec*. The facts surrounding *dans/dedans* and *sur/dessus* are especially relevant to the analysis and discussion in this thesis, as these are two out of the only three prepositions to overtly realize the DR-morpheme that will be central to my analysis of LFF P-stranding. In my discussion I will show that LFF prepositions diverge in significant ways from their SF counterparts, showing English-like characteristics.

3.4.1 A survey of *dans/dedans*, *sur/dessus*, *pour* and *avec*

There are three prepositions that undergo morphological change in French when followed by a gap, requiring the addition of a *de-* morpheme. These prepositions are *dans*, *sur* and *sous*, which become *dedans*, *dessus* and *dessous*. I begin by examing the use of the preposition *dans/dedans*.

Authier claims that the preposition *dedans* cannot be used as an OP in all the same scenarios that *dans* can as a transitive preposition taking an overt complement. He argues *dedans* can only be used as an OP when it has a material interpretation, where the preposition is interpreted with the meaning that 'something is contained within something else' (e.g. *dans la boîte*). He further claims this preposition cannot be used as an OP when it receives what he designates as a spatial

interpretation, where the preposition takes on a meaning equivalent to 'X is in some zone of space Y that affects it in some manner but does not have well-defined boundaries' (e.g. *dans le ciel*) (Authier, 2016, 21-23).

For simplicity and ease of reference, I will refer to Authier's first use of *dedans* as *contained* and the second one as *uncontained*. That the preposition *dans* (which of course becomes *dedans* when followed by a gap) can only be used in the contained context in OPs is exemplified in the asymmetry in acceptability between the contained examples in (45) versus the uncontained ones in (46) below (from Authier 2016):[9]

(45) a. Cette eau, il y a du chlore *dedans*.
this water there CLIC is some chlorine inside
'This water, there is chlorine in *(it).'

b. Ce fossé, Aline m'a entraîné *dedans*.
this ditch Aline me.has pulled into
'This ditch, Aline pulled me into *(it).'

c. Cette grotte, il fait pas très froid *dedans*.
this cave it makes not very cold inside
'This cave, it's not very cold in *(it).'

d. Les rues de cette ville, il faut s'enfoncer *dedans* pour en apprécier la beauté.
the streets of this city one has.to oneself.plunge into for to appreciate the beauty
'The streets of this city, one must venture into *(them) to appreciate their beauty.'

(46) a. *Le ciel, des oiseaux volaient *dedans*.
the sky some birds were.flying inside
'The sky, birds were flying in *(it).'

b. *Les rues de Paris, il vend ses crêpes *dedans*.
the streets of Paris he sells his crêpes in
'The streets of Paris, he sells his crêpes in *(them).'

c. */?La foule, un homme a crié *dedans*.
the crowd a man has cried.out in
'The crowd, a man cried out in *(it)'

d. *Cette région, il y a beaucoup de musiciens *dedans*.
this region there CLIC is a.lot of musicians in
'This region, there are a lot of musicians in *(it).'

What is of interest is that the restriction on the 'uncontained' use of *dedans* is in some cases obviated by *wh*-movement in LFF:

[9] Authier claims the predicate *s'enfoncer* favours the contained reading, while *vendre* favours the uncontained reading.

(47) a. Les rues de quelle ville est-ce qu'il a vendu ses crêpes *dedans*?
the streets of which city is.it that.he has sold his pancakes in
'The streets of which city did he sell his pancakes in?'

b. ?Quelle foule est-ce que l'homme a crié *dedans*?
which crowd is.it that the.man has cried.out in
'?Which crowd did the man cry out in?'

c. *Quelle région est-ce qu'il y a beaucoup de musiciens *dedans*?
which region is.it that.there CLIC is a.lot of musicians in
'*Which region are there a lot of musicians in?'

d. Quelle (région de la) forêt est-ce qu'il s'est perdu *dedans*?
which (region of the) forest is.it that.he himself.is lost in
'Which (part of the) forest did he get lost in?'

That the preposition *dedans* can strand under $\overline{\text{A}}$-movement in some instances when it takes an uncontained complement further emphasizes that these LFF cases are not orphaning, but bona fide P-stranding. To be noted is the fact that the judgements of all the examples in (47) (visible in the English translations) are equivalent between English and LFF, showing that LFF *dedans* parallels the English use of *in* when taking what Authier classifies as an uncontained DP complement.

Finally, in examining *dedans*, Authier argues there is another lexically distinct use of this preposition. He argues that the preposition *dedans* has a true intransitive instantiation, which has the same interpretation as English 'indoors', as exemplified below (from Authier 2016):[10]

(48) Comme il faisait chaud, les citadins sont restés *dedans* toute la journée.
as it made hot the city.folks are stayed inside all the day
'Because it was hot, the city folks spent all day indoors.'

His conclusions regarding *dedans* are that there are in fact three different lexical entries for this preposition in SF (adapted from Authier, 2016):

(49) a. *dans* (contained reading): takes an overt complement or a covert one. In the latter case, it surfaces as [dedans + pro].

b. *dans* (uncontained reading): takes an overt complement only.

c. *dedans*, when it means "indoors", does not take an overt complement.

The take away from the discussion of the LFF preposition *dedans* is that it has parallels with both SF and English. The LFF data provided shows that it parallels SF in its use of *dedans* where OPs are concerned. The crucial difference is that LFF, unlike SF, also parallels English in being able to strand the preposition *dedans* under $\overline{\text{A}}$-movement when taking both contained and uncontained DP complements, with judgements for the data provided being an exact match between LFF and

[10] Although LFF matches SF in having an intransitive use of *dedans*, this is rather inconsequential. The reason for this being that English *indoors* is also intransitive and so both LFF and SF match English in this case.

English.

In investigating the prepositions *sur*/*dessus*, Authier claims they are semantically equivalent lexical entities. Crucially, I will show that in LFF the use of these prepositions differ from Standard French. Authier argues that like *dedans*, *dessus* has a locative use, but when selected by certain verbs also has different metaphorical and idiomatic meanings. His central claim is that unlike *dedans*, *dessus* is a true OP in all instances. That is, every use of *sur* + complement licenses a use of *dessus* + pro. Authier gives a selection of relevant examples (from Authier 2016):

(50) a. Il y avait un banc avec deux clochards assis *dessus*.
there CLIC was a bench with two bums sitting on
'There was a bench with two bums sitting on *(it).'

b. Le tableau de bord fait vraiment bas de gamme. On sent vraiment que
the dashboard looks really bottom of the.line one feels definitely that
Toyota a économisé *dessus*.
Toyota has scrimped on
'The dashboard looks really low end. It feels like Toyota really scrimped on *(it).'

c. N'engage jamais un avocat sans te renseigner *dessus*!
NEG.hire never a lawyer without yourself getting.information on
'Never hire a lawyer without first getting information on *(them)!'

d. Il ne s'agit pas de résoudre ces problèmes mais plutôt de réfléchir *dessus*.
it NEG about not of solving these problems but rather about thinking about
'It's not about solving problems, but rather about thinking about *(them).'

e. Ce code marche très bien et j'ai donc pris modèle *dessus*.
this code works really well and I.have therefore taken model after
'This code works really well and I've modeled mine after *(it).

f. Elle est pas mal, ta vie. Tu devrais écrire un livre *dessus*.
it is not bad your life you should write a book about
'Your life is not bad. You should write a book about *(it).'

In examining the use of *dessus* in LFF, we see that it can appear without a complement under $\overline{\text{A}}$-movement in all the same scenarios that it can when used as an OP. This becomes evident if we take the OP scenarios from (50) and restructure them as movement derived instances P-stranding:

(51) a. Quel banc est-ce que les deux clochards se sont assis *dessus*?
which bench is.it that the two bums themselves are sat on
'Which bench did the two bums sit on?'

b. Quel modèle est-ce qu'ils ont économisé *dessus* afin d'atteindre le
which model is.it that.they have scrimped on in.order to.attain the
résultat net?
result net
'Which model did they scrimp on in order to meet the bottom line?'

c. Quel avocat est-ce qu'ils ont obtenu de l'information *dessus*?
which lawyer is.it that.they have obtained of the.information on
'Which lawyer did they get information on/about?'

d. Quels problèmes est-ce qu'il a dû réfléchir *dessus*?
which problems is.it that.he has had to.think about
'Which problems did he have to think about?'

e. Quel code est-ce qu'il a pris modèle *dessus*?
which code is.it that.he has taken model after
'Which code did he model it after?'

f. Quel sujet est-ce qu'il voulait écrire un livre *dessus*?
what subject is.it that.he wanted to.write a book about
'Which subject did he want to write a book about?'

As the above shows, *dessus* is strandable in all the same instances as the uses of *sur* + complement. This should come as no surprise since *dessus* carries the DR-morpheme *de-* which allows P-stranding in LFF. The more restricted nature of *dedans* where stranding with uncontained DP complements is concerned remains an oddity. What is of note in the data above is that judgements for LFF perfectly match those of English. Again, we can see here a clear parallel between P-stranding in LFF and English.

We cannot end the discussion on *dessus* just yet though. As already mentioned, *dessus* is a preposition that is selected by a variety of verbs where it takes on an idiomatic/metaphorical meaning. Contra Authier's claim for SF, in LFF, the use of *sur* + complement cannot always be used as an OP. As the following shows, there are at least some clear cases where *dessus* used as an OP appears to be wholly illicit (these are derived from the licit, idiomatic uses of *dessus* in the following cases of V + PP combinations: *régner sur*; *revenir sur (un sujet)*; *arriver sur (e.g. midi)*; *acheter quelque chose sur le marché*; *tourner sur (la gauche, la droite etc.)*:

(52) a. ??Le peuple de la France, Louis IX a régné *dessus* et ils ont prospéré.
the people of the France Louis IX has reigned over and they have prospered
'The people of France, Louis IX reigned over *(them) and they prospered.'

b. ?Ce sujet, nous avons souvent dû revenir *dessus* afin de le comprendre.
this subject we have often had.to come.back onto in.order to it understand
'This subject, we often had to come back to *(it), in order to understand it.'

c. *9:00 du matin, il arrive *dessus* chaque jour.
9:00 of.the morning he arrives at every day
'*9:00 in the morning, he arrives at every day.'

d. *Le marché, il achète toujours des oranges *dessus*.
the market he buys always some oranges at
'*The market, he always buys oranges at.'

e. *La gauche, nous devons tourner *dessus* pour arriver chez Luc.
the left we must turn at to arrive at Luc
'*The left, we must turn at to arrive at Luc's.'

These same cases, when constructed as movement derived instances of P-stranding seem to illicit the same judgements as their OP counterparts.:

(53) a. ??Quelle nation est-ce que Louis IX a régné *dessus*?
which nation is.it that Louis IX has reigned over
'?Which nation did Louis IX reign over?'

b. ?Quel sujet est-ce qu'on a fallu revenir *dessus* afin de le
whic subject is.it that.we have had.to come.back onto in.order to it
comprendre?
understand
'Which subject did we often have to come back to in order to understand it?'

c. *Quelle heure est-ce qu'il est arrivé *dessus*?
what time is.it that.he is arried on
'What time de he arrive at?'

d. *Quel marché est-ce qu'il a achèté des oranges *dessus*?
which market is.it that.he has bought some oranges on
'Which market did he buy oranges at?'

e. *Quel direction est-ce qu'on doit tourner *dessus* pour arriver chez Luc?
which way is.it that.we must turn at to arrive at Luc
'*Which way do we have to turn at to arrive at Luc's?'

Authier's claim that all uses of *sur* + complement allow *dessus* + pro is too strong of a generalization for LFF. In LFF there exists cases where *dessus*, when used both as an OP and a movement derived stranded preposition, cannot appear without a complement. Overall, the main point to take away from our discussion is that LFF *dessus* strongly parallels English in its use as a stranded preposition.

Authier also makes a survey of the prepositions *pour* and *avec*. Authier claims that in SF *pour* is not a true OP. He claims it is a lexically restricted intransitive preposition which can only receive an interpretation related to an actual or hypothetical act of voting. In essence, his claim is that only when *pour* receives an interpretation where it takes on the meaning of 'voting for/being in favour of something', can it be used as an OP in SF (adapted from Authier, 2016):

(54) Les réductions d'impôts, je suis/vote toujours *pour*.
the reduction of.taxes I am/vote always for (for = in favour of)
'The reduction of taxes, I'm always in favour of.'

The above is equally licit in LFF, with A-bar stranding of *pour* with the 'vote for/in favour of' interpretation also being perfectly acceptable:

(55) Qui$_i$ est-ce qu'il a voté *pour* t_i?
who is.it that.he has voted for
'Who did he vote for?'

Authier then gives the following as some of the more common possible interpretations of *pour* (from Authier 2016):

(56) a. ON BEHALF OF
se battre/quêter pour
'to fight/collect donations for'

b. STIMULUS OF PSYCH PREDICATE
se passionner/s'inquiéter pour – trembler pour
'to be fired up/worried about – to fear for'

c. GOAL
se préparer/partir/vivre pour
'to get ready/leave/live for'

d. REASON
être puni/condamné/fermé pour
'to be punished/sentenced/closed for'

Authier claims *pour* cannot be used as an OP in SF on any of the interpretations listed in (56). As the judgements given to the right of each example show, this does not carry over to LFF (adapted from Authier, 2016):

(57) a. La Croix Rouge, je quête souvent *pour*.
the cross red I collect.donations often for
'The Red Cross, I often collect donations for *(it/them).' *SF/✓LFF

b. La musique de Rock, elle se passionne vraiment *pour*.
the music of Rock she herself is.passionate really about
'Rock music, she's really passionate about *(it).' *SF/✓LFF

c. Le Brésil, je suis sur le point de partir *pour*.
the Brazil I am on the verge of leaving for
'*Brazil, I'm on the verge of leaving for it.' *SF/✓LFF

d. Ce meurtre, on l'a condamné *pour*.
this murder they him.have condemned for
'This murder, they condemned him for *(it). *SF/✓LFF

LFF *pour* seems far more permissive and versatile than its SF counterpart. Not only is it acceptable in the OP scenarios shown above, it can be used as a stranded preposition under $\overline{\text{A}}$-movement with all of the meanings Authier lists as illicit for *pour* as an OP in SF, as shown below:[11]

[11] Overall, *pour* appears to be the most highly versatile preposition in LFF, even participating in swiping construc-

(58) *wh-movement*

a. Quelle charité est-ce que tu veux quêter *pour*?
which charity is.it that you want to.collect.donations for
'Which charity do you want to collect donations for?'

b. Quel genre de musique est-ce qu'elle se passionne vraiment *pour*?
what type of music is.it that.she herself is.passionate really about
'What type of music is she really passionate about?'

c. Quel pays est-ce que tu pars *pour* ce lundi?
which country is.it that you are.leaving for this Monday
'Which country are you leaving for this Monday?'

d. Quel crime est-ce qu'ils vont le condamner *pour*?
what crime is.it that.they will him condemn for
'What crime are they going to condemn him for?'

(59) *restrictive relative*

a. La Croix Rouge est la charité que je préfère quêter *pour*.
the cross red is the charity that I prefer to.collect.donations for
'The Red Cross is the charity that I prefer to collect donations for.'

b. La musique Rock est la celle qu'elle se passionne vraiment *pour*.
the music Rock is the one that.she herself. is.passionate really about
'Rock is the music that she's really passionate about.'

c. La France est le pays que je vais partir *pour* lundi.
the France is the country that I will leave for Monday
'France is the country that I'm leaving for on Monday.'

d. Le meurtre de Pierre est le seul crime qu'ils vont le condamner *pour*.
the murder of Pierre is the only crime that.they will him condemn for
'Pierre's murder is the only crime that they're going to condemn him for.'

The take away from our investigation of the LFF uses of *pour* shows that this preposition strongly deviates from what is seen in SF. Authier's claim that *pour* can only be used as an OP when it has a 'vote for something/be in favour of something' interpretation does not carry over to LFF. The preposition *pour* + pro (i.e. OP) and *pour* + trace (i.e. movement derived P-stranding) can receive the same interpretations as uses of *pour* + overt complement in LFF. This is no different than what we observed with the LFF preposition *dessus*. Furthermore, the data in (58) and (59) show that LFF pour, when stranded under $\overline{\text{A}}$-movement, parallels English 'for/about' in both use and meaning.

Let us look now at the LFF use of the preposition *avec* in comparison to SF as well as English. Authier (2016) claims *avec* + overt complement in SF has three distinct interpretations, as listed below (from Authier 2016):

tions. I return to discussion of *pour* in the contexts of swiping and sluicing in Chapter 5.

(60) a. INSTRUMENTAL
décaper/se gratter/se gargariser avec
'to scour/scratch oneself/gargle with'

b. COMITATIVE
jouer/danser/s'accorder/s'acoquiner avec
'to play/dance/agree/team up with'

c. PART-WHOLE
une veste avec ceinture
'a jacket with a belt'

He further shows that *avec* can be used as an OP with all the interpretations given above (from Authier 2016):

(61) a. La Listerine, j'aime me gargariser *avec*.
the Listerine I.like myself to.gargle with
'Listerine, I like to gargle with (it).' *Instrumental*

b. Ces voyous, il finira par s'acoquiner *avec*.
those thugs he will.end.up by himself.to.team.up with
'Those thugs, he will end up teaming up with (them).' *Comitative*

c. Ils ont des vestes avec ceinture et des vestes sans ceinture. Tu veux
they have some jackets with belt and some jackets without belt you want
quoi? Une veste *avec*?
what a jacket with
'They have jackets with belts and jackets without belts. What do you want? A jacket with (a belt)?' *Part-whole*

Where OPs are concerned, LFF *avec* matches SF, the judgements for the above examples being that theses are also perfectly licit in LFF. Of course, LFF diverges from SF in allowing stranding of *avec*. In parallel to English, *avec* can be stranded under any of Authier's interpretations for *avec*, as exemplified below:

(62) a. Quel couteau est-ce qu'il l'a poignardé *avec*?
which knife is.it that.he her.has stabbed with
'Which knife did he stab her with?' *Instrumental*

b. Qui est-ce que Marie voulait danser *avec*?
who is.it that Marie wanted.to dance with
'Who did Marie want to dance with?' *Comitative*

c. Quelle partie du moteur est-ce qu'il était en train de bricoler *avec*?
which part of.the motor is.it that.he was in the.process of tinkering with
'Which part of the motor was he tinkering with?' *Part-whole*

Following the pattern we have seen throughout the discussion so far, *avec* is another LFF preposition which strongly parallels its English counterpart . Even though it can be used as an OP, as expected in a dialect of French, its use in movement derived structures parallels English.

3.4.2 Interim summary

The discussion in this section has provided further evidence that although LFF mostly parallels SF where OPs are concerned, it also demonstrates divergence. This is observable in its ability to strand prepositions under both A and $\overline{\text{A}}$-movement. A survey of the prepositions *dans/dedans*, *sur/dessus*, *pour* and *avec* showed that these prepositions in LFF strongly parallel their English counterparts where P-stranding is concerned. LFF prepositions thus differ from their SF counterparts, not only in being able to participate in movement derived P-stranding, but even sometimes showing different behaviour when used as OPs, allowing English-style topicalization.

3.5 Reverse transfer in LFF P-stranding

This section discusses a reading time experiment comparing three different groups of speakers (English, Quebec French and LFF).[12] In my discussion I provide some preliminary data from this basic pilot study but keep my discussion cursory since ultimately no conclusions can be drawn from the analysis at this time. The original goal of this experimental work was to provide evidence of the acceptability of P-stranding among speakers of LFF in comparison to speakers of Quebec French, with a group of native English speakers used as a baseline for comparison. In this manner, I aimed to determine whether an effect of reverse transfer from English to LFF has taken place in this dialect of Ontario French that is in an intense contact situation with English.

3.5.1 Background

Typically, studies on language acquisition and language transfer/contact focus on effects of a language learner's first language (L1) on their acquired second language (L2) (e.g. Chung, Chen, and Geva 2019; Jiang 2004; Major 2008; Odlin 1989; Pasquarella, Chen, Gottardo, and Geva 2015; Gass and Selinker 1992, a.o.). Study of reverse transfer on the other hand, although less common,

[12] I remain very cursory in my discussion in each subsection of this chapter section (i.e. background, experiment protocol and preliminary results). This section is to be taken as a preliminary outline of work that can be expanded on at a future time and fleshed out into a more substantial chapter or academic article. I give only enough information for the reader to understand the basic premise behind the study and its main goal. Since no statistical analysis has been conducted at this time, I cannot make any valid claims or draw any conclusions from the data and add this section only as a sort of addendum on P-stranding in LFF and as a preliminary commentary on work in reverse transfer to be completed at a future time.

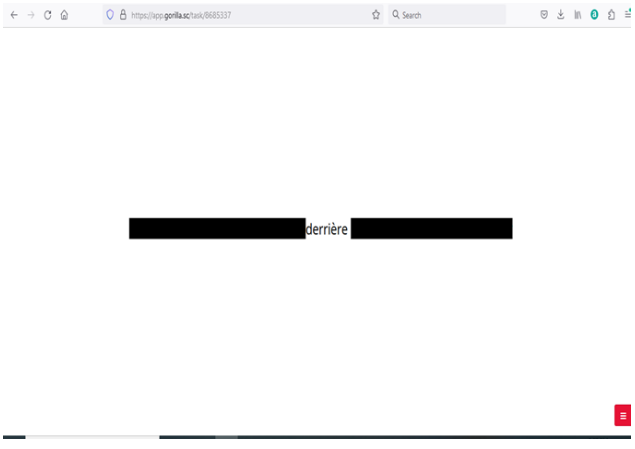
looks at how acquisition of an L2 affects a language learner's L1 (Backus 2015; Schmid and Köpke 2017; Treffers-Daller 2012, a.o.). Based on previous work that has found experimental evidence for effects of reverse transfer from English to native speaker L1's in P-stranding (e.g. Bousquette 2018; De Lemos 2013; Depiante and Thompson 2013; González-Rivera, Padilla-Reyes, and Rueda-Chaves 2015; Koronkiewicz 2022; Langstraat 2018; Y Cabo and Soler 2015), I looked to conduct a reading time experiment that tested reaction in reading times from stranded prepositions onward.

3.5.2 Experiment protocol

The protocol of the reading time experiment was a self-paced task using the Gorilla platform experimental task builder (Gorilla^{TM} 2023) where participants read sentences on a computer screen, proceeding word by word at their own pace via press of a button. The sentences themselves were masked, with the participant only able to see one word at a time as they proceeded through each sentence. Along with fillers, random true or false comprehension questions relating to specific sentences were included to keep the participants engaged in their task. The main experimental stimuli consisted of instances of P-stranding in questions (both in matrix and long distance construals) as well as relative clauses. I give a case of P-stranding in a matrix clause from the online reading task below, showing the stranded preposition (the full stimulus is shown in (63)):

(63) Quel arbre est-ce qu'il s'est caché *derrière* pendant le jeu de cache-cache?
which tree is.it the.he himself.is hidden behind during the game of hide-hide
'Which tree did he hide behind during the game of hide and go seek?'

Figure 3.1: Experimental stimulus: P-stranding in a matrix clause



In analyzing the stimuli, the stranded preposition was considered the critical juncture at which reading times would slow down if a given participant found the stranded preposition odd or unacceptable. Reaction times were measured for each word from the preposition onward. In total, a

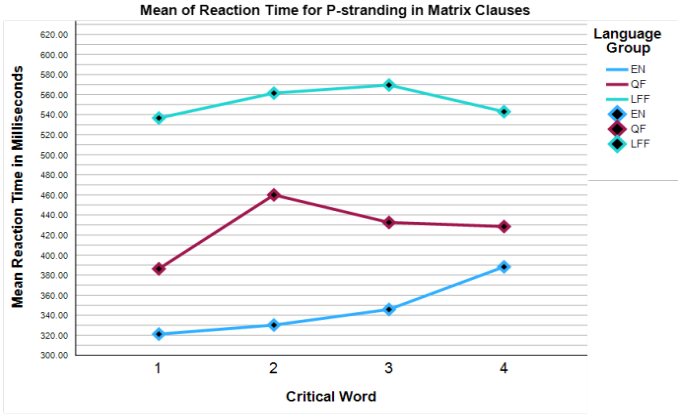
group of 20 English speakers (henceforth EN), 20 LFF speakers (henceforth LFF) and 15 Quebec French speakers (henceforth QF) participated in this online reading experiment task. English and Quebec French participants were recruited through the University of Ottawa ISPR/SIPR system. LLF speakers were recruited through Facebook and via word of mouth.

3.5.3 Preliminary results and discussion

At this stage of this pilot study, data has only been analyzed in the form of line graphs using SPSS software (IBM 2023). I present each of these below and make some cursory comments on what the given data might possibly be suggesting.

The following line graph shows the results of reaction times starting at the stranded preposition (i.e. critical word 1) and including the three words following it (i.e. critical words 2-4) for the P-stranding in matrix clauses condition. The data point for critical word 1 (i.e. the stranded preposition) for instance, shows the total mean reaction times for all participants for each group of speakers for all P-stranding in matrix clauses stimuli.

Figure 3.2: Reaction times for P-stranding in matrix clauses

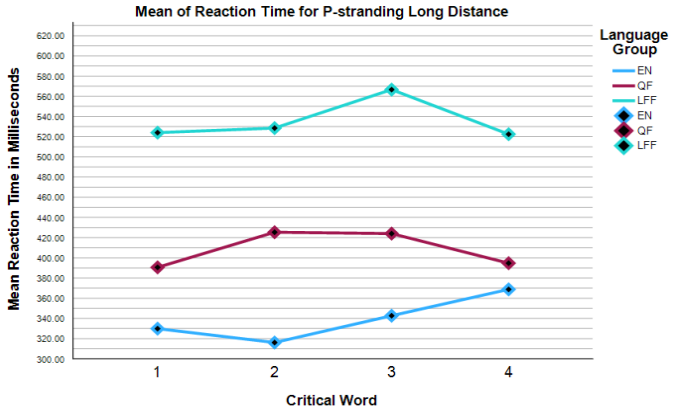


What stands out in figure 3.2 is the sharp rise in reaction times for the first word following the preposition in the group of QF speakers. The LFF and EN speakers appear to more closely pattern together, where there is a gradual rise (slightly more pronounced in the LFF speakers) starting at the preposition and continuing over critical words 2 and 3. Strangely, the LFF reaction times speed up (indicated by the drop in reaction times) from critical word 3 to 4, while the EN speakers continue to show a continually pronounced slow down in reaction times, as indicated by the rise. We could perhaps surmise here that the sharp initial rise in reaction times in the QF speakers indicates that readers have an issue with the stranded preposition, but the drop towards faster reaction times after critical word 2 is difficult to interpret; this could perhaps be taken as a increase in reading time back towards the normal baseline after the initial reaction to the stranded preposition. Although we

might be seeing preliminary evidence for a trend here in QF speakers disfavouring P-stranding, I do not lend much weight to these results at this time and can make no claims that this data really tells us anything significant.

Below are the results for the reaction times, again at each critical word for all speakers of the three language groups for the P-stranding in long distance construals condition of the study.

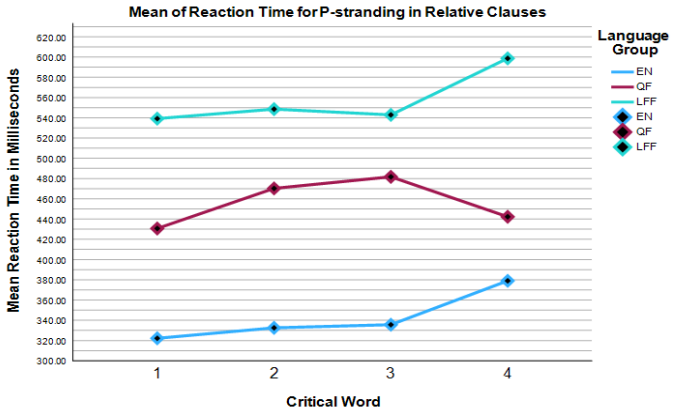
Figure 3.3: Reaction times for P-stranding in long distance construals



In the results above, we see again a sharp initial rise following the stranded preposition for QF speakers, but then reaction times plateau and become even faster at critical word 4. EN on the other hand shows an initial speed up in reading times and then a (somewhat) substantial rise, showing a slow down. The LFF data is very irregular in that we have a very slight increase in reaction times, followed by a substantial rise on critical word 3, followed by a sharp decrease in reaction times on word 4 indicating faster reading times. Given these irregular results, not much can be surmised from this data. The only comment I will make is that QF speakers in both conditions so far show a sharp rise from the preposition onward up to the first word following the stranded preposition.

Below are the results for the relative clause condition of the study:

Figure 3.4: Reaction times for P-stranding in relative clauses



Out of all three conditions, we see here the clearest indication that there might be a trend of LFF and EN speakers patterning together, where reading times from the preposition through to critical word 3 are quite stable, with very little change; there is then an almost identical rise from word 3 to 4 in both groups. The QF speakers on the other hand remain constant across conditions in showing a substantial slow down in reading times beginning at the stranded preposition, in this instance carrying over past word 2 and into word three, followed by faster reaction times from word 3 onward, where times return almost to the baseline seen at the stranded preposition. Given this data, we might hypothesize that EN and LFF speakers pattern together in not being disturbed by the presence of a stranded preposition in the stimuli, where the rise from word 3 onward might be a natural slow down in reading times towards the end of sentences, something we would expect naturally happens. The QF pattern on the other hand might indicate that speakers in this group slow down initially upon encountering a stranded preposition, thus indicating that they find it unnatural/unacceptable, and then begin to return to their more natural reading times from the third word onward.

The results seen in all three P-stranding conditions, as observed in the line graphs provided here, show that perhaps there might be a trend, wherein Quebec French speakers find the stranded preposition in all three sentence conditions tested unnatural or perhaps even unacceptable. This might be surmised given the (rather) sharp slow down in reading times beginning at the preposition and carrying over into the first (i.e. critical word 2) and sometimes even third word (i.e. critical word 3) following stranded prepositions. However, the descriptive statistics presented here cannot be taken as a valid indication that QF speakers disfavour P-stranding to any significant degree when compared to LFF and English speakers and I put no real weight on what these preliminary results show us. To draw any firm conclusions about a possible effect of reverse language transfer from English to LFF and make any solid claims regarding the acceptance of P-stranding in either English, Quebec French or LFF, a thorough syntactic analysis will eventually have to be conducted. Given that the study was limited in scope and design, it would in reality be best to run a more sophisticated and comprehensive follow-up experiment before doing an in depth statistical analysis on reading times in the context of P-stranding. This is something I will have to leave to future work.

3.6 Conclusion

This chapter has provided a picture of the empirical side of P-stranding in LFF. I showed that like SF, LFF has an extension of a system of (apparent) P-stranding seen in SF known as orphaning. The facts and characteristics of the two types of orphan preposition constructions were reviewed. I showed that LFF, like SF, has both types of OPs available in its grammar. Nevertheless, an important asymmetry exists between the two languages. Contra to SF, LFF sometimes allows

animate antecedents in the second type of OP scenarios examined in this chapter. LFF thus violates an Animacy Constraint that is operable in SF and parallels English in allowing movement derived English-style topicalization.

I further showed that LFF goes far beyond what is possible in SF in having true movement derived P-stranding. This type of P-stranding was shown to take place under various types of $\overline{\text{A}}$-movement, as well as under A-movement in the very rare prepositional passive construction, strongly paralleling what is observed in English. Using various diagnostics on movement, I then provided argumentation that the P-stranding observed in LFF is in fact derived via leftward movement of prepositional complements, thus having English-style P-stranding available in its grammar. A survey of LFF data using the prepositions *dans/dedans*, *sur/dessus*, *pour* and *avec* showed that P-stranding in this dialect matches what is observed in English in significant ways, diverging from SF.

The fallout of reviewing the empirical side of LFF P-stranding corroborates a central argument I have made throughout this thesis; LFF closely parallels English where P-stranding is concerned and belongs in the inventory of Class 1 languages. The final section of the chapter presented some cursory discussion on reverse language transfer along with some preliminary descriptive statistics from a reading time experiment focused on P-stranding. Although line graphs of the data collected might indicate a trend wherein speakers of Quebec French disfavour P-stranding when compared to English and LFF speakers, I concluded that more sophisticated follow-up work must be completed in order to make any substantial claims. With the empirical picture and the data provided in this chapter in mind, we are prepared to move on to the syntactic analysis in Chapter 4.

Chapter 4

The DR-morpheme and anti-locality in LFF P-stranding

In the syntactic analysis of LFF P-stranding developed in this chapter, I account for why this phenomenon is able to seemingly violate Abels' (2003b) constraints of Last Resort and anti-locality (ALC). These constraints, discussed in Chapter 2, are repeated here as (1) and (2) (from Abels 2003b):

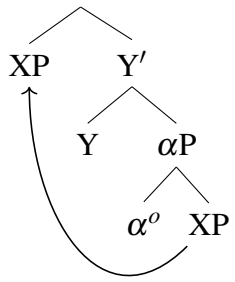
(1) *Last Resort*
A constituent α may only be merged (i.e. base-merged or remerged) if that leads to the immediate satisfaction of a previously unsatisfied feature.

(2) *Anti-Locality Constraint (ALC)*
The complement of a phase head may never move to the specifier of that head's maximal projection, leaving the phase head stranded.

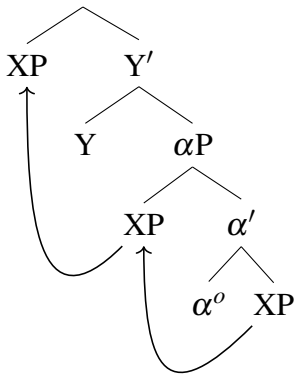
Following Abels (2012), I assume that prepositions are universally phase heads. I further assume that an intrinsic property of phase heads is that they induce a freezing effect on their immediate complements. That is, the immediate complement of a phase head cannot undergo a transformation that leaves its phase head stranded.

As discussed in chapter 2, this property of phase heads is derived through the constraints in (1) and (2) in conjunction with the Phase Impenetrability Condition (PIC) which makes phases opaque to syntactic operations once that phase has been spelled-out and sent to the interfaces. To remain accessible within a derivation, an element must first move to the edge of a given phase before it is spelled-out. Together, these derive Abels' Stranding Generalization (SG). To refresh the reader's memory, Abels' SG states that the immediate complement of a phase head cannot be moved to leave its phase head stranded, either directly (3-a) or via successive-cyclic movement through the specifier of that phase (3-b) (where α^o represents a phase head) (from Abels 2003b):

(3) a. *



b. *



To recap the background discussion from chapter 2, the derivation in (3-a) is not successive cyclic and so violates the PIC since the moved element leaves a phase without first cycling through the phase edge. The movement in (3-b) violates Last Resort and by default the ALC as it is too local. The XP in (3-b), being in the closest possible structural relationship with the phase head (i.e. sisterhood), would have any features it needs to have valued already satisfied at this stage and have no reason to undergo further movement via Internal Merge.

At first glance, all preposition stranding languages would seem to violate the SG and the phase head nature of prepositions, whether we analyze these sentences as being derived by successive-cyclic movement (4-a) or not (4-b).

(4) a. Qui$_i$ est-ce qu'il a voté [$_{PP}$ t_i [$_P$ *pour* [$_{DP}$ t_i]]]?
who is.it that.he has voted for
'Who did he vote for?'

b. Qui$_i$ est-ce qu'il a voté [$_{PP}$ [$_P$ *pour* [$_{DP}$ t_i]]]?
who is.it that.he has voted for
'Who did he vote for?'

Following the work of Abels (2003b, 2012), my analysis relies on the intuition that there is more going on in cases like (4) than what we can see on the surface. The central assumption of my syntactic analysis is that the extracted element in (4) is not actually directly adjacent to the prepositional phase head.

I begin in section 4.1 by first reviewing the P-stranding facts in Dutch and German. As the reader may recall, a restricted form of P-stranding takes place in these languages with pronominal elements called R-pronouns (emboldened below) which appear in postpositional phrases. These are to be distinguished from their homophonous locative forms which receive a different (i.e. locative) semantic interpretation and cannot appear in postpositional phrases. As the German examples below show, an additional morpheme (*dr-*) must be realized on the adposition in these cases (5-a). Evidence of this morpheme is wholly absent with non-R-pronouns (5-b) and consequently

P-stranding with these constituents is always illicit (5-c); pied-piping of the PP is the only licit option (5-d) (examples (5-a) and (5-c) from Abels 2012).

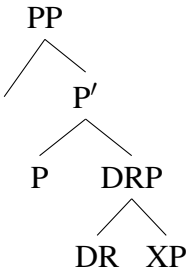
(5) a. **Wo** hast du [**in/drin*] geschlafen?
where have you in/DR.in slept
'What did you sleep in?'

b. Du hast in einem Bett geschlafen.
you have in a bed slept
'You slept in a bed.'

c. *Welchem Bett hast du *in* geschlafen?
which bed have you in slept
'Which bed did you sleep in?'

d. In welchem Bett hast du geschlafen?
in which bed have you slept
'In which bed did you sleep?'

This additional morpheme, labelled a DR-morpheme by Abels (2012), is argued to constitute an additional layer of structure in the PP. I will follow Abels in incorporating the notion of the existence of a DR-morpheme in LFF, like Abels suggests for Dutch and German, but I will conclude that the syntactic structure he suggests for cases of P-stranding with R-pronouns is unnecessary. Instead, I will propose that PPs have the following universal structure in P-stranding scenarios, where the DR-morpheme is selected by the preposition and takes a right-branching complement:

(6)


Based on the evidence from Dutch and German discussed in Section 4.1.1 and 4.1.2, Section 4.2.1 of the chapter will present my DR-morpheme analysis of LFF P-stranding under $\overline{\text{A}}$-movement. In this section I will give a detailed layout of the proposed structure of PP in LFF and an account of how the DR-morpheme proposal fares in accounting for the empirical picture of P-stranding in the LFF dialect. I will argue that in P-stranding, LFF PPs contain an additional layer of structure between prepositions and their complements. Following Abels, I will label this intervening element a DR-morpheme. Overt morphological evidence for a DR-morpheme in LFF is observed with the prepositions *dans*, *sur* and *sous*, which when stranded, must be realized as *dedans*, *dessus* and *dessous* (7-b); the base form of these prepositions cannot be stranded (7-c):

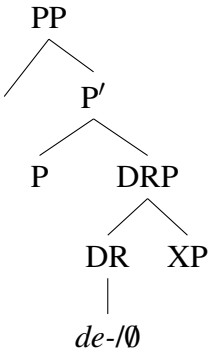
(7) a. Il a mis le livre *sur* la table.
he has put the book on the table
'He put the book on the table.'

b. Quelle table est-ce qu'il a mis le livre *dessus*?
which table is.it that.he has put the book on
'Which table did he put the book on?'

c. *Quelle table est-ce qu'il a mis le livre *sur*?
which table is.it that.he has put the book on
'Which table did he put the book on?'

My analysis argues that the *de-* morpheme allows P-stranding in LFF and I suggest that it has different exponents. In cases of LFF P-stranding with *dans*, *sur* and *sous*, it is realized as *de-* and head moves to amalgamate with these base forms. The same process takes place in other cases of P-stranding, albeit the DR-morpheme is a null element and remains phonologically unrealized. This is represented below, where the two possible exponents of the DR-morpheme are shown in their base-merged position in the PP structure suggested above in (6):

(8)



The additional layer of structure created by the DR-morpheme in LFF obviates Last Resort and the ALC and allows prepositional complements to move past their selecting prepositional phase heads and into the phase edge position (i.e. Spec-PP) where they are visible to further syntactic operations throughout the derivation. While the DR-morpheme is obligatory in P-stranding scenarios, its presence remains optional in pied-piping and in situ prepositional phrases. Evidence and discussion for the presence of a DR-morpheme in a number of other languages will also be provided, lending further support for the DR-morpheme analysis.

Section 4.2.2 will subsequently examine P-stranding under A-movement in passivization. As the reader may recall, LFF allows prepositional passives (P-passives), where the object of a preposition, rather than that of a verb, undergoes A-movement to subject position under passivization:

(9) [Cette plume]$_i$ a été écrit *avec* t_i.
this pen has been written with
'This pen has been written with.'

The DR-morpheme approach will be extended to account for use of the prepositional passive in LFF. Following Collins (2005), I will show that P-passives are possible in LFF by means of a Voice head which absorbs the prepositional head's case assigning capabilities. Movement of the prepositional complement to subject position in passivization will be argued to be permissible due to a combination of the presence of a DR-morpheme in LFF and the PP itself escaping the vP phase by being smuggled past this phase head to a position in the specifier of the Voice phrase.

In Section 4.2.3, I will continue the discussion of A-movement by discussing the inability of clitics to participate in P-stranding scenarios in LFF. As the following contrast shows, only strong tonic pronouns can merge in a PP (10-a); clitics can neither merge as prepositional complements (10-b), nor undergo movement to leave a preposition stranded (10-c):

(10) a. Il a voté *pour* moi.
he has voted for me
'He voted for me.'

b. *Il a voté *pour* me.
he has voted for me.CL
'He voted for me.'

c. *Il m'a voté *pour*.
he me.CL.has voted for
'He voted for me.'

The discussion of clitics will account for the illicit nature of both (10-b) and (10-c) via the head nature of clitics in LFF. Given that clitics are heads in LFF, merger of these elements with either P or DR, which are also heads, yields an illicit PP.

Section 4.3 of the chapter will look at the complex issue of pied-piping of adpositional phrases in P-stranding languages and the vexing problem of how to account for its optionality. Unlike in English, where some have argued that pied-piping of PPs is not truly optional, but rather mostly restricted to matrix clause environments (Cable and Harris, 2011; Heck, 2008), LFF has true optionality when it comes to choosing between P-stranding and pied piping in both matrix (11) and embedded clauses (12):

(11) a. Qui$_i$ est-ce qu'elle est sortie [$_{PP}$ *avec* t_i]?
who is.it that.she is gone.out with
'Who did she go out with?'

b. [$_{PP}$ Avec qui]$_i$ est-ce qu'elle est sortie t_i?
with who is.it that.she is gone.out
'With who did she go out?'

(12) a. Je me demande qui$_i$ qu'elle a dansé [$_{PP}$ *avec* t_i].
I myself wonder who that.she has danced with
'I wonder who she danced with?'

b. Je me demande [$_{PP}$ avec qui]$_i$ qu'elle a dansé t_i.
I myself wonder with whom that.she has danced
'*I wonder with whom she danced?'

The bona fide optionality seen in LFF pied-piping leads me to have to reject the more modern approaches to pied piping of Heck (2004) and Cable (2007), which are unable to account for this factor. Using principles of feature percolation adopted from Matic and Nikolaeva (2014), I will provide an account of how feature percolation in conjunction with the DR-morpheme derives the optionality between P-stranding and pied-piping observed in LFF.

Section 4.4 provides a brief discussion regarding non-strandable prepositions. It is a well known fact that some prepositions, even in English, cannot be stranded, as exemplified in the contrast below:

(13) a. Who did he leave *with*?
b. *Who did he leave *without*?

In this section I discuss this puzzle, which under all accounts of P-stranding (including my own) has no adequate solution. Although it is by no means a resolution, I tentatively suggest that the unstrandable nature of some prepositions may be due to their idiosyncratic nature. I will suggest that the morphological merger of the DR-morpheme with certain prepositions simply does not conflate and this is an idiosyncratic property of individual prepositions. This is a tentative suggestion only within the larger discussion and analysis of P-stranding presented in this thesis and does not constitute a claim that what I propose resolves the issue of non-strandable prepositions. This issue, within the contexts of my proposal, will have to remain an open question, as it currently does under all accounts of P-stranding. Section 4.5 then provides an interim summary of the chapter, while section 4.6 concludes with a summary of where the DR-proposal leaves us in accounting for P-stranding and what questions remain open in accounting for this rare phenomenon.

4.1 The DR-morpheme in German and Dutch

This initial section of the chapter reexamines the P-stranding facts observed in Dutch and German and the evidence that Abels (2012) uses to argue that PPs in P-stranding languages contain an additional layer of structure. I review Abels' own analysis of P-stranding with R-pronouns and his reasons for assuming that R-pronouns merge as left-branching complements. I show that assuming this structure is unnecessary and that we can adopt a universal structure for PPs cross-linguistically. I further argue that the revised feature sharing system Abels develops in order to explain why R-pronouns must move to the specifier position in adpositional phrases in Dutch and German can also be eschewed.

4.1.1 Evidence for a DR-morpheme

As previously discussed in Chapter 2, a restricted form of P-stranding occurs in Dutch and German with R-pronouns only (14-a).[1] Preposition stranding with regular NPs/DPs is illicit (14-b) (example (14-a) adapted from Gutiérrez, 2020; example (14-b) from Koopman, 2010):

(14) a. **Waar** heeft Jan de krant *mee* op de tafel gelegd?
where has Jan the paper with on the table put
'What has Jan put the paper on the table with?' *Dutch*

b. *__Welke tafel__ heb je dat boekje *op* gelegd?
which table have you that book on put
'Which table did you put the book on?' *Dutch*

The notable characteristic in all cases of P-stranding with R-pronouns is that we see a morphological change. In German, vowel-initial prepositions must appear with the prefix *dr-* in extraction scenarios (15-a), while consonant-initial prepositions appear in their regular form (15-b) or with the prefix *da-* (15-c) (from Abels 2012).

(15) a. **Wo** hast du [**in*/*drin*] geschlafen?
where have you in/DR.in slept
'What did you sleep in?' *German*

b. **Wo** hast du *mit* gerechnet?
where have you with counted
'What did you count on?' *German*

c. **Da** habe ich nicht *damit* gerechnet.
there have I not DR.with counted
'I didn't expect that.' *German*

A similar morphological process exists in Dutch. As noted by Noonan (2017), the *(d)-r* morpheme in Dutch is realized on the R-pronoun itself (e.g. *het* → *er*, *dat* → *daar*, *wat* → *waar* (recall (14-a) above).

Following Abels (2012) and Noonan (2017), I assume that these elements are DR-morphemes. I posit that the DR-morpheme is a head that projects a DR-phrase and constitutes an additional layer of structure in Dutch and German adpositional phrases.[2] This DR-morpheme head is morphologically realized as *dr-* on German prepositions and as *-r* on R-pronouns in Dutch.

There is further evidence outside of Dutch and German for the existence of a DR-morpheme in P-stranding. Turkish (16-a) and Russian (17-a) are known as robustly non-P-stranding languages. Nevertheless, both these languages do in fact allow P-stranding in restricted cases (16-b)/(17-b).

[1] Again, these are to be distinguished from their homophonous locative forms which cannot appear in postpositional phrases and can only be (semantically) interpreted as denoting a location.

[2] Noonan (2017) makes this suggestion in her work and I adopt the idea that this morpheme is the same head in both languages, but I do not follow or adopt any particular implementation of her proposal in this thesis.

In these particular instances, both languages realize additional morphology on the stranded preposition. (Examples in (16) from Sener, 2006 in Özgen and Koşaner 2015; examples in (17) from Podobryaev, 2009):

(16) a. *Murat [öğrenci-leri]$_i$ dün [$_{PP}$ t_i için] hediye-ler al-dı.
Murat.NOM student-PL yesterday for present-PL buy-PAST
'Murat bought presents for the students yesterday.'

b. Murat sınıf-ını dün [$_{PP}$ ti iç-in-de] bağır-dı.
Murat.NOM class-GEN yesterday in-3SG.AGR-LOC shout-PAST
'Murat shouted in the class yesterday.'

(17) a. *Čem$_i$ ty govoriš [$_{PP}$ *o* t_i]?
what you talk about
'What are you talking about?'

b. Komu$_i$ ty èto sdelal [$_{PP}$ *nazlo* t_i]?
whom you this did to.spite
'To spite whom have you done it?'

In the Turkish case of P-stranding in (16-b) the preposition carries the additional morpheme *-de*, while the Russian preposition *na* carries the additional morpheme *-zlo* under P-stranding (17-b). In both the cases above, the prepositions carry what has been analyzed as additional nominal morphology. Following Abels (2012) I (tentatively) suggest that this additional morphology, seen strictly under P-stranding, could in fact be an overt realization of the DR-morpheme of the type seen in German, Dutch and LFF.

Further possible evidence for the existence of a DR-morpheme in P-stranding comes from two Portuguese-based creole languages: Cape Verdean Creole and Papiamentu. In both these languages, P-stranding is permissible and we see evidence of additional morphology on the stranded prepositions. This is exemplified below for Papiamentu in (18-a) and Cape Verdean Creole (CVC) in (18-b) (Example (18-a) from Muysken, 1977 and (18-b) from Alexandre, 2009):

(18) a. Ken bo ta kumpra flor *p***é**?
who you ASP buy flower for-PRO
'Who are you buying flowers for?'

b. [$_{DP}$ Ken/kenha]$_i$ ki bu sa ta papia [$_{PP}$ *ku*-[**el**]$_i$]?
who that 2SG PROGR talk with-3SG
Lit.: 'Who are you talking with him?'
'Who are you talking with?'

Both Muysken and Alexandre provide evidence that the additional element found on prepositions in these cases does not have the characteristics of a resumptive pronoun and resort to analyzing it as a spelled-out trace of the moved element. I suggest here that Papiamentu *é* and CVC *-el* could

instead be instantiations of DR-morphemes. The evidence provided by Muysken and Alexandre show that these elements are invariant and do not show agreement with the extracted element. The evidence seems to suggest that these morphemes are the key factor allowing P-stranding to take place by obviating violations of anti-locality.

The morphemes we see in cases of P-stranding from LFF through to CVC all have common characteristics. They are prosodically weak elements and must find a prosodic host (typically the preposition). They all separate prepositions from their complements, allowing movement by circumventing violations of anti-locality in P-stranding scenarios. The universal PP structure that I am proposing in this chapter is able to derive and account for all these instances of P-stranding, under the assumption that the morpheme attaching to prepositions in P-stranding scenarios is the instantiation of a DR-morpheme. The evidence for a DR-morpheme, in those instances where it is overtly realized, suggests that this element may come in different flavors or guises in different languages, where in some languages it allows P-stranding in general (e.g. English, LFF, a.o.), but in others works to restrict it to specific instances (e.g. Dutch, German, Turkish, etc.). Admittedly, for the more restricted languages (e.g. Russian, Turkish, Papiamentu and CVC) I put this forward as a tentative analysis only at this time. Although the evidence points towards the existence of a DR-morpheme similar to what I am suggesting for LFF, further work and investigation needs to be carried out in these languages to determine whether the DR-proposal is in fact the correct analysis.[3]

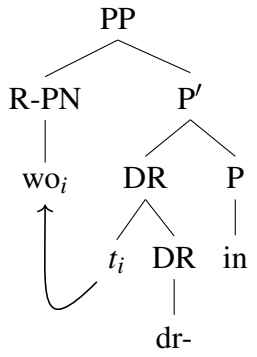
4.1.2 Deriving German and Dutch P-stranding

Following Abels, I propose that the additional layer of structure instantiated by the DR-morpheme allows R-pronouns to be extracted, but I do not implement Abels' particular syntactic structure for these R-pronoun extraction cases. Abels assumes that an example like (15-a), repeated here as (19-a) is derived as in (19-b) (adapted from Abels, 2012):

(19) a. **Wo** hast du [**in*/*drin*] geschlafen?
where have you in/DR.in slept
'What did you sleep in?'

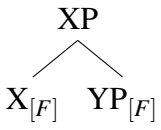
[3]If future work shows that the restricted type of P-stranding seen in these languages is in fact allowed via a DR-morpheme of the type observed in Dutch and German, then they would be added to the inventory of Class 3 P-stranding languages.

b.

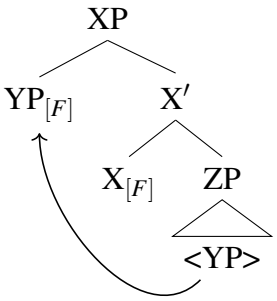


Abels' motivations for the structure in (19-b) stem from his revised system of feature sharing based on c-command relationships, which I do not adopt. Abels assumes that features triggering movement can be shared in two structural configurations: a head complement relation (20-a) and via movement of the feature bearing element to a specifier position via Internal Merge (20-b) (where [F] is simply a place marker representing a feature shared by X and YP) (from Abels 2012):

(20) a.



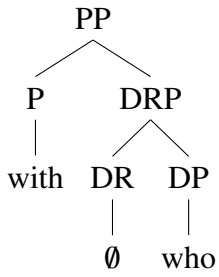
b.



To derive the postpositional word of R-pronouns in German and Dutch, Abels stipulates that the DR-morpheme in these languages cannot satisfy an adposition's selectional requirements for a complement. This, he assumes, forces movement of R-pronouns to the specifier position of PP (see again (19-b) above). This movement places the R-pronoun in the feature sharing configuration in (20-b), which Abels assumes allows feature sharing between the R-pronoun and the adpositional head. Abels also assumes other features, such as [+wh], can now be shared throughout the entire phase (i.e. PP), allowing optional pied-piping.

The first question Abels' assumptions raise is what happens in P-stranding languages like English, where prepositional complements do not raise to and appear independently in Spec-PP as R-pronouns do. Abels discusses Cape Verdean Creole and Papiamentu, suggesting that in these languages the more stringent selectional requirements of P he assumes for German and Dutch can be dropped; in these languages DRP *can* satisfy Ps selectional requirements for a complement. Although he does not explicitly state it, we must assume that Abels presupposes that the same thing applies to English, given that he assumes that PPs in English have the following base structure in extraction scenarios yielding P-stranding:

(21)



Otherwise, if we apply the assumptions Abels makes about DR in German and Dutch to English, prepositional complements in derivations with a DR-morpheme would be forced to move to Spec-PP in order to satisfy Ps selectional requirements for a complement. This would predict that in English the PP could pied-pipe at this stage in the same manner that is possible with R-pronoun containing postpositional phrases in German and Dutch (22-a), yielding illicit forms of pied-piping (22-b) (example (22-a) from Dennis Ott, p.c.):

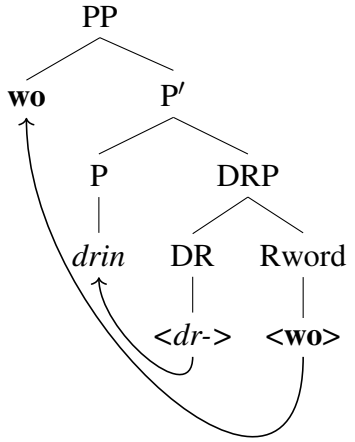
(22) a. **Wo***mit* hast du nicht gerechnet?
where.with have you not reckoned
'What did you not reckon with?'

b. *[$_{PP}$ Who$_i$ [$_P$ with t_i]]$_k$ was he seen t_k?

These facts suggest that although he does not explicitly state it, Abels must assume that DR can satisfy Ps selectional requirements for a complement in English and other similar P-stranding languages. Abels' theory must assume that DR has inherently different characteristics in German and Dutch in terms of its relationship with P where selection is concerned than it does in other P-stranding languages. Under Abels' assumptions, we are left with an open issue of why DR can satisfy Ps selectional requirements in some languages but not others.

It seems to me that Abels could get the exact same result with the following configuration:

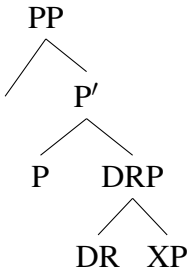
(23)



Given (23) and staying true to Abels' assumptions, we can still claim that the preposition's selectional requirements are not met due to the intervention of DR between the preposition and the R-pronoun. This would force movement of the R-pronoun to the specifier of PP and via (20-b) the [+wh] feature on *wo* would be shared with the entire phase, allowing for optional pied-piping. Conceptually, Abels' structure in (19-b) seems superfluous as (23) yields the same results without having to adopt the structure Abels suggest in (19-b). Given this, and the fact that Abels must assume an inherently different status for DRP in terms of its ability to satisfy an adposition's complement cross-linguistically, I will not adopt Abels' proposed structure for postpositional phrases in German and Dutch or his specialized feature sharing system.

Although accounting for preposition stranding with R-pronouns in Dutch and German is not the focus of this thesis, I will suggest here that these cases of P-stranding can be dealt with in the same manner as English and LFF cases. I propose the following universal structure for PPs in P-stranding scenarios:

(24)



The structure in (24) straightforwardly accounts for the cases of P-stranding observed in German and Dutch. The DR-morpheme intervening between the phase head P and its complement voids any violation of anti-locality and allows the prepositional complement to move to the edge of PP and escape the phase via the Spec-PP escape hatch. This is exemplified for Dutch below with a case of scrambling (25-a), topicalization (25-b), and *wh*-movement (25-c) (examples from Noonan, 2017):

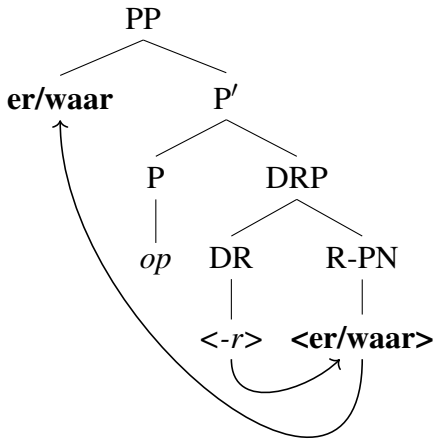
(25) a. Ik heb **daar**$_i$ dat boek [$_{PP}$ t_i [$_P$ *op* t_i]] gelegd.
I have there that book on put
'I have put that book on there.'

b. **Daar**$_i$ heb ik dat boek [$_{PP}$ t_i [$_P$ *op* t_i]] gelegd.
there have I that book on put
'I have put that book on there.'

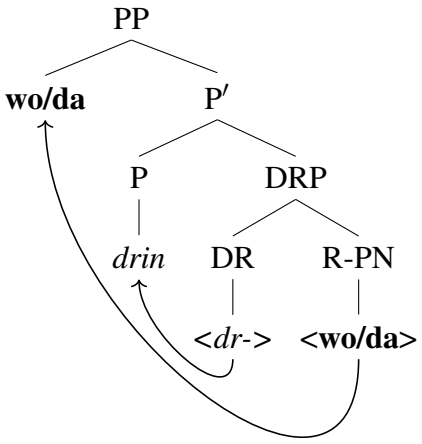
c. **Waar**$_i$ heb jij dat boek [$_{PP}$ t_i [$_P$ *op* t_i]] gelegd?
where have you that book on put
'What did you put that book on?'

The only difference between German and Dutch is that in Dutch (26), the DR-morpheme chooses the R-pronoun as its prosodic host, while in German (27) the preposition is the selected host:

(26)



(27)



Postpositional phrases with R-pronouns in Dutch and German can optionally remain in situ (28-a) (example from Noonan, 2017) or undergo pied-piping (28-b) (example provided by Dennis Ott, p.c.):

(28) a. Ik heb dat boek **er***op*/**daar***op* gelegd.
I have that book there.on put
'I have put that book on it.' *Dutch*

b. **Wo***mit* hast du nicht gerechnet?
where.with have you not reckoned
'What did you not reckon with?' *German*

I will defer any further discussion of the cases in (28) until section 4.3, where I will account for the optionality of pied-piping in LFF. As for the P-stranding options, the only differences we see between what takes place in German and Dutch versus languages like English and LFF is the inverse order of the preposition and its complement, as well as the fact that the adposition's complement can undergo scrambling (recall (25-a) above).

The scrambling option causes no issues with the universal structure I am proposing in my DR-morpheme analysis as this process is simply not available in English or LFF. As to why R-pronouns *must* end up in Spec-PP, I will remain agnostic as to what exactly drives this movement. Nothing in the DR-morpheme proposal hinges on whatever mechanism enforces this movement; presence of the DR-morpheme simply allows it to take place. Whatever we might suggest as the reason for this movement being obligatory, it seems that it will have to be a stipulation, as in van Riemsdijk's (1978) r-movement rule and Abels' assumption that DR cannot satisfy Ps selectional requirements for a complement (specifically in German and Dutch).[4] Given that the DR-morpheme analysis does

[4]Abels (2012, 240) must in fact add an additional stipulation in the form of a linearization statement in order to derive the postpositional word order in R-pronoun cases.

not hinge on whatever might force R-pronoun movement I will refrain from adding an additional and unnecessary stipulation to my analysis.

The goal of this thesis remains an explication of what allows P-stranding in LFF when this construction is illicit in Standard French. I contend that the DR-morpheme proposal is sufficient in being able to account for P-stranding in German and Dutch, and as I will show in the discussion to come in LFF and English (and by extension other P-stranding languages). In Dutch and German, presence of the DR-morpheme is the key factor allowing R-pronouns to move and escaped the PP phase.

4.1.3 Interim summary

This section has examined the restricted type of P-stranding that has been observed in German and Dutch. I have exemplified with relevant data what has already been observed in studies of P-stranding with R-pronouns. That is, there is a morphological change that takes place in all instances of P-stranding in these languages which involves a DR-morpheme which is realized on prepositions as *(d)r-* in German and as *-r* on R-pronouns in Dutch. Following Noonan (2017), I suggested that these morphemes instantiate the same head in each language, that is, these are both realizations of what has been labelled as a DR-morpheme (Abels, 2012), a head which projects a DRP. Following Abels (2012), I demonstrated that the DR-phrase, headed by the DR-morpheme constitutes an additional layer of structure in Dutch and German adpositional phrases, one which allows adpositional complements to avoid violations of the Anti-Locality Constraint and escape the PP phase via the edge (i.e. specifier) of PP. Further potential evidence for a DR-morpheme was shown to exist in Turkish, Russian and two creole dialects.

Contra Abels (2012), I showed that P-stranding with R-pronouns can be accounted for with a universal structure for prepositional phrases in P-stranding scenarios which does not require us to adopt Abels' structure for postpositional phrases in German and Dutch or his specialized feature sharing system. In the remainder of this chapter, I take the universal PP structure incorporating the DR-morpheme suggested in (24) and apply it to cases of P-stranding in LFF.

4.2 The DR-morpheme in LFF P-stranding

This section of the chapter will make explicit how the DR-morpheme accounts for P-stranding in LFF. Section 4.2.1 looks at P-stranding in LFF under $\overline{\text{A}}$-movement. I will show that the LFF dialect provides direct evidence of the DR-morpheme proposed in Abels (2012) via an invariable form that is morphologically realized as *de-*. Like its German and Dutch counterparts, *de-* is a prosodically weak element and requires a host, attaching to the prepositional head. Through data and derivations

I will show that the DR-morpheme *de-* constitutes an additional layer of structure in the LFF PP that allows anti-locality to be circumvented, permitting extraction of prepositional complements in P-stranding cases. I will argue that the DR-morpheme *de-* in LFF, realized overtly in some case and as a null element in others, also constitutes evidence for the presence of a null DR-morpheme in P-stranding languages like English.

Section 4.2.2 will examine P-stranding in LFF under A-movement in prepositional passives (P-passives). As discussed in Chapter 2, I will adopt an approach to deriving the P-passive that incorporates the DR-morpheme, the key element allowing prepositional complements to escape the PP-phase in P-stranding languages. This section will present my assumptions and arguments that an approach using some form of case absorption is best suited to accounting for the P-passive in LFF. Adopting a Collins-style (2005) smuggling approach, I will argue that the prepositional complement reaches its surface position in P-passives by being moved out of the vP-phase to the specifier position in a functional Voice projection. The prepositional complement is then raised to the Spec-TP subject position in order to satisfy the EPP. As in standard P-stranding, a violation of anti-locality is precluded by the presence of the DR-morpheme intervening between the preposition and its complement within the PP architecture.

In section 4.2.3, I will then discuss the inability of cliticized elements to leave prepositions stranded in LFF. This section will give a brief overview of the existing approaches to cliticization. I will then discuss how the DR-proposal could potentially be incorporated into the different styles of analyses that have been proposed for deriving clitic structures. My conclusion will be that to effectively account for the lack of P-stranding in cliticization scenarios, we must adopt an approach that assumes that clitics are always heads.

4.2.1 Deriving P-stranding under $\overline{\text{A}}$-movement

As discussed in the background in chapter 2, Abels (2003b, 2012) derives the ban against P-stranding, which applies to all Class 4 languages, via his Stranding Generalization (SG), repeated here as (29) (from Abels 2012):

(29) *Stranding Generalization*
Given a phase head α^o and a constituent X in α^o's c-command domain, extraction out of the c-command domain of α^o may occur, as long as the extraction does not leave α^o without a complement.

The SG states that the direct complements of phase heads cannot move, leaving the phase head stranded. To refresh the reader's memory, Abels' derives the SG via Last Resort (LR) and its corollary named the Anti-Locality Constraint (ALC) (from Abels 2012):

(30) *Last Resort*

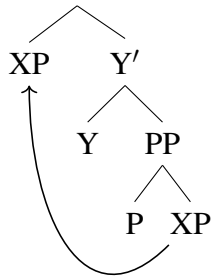
A constituent α may only be merged (i.e. base-merged or remerged) if that leads to the immediate satisfaction of a previously unsatisfied feature.

(31) *Anti-Locality Constraint (ALC)*

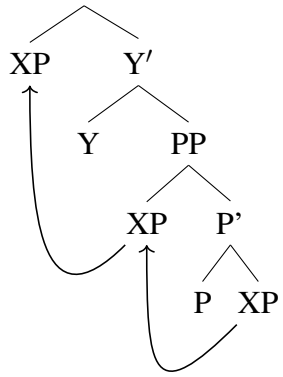
The complement of a phase head may never move to the specifier of that head's maximal projection, leaving the phase head stranded.

In combination with the Phase Impenetrability Condition (PIC) (Chomsky, 2001), which derives successive-cyclic movement by ensuring that elements exiting a phase must first cycle through that phase's edge, Last Resort and the ACL derive Abels' SG by blocking either of the two movements below (adapted from Abels, 2003b):

(32) a. *



b. *



The option in (32-a) is illicit because the movement is too non-local (i.e. non-cyclic) and is ruled out by the PIC. Since PP is a phase, the prepositional complement cannot escape without first moving to the phase edge (i.e. Spec-PP). The scenario in (32-b) is blocked since the movement is too local in this instance. Even though this option adheres to the PIC, it violates Last Resort and its corollary the ALC. To be explicit, I follow Abels in assuming that directly merging a prepositional complement with its phase head P in a sisterhood relationship, as in (32-b), would satisfy any features on XP that need valuation. Any movement of XP after merger with its phase head (where XP is a sister to the phase head) would thus violate Last Resort, and by default the ALC.

Given the assumptions made explicit so far, the prediction would be that P-stranding is generally impossible. This should be the case whether we assume that movement takes place in one fell swoop (33-a) or successive cyclically (33-b):

(33) a. Qui$_i$ est-ce qu'elle est sortie [$_{PP}$ [$_P$ *avec* t_i]]?
who is.it that.she is gone.out with
'Who did she go out with?'

b. Qui$_i$ est-ce qu'elle est sortie [$_{PP}$ t_i [$_P$ *avec* t_i]]?
who is.it that.she is gone.out with
'Who did she go out with?'

Only if something were to intervene between a preposition and its complement should we in theory be able to get P-stranding. With additional structure intervening between phase head P and its complement XP, these two would no longer be in the sisterhood relation we see in (32-b). Given the assumptions discussed above, if XP were not directly merged with its phase head, we can also assume it could have features left needing valuation. XP could then be attracted upwards to the edge position of PP for reasons of feature valuation without violating Last Resort or the ALC. This is exactly what I argue takes place in LFF and other P-stranding languages.

LFF, like German, shows evidence of a DR-morpheme on prepositions, namely the three prepositions *dans*, *sur* and *sous*. When stranded, these three prepositions are obligatorily realized as *dedans*, *dessus* and *dessous*, showing an evident morphological change with the addition of the morpheme *de-* (34)-(36). There is no instance in LFF where *dans*, *sur* or *sous* can be stranded without the *de-* morpheme being present in the derivation (37).

(34) a. Le chat s'est caché *dans* la boîte.
the cat itself.is hid inside the box
'The cat hid inside the box.'

b. Quelle boîte est-ce que le chat s'est caché *dedans*?
which box is.it that the cat itself.is hidden inside.of
'Which box did the cat hide in?'

(35) a. Il a mis le livre *sur* la table.
he has put the book on the table
'He put the book on the table.'

b. Quelle table est-ce qu'il a mis le livre *dessus*?
which table is.it that.he has put the book on
'Which table did he put the book on?'

(36) a. Marie s'est assise *sous* l'auvent.
Marie herself.is sat under the.awning
'Marie sat under the awning.'

b. Quel auvent est-ce que Marie s'est assise *dessous*?
which awning is.it that Marie herself.is sat under
'Which awning did Marie sit under?'

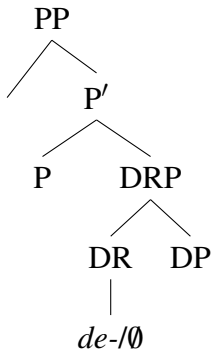
(37) a. *Quelle boîte est-ce qu'il l'a mis *dans*?
what box is.it that.he it.has put inside
'Which box did he put it in?'

b. *Quelle chaise est-ce qu'elle s'est assise *sur*?
which chair is.it that.she herself.is sat on
'Which chair did she sit on?'

c. *Quelle table est-ce que le chat s'est caché *sous*?
which table is.it that the cat itself.is hidden under
'Which table did the cat hide under?'

The structure I assume for PPs in LFF, for my purposes here, is straightforward and simple. In LFF, PPs are headed by a prepositional head that projects a PP mother node. A DR-morpheme, realized overtly as *de-* on three specific prepositions, and as a null morpheme otherwise, can optionally merge in PPs, creating an additional layer of structure that separates prepositional heads from their complements. This is exemplified in (38) below:

(38)



I suggest that the DR-morpheme has different exponents and that this is idiosyncratically determined by the preposition itself.[5] In some P-stranding languages, the idiosyncratic nature of some prepositions will demand an overt form of the DR-morpheme, while others require the null form (e.g. LFF, Dutch, German). Of course, in many P-stranding languages, it would seem that prepositions uniformly require a null DR-morpheme and do not allow an overt form (e.g. English).

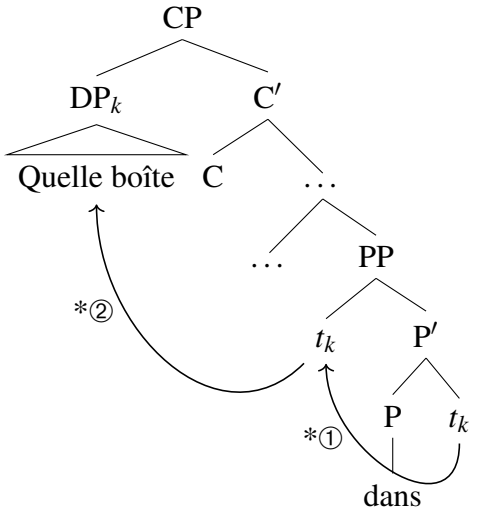
Following standard assumptions about the structure of prepositional phrases (Abels, 2003b, 2012; Bošković, 2014; Sener, 2006; van Riemsdijk, 1978, among many others), I presume that PPs in LFF project a specifier position. As per Chomsky (2001), this specifier constitutes an edge domain within the PP phase that acts as an escape hatch. Spec-PP in LFF provides a prepositional complement a position to which it can be displaced and move successive-cyclically out of PP. This displacement is of course only allowed if something intervenes between phase head P and its complement. Preposition stranding in LFF thus only occurs when the DR-morpheme portrayed in (38) is merged.

In (37-a) above for example, we see that without merger of the DR-morpheme, the DP *quelle boîte* is a direct complement of the preposition *dans*, and cannot extract. This is exemplified in (39). The first movement (marked *①) in the successive cyclic movement chain of the DP in (39)

[5] I return to this point in more detail in Section 4.4 which discusses the issue of non-strandable prepositions.

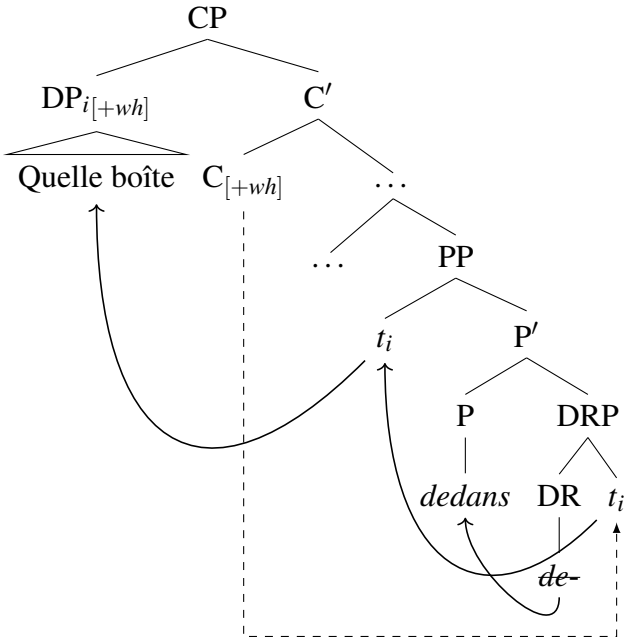
is blocked by Last Resort and the ALC and subsequent movement (i.e. *②) up to Spec-CP is illicit.

(39)



Only when the DR-morpheme merges do we get P-stranding with *dans*, *sur* and *sous*. Example (40) below exemplifies how the DR-morpheme derives the P-stranding shown in (34-b) above:

(40)



In (40), an overt DR-head merges with an XP complement (in this case a DP), projecting a DR-phrase. I assume that prepositions are case assigners in LFF. Once merged, the preposition in (40) assigns structural case to the DP in situ. I assume that phase head P is a probe and carries not only an uninterpretable feature [*u*DP], but also [*u*DR]. I further posit that the DRP, like a DP, carries a matching , interpretable feature that can value the uninterpretable feature [*u*DR] on P. When DRP merges into the derivation it is the closest possible goal bearing a matching feature that can satisfy

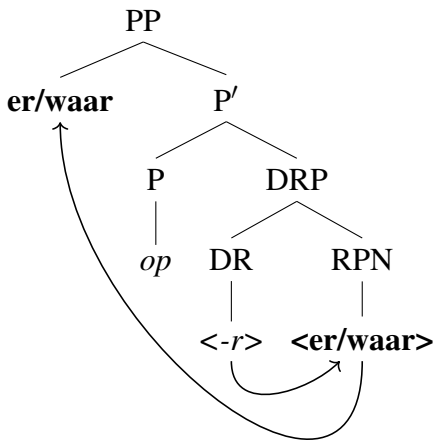
Ps requirement for a complement. When DRP merges with P, Ps [*u*DR] feature gets valued and deleted under Agree. I assume that Ps selectional requirements for a complement can thus be met by either a DP or a DRP. The DR-morpheme itself, being prosodically weak, morphologically fuses with the preposition, yielding *dedans*. I assume this takes place via head movement of DR to P. I have nothing novel to say here about why this head attaches to prepositions in LFF and German, but to R-pronouns in Dutch. Like other prosodically weak elements, it simply requires a host.

DP movement in (40) is motivated by Agree. I assume that phase head P carries an uninterpretable [*u*WH] feature. Since DP and P did not merge into a direct sisterhood relation, the [*u*WH] on P has yet to be satisfied. Under question formation, phase head P probes for an XP that carries the matching interpretable feature. A DP bearing an interpretable *wh*-feature will thus be attracted upwards to the Spec-PP position where [*u*WH] on P can be valued and deleted under Agree in accordance with Last Resort. Here, at the edge of the phase in Spec-PP it remains accessible, being visible when a C head bearing uninterpretable [*u*WH] merges into the derivation, motivating movement of the *wh*-phrase up to Spec-CP, thus deriving the case of P-stranding seen in (40).

Only when a DR-morpheme merges into the derivation (40) will successive-cyclic movement and P-stranding be allowed. Only when the intervening structure imposed by the DR-morpheme and the DRP it projects is present will Last Resort–and by extension the ALC–be satisfied. Without merger of DR, an illicit derivation results as both Last Resort and the ALC are violated.

I suggest that only Ps can carry uninterpretable [*u*DR] and select a DRP complement. This is a purely stipulative step, but a necessary one. In Dutch for instance, the DR-morpheme is realized on the R-word and not the preposition. If a DP could select a DRP via an uninterpretable [*u*DR] on D, we could still account for the morphological change and presence of the DR-morpheme on the R-pronoun. For clarity, let us reexamine (26), repeated here as (41):

(41)



If we assumed a D head, instantiated by *er/waar* in (41), could select DR, DRP would be below RPN, with RPN as sister to P. Nothing in this revised structure would prevent head movement of DR to the R-pronoun, but problematically, the R-pronoun would be sister to P and could never move to its required position in Spec-PP given Last Resort and the ALC. In P-stranding scenarios where the DR-morpheme head moves to adjoin the preposition, a revised structure where D selects DPR is even more untenable. In these instances, not only would the DRP not intervene between P and its complement, but the DR-morpheme itself would have to cross an intervening head (i.e. D) in order to amalgamate with the preposition. Given these facts, I contend that restricting [*u*DR] to adpositional heads is a necessary stipulation.

Importantly, merger of the DR-morpheme allows extraction, but does not enforce it. This is no different that what we observed in the German and Dutch P-stranding data. Prepositional phrases using *dans*, *sur* and *sous*, where the DR-morpheme merges can also remain in situ (42) or pied-pipe (43); either option is perfectly licit in LFF:

(42) a. Il l'a mis *dedans* quelle boîte?
he it.has put inside.of which box
'He put it inside of which box?'

b. Il l'a mis *dessus* quelle table?
he it.has put on.top.of which table
'He put it on top of which table?'

c. Elle s'est assise *dessous* quel auvent?
she herself.is sat under which awning
'She sat under which awning?'

(43) a. *Dedans* quelle boîte est-ce qu'il l'a mis?
inside.of which box is.it that.he it.has put
'Inside of which box did he put it?'

b. *Dessus* quelle table est-ce qu'il l'a mis?
on.top.of which table is.it that.he it.has put
'On top of which table did he put it?'

c. *Dessous* quel auvent est-ce qu'elle s'est assise?
under which awning is.it that.she herself.is sat
'Under which awning did she sit?'

The above is not surprising as French has the option in its grammar to have *wh*-in situ constructions.[6] The overtly realized DR-morpheme in LFF (as well as German and Dutch) thus has a vacuous effect in cases of in situ and pied-piped PPs.

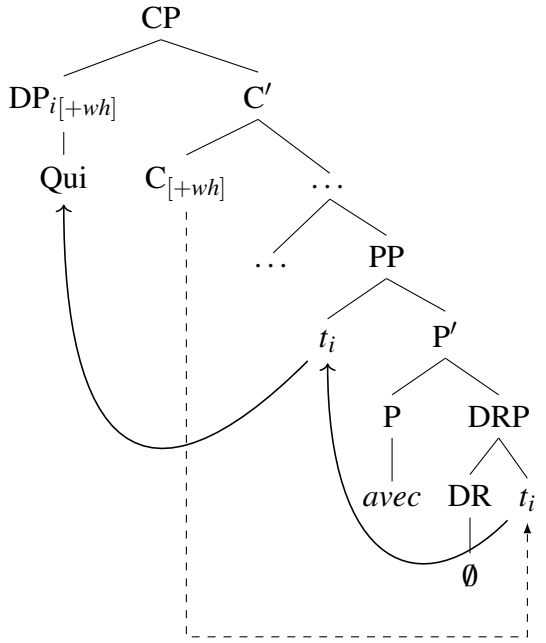
In all other cases of P-stranding in LFF where the DR-morpheme *de-* is not present, I assume

[6]I remain agnostic regarding the mechanism that allows *wh*-in situ within the syntax of LFF and French in general as it is not immediately relevant to my proposal and constitutes a question that need not be answered within the confines of this thesis.

that just like English, a phonologically null DR-morpheme is merged in the derivation:

(44) a. Qui$_i$ est-ce qu'elle est sortie [$_{PP}$ t_i [$_P$ *avec* t_i]]?
who is.it that.she is gone.out with
'Who did she go out with?'

b.



Structurally, PP is thus uniform across languages and across cases of P-stranding. The only factor that determines whether P-stranding takes place or not is whether the language has a DR-morpheme and whether this morpheme merges into the derivation or not. Nothing further is required in order to derive P-stranding in those languages that display this phenomenon.

The facts observed above show that the two exponents of the DR-morpheme in LFF are in complementary distribution. Although these elements constitute the same morphological head, in a P-stranding environment, only the *de-* exponent can appear on the prepositions *dans*, *sur* and *sous*, never the null form; otherwise we would see cases of P-stranding with the base forms. The converse is true with prepositions that take the null exponent of the DR-morpheme; merger of *de-* in these cases leads to an illicit derivation. This is exemplified by the fact that strandable prepositions like *avec* or *pour* can never be realized as *deavec* or *depour*:

(45) a. *Qui est-ce qu'elle est sortie *deavec*?
who is.it. that.she is gone.out with
'Who did she go out with?'

b. *Qui est-ce qu'il a voté *depour*?
who is.it that.he has voted for
'Who did he vote for?'

Lastly, I note the fact that the *de-* morpheme has a homophonous form in the preposition *de*.

This element is nevertheless distinct from the DR-morpheme. Much debate still exists over the prepositional status of *de* given its varied uses in French (Carlier 2007, a.o.) and there exists a general consensus that it does not belong to a single category (i.e. preposition) (Abeillé, Bonami, Godard, and Tseng 2006, a.o.). Some, for example, have suggested that *de* (Elliott, 1986) as well as *à* (Kayne 1975; Vergnaud 1974) are in certain instances simply case marking on NPs (see Zaring 1991 for discussion). The element *de* can of course also function as a complementizer (Huot 1981; Kayne 1975, a.o.) (example from Huot 1981):

(46) Il est honteux *de* mentir.
it is shameful to lie
'It's shameful to lie.'

Besides its use as a complementizer, *de* has numerous other uses (Abeillé et al. 2006; Carlier 2007; Grevisse, Fairon, and Simon 2018; Hennecke 2022; Ursini and Tse 2021; Vandeloise 2017, a.o.). These include a partitive use (47-a), use as a free preposition (47-b), use in introducing an infinitive (47-c), as an adjectival attribute marker (47-d), a possessive marker (47-e), in N-P-N compounds (47-f), in routinized phrases (47-g), as part of complex prepositions (47-h) and in adverbial constructions (47-i) (list of uses and examples from Grevisse et al. 2018 in Hennecke 2022: glosses and translations are my own):

(47) a. une tasse *de* thé
a cup of tea
'a cup of tea'

b. la réparation prendra *de* huit à dix jours
the repair will.take from eight to ten days
'the repairs will take from eight to ten days'

c. on permet *de* fumer
we permit to smoke
'it is permitted to smoke'

d. deux jours *de* libre
two days of free
'two days off'

e. le livre *de* mon père
the book of my father
'my father's book'

f. une pomme *de* terre
an apple of earth
'a potato'

g. *de* rien
of nothing
'it's nothing/think nothing of it'

h. afin *de*
in.order to
'in order to'

i. *de* loin
from afar
'from afar'

Regardless of its classification, what matters in the contexts of this thesis is that *de*, unlike in Standard French, can be stranded in LFF, as I have already demonstrated numerous times. What is notable about the strandability of an element like *de* is that it is arguably prosodically light. French intonational sequences usually end with high tones and in situ or deeply embedded material tends to be prosodically heavy (e.g. Féry 2017; Jun and Fougeron 2002, among many others). It is thus interesting to find light elements like *de* as well as *à* stranded in any dialect of French.[7] It bears repeating here that the fact that LFF allows this further shows that the cases where we find these elements stranded cannot be cases of orphaning, as these two elements are universally illicit in orphan preposition constructions.

Again, what I emphasize in the discussion here is that the *de* that appears independently in stranding scenarios in LFF is distinct from the homophonous DR-morpheme *de-* that appears on the prepositions *dans*, *sur* and *sous*. Firstly, unlike the DR-morpheme, the preposition *de* is not required to merge with a prosodic host. The independent preposition *de* further selects only for the null exponent of the DR-morpheme; it can never merge with the homophonous *de-* exponent of DR:

(48) Où est-ce qu'il est venu *de*/**dede*?
where is.it that.he is come from
'Where did he come from?'

The above carries over to cases where the preposition *de* appears in complex prepositions:

(49) Qui est-ce qu'elle s'est assise à côté (**de*)*de*?
who is.it that.she herself.is sat at side of
'Who did she sit beside?'

Furthermore, although certain other French prepositions show a realization of *de* (e.g. *devant*, *derrière*, *depuis*), this is an orthographic coincidence only as there is no base form of these prepositions without *de* (i.e. **vant*, **rrière*, **puis*).[8] The fact that *devant* and *derrière* are strandable in

[7] I follow Abeillé et al. (2006) in assuming that when followed by NPs (as well as PPs), *de* and *à* have the characteristics of ordinary prepositions. I make no claims here as to the prosodic nature of these prepositions in LFF or why (beyond their ability to merge with a DR-morpheme) they can appear in situ (i.e. stranded) in LFF. Whether their prosody or status differs from their SF counterparts, or whether there is a prosodic parameter in conjunction with the DR-morpheme that allows this is something I will have to leave to future work on this topic.

[8] There is an independent word *puis* in French, but this element is analyzed as a discourse particle that functions as

LFF only means that these must be analyzed as taking a null DR-morpheme under P-stranding. The *de* seen in prepositions that are not part of the set comprised of *dedans*, *dessus* and *dessous* is thus completely disassociated from the homophonous DR-morpheme.

The case study of LFF in this subsection provided robust evidence that the DR-morpheme is the necessary component allowing P-stranding to take place in a given language. In LFF the DR-morpheme has multiple exponents, one being overt and the other one null, with the two forms being in complementary distribution. Although the overt DR-morpheme *de-* has a homophonous form in the preposition *de* and additionally is part of the phonological sequence of certain other LFF prepositions (e.g. *devant*), these realizations of *de* are dissociated from the DR-morpheme.

In my discussion I further argued that in most other P-stranding languages (e.g. English) prepositions only ever take a null exponent of the DR-morpheme. Regardless of whether DR is null or overt, this morpheme is furthermore prosodically weak and requires a host, generally choosing its selecting preposition (Dutch being the exception). Furthermore, the DR-head can take either PP or DP complements, but can only ever be selected by prepositions. The overall take away is that when selected and merged into a derivation, the DR-morpheme provides the additional layer of structure within PPs that allows an extraction of prepositional complements and P-stranding.

4.2.2 Deriving prepositional passives in LFF

As discussed in Chapter 2, LFF can strand prepositions under passivization (P-passive). Example (50) shows that in standard cases of passivization in LFF, just as in English, a verbal object is promoted to subject position. The LFF cases in (51) show that in P-passives a prepositional object, rather than a verbal one, is promoted to subject position:

(50) Jean$_i$ a été [$_{VP}$ [$_V$ tué t_i]].
Jean has been killed
'Jean was killed.'

(51) a. [Ce stylo]$_i$ a été écrit [$_{PP}$ [$_P$ *avec* t_i]].
this pen has been written with
'This pen has been written with.'

b. Le ciment a été marché [$_{PP}$ [$_P$ *dedans*]] avant qu'il puisse sécher.
the cement has been walked in before that.it could dry
'The cement was walked in before it could dry.'

c. Jean a été parlé [$_{PP}$ [$_P$ *de*]] au meeting l'autre jour.
Jean has been talked about at.the meeting the.other day
'Jean was talked about at the meeting the other day.'

a temporal connective and is not in any way prepositional in nature (see e.g. Bras, Le Draoulec, and Vieu 2001; Hansen 1995).

d. Le lit a été dormi [$_{PP}$ [$_{P}$ *dedans*]].
the bed has been slept in
'The bed has been slept in.'

LFF thus joins a very small and restricted group of the world's languages, almost all of them Germanic, in being able to strand prepositions under A-movement.

The central issue in accounting for P-passives is what allows a prepositional object, rather than a verbal one, to extract and undergo A-movement to Spec-TP. In standard passives, the verbal object moves to satisfy the EPP and given that the verbal head in these cases is assumed to lack Case-assigning capabilities, it can also receive [NOM] Case from T. As discussed in 2.4.2, analyzing the P-passive is a problem because PPs are generally opaque to outside probes for Agree operations and so T should not be able to probe into PP in cases of pseudopassivization (see McInnerney 2022, a.o.). Secondly, prepositions are generally thought to assign case to their complements (Biskup 2019; Law 2006; McInnerney 2022, among many others). Given this fact, the prepositional complement even in passivization should in theory already have been assigned Case and should not be able to receive [NOM] Case from T.

Three solutions have been developed to solve the P-passive puzzle. These have already been discussed in 2.4.2. To refresh the reader's memory, I argued that two of these solutions are rather inelegant and problematic. The first was the reanalysis approach, which hypothesizes that prepositions can be reanalyzed as part of a verb, freeing the prepositional object. In 2.6.2 I provided an in depth discussion as to why reanalysis is theoretically problematic and I will refrain from repeating these arguments here. The second approach posits that the preposition in cases of pseudopassivization is unaccusative in nature. In 2.4.2 I noted that the manner in which this type of analysis solves the Case puzzle is problematic. Proposals adopting this approach further suffer from the fact that they offer no viable solution as to why a probe on T should be able to access the PP domain in P-passives. This leaves us with one viable option: case absorption/suppression.

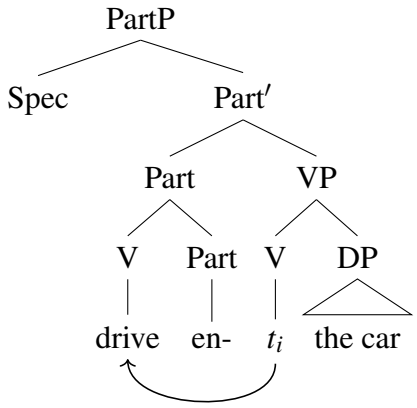
For purposes of my analysis I adopt Collins' (2005) smuggling approach to prepositional passives. I take this step only to be explicit in my analysis. To be clear, the DR-morpheme approach to pseudopassivization does not hinge on any particular aspect of Collins proposal. I remain agnostic as to whether it is the superior case suppression/absorption approach. I remain open to the possibility that other case suppression/absorption proposals could be implemented within the framework of the DR-analysis of LFF P-passives (e.g. Abels, 2003b; Truswell, 2009, a.o.).

Contra standard analyses of passivization, Collins (2005) assumes that passive sentences, just like active ones, contain an external argument (EA) that undergoes External Merge in spec-vP. In (52) below we see a standard English case of passivization:

(52) The car was driven (by Bill).

Collins assumes that in standard passivization, the direct object first merges with the verb. The constructed VP then merges with the passive morpheme which heads a participle phrase (PartP), as in (53):[9]

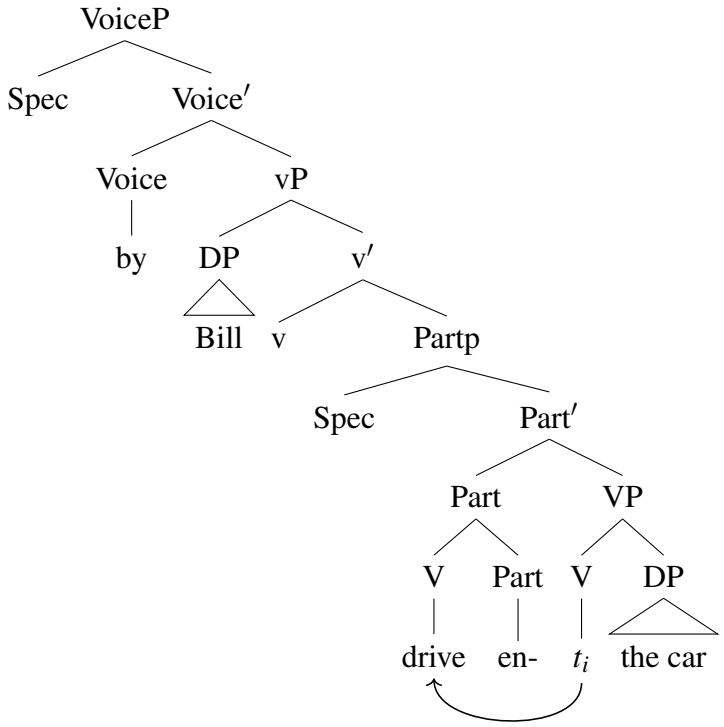
(53)



The derivation then proceeds by PartP being selected by and merging with little-v, with the EA merging in its usual argument position in Spec-vP. A crucial aspect of Collins' proposal is that the EA, which appears in the optional by-phrase in the passive (52) merges in Spec-vP as a regular DP argument (i.e. 'Bill'). Collins supposes that the preposition 'by' does not form a constituent with the DP merged in Spec-vP. Instead, he proposes this preposition is the head of a VoiceP and c-selects for a vP. The preposition 'by' is thus a functional head that heads a VoiceP in passive sentences, as in (54):

[9]Collins (2005, p. 90) assumes that given the presence of the participal head in PartP, V cannot raise to v, as per the Head Movement Constraint (Travis, 1984).

(54)



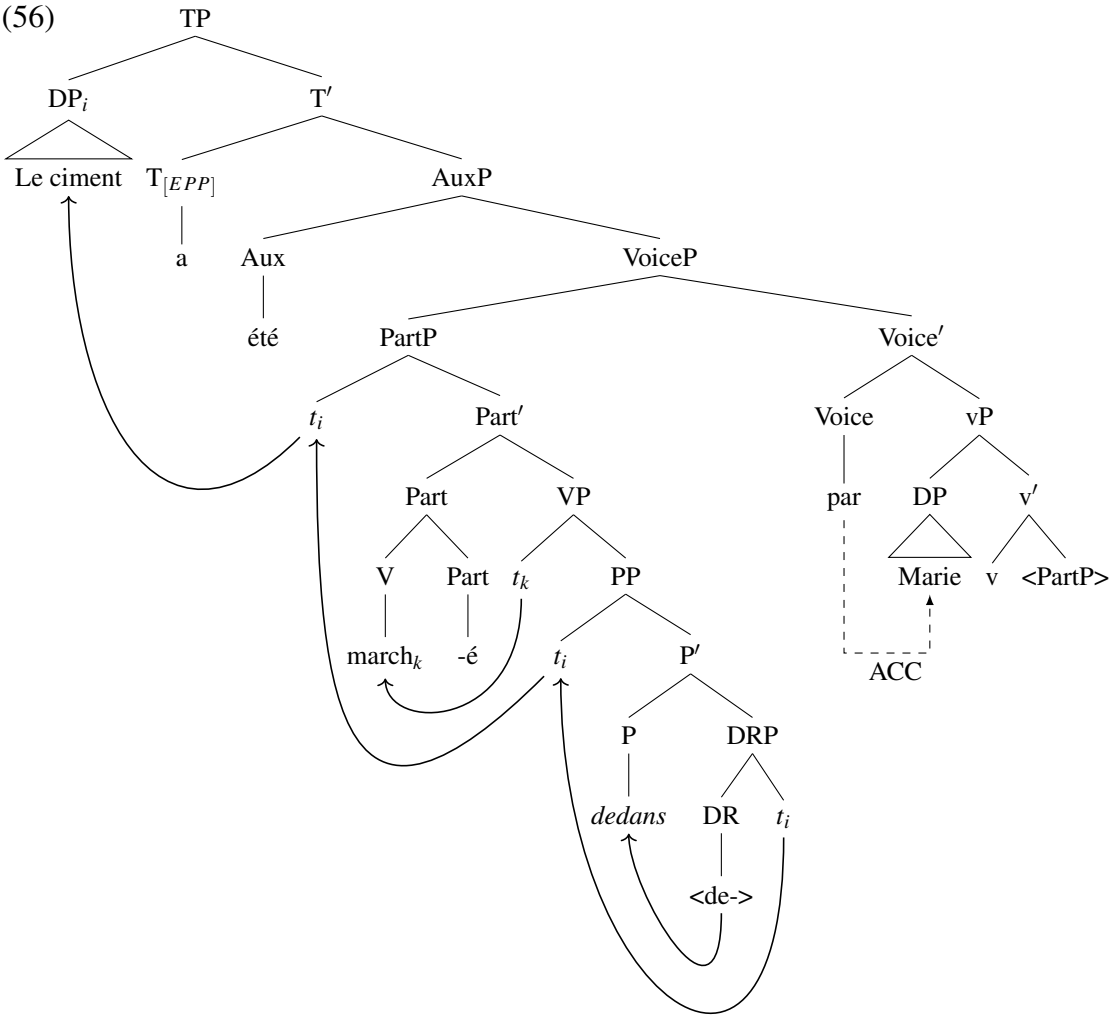
As in active sentences, little-v assigns a theta-role to the EA in Spec-vP. Accusative Case on the other hand is assigned by the Voice head and not little-v, as would be the case in active sentences.

The crucial component of Collins' proposal is the presence of the VoiceP. In essence, Collins assumes that the Voice head can take on the preposition's Case-assigning capabilities (see Collins (2005, 96) for a more explicit discussion). This Voice head assigns accusative Case to the EA in Spec-vP. With P not being a Case-assigner, the prepositional argument does not receive Case. Spec-VoiceP then provides an escape hatch position for the entire PartP to be 'smuggled' out past the EA. Movement of PartP is motivated by an uninterpretable feature on the passive morpheme which gets valued by the voice head upon movement to Spec-VoiceP. The prepositional complement (IA), having no Case and being contained within a constituent that is in an escape hatch position at the edge of a phase, can move up to Spec-TP to receive nominative Case as in standard passivization.

With this background in mind, I now look at how Collins' smuggling approach can be paired with the DR-proposal in deriving P-passives in LFF. The tree in (56) below gives the visual representation of how a P-passive can be derived for the LFF sentence in (55) along the lines of Collins' smuggling approach.

(55) Le ciment a été marché *dedans*.
the cement has been walked in
'The cement has been walked in.'

(56)



As noted above, movement of PartP to Spec-VoiceP is motivated by the feature checking requirements of the passive morpheme. At this stage of the derivation, the IA still has as of yet to receive case and is left with an unvalued Case feature (i.e. [*u*Case]). Given this fact and the presence of the DR-morpheme intervening between P and the Caseless DP, this constituent can freely undergo movement to Spec-PP without violating Last Resort or the ALC. Once moved, the DP is in the edge position of PP, which itself is within the larger VoiceP constituent which is also in an edge position (i.e. Spec-VoicP). In this manner, the DP complement of P remains accessible to a higher probe. Once the T head merges and TP is built, T acts as a probe and looking down finds the IA (in this case *le ciment*) as the structurally closest goal possessing Case features in need of valuation. The IA thus receives nominative Case from T. With French being an EPP language (Chapman 2013; Doner 2019; van Kampen 2006, a.o.) it is required that the Spec-TP argument position be

filled by a DP. The DP is thus raised via successive-cyclic movement through Spec-PP to Spec-TP to satisfy the EPP requirement, yielding the derivation seen in (56).

I note here that movement of the DP in P-passives is obligatory. This is evidenced by the fact that the DP complement of P cannot remain in situ in P-passive constructions. We cannot, for example, insert an expletive into subject position to satisfy the EPP, leaving the DP in situ:

(57) *Il a été marché *dedans* le ciment.
it has been walked in the cement
'*It has been walked in the cement.'

The movement of DP is not only obligatory in P-passives, but also restricted to DPs. That is, pied-piping can never take place in P-passives. This applies both in cases where the LFF DR-morpheme *de* is overtly realized (58-a) and in those cases where it is realized as a phonologically null element (58-b):[10]

(58) a. *[$_{PP}$ Dedans le ciment]$_i$ a été marché t_i.
in the cement has been walked
'*In the cement has been walked.'

b. *[$_{PP}$ Avec cette plume]$_i$ a été écrit t_i.
with this pen has been writen
'*With this pen has been written.'

As a final point in the discussion of P-passives, I will also mention here that I assume that some

[10]The restriction noted here is due to the fact that subjects raising to Spec-TP in French require φ-features that can value the unvalued φ-features on T, features which are inherent in DPs but not PPs. It is well documented that PPs, when appearing in a preverbal position, are said to never act as subjects (see e.g. Bresnan and Kanerva, 1992; Conway, 1996 for discussion of English and Abeillé et al., 2006; Davies and Dubinsky, 2001 for French), but rather occupy a structural position above TP. French, like English, has thus been classified as a DP-EPP language (see Doner 2019 for discussion of a typology of EPP languages and their defining characteristics). Although select cases of what appear to be PPs showing up in subject position are attested in both active (i-a) and passive sentences (i-b), Davies and Dubinsky (2001) show that these PPs have both φ-features and a D-head and show the characteristics of DP subjects (i.e. undergo obligatory raising; trigger subject agreement; host emphatic reflexives; license plural adverbs) (from Davies and Dubinsky, 2001):

(i) a. [$_{PP}$ under the bed] is a good place to hide
b. [$_{PP}$ after the holidays] was discussed by everyone in the office for the entire month of January

In terms of the passive example in (i-b), I disagree with the judgement given for this example as I myself find it nonsensical and illicit. As far as such examples are concerned, I follow Davies and Dubinsky (2001) in assuming that in such cases these are not true PPs, but rather DPs. These instances of apparent PP subjects can be analyzed along the lines of Davies and Dubinsky (2001) as Non-DP subjects that are syntactically within a DP-shell, with the null D head carrying φ-features:

(ii) [$_{DP}$ [$_{D}$ $\emptyset$] [$_{PP}$ under the bed] is a good place to hide

Such cases, if they are in fact acceptable, are thus not counterexamples to the generalization that PPs never occupy the subject position. I thus assume that all subjects in English and French are DPs, only sometimes covertly so.

features can percolate upwards from DP to PP, while others cannot. I take this step in order to allow optional pied-piping under *wh*-movement while ruling it out in P-passives. I assume that *wh*-features for instance, unlike the φ-features on DPs can percolate up to PP, allowing pied-piping under question formation. This rules out any possibility of pied-piping in P-passives as required, while allowing optional pied-piping in case of *wh*-movement.[11]

The DR proposal, in combination with Collins' smuggling approach accounts for why prepositions can be stranded under passivization in LFF. Being that this is a case of phrasal movement, the DR-morpheme, when merged, separates the preposition from its complement, allowing it to cycle out of the PP phase under A-movement and raise to Spec-TP to satisfy the EPP. As in P-stranding under $\overline{\text{A}}$-movement, merger of the DR-morpheme assures that a P-passive derivation abides by Last Resort and the ALC.

4.2.3 LFF clitics as heads

In this section, I investigate why clitics in LFF, which under most analyses of French undergo A-movement (e.g. Kayne, 1975, 1991, a.o.) cannot participate in P-stranding. I have made the claim, and demonstrated through cases of $\overline{\text{A}}$-movement, that the instantiation of the DR-morpheme in LFF P-stranding derivations allows movement of a preposition's complement. I strengthen this claim by stating that the DR-morpheme is an intervening element that obviates anti-locality for phrases only (i.e. XPs), never heads (i.e. Xs) in cases of A as well as $\overline{\text{A}}$-movement. This aspect of the proposal predicts that elements that are heads should never participate in P-stranding. In this section I examine the effects of this prediction where LFF clitics are concerned.

To begin, I assume that clitics in French, including the LFF dialect, are structurally heads and not XPs. Evidence supporting my claim comes from the fact that only non-clitic pronouns can ever be realized in complement position to a preposition in LFF (59-a). Clitics in French can never be complement to a preposition (59-b), and subsequently, can never leave a preposition stranded (59-c).[12]

(59) a. Il a voté pour **moi**.
he has voted for me
'He voted for me.'

[11] I reiterate here that I take the rare case of PPs appearing in subject position in French in both active and passive sentences noted in fn. 10 above as covert DPs as per the analysis of Davies and Dubinsky (2001). Such cases, if they are in fact acceptable, are thus not counter-examples to my claim here and do not constitute instances of percolation of φ-features from DP to PP.

[12] For relevant discussion on the head status of clitics in French I refer the reader to Manzini (2022). Manzini provides argumentation that clitics in French are always heads based on evidence of asymmetries between clitics and phrasal arguments where order, Case and agreement are concerned. I follow Manzini in assuming that clitics in LFF, like other dialects of French, differ from tonic pronouns and regular XPs in being functional heads.

b. *Il a voté pour **me**.
he has voted for me.CL
'He voted for me.'

c. *Il **m'**a voté *pour*.
he me.CL.has voted for
'I'm the one he voted for.'

Abels (2003a) argues that some P-stranding languages actually do allow prepositions to take clitic complements. Cases from English (60-a), Swedish (60-b), Icelandic (60-c) and Norwegian (60-d) are given below (examples adapted from Abels, 2003a).

(60) a. We talked *about* **'im** for quite some time.

b. Han trodde *på* **na**.
he believed on her
'He believed in her.'

c. Ég hugsaði *um* **'ana**.
I thought about her.CL
'I thought about her.'

d. Den lå *under* **'a**.
it lay under her.CL
'It lay under her.'

Notably, even though these languages allow clitics as complements to prepositions, these cannot be extracted to strand their selecting preposition. The fact that these elements cannot be extracted in theses languages suggests that if the DR-morpheme does merge in these cases, it does not allow clitics to undergo extraction. As to why these languages allow clitics as complements to P I will have to leave as an open question at this time. Given that these languages are all Germanic, perhaps the answer lies in the differences in stress assignment and prosody between Germanic and Romance languages. This is of course only conjecture at this time and would require further investigation. The important point to take away from theses cases is that extraction is illicit, whether the given language allows clitic complements (e.g. English) or not (e.g. LFF).[13] It seems clear that the DR-

[13]As pointed out to me by Marc Authier (p.c.), there are certain instances where prepositions in French appear to allow clitic complements and subsequent P-stranding:

(i) a. On **leur** a tiré *dessus*.
we them.CL have fired on
'We fired on them.'

b. Son père **lui** court toujours *après*.
his father him.CL runs always after
'His father is always chasing after him.'

These cases, I argue, are only apparent counterexamples. These structures are not bona fide P-stranding with clitics, but rather cases of orphan prepositions. A null resumptive pronoun occupies the gap following these prepositions. Evidence towards this end comes from the fact that we cannot construct equivalent examples with a preposition like

morpheme, if it is merged in such cases, uniformly disallows extraction of heads.[14]

There are two standard accounts in deriving clitics (Manzini, 2022). On one view, clitics are arguments and undergo movement (Kayne 1975, 1991; see also Chomsky, 1995). The alternative view is that clitics are not arguments but rather agreement markers and do not undergo movement (e.g. the clitic-pro analysis of Sportiche (1996, 1998). In what follows, I discuss how each approach fares in accounting for the inability of clitics to extract from PPs and leave prepositions stranded.

The Kayne-style approach to clitics assumes that these are merged as arguments. Subsequently, they undergo movement to a structural position somewhere above the verb that serves as their prosodic host. Below I give a general illustration of this approach:

(61) a. Jean a donné le livre à Luc.
Jean has given the book to Luc
'Jean gave the book to Luc.'

b. Jean l'$_i$a [$_{VP}$ donné t_i à Luc]

Along the lines of a Kayne-style analysis of clitics, where clitics are based merged and undergo movement, it is relatively straightforward to account for why we do not see P-stranding with these elements, as long as we assume that they are heads. If clitics are heads and merge as such, the DR proposal can rule out P-stranding as shown in (62) below:

---

de, which is strandable in LFF, but is universally banned from OP structures:

(ii) *On **leur** a parlé *de*.
we them have talked about
'We talked about them.'

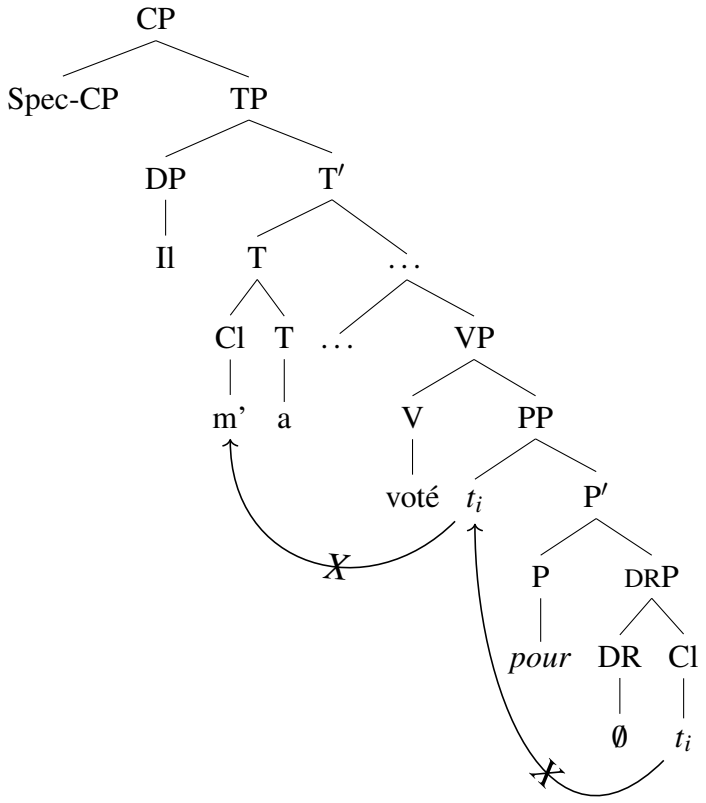
Clitics in French are thus special in being able to be both merged as complements to V and move upwards to left-adjoin to inflection or base merge and bind a null pro complement, as seen in cases like (i) above.

[14]A possible counterexample is Gbadi, which apparently allows extraction of a clitic out of a PP (from Koopman 1984 in Abels 2003a):

(i) Wa y- **É**$_i$ ɓȮ [$_{PP}$ t_i *klÙ*] jİlEÉ?
they PERF.A- it$_i$.cl- Q [$_{PP}$ t_i on] put.Q
'Have they put food on it?'

The only thing I can suggest here is that perhaps the PP complement in this case is not truly a clitic, but a phrasal element. If it is in fact a clitic, then this case constitutes an outstanding counter-example which at this time I have no sufficient explanation for. I must leave this as an open question at this time.

(62)



The issue with (62) is that a head is merging as complement to a head; this alone rules out any such derivations. Under the assumption that clitics are heads, the DR-morpheme simply cannot merge with these elements. If the DR-morpheme does merge with a clitic, a defective PP is formed and we get an illicit derivation; any movement of a clitic is thus blocked as the derivation at this point is already illicit. Since the DR-morpheme is a head, it can only merge with XPs (i.e. phrasal elements) and never Xs (i.e. heads); the inability to strand clitics falls out as a natural consequence of the illicit X-X External Merge operation. Since clitics in LFF are heads, they are thus banned from merging in PPs, either directly with P when the DR-morpheme is not merged (recall (59-b) above) or with the DR-morpheme itself, both of these merge operations yielding a defective X-X PP.[15]

Sportiche's alternative clitic-pro analysis also assumes movement in deriving clitic structures. Under Sportiche's approach, the movement is not of the clitic itself, but rather a silent *pro* that

[15] Admittedly, this view relies on rather traditional phrase-structural notions and is but one way of looking at this puzzle. On an alternative view, clitics could enter the derivation as structurally ambiguous, being both Xs and XPs (Matushansky, 2006, a.o.). On this view, the status of the clitic would nevertheless have to be determined before movement takes place. If head status were chosen, the clitic could then only undergo head movement and would have to incorporate into the next higher head in the derivation, which is DR, an unsuitable host. If phrasal status were chosen, then only phrasal movement would be available. Problematically, this would preclude merger of the clitic with inflection, and so this option also yields an illicit derivation.

resides in the argument position of the verbal head. Clitics themselves are merged as heads of different functional projections (depending on whether they are subjects or objects), merging with the highest verbal element within the clause containing the silent, resumptive *pro*. The general idea behind Sportiche's approach is illustrated below (adapted from Sportiche, 1998):

(63) a. Marie les$_i$ aura présentés *pro*$_i$ à Louis.
Mary them will.have introduced to Louis
'Mary would have introduced them to Louis.'

b. [$_{\text{AccP}}$ *pro*$_i$ [[$_{\text{ACC}}$ les$_i$] [. . . aura présentés ~~*pro*$_i$~~ . . .]]]

Sportiche assumes that *pro* and the clitic must agree. This is achieved via movement of the null *pro* to the specifier position headed by the clitic, in the case of (63-a), an AccP.[16]

Adopting the clitic-pro analysis of Sportiche to account for the inability to P-strand with clitics in LFF seems untenable since it falsely predicts such structures to be licit. As far as I can see, there does not seem to be a principled way to rule out P-stranding with clitics in a Sportiche-style analysis. Sportiche actually argues that some form of movement must be involved in clitic constructions based specifically on P-stranding facts in Standard French (SF). He shows that in SF prepositions cannot be stranded whether their arguments are phrases (64-a) or clitics (64-b) (adapted from Sportiche, 1998):

(64) a. *[Quel traité]$_i$ Jean a-t-il voté *pour* t_i?
Which treaty John has-T-he voted for
'Which treaty did John vote for?'

b. *Jean lui$_i$ a voté *pour* t_i.
John him has voted for
'John voted for him.'

He argues that the empty argument position following the preposition *pour* in both of the illicit cases of P-stranding in (64-a) and (64-b) must be occupied by a trace, thus showing movement is involved in the realization of clitics. He further cites the work of Zribi-Hertz (1984), showing that prepositions in SF can be stranded in cases not involving clitics, where the empty argument position

[16] A more modern approach also exists which eliminates both phrasal and head movement from the analysis of clitics in Romance languages (Manzini and Pescarini, 2022; Manzini, 2022). In this alternative approach, it is assumed that clitics in French are always heads and are pair-merged with the verb:

(i) . . . [$_{\text{vP}}$ v* [$_{\phi\text{P}}$ Clitic [$_{\text{VP}}$ V]]]

In Manzini (2022), it is assumed that nothing is initially merged with the verb, that is, V retains an empty and open argument position. The clitic and the subsequent v* are then merged into the derivation, yielding the structure in (i). Manzini assumes that at this point, the clitic can saturate the verb, receiving the relevant theta-role needing to be assigned by V and existentially closes the open argument position of V. The constituent [CliticP VP] is labelled as ϕP via the phi-features shared between V and the clitic. There is no argument or pro-DP as complement to V where clitics are concerned within this proposal.

is best analyzed as being a null *pro* element. This is all laid out in order to argue that some form of movement is needed in deriving clitic structures. My contention is that given his later analysis of clitics, this argument seems to incorrectly allow P-stranding with clitics.

Sportiche assumes that what actually occupies the argument position of the verb in clitic structures is a null pronoun. This gives us the same structural conditions that are hypothesized to exist in orphan preposition constructions. Thus, his analysis would give a structure for the illicit case of P-stranding in (64-b) as follows since it involves a clitic:

(65) Jean [$_{\text{AccP}}$ *pro*$_i$ [[$_{\text{ACC}}$ lui$_i$] [a voté *pour* ~~*pro*~~]]]
Jean him has voted for

Since he assumes clitic scenarios involve a *pro*, the very element that is said to license orphan preposition constructions in SF, then stranded *pour* in (65) should be fine as it has a null *pro* argument, albeit one that moves at a later point in the derivation. Perhaps Sportiche could appeal to the later movement of *pro* as a factor that rules out such constructions. Along the lines of the DR-proposal, it might be suggested that DR simply cannot merge in constructions involving *pro*, and that because of this, *pro* cannot cycle out of the PP phase to reach its agreement position in Spec-AccP. This is of course a purely stipulative step, but it seems like the only viable option. However we might try to account for it, it seems far from clear how we could explain the lack of P-stranding with clitics under Sportiche's approach. It seems to me that taking clitics as heads and assuming a standard movement approach remains a more elegant way of ruling out P-stranding with clitics in LFF.

It seems unlikely that an analysis of clitics as agreement markers, as Sportiche suggests, is correct. French disallows clitic doubling of the type seen in other Romance languages like Spanish. In French, unlike in a clitic doubling language like Spanish, we see either a clitic or an NP argument, never both at once. This is exemplified for a case of clitic doubling with objects in Spanish (66-a) versus French in (66-b) (data from Jaeggli 1982 in Anagnostopoulou 2006):

(66) a. Miguelito (le) regaló un caramelo a Mafalda.
Miguelito CL.DAT gave a candy to Mafalda
'Miguelito gave Mafalda a piece of candy.'

b. Jean (*lui) a donné des bonbons à Marie.
Jean CL.DAT has given the candies to Marie
'Jean gave chocolates to Marie.'

De Cat (2005) further argues that analyzing French clitics as agreement markers faces significant empirical as well as theoretical difficulties. Given the inherent problems in accounting for the lack of P-stranding with clitics via a Sportiche-style analysis, I contend that clitics in LFF are in fact heads.

4.2.4 Interim Summary

The analysis provided so far has given us an account of why LFF, unlike SF, allows P-stranding. I have provided evidence that what we observe in LFF is in fact bona fide P-stranding. That is, prepositional complements can be extracted out of PPs via leftward movement to a higher clausal position, a phenomenon that is wholly different than that of orphan prepositions. This extraction is permissible due to an intervening layer of structure between LFF prepositions and their complements. Direct evidence for this extra layer comes in the form of what has been labelled a DR-morpheme (Abels, 2012), realized as *de-* on the prepositions *dans*, *sur* and *sous*. The central piece of evidence for the DR-morpheme *de-* being the key factor in allowing preposition stranding is the fact that these three prepositions in their bare form are robustly resistant to stranding, but productively allow it once the morpheme appears. We have seen that in a fashion parallel to German and Dutch, the DR-morpheme in LFF is a prosodically weak element and requires a host, choosing the preposition to fulfill this task. The analysis has shown that the DR-morpheme is obligatory in P-stranding contexts. While it may be realized in pied-piping and PP in situ contexts, its presence in these cases is vacuous.

Section 4.2.2 gave a detailed account of P-stranding in LFF under A-movement. I showed that the P-passive in LFF is derived via successive-cyclic movement of prepositional complements. This process is permitted via a process of smuggling (Collins, 2005) the PP out of the vP phase as part of a participle phrase. The participle phrase moves to the specifier of a VoiceP, putting it in an edge position where it is visible to higher probes. Given that the Case-assigning properties of the preposition are absorbed by the Voice head proposed by Collins, the prepositional complement moves to the edge of PP and can receive Case from T. Subsequently, it moves to subject position to satisfy EPP. This successive-cyclic movement, as in standard P-stranding under $\overline{\text{A}}$-movement is permitted due to the DR-morpheme's presence in the PP structure. Additionally, I made it clear that I assume that a process of feature percolation exists within syntax, but that it cannot apply to certain features. I made the assumption that *wh*-features for instance can percolate upwards from DP to PP, but that φ-features cannot. In this manner, I allowed for optional pied-piping of PPs under $\overline{\text{A}}$-movement while ruling it out in P-passives, as required by the empirical facts.

In the discussion of P-stranding under A-movement, I also accounted for why clitics, which are also presumed to undergo A-movement cannot strand prepositions. I argued that clitics in LFF must be taken as heads and not agreement markers. Since clitics are heads, merging these elements, either with a P head or a DR head yields an illicit PP; they can in principle thus never escape the PP phase.

4.3 Pied-piping

In this section I discuss the issue of pied-piping within the contexts of the DR-approach. Again, attempting to account for pied-piping has long been a perennial problem in the field of generative syntax. In pied-piping, a constituent lacking the trigger posited to drive syntactic movement contains the actual trigger for movement. Simply put, in pied-piping more structure moves than what should be required to move. As we have already seen, pied-piping of PPs is a prime example, where the complement of the preposition carries a *wh*-feature that triggers movement, yet the entire PP undergoes displacement to Spec-CP in question formation, carrying the *wh*-constituent with it, as seen in the following case of PP pied-piping in LFF:

(67) $[_{CP}\ [_{PP}\ [_{P}$ Avec $[_{DP_{[+wh]}}$ qui]]]$_i$ est-ce qu'elle parlait t_i]?

In this thesis, I will adopt the more traditional approach of feature percolation (Aissen, 1996; Kayne, 1994; Matic and Nikolaeva, 2014; Webelhuth, 1992, a.o.) in my analysis of pied-piping in LFF. In what follows, I look at feature percolation in comparison to more modern approaches that attempt to do away with this mechanism (Cable 2007, 2010; Heck 2004, 2008, 2009). My core argument will be that feature percolation as a syntactic mechanism is necessary in accounting for pied-piping in LFF. This is due to the fact that in LFF, unlike in English and other P-stranding languages, the choice between pied-piping and P-stranding, in those cases where P-stranding is possible, is always optional.[17]

4.3.1 Modern approaches to pied-piping

Here I discuss two modern approaches to pied-piping as both these proposals include a cursory account of P-stranding while at the same time attempting to eliminate feature percolation from syntactic theory. I include them here as they have been influential in the more modern literature on pied-piping. I will keep the details very brief though as my analysis shows that these proposals are untenable in accounting for P-stranding in LFF as they both claim that pied-piping of PPs is only apparently optional and a special case, in essence a type of last resort mechanism (Heck, 2004). This of course cannot be extended to any dialect of Canadian French. As the following examples show, the option to either pied-pipe or P-strand is freely available in matrix (68) and indirect questions (69) in LFF:

(68) a. $[_{PP}$ Pour for who qui]$_i$ est-ce is.it qu'il a that.he has voté t_i? voted
'For whom did he vote?'

[17] LFF is not unique in this regards. Pied piping has also been noted as displaying true optionality in Basque and Imberra Quecha (Yoon, 2001).

b. *Qui*$_i$ est-ce qu'il a voté [*pour* t_i]?
who is.it that.he has voted for
'Who did he vote for?'

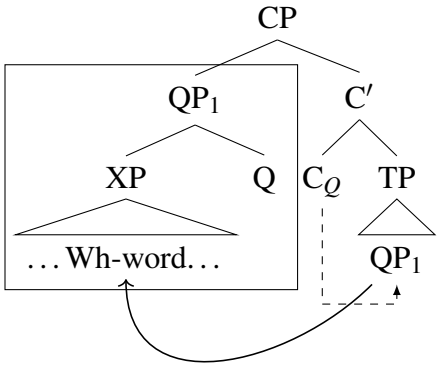
(69) a. Je me demande [$_{PP}$ avec qui]$_i$ qu'elle avait parlé t_i.
I myself wonder with who that.she had talked
'I wonder with whom she had talked.'

b. Je me demande *qui*$_i$ qu'elle avait parlé [$_{PP}$ *avec* t_i].
I myself wonder who that.she had talked with
'I wonder who she had talked to.'

Whatever approach we take to P-stranding, the empirical facts observed in LFF shows that it is crucial that optional pied-piping not be ruled out.

Cable (2007, 2010) proposes that all *wh*-movement (including movement of a pied-piped *wh*-phrase) is motivated by a Q-head (Q-particle) bearing an unvalued feature.[18] This Q-head takes as its sister *wh*-phrases, or an element properly containing a *wh*-phrase and projects a QP-phrase. This is illustrated in (70) (from Cable 2010):

(70)



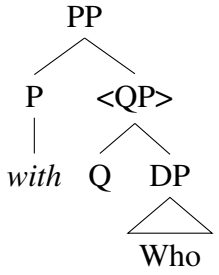
Cable further proposes that languages have either lexical or functional prepositions and that lexical prepositions can select a QP while functional prepositions cannot.[19] In languages with lexical prepositions (e.g. English) where QP is selected by P, the QP will be able to move and leave a preposition stranded (71-a). In languages with functional prepositions (e.g. Russian) QP will be structurally outside of PP and only pied-piping is possible (72) (from Cable 2010).

(71) a. Who was she *with*?

[18]Cable's evidence for QP comes from the (mostly) head-final Tlingit language, where there is an overt element *sá* that instantiates the Q-particle. For a more thorough discussion of the facts I refer the reader to Cable's work.

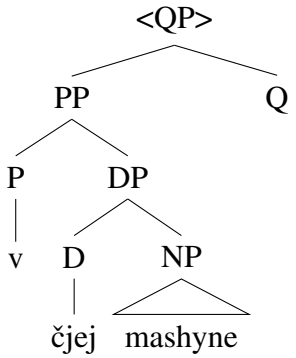
[19]Cable (2010, 57 e.g. (107)) derives this via his *QP-Intervention Condition* which disallows QPs from being selected by functional heads.

b.



(72) a. V čjej mashyne priexal?
in whose car you.arrived
'In whose car did you arrive?'

b.



Problematically, Cable's method for deriving P-stranding makes any pied-piping of PP illicit in P-stranding languages, contra to fact. Given Cable's suggested structure for English PPs (71-a), only DPs will ever be able to move upwards in syntactic structure, never PPs, thus unequivocally ruling out pied-piping of PPs.

Heck (2008, 2009) also investigates pied-piping, with P-stranding remaining a peripheral issue in his account. Heck uses an Agree-based approach supplemented by Optimality Theory. In his account PPs are not phases. Under certain conditions, XPs with a [+wh] feature are accessible to a higher probe without moving to the specifier of PP, as long as the XP bearing the feature is the closest goal for the probe. I remain sparse on the details of Heck's account simply because the assumptions in his proposal, like those in Cable's, predict that pied-piping and P-stranding cannot co-exist. In what follows, I show how Heck and Cable attempt to circumvent this serious flaw in their theory. Ultimately I show that despite their suggested solution, their approaches remain untenable as they cannot be reconciled with the empirical facts observed in LFF, which show that pied-piping of PPs and P-stranding freely co-exist (recall (68) and (69) above).

4.3.2 PP pied-piping as a restricted phenomenon

To explain away the inability of their theories to account for optional pied-piping in P-stranding languages, both Heck and Cable claim that pied-piping of PPs is in fact not bona fide pied-piping,

but something else entirely. The discussion in this section shows that even if we accept their proposed solution, it ultimately cannot be extended to LFF, rendering their approaches untenable. I show that in LFF, choosing between P-stranding and pied-piping is always an option, rendering feature percolation the only viable explanatory means available to us.

Heck (2008) (citing Postal, 1971 and van Riemsdijk and Williams, 1986) notes that pied-piping is typically viewed as an irregular phenomenon. Pied-piping of PPs he argues, is even more irregular in that it violates a central generalization on pied-piping. This generalization, first observed by Bresnan (1976) and sometimes referred to as an 'Edge Generalization' (see Heck, 2008, 2009 a.o.) is presented below (adapted from Horvath, 2017):

(73) Given a phrase, XP:

a. XP can pied-pipe if it is a head or a specifier.

b. XP cannot pied-pipe if it is a complement or an adjunct.

Specifiers and heads are thus taken to be *the* canonical positions from which pied-piping can take place (e.g. Cable, 2010; Heck, 2008, 2009; Horvath, 2017 a.o.). The generalization in (73) is exemplified for English in the contrast below (adapted from Horvath, 2017), where the pied-piper is a *wh*-possessive in the specifier of DP in (74-a) and a *wh*-determiner in the head position under D in (74-b). In the illicit (75-a) the pied-piper is a *wh*-adjunct and in (75-b) a complement:

(74) a. [*Whose* articles]$_i$ did they read t_i?

b. [*Which airport*]$_i$ t_i is the busiest?

(75) a. *[Articles by *whom/which linguists*]$_i$ did they read t_i?

b. *[The airport *where/in which city*]$_i$ t_i is the busiest?

The observation that an edge generalization exists in pied-piping suggests there is a locality condition on pied-piping, where no lexical element, such as an NP, can separate the *wh*-phrase targeted for movement and the left edge of the pied-piped phrase (Cable and Harris, 2011). Pied-piping of PPs violates this locality condition, since in these cases a preposition always intervenes between the wh-element posited to be responsible for triggering movement and the actual edge of the PP that undergoes the movement operation. Pied-piping of PPs is thus difficult to account for under any theory of pied-piping as they constitute a significant exception to the edge generalization and the locality condition typically observed in pied-piping of *wh*-phrases.

In their respective investigations into pied-piping, both Cable and Heck note that pied-piping in English relative clauses (especially non-restrictive relative clauses) parallels pied-piping of PPs. That is, material can intervene between the edge of the pied-piped constituent and the element carrying the features that trigger movement (Heck, 2008, a.o.). The sentences below exemplify this

point (from Ross 1967 in Horvath 2017):

(76) a. Reports [the height of the lettering on the covers of *which*] the government prescribes should be abolished.
b. He is a linguist [articles by *whom*] the editors always reject.
c. This is the kind of woman [proud of *whom*] I could never be.

We thus have two different instances where the *wh*-phrase is embedded within the pied-piped element and not at its left edge, contra the edge generalization: relative clauses and PPs.

Notably, pied-piping in embedded interrogatives has been noted as robustly adhering to the edge generalization (Heck, 2008; Kayne, 1994, among others). This is exemplified with the illicit case of pied-piping with embedded DPs in (77-a) and (77-b) and the embedded PP in (77-c) (examples from Horvath 2017):

(77) a. *We don't know [articles by *whom*] the editors have rejected.
b. *I asked Bill [proud of *whom*] he has always been.
c. *I wonder [$_{\text{PP}}$ *with whom*]$_i$ he danced.

The above claim is somewhat contentious, but Heck (2008) argues in favour of its validity, citing Allen (1977, 123), Bouchard (1982, 277), Levin (1982, 606-607), Sells (1985, 18), Kayne (1994, 25), Radford (1997, 278), Grimshaw (2000, 130), and Merchant (2001, 135) as sources corroborating it. Furthermore, Cable and Harris (2011) provide some experimental proof towards this end, showing that pied-piping of PPs is dispreferred in embedded contexts. This claim and the results of Cable and Harris's experimental work is beneficial for Cable and Heck's proposals given that they each work in independent ways to block optional pied-piping of PPs in P-stranding languages.[20]

If we accept the judgements given for the data so far, the relevant generalization to draw is that instances of pied-piping that go contra the Edge Generalization seem to be an artifact of matrix clauses, being disallowed in embedded contexts. Both Cable and Heck claim that due to its

[20]I argue that the claim that pied-piping of PPs is generally illicit in embedded interrogatives in English is too strong. A standard example offered by Heck (2008) as illicit (i-a) I find completely acceptable, as long as the more colloquial *wh*-phrase *who* is used instead of the case-marked, accusative *whom* (i-b):

(i) a. *I wonder [with whom]$_i$ she left t_i.
b. I wonder [with who]$_i$ she left t_i.

I contend that the illicit nature of (i-a) may simply derive from the use of the archaic, accusative *whom* in these contexts, a lexical item which is to the best of my knowledge, no longer used in colloquial registers. I also do not find the eight different stimuli used in the experiment of Cable and Harris (2011) as very convincing in that I do not find a great degree of difference in acceptability between their cases of P-stranding and pied-piping in embedded contexts. Of course, judgements have been noted to vary greatly between speakers and across dialects, but the entire argument that pied-piping of PPs must be given a special status as a matrix clause phenomenon is rendered moot by the LFF facts. Any theory of P-stranding relying on this argument cannot account for the cross-linguistic variation observed in any dialect of French that allows P-stranding.

(purported) restricted occurrence to matrix clause environments, pied-piping of PPs is not standard pied-piping, such as that exemplified in (74). In this manner they relegate pied-piping of PPs to the margins of the grammar, claiming it is a phenomenon which has a special status and is only possible due to independent factors that allow instances of pied-piping of PPs to take place in matrix clause environments.[21]

Even if we accept the solution that Cable and Heck use to side-step the issue of optionality of pied-piping in P-stranding languages, LFF raises a serious challenge for their claims. Being a dialect of French which allows P-stranding creates a unique problem for claiming that pied-piping of PPs must be analyzed as a special case and as something other than bona fide pied-piping. As I have already shown earlier in (68) and (69), both pied-piping and P-stranding are equally acceptable in matrix questions as well as indirect questions in LFF. For clarity, I repeat the relevant data here in (78) and (79) below.[22]

(78) a. [$_{PP}$ Pour qui]$_i$ est-ce qu'il a voté t_i?
for who is.it that.he has voted
'For whom did he vote?'

b. *Qui*$_i$ est-ce qu'il a voté [*pour* t_i]?
who is.it that.he has voted for
'Who did he vote for?'

(79) a. Je me demande [$_{PP}$ avec qui]$_i$ qu'elle avait parlé t_i.
I myself wonder with who that.she had talked
'I wonder who she had talked to.'

b. Je me demande *qui*$_i$ qu'elle avait parlé [$_{PP}$ *avec* t_i].
I myself wonder who that.she had talked with
'I wonder who she had talked to.'

If pied-piping of PPs is in fact a matrix clause phenomenon, allowed only because of certain in-

[21] Heck (2008) and Cable (2010) formulate these independent factors in different ways within the parameters of their particular proposals. I refer the interested reader to their works for the finer details of their respective implementations.

[22] I note here that PP-in situ is actually blocked in embedded contexts in French, as shown below:

(i) *Je me demande elle avait parlé *avec qui*.
I myself wonder she had talked with who
'*I wonder she had talked to who.'

This is of course not of any concern to the theory of P-stranding and pied-piping developed here. The illicit nature of the example above has nothing to do with the nature of PP, but is instead due to the fact that *wh*-in situ is typically disallowed in indirect questions in French, as the following example shows (see Bošković, 1998; Cheng and Rooryck, 2000; Mathieu, 2004, a.o.):

(ii) *Je me demande il a fait quoi.
I myself wonder he has done what
'*I wonder he did what.'

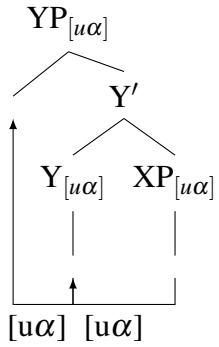
dependent factors that allow the locality condition observed in pied-piped constituents to be sometimes violated, what do we make of LFF? Given the facts above, we can only conclude that LFF pied-piping cannot be qualified as a restricted phenomenon as it is in English, given that it is productive in both matrix and indirect questions and freely alternates with P-stranding.

This leaves open a very important question. Are Cable and Heck's approaches reconcilable with what is observed of pied-piping and P-stranding in LFF? It seems to me that they are not. We must then ask, does this justify a return to a feature percolation approach despite the theoretical shortcomings some have argued for? I contend that the answer is yes.

4.3.3 Deriving LFF pied-piping

In deriving pied-piping in LFF, I will rely on the mechanism of feature percolation to account for pied-piping. The general idea behind feature percolation is quite simple in conception; a feature α on a constituent XP is transferred upwards in syntactic structure to YP, as in (80):

(80)



Proposals on feature percolation suggest this mechanism can apply and spread a feature from different structural positions. Feature percolation up to a maximal projection (XP) has been hypothesized as being able to take place from XP's head (Zelenskii, 2020), from XP's complement (Grimshaw, 1991; Grosu, 1994; Matic and Nikolaeva, 2014; Webelhuth, 1992, a.o.) and from XP's specifier (Aissen, 1996; Kayne, 1994; Koopman and Szabolcsi, 2000; Moritz and Valois, 1994; Yoon, 2001, a.o.).

Although the validity of feature percolation as a mechanism has come under question for various reasons (Heck, 2009, a.o.), it remains the most viable option in accounting for pied piping in LFF. Furthermore, there exists data showing that such a mechanism may independently be required within syntax (Matic and Nikolaeva, 2014; R. Huang, 2020). Matic and Nikolaeva (2014) examine the lack of strong island effects in two northern Eurasian languages. Agreement and focus facts in these two languages show that focus on a subpart of a complex phrase results in focus marking of the entire phrase. This, they argue, can only take place via feature percolation. For my purposes here, I will adopt the following principle from Matic and Nikolaeva (2014):

(81) *Principles of Feature Percolation*

a. [+wh] on a non-head daughter licenses [+wh] on the head

b. [+wh] on the head licences [+wh] on the phrase.

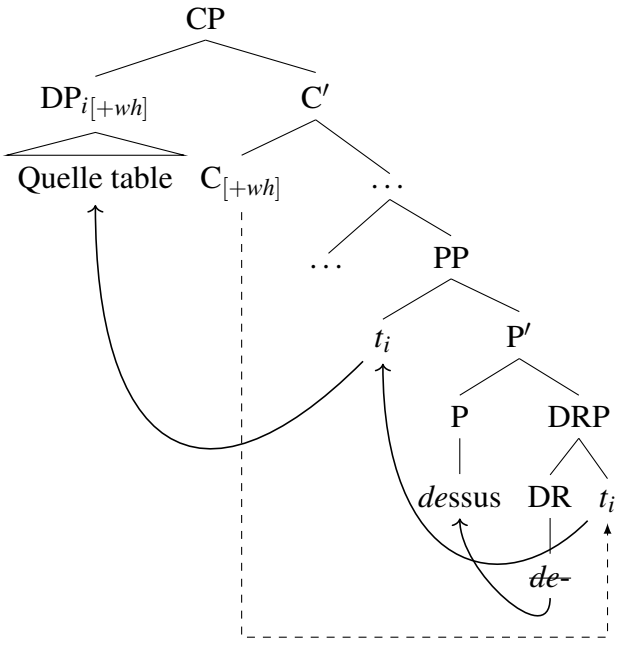
I will not review the details of Matic & Nikolaeva's arguments here as nothing in my analysis truly hinges on their claims. I simply adopt (81) above as it is descriptively convenient. In my analysis I remain somewhat agnostic as to the finer details of how feature percolation takes place in the syntax. I simply assume that this mechanism is a viable component of UG and that a feature percolation mechanism allows the [+wh] feature to find its way up to the PP node in pied-piping scenarios in LFF. Crucially, I must stipulate that (81) applies only to specific features, in this instance, the feature [+wh]. I assume that phi-features in general cannot be subject to feature percolation. I further assume that the principles proposed in (81) take place optionally in the syntax. Thus, merging of the DR-proposal with (81) will yield four possible scenarios.

The first potential option is that the DR-morpheme merges into the derivation, but feature percolation does not take place. In question formation, the C probe bearing a [+wh] feature will probe downwards and locate the structurally closest goal bearing [+wh]. Where PPs are concerned, the default option will trigger selection of $DP_{[+wh]}$. This of course yields standard cases of preposition stranding:

(82) *Merge DR, no feature percolation*

a. [Quelle table]$_i$ est-ce qu'il a mis le livre *dessus* t_i ?
which table is.it that.he has put the book on
'Which table did he put the book on?'

b.

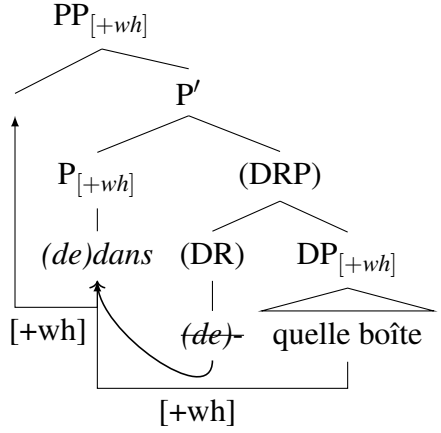


In the second scenario, if feature percolation does takes place, feature sharing via the principles in (81) will result in a [+wh] feature being present on the prepositional head and hence its maximal projection (PP). For my purposes here, I will assume, as per (81), that the [+wh] feature on the *wh*-phrase is transferred and copied first up to the prepositional head, and then upwards again to the preposition's maximal projection, as indicated in (83-b). This yields cases of pied-piping (83-c):

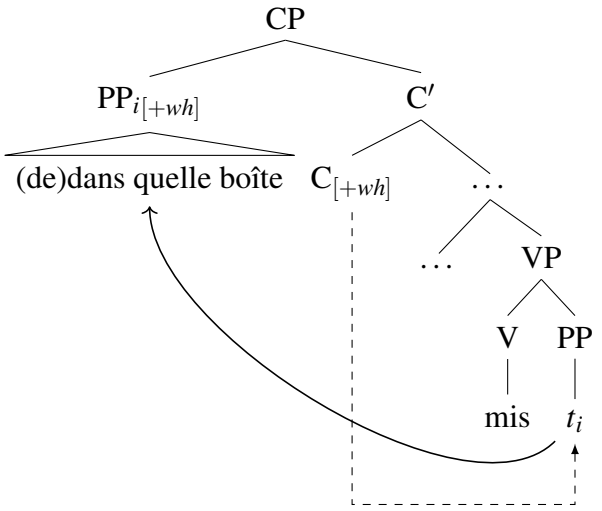
(83) *Feature percolation with or without merger of DR*

a. [(de)dans quelle boîte]$_i$ est-ce qu'il l'a mis t_i?
inside.of which box is.it that.he it.has put
'Inside which box did he put it?'

b.



c.



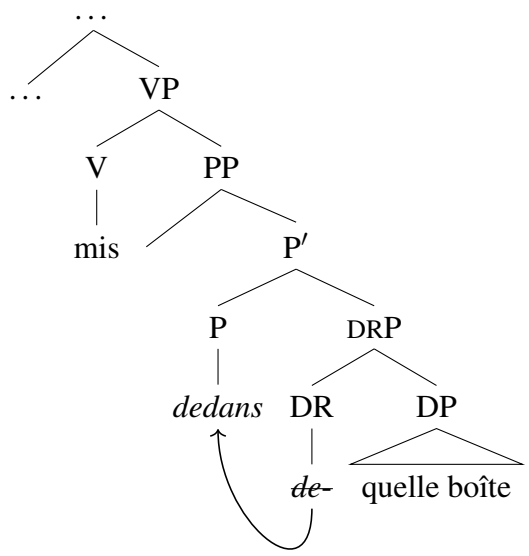
As the rounded brackets show, merger of the DR-morpheme is optional in cases of pied-piping, since pied-piped phrases in LFF involving the prepositions *dans*, *sur* and *sous* can be realized as *dedans*, *dessus* and *dessous* in pied-piping scenarios, but importantly, are not required to do so. The merger of the DR-morpheme in pied-piping thus has a vacuous effect. The presence of the DR-morpheme is wholly optional and although it is licensed in pied-piping it is not a necessary precondition for pied-piping to take place in LFF.

The third and fourth possible scenarios involve in situ PPs. In scenario three, if the DR-morpheme merges but both feature percolation and *wh*-movement do not take place, we can get an in situ PP. We see again here that the DR-morpheme has a vacuous effect, just as in pied-piping, as it is not required to license the in situ PP. The DR-morpheme's presence is of course a necessary precondition should the derivation opt for P-stranding. Option three is detailed below:

(84) *Merge of DR, no feature percolation, no wh-movement*

a. Il l'a mis [$_{PP}$ *dedans* quelle boîte]?
he it.has put in which box
'He put it in which box?'

b.

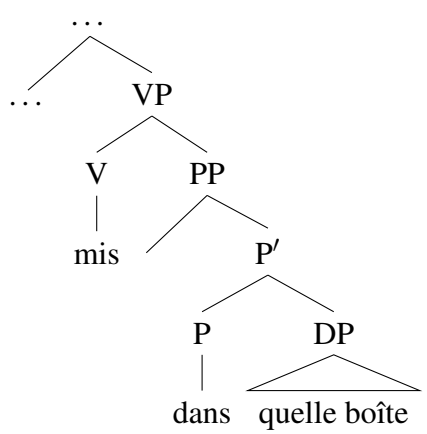


The only instance in which in situ PP is forced, is if both merger of the DR-morpheme as well as feature percolation do not take place. This yields scenario four, as shown in (85-a) and its related derivation in (85-b):

(85) *No merger of DR, no feature percolation*

a. Il l'a mis [$_{PP}$ *dans* quelle boîte]?
he it.has put in which box
'He put it in which box?'

b.



4.3.4 Interim summary

This section has provided an account of pied-piping in LFF. I have shown that although criticisms of the more traditional approach of feature percolation exist, it remains a necessary aspect of syntactic theory as it fares better than the modern analyses proposed by Heck (2004) and Cable (2010) which assume pied-piping of PPs is a special case to be relegated to the margins of the grammar. These approaches fail in accounting for the true optionality of pied-piping observed under *wh*-movement in LFF. LFF clearly shows that unlike English, pied-piping of PPs is not a special case restricted to matrix clauses, but alternates freely with P-stranding under *wh*-movement. To be able to adequately account for the full empirical picture where pied-piping of PPs is concerned, I have argued that LFF requires us to adopt the more traditional approach of feature percolation. In incorporating the DR-proposal with feature percolation, I then showed how the combination of the DR-morpheme analysis and feature percolation results in four possible derivations in LFF. The resulting derivations were exemplified and demonstrated that in LFF, the DR-morpheme is a necessary factor in deriving P-stranding. Pied-piped and in situ PPs on the other hand do not require merger of the DR-morpheme. In these contexts, the DR-morpheme remains wholly optional and thus has a vacuous effect.

4.4 Non-strandable prepositions in LFF

The analysis I have laid out in this chapter using the DR-morpheme approach gives us a good understanding of why certain languages can strand prepositions and others cannot. Nevertheless, there remains an open question regarding P-stranding, namely, why is it that some prepositions are strandable, while others are not? Currently, there is no proposal, including my own, that gives us any kind of satisfactory answer to this question. In what follows, I provide some discussion on this puzzle. Although I will tentatively suggest that idiosyncrasy may play a part–given that

idiosyncratic variation is seen in P-stranding, depending on the preposition being used (Biber et al., 1999)–I will admittedly not resolve this issue and it will have to remain an open question at this time.

In analyzing unstrandable prepositions in English, one preposition that is often discussed is 'without' (e.g. Takami,1988, 1992; van Riemsdijk, 1994 a.o.). In comparison to the preposition 'with', which is commonly stranded in English, 'without' is generally unstrandable.[23] This is exemplified in the contrast below, using these two preposition with different verbs as well as different NP/DP complements:

(86) a. [Which hat]$_i$ did he leave the house [$_{PP}$ t_i [$_P$ *with* [$_{DP}$ t_i]]]?
b. *[Which hat]$_i$ did he leave the house [$_{PP}$ t_i [$_P$ *without* [$_{DP}$ t_i]]]?

(87) a. Who$_i$ did they go to the movies [$_{PP}$ t_i [$_P$ *with* [$_{DP}$ t_i]]]?
b. *Who$_i$ did they go to the movies [$_{PP}$ t_i [$_P$ *without* [$_{DP}$ t_i]]]?

The contrast above is puzzling, and again cannot be relegated to something like an adjunct/argument distinction as extraction takes place out of adjuncts in both the licit and illicit cases.

The contrast seen in the ability to extract a complement of these two similar prepositions extends directly to LFF. The preposition *avec* is quite productive in P-stranding in LFF, while its counterpart *sans* parallels English 'without', being robustly unstrandable. This is exemplified below:

(88) a. [Quel chapeau]$_i$ est-ce qu'elle a quitté la maison [$_{PP}$ t_i [$_P$ *avec* [$_{DP}$ t_i]]]?
which hat is.it that.she has left the house with
'Which hat did she leave the house with?'
b. *[Quel chapeau]$_i$ est-ce qu'elle a quitté la maison [$_{PP}$ t_i [$_P$ *sans* [$_{DP}$ t_i]]]?
which hat is.it that.she has left the house without
'*Which hat did she leave the house without?'

(89) a. Qui$_i$ est-ce qu'ils sont allés au cinéma [$_{PP}$ t_i [$_P$ *avec* [$_{DP}$ t_i]]]?
who is.it that.they have gone to.the movies with
'Who did they go to the movies with?'
b. *Qui$_i$ est-ce qu'ils sont allés au cinéma [$_{PP}$ t_i [$_P$ *sans* [$_{DP}$ t_i]]]?
who is.it that.they have gone to.the movies without
'*Who did they go to the movies without?'

[23] It has been pointed out to me (Marc Authier, p.c.) that *without* in a weighing-alternatives-type context can be stranded:

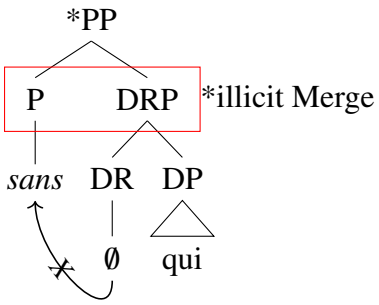
(i) I have two Martin guitars. I'm considering selling one or the other, but I haven't decided yet which one I could live *without*.

This does not carry over to LFF *sans*, showing that although there exist strong parallels between the use of prepositions in P-stranding in English and LFF, there remain discrepancies at times, complicating the issue of language transfer.

The unstrandability of a preposition like without/*sans* remains a puzzling factor in analyzing P-stranding and is not accounted for under any current analyses.[24] I suggest that it is perhaps possible that it is an idiosyncratic quality of 'without'/*sans* that disallows P-stranding. What I will suggest here is that certain prepositions simply do not conflate with the DR-morpheme. To be explicit, I suggest two possible things when I use the term conflate. A first possibility is that it is an idiosyncratic property of a preposition like *sans* that it simply does not come with a selectional feature [*u*DRP], but only [*u*DP]. Merger of this preposition with a DRP would then lead to a failure to satisfy this preposition's requirement for a licit complement (with this illicit merger being indicated by the red box in (90) below). A second possibility is that perhaps it is an idiosyncratic property of *sans* that it cannot undergo morphological merger with a DR-morpheme. That is, the head movement of the DR-morpheme that takes place in P-stranding leads to an illicit prepositional form when this head morphologically combines with *sans* (as indicated by the x on the movement arrow in (90)).

(90) a. *Qui$_i$ est-ce qu'ils sont allés au cinéma [$_{PP}$ t_i [$_P$ *sans* [$_{DP}$ t_i]]]?
who is.it that.they have gone to.the movies without
'*Who did they go to the movies without?'

b.



Either of the two illicit operations I have suggested above, given the idiosyncratic properties of *sans*, would lead to a defective PP. Any further structural operations, such as those that would give us the sentence in (90-a) are simply not possible given the defective nature of the PP. Again, I do not contend that what I suggest here are solutions, but only ways of looking at this puzzle to perhaps better understand it.

I add here to what I suggest above by showing that the idiosyncratic nature of a preposition like *sans*, in terms of its selectional preferences, is further evidenced by its use in orphan preposition

[24]Takami (1988, 1992) attempts to explain such contrasts via a functional approach. Takami's core argument and the basis of his proposal is that only PPs that carry new/pragmatically more important information can participate in stranding. More specifically, a preposition will be able to be stranded if its DP complement carries what can be considered the most contextually salient information in the sentence. Such an approach of course does not explain contrasts such as the one observed in (86) and (87). This is aside from the fact that such an approach encounters many other significant problems (I refer the interested reader to van Riemsdijk's 1994 review of Takami (1992) and the criticisms therein. A purely functional approach such as Takami's remains insufficient in explaining the non-strandable nature of certain prepositions.

structures (OPs). As the reader may recall from chapter 3, *sans* can appear with a silent *pro* in OPs (from Authier 2016):

(91) Astrid a un chapeau. Elle ne sort jamais *sans*.
Astrid has a hat she NEG goes.out never without
'Astrid has a hat. She never goes out without *(it).'

The above suggests that perhaps *sans* is idiosyncratic in having a strict selectional restriction for a [*u*DP]. This can be satisfied by either an overt DP or a null pronomimal in LFF, but never by a DRP.

Lastly, I will point out that 'without' and*sans* both resist being stranded via leftward movement of their complements:

(92) *[Quel chapeau]$_i$ est-ce qu'il est sorti *sans* t_i l'autre jour?
which hat is.it that.he is gone.out without the.other day
'*Which hat did he go out without the other day?'

That the idiosyncrasy observed with this preposition under *wh*-movement applies equally to English and LFF shows again how LFF strongly parallels English P-stranding, showing the characteristics of a Class 1 P-stranding language.

To my knowledge, there is no existing taxonomical work giving an inventory or catalogue of explicitly unstrandable prepositions in English or any other P-stranding language. Aside from 'without', my own intuition is that English 'among' is also unstrandable. This extends directly to its LFF equivalent *parmi*. This is exemplified in the contrasts shown below:

(93) a. He is popular amongst his colleagues.
b. *Who$_i$ is he popular *amongst* t_i?

(94) a. Il est populaire parmi ses collègues.
he is popular among his colleagues
'He is popular amongst his colleagues.
b. *Qui$_i$ est-ce qu'il est populaire parmi t_i?
who is.it that.he is popular amongst
'*Who is he popular amongst?'

The examples provided so far suffice to illustrate my suggestion that the idiosyncratic nature of prepositions may affect their strandability. Furthermore, we see direct correlations between English and LFF where this idiosyncrasy is concerned, arguing for LFF as a Class 1 P-stranding language.

As a final comment, I note that the idiosyncrasy in the strandability of prepositions can also be observed with complex, multi-word prepositions. There are numerous P + NP/DP and P + NP/DP + P complex prepositions in English that cannot be stranded, but of course there are others that are

perfectly capable of participating in stranding scenarios. This is exemplified in the contrasts below for P + NP/DP (95) and P + NP/DP + P (96) complex prepositions:

(95) a. *What did he do it *prior to*?
b. Which store was he standing *outside of* when Mary saw him?

(96) a. *What did he give his life *in exchange for*?
b. Who was she standing *in front of*?

The same facts can be observed in LFF. As the examples below show, certain complex prepositions are strandable in LFF (97), but many others are not (98).

(97) a. Quelle chaise est-ce qu'il a sauté *par-dessus* ?
which chair is.it that.he has jumped over
'Which chair did he jump over?'
b. Qui est-ce qu'elle s'est assise *à côté de* hier soir?
who is.it that.she herself.is sat at side of last night
'Who did she sit beside last night?'

(98) a. *Qui est-ce qu'elle a réussi *grâce à*?
who is.it that.she has succeeded thanks to
'*Who did she succeed thanks to?'
b. *Qu'est-ce qu'il a été arrêté *à cause de*?
what.is.it that.he has been arrested at cause of
'*What did he get arrested because of?'

Again, I provide only a few examples to make the point as my goal in this thesis is not taxonomical and I am not providing an inventory of unstrandable prepositions in either LFF or English. The examples given are sufficient to make the point that prepositions in LFF and English are idiosyncratic in nature, observable in the fact that some prepositions, for reasons that are still not well understood, simply cannot be stranded. Furthermore, we see that where the idiosyncratic nature of prepositions are concerned, LFF strongly parallels English, lending credence to my argument that LFF must be classified along with English as a Class 1 P-stranding language.

In terms of what the particular idiosyncrasies of some prepositions are that disallow them to be stranded, I made two suggestions. The first was that some prepositions have stricter selectional requirements and cannot select a DRP as complement. The second was that perhaps some prepositions simply cannot morphologically combine with a DR-morpheme. Again, these are suggestions only and the precise factors affecting the strandability of some prepositions have as of yet to be clearly identified. The robustly unstrandable nature of some prepositions will have to, at this stage in our theoretical understanding of P-stranding, remain a puzzle. This is a shortcoming of not just my own proposal, but all other current accounts of P-stranding.

4.5 Interim summary: The typology of P-stranding languages

At this stage in our discussion, I have provided empirical evidence that although LFF has orphan prepositions, just like Standard French, it parallels English in also having bona fide P-stranding via leftward movement of prepositional complements. Furthermore, this P-stranding is productive under both A and $\overline{\text{A}}$-movement, just as it is in English. The facts and analysis at this stage corroborate my argument made at the very beginning of the thesis; LFF is a bona fide P-stranding language and must be added to the inventory of Class 1 languages within the typology I established in chapter 2.

My discussion and analysis throughout have shown that the way we can understand Class 1 languages and how they differ from the other three classes in the typology of P-stranding languages I have established is via their ability to productively strand prepositions under both A and $\overline{\text{A}}$-movement. What truly makes Class 1 languages stand out from the P-stranding languages in Class 2 and 3, is the ability to productively strand prepositions under passivization of DP complements. The rare phenomenon of P-passives is the hallmark and defining characteristic of a true Class 1 language. The fact that LFF, which is a non-Germanic language, allows this very rare construction when certain other Germanic languages do not (relegating them to Class 2) is a striking fact in the empirical picture of P-stranding cross-linguistically.

The presence or absence of a DR-morpheme in a language can then help us understand the difference between Classes 1-3 and Class 4, which stands alone in robustly disallowing P-stranding. In languages which qualify as belonging to Classes 1-3, a DRP headed by a DR-morpheme can merge as complement to an adpositional head, creating structural separation between these heads and their complements. This additional structure allows movement for reasons of feature valuation and so extraction of adpositional complements in these languages will respect Last Resort and not incur violations of the ALC. Furthermore, the DR-morpheme in some languages has both an overt and null exponent, while in other languages the DR-morpheme is always a phonologically null element. Languages in Class 4 on the other do not have a DR-morpheme at all, categorically ruling out the possibility of P-stranding. Finally, some languages that are claimed to be Class 4 but show restricted instances of P-stranding may provide yet more evidence of a DR-morpheme and be added to the inventory of Class 3 languages, but ultimately future work on these languages will have to bear this out.

4.6 Conclusion

In this chapter I have made explicit the details of how P-stranding can be accounted for in those few languages of the world that manifest this phenomenon. I have argued, following Abels (2003b, 2012) that PPs are phases. Being that adpositions are phase heads, anti-locality entails that their

immediate complements cannot undergo extraction. Only when extra structure intervenes between an adpositional phase head and its complement can extraction take place. Using initial evidence from German and Dutch discussed by Abels (2012), I have shown that a particular head, labelled as a DR-morpheme is the key factor allowing extraction of adpositional complements under both A and $\overline{\text{A}}$-movement and thus P-stranding. This intervening head comes in different guises in different languages. In Dutch and German, it is realized as *(d)r* and in LFF as *de-*. I have further argued that direct evidence of this morpheme in P-stranding languages like LFF entails that when we do not see an overt realization of this morpheme, it is still present but as a phonologically null element. This DR-morpheme, whether realized overtly or not, allows anti-locality to be circumvented so that P-stranding may take place. Further potential evidence for the existence of a DR-morpheme was examined in Turkish, Russian, Papiamentu and Cape Verdean Creole. Although the results were deemed preliminary, these languages lend weight to the argument that the DR-morpheme analysis of P-stranding is on the right track.

Having accounted for P-stranding under $\overline{\text{A}}$-movement, the DR-morpheme analysis was then extended to cases of P-stranding under A-movement. My analysis demonstrated how the DR-morpheme can account for why P-stranding can take place under A-movement in P-passives, but not under A-movement with clitics. Clitics, being heads, cannot merge with either P or DR; if such a merge operation occurs a defective PP is the result. Clitics can thus not merge as part of a PP, and by default cannot move out of PPs, thus ruling out P-stranding with clitics in LFF.

The DR-morpheme analysis was then extended to cases of pied-piping. I showed that feature percolation must be a necessary component of UG in order to account for the true optionality of pied-piping observed in LFF. The DR-morpheme itself was shown to be a permissible component in pied-piped and in situ PPs, but not an obligatory one, thus having a vacuous effect in these cases.

The final section of the chapter discussed how all P-stranding languages have some prepositions that are strandable and others that resist stranding. I made some suggestions regarding the idiosyncratic nature of prepositions in order to add to the discussion and shed some light on this puzzle. I suggested that perhaps some prepositions simply do not conflate with the DR-morpheme. This can take place either via stricter selectional restrictions on P (where P has only [uDP]), or via the inability of some adpositions to allow morphological incorporation of a DR morpheme, whether it be an overt or null exponent; head movement of a DR-morpheme in these cases leads to formation of an illicit P and by extension a defective PP. Although the suggestions provided are by no means a solution to the puzzle of non-strandable adpositions, it nevertheless renders my proposal on a par with all other current studies on P-stranding as no sufficient solution exists for this problem.

Chapter 5

Swiping in LFF

5.1 Introduction

This chapter looks at P-stranding in Lafontaine French (LFF) in the contexts of ellipsis.[1] In what follows, I investigate two interrelated elliptical phenomena. The first type is called *sluicing*. In sluicing, a *wh*-phrase constitutes the remnants of clausal ellipsis, as in (1):

(1) Jen saw someone, but I don't know who$_i$ ~~she saw t_i~~.

Of importance to the work being presented in this thesis is that in his seminal work on sluicing, Merchant (2001) establishes the Preposition Stranding Generalization (PSG). This generalization states that a language will allow P-stranding under sluicing only if that language allows P-stranding under *wh*-movement in non-elliptical clauses. English is a prime example of such a language: since it permits P-stranding generally (2-a), it permits prepositions to be stranded and deleted in sluicing (2-b), in addition to optional pied-piping (2-c).

(2) Jack borrowed money from someone, but...

a. I don't know who$_i$ he borrowed it *from* t_i .

b. I don't know who$_i$ ~~he borrowed it *from* t_i~~.

c. I don't know [from who(m)]$_i$ ~~he borrowed it t_i~~.

Merchant's PSG thus provides us with a further diagnostic in testing P-stranding in LFF and determining whether it again parallels English. I will ultimately show that where sluicing is concerned, English and LFF again pattern together.

[1] This chapter is based on and largely follows the structure of a co-authored article published in *The Canadian Journal of Linguistics/Revue canadienne de linguistique* (Ott and Therrien 2020). Many portions of text have been reworked and some additions made to more closely integrate the chapter into the thesis (notably, section 5.2 is a wholly new addition). Nevertheless, I make it explicit here that this chapter is in large part a reproduction of Ott and Therrien (2020) and in many instances sentences and even sections have been taken verbatim from this work.

The second type of ellipsis I will investigate is called *swiping* and will be the main focus of the chapter. This construction, first discussed in Ross (1969) and Rosen (1976) and named by Merchant (2002),[2] is a sub type of sluicing in which a sluiced *wh*-phrase and its selecting preposition constitute the remnants of ellipsis, with the *wh*-phrase preceding the preposition in linear order:

(3) Jack borrowed some money, but I don't know who *from*.

Analogous constructions are felicitous in the variety of Ontario French considered in this thesis (i.e. LFF):[3]

(4) Jean a acheté un cadeau, mais je ne sais pas qui *pour*.
Jean has bought a gift but I NEG know not who for
'Jean bought a gift, but I don't know who for.'

Like sluicing, swiping provides us with another opportunity to compare the distribution of P-stranding in English and LFF. The discussion on swiping will show that although there are parallels here as in sluicing, the picture is far more complex, but nevertheless provides evidence that LFF belongs with English in the inventory of Class 1 P-stranding languages. To the best of my knowledge, swiping in non-Germanic languages has not been discussed before; previous work has focused exclusively on English and, to a lesser extent, Scandinavian (e.g., Hartman and Ai 2009; Hasegawa 2007; Merchant 2002; Nakao, Ono, and Yoshida 2006; van Craenenbroeck 2004).

The structure of the chapter is as follows. In section 5.2 I connect LFF sluicing and swiping back to the typology of P-stranding languages established in Chapter 2. I show that where sluicing and swiping are concerned, LFF patterns with English (a Class 1 language) in allowing preposition stranding under ellipsis. Standard French (SF) (Class 4) and Dutch and German (Class 3) on the other hand pattern together in disallowing P-omission under ellipsis, albeit the circumstances under which the preposition is retained differ. The patterns observed in LFF sluicing and swiping will show that once again, this language parallels English in its use of prepositions, in this case in elliptical scenarios, providing yet more evidence that LFF belongs in the inventory of Class 1 P-stranding languages. The remainder of the chapter investigates the central empirical properties

[2] 'Swiping' is an acronym for *sluicing with inversion of a preposition in Northern Germanic*. Even though I am investigating swiping outside of Northern Germanic, I will retain the use of this established label in discussing this construction.

[3] As noted in the thesis introduction, LFF is a dialect spoken in the francophone community of Lafontaine in south-central Ontario, located in a predominantly anglophone region. Where swiping is concerned, I make no claims herein about any other varieties of Ontario French, or Canadian French in general. Preliminary informal elicitations suggest that swiping is possible in Acadian French but not Quebec French, which raises interesting questions concerning the relation between swiping and P-stranding. This possible discrepancy may suggest that Acadian French, being in a close and long term contact situation with English (unlike Quebec French) has incorporated the DR-morpheme into its grammar. This is of course speculation only at this time and requires further investigation. I leave these issues to future work.

of swiping constructions in LFF (section 5.3)[4] and their theoretical ramifications for the theory of sluicing (section 5.4). While I will not attempt to develop a comprehensive theory of swiping within the confines of this chapter, I will argue that an analysis positing that P-stranding via merger of a DR-morpheme, in combination with non-constituent deletion derives swiping structures and fares better overall than existing proposals, which invariably postulate construction-specific reorderings.

5.2 Patterns in LFF sluicing and swiping

Based on Merchant's (2001) preposition stranding generalization (PSG), languages which do not allow P-stranding in non-elliptical scenarios will concurrently not allow it under sluicing. That is, in a non-P-stranding language (i.e. Class 4), in a sluice involving a PP, pied-piping is the only option. Greek, being a Class 4 (i.e. illicit) P-stranding language exemplifies this point. Example (5-a) shows that P-stranding is illicit in Greek, with pied-piping being the only available option (5-b). As per Merchant's PSG, the preposition must appear in the sluiced remnant; it cannot be left stranded in the site of ellipsis (5-c) (examples from Merchant 2001).

(5) a. *Pjon milise *me*?
who she.spoke with
'Who did she speak with?'

b. Me pjon milise?
with who she.spoke
'With whom did she speak?'

c. I Anna milise me kapjon, alla dhe ksero *(me) pjon?
the Anna spoke with someone but not I.know with who
'Anna spoke with someone, but I don't know with who.'

Notably, exceptions to the PSG have been observed in the literature (e.g. for Spanish, Italian and French see Merchant (2001) and Vicente (2008); for Brazilian Portuguese see Rodrigues, Nevins, and Vicente (2006); for Polish see Szczegielniak (2008), a.o.). Even in English, a Class 1 language, some non-strandable prepositions appear to be omissible under sluicing (Fortin 2007; Ross 1969; van Craenenbroeck 2004). The preposition 'against' for instance resists stranding (6-a), but can apparently be left behind in sluicing (6-b) (examples from Fortin 2007 in Griffiths et al. 2021):

[4]The data provided in this chapter are based primarily on my own introspective judgments as a native speaker of LFF and were checked with two additional native speakers of LFF; unless noted otherwise, the informants' judgments converged with my own. While I cannot provide a comprehensive illustration of LFF *wh*-syntax within the confines of this chapter, as noted in 2.1 of chapter 2, LFF, like Standard French, can use a variety of question formation strategies, including the in situ variant. Again, as discussed in that section LFF strongly prefers the fully realized *est-ce que* variant. Throughout this chapter, I will nevertheless at times provide examples using a *wh*-question formation strategy other than the *est-ce que* variant only to emphasize that this is not the only licit variant in LFF. On the syntax of *wh*-questions in various varieties of Canadian French, see Tailleur 2013.

(6) a. *[Whose wishes]$_i$ did Terry get married [$_{PP}$ *against* t_i]?
b. Terry got married against someone's wishes, but I don't know whose (wishes).

Despite the apparent evidence against the PSG, Griffiths et al. (2021) point out that these studies typically show that the elided clause is not isomorphic with its antecedent, but rather derived from either a cleft or simple copular structure:

(7) Terry got married *against* someone's wishes, but I don't know whose (wishes) ~~[it was]~~.

Since P-stranding does not in actuality occur in the elided clause, Griffiths et al. (2021) argue that these do not constitute true exceptions to the PSG.[5]

The patterns observed in sluicing when comparing Standard French (SF) and LFF show a clear divergence in the use of prepositions. Like Greek, SF is a Class 4 language. P-stranding is illicit (8-a), with pied-piping being the only available option (8-b). Typically, in SF, sluices involving prepositions must realize the preposition in the sluicing remnant (8-c) (examples (8-a) and (8-c) from Merchant 2001 in Sato 2011; (8-b) from Sato 2011).

(8) a. *Qui est-ce qu'elle l'a offert *à*?
Who is.it that.she it.has offered to
'Whom has she offered it to?'
b. À qui l'a-t-elle offert?
to whom it.has-T-she offered
'To whom has she offered it?'
c. Anne l'a offert *à* quelqu'un, mais je ne sais pas *(à) qui.
Anne it.has offered to someone but I NEG know not to whom
'Anne has offered it to someone, but I don't know (to) whom.'

Sluices involving PPs clearly show that SF patterns with other Class 4 languages in requiring the presence of the preposition in sluicing remnants.

[5]Dagnac (2019) examines instances of what she calls 'bare sluices' in Standard French (SF), in which a prepositionless remnant has a PP correlate, contra expectations, being that SF is a Class 4 language:

(i) Je dois parler *à* quelqu'un, mais qui?
I must speak to someone but who
'I must speak to someone, but who?'

Dagnac claims that these bare sluices in SF cannot be accounted for by either a cleft or copular strategy, thus appearing to constitute bona fide counter-examples to Merchant's PSG. What I will tentatively suggest here is that these cases might simply be a process of PF deletion of redundant material. That is, the PP remnant is pied-piped as usual in SF, with the preposition in the remnant (being a non-focused element as it is already present in the correlate) then being deleted/omitted at PF:

(ii) Je dois parler *à* quelqu'un, mais [$_{PP}$ ~~*à*~~ qui]$_i$ ~~[$_{TP}$ dois-je parler t_i]~~?

Under such an analysis, these cases still adhere to the PSG.

In examining swiping, we observe the same patterns as those seen in sluicing. That is, a Class 3 language like German does not allow P-stranding under overt *wh*-movement (9-a) with full DPs, and so does not permit preposition omission under swiping (9-b).

(9) Peter hat sich Geld geliehen, aber…
Peter has REFL money borrowed, but

a. ich weiß nicht *(von) wem er es sich (*von) geliehen hat.
I know not from who he it REFL borrowed has

b. ich weiß nicht *(von) wem (*von).
I know not from who
'Peter borrowed money, but I don't know who (he borrowed it) from.'

P-stranding under regular, non-elliptical *wh*-movement is thus a necessary precondition for preposition omission under sluicing as well as swiping. It is not a sufficient condition for swiping if Merchant's and Hasegawa's claims about the infelicity of swiping in Swedish, Icelandic, and (dialects of) Norwegian are correct: for reasons that remain unclear, these languages do permit P-stranding in non-elliptical contexts but do not permit swiping under sluicing (see also fn. 3).

Even in languages which allow restricted P-stranding (i.e. the Class 3 languages of Dutch and German), preposition omission under sluicing is not permissible. As discussed in chapters 2 and 4, Class 3 languages can strand prepositions with a specific class of pronouns called R-pronouns (10-a)/(11-a). Again, these are to be distinguished from their homophonous forms which must always follow their selecting adposition, yielding prepositional phrases and whose semantics denote a strictly locative interpretation. Despite the fact that R-pronouns can move, leaving their prepositions stranded, the R-pronoun cannot appear independently in a sluice. As (10-b)/(11-b) show, the pronouns in these sluices must be interpreted as denoting a location and cannot be construed as R-pronouns (examples from Griffiths et al. 2021). Under ellipsis, sluices involving R-pronouns in Dutch (12-a) and German (12-b) must retain the adposition (examples from Ott 2023).[6]

(10) He is looking at something, … *Dutch*

a. maar ik weet niet **waar**$_i$ hij [$_{PP}$ *naar* t_i] kijkt.
but I know not where(R) he at looks
'but I don't know what he is looking at.'

b. maar ik weet niet (***waar** **/ waar**).
but I know not where(R) where
i. * 'He is looking at something, but I don't know what he is looking at.'
ii. 'He is looking at something, but I don't know where he is looking at something.'

[6] An uppercase (R) has been added to the glossed R-pronouns in the examples below in order to distinguish them from their homophonous locative forms.

(11) He counted on something, … *German*

a. aber ich weiß nicht **wo**$_i$ er [$_{PP}$ *mit* t_i] gerechnet hat.
but I know not where(R) he with counted has
'but I don't know what he counted on.'

b. aber ich weiß nicht (***wo** / **wo**).
but I know not where(R) where
i * 'He counted on something, but I don't know what he counted on.'
ii. 'He counted on something, but I don't know where he counted on something.'

(12) a. Bob rekent ergens op, maar ik weet niet **waar***op*.
Bob counts something on but I know not where(R).on
'Bob is counting on something, but I don't know what (he's counting on).' *Dutch*

b. Er hat für etwas bezahlt, aber ich weiß nicht **wo**-*für*.
he has for something paid but I know not where(R).for
'He paid for something, but I don't know what he paid for.' *German*

What we essentially get in Dutch and German is that sluicing results in a swiping pattern which stands out from its English counterpart in that retention of the preposition is obligatory and the inversion order *wh* $\prec$ *P* happens independent of ellipsis (i.e. in standard P-stranding with R-pronouns). We therefore see a split pattern when sluicing takes place in Class 3 languages. These languages pattern with SF in requiring retention of the preposition under ellipsis, but like English and LFF, they allow prepositions to be stranded in the ellipsis site.

The sluices in (12) are structurally ambiguous. These could be analyzed as cases of pied-piping, as in SF. Crucially though, Dutch and German instances of sluicing, like English and LFF, are derivable via movement of the R-pronoun and stranding of the preposition in the ellipsis site. Evidence for such an analysis comes from diagnostics provided by Ott and Struckmeier (2018) using modal particles. Modal particles are immobile middle-field elements in Dutch and German which allow us to identify ex situ versus in situ remnants in sluicing.[7] Below, modal particles can be added to show that a sluice with an R-pronoun like *wogegen*/'where.against' (13-b) (used in response to (13-a)) in German is derivable via *wh*-movement of the R-pronoun to the left periphery, with the preposition remaining (stranded) *in situ* (13-c). The response of speaker B´shows (via the modal particles *denn* and *wohl* which obligatorily occupy the middle-field) that the R-pronoun *wo* has moved to the left periphery and the preposition *gegen* has been left stranded in its in situ position in the ellipsis site. This fact is emphasized by the illicit response of speaker B´´, where we see that the PP cannot undergo pied-piping to the the middle-field with subsequent *wh*-movement, leaving

[7] Ott and Struckmeier (2018) demonstrate that the ordering patterns of modal particles in German shows that they can precede or follow a preposition. With *wh*-phrases on the other hand, they can only ever follow, demonstrating that *wh*-phrases must obligatorily move to the left periphery, across middle-field elements. For the detailed discussion of theses arguments and facts surrounding modal particles and their use as a diagnostics in identifying ex situ versus in situ elements see Ott and Struckmeier (2018) and Ott (2023) and sources cited therein.

the preposition stranded here (examples from Ott 2023).

(13) a. A: I know what she voted FOR.

b. B: OK, aber **wo***GEGEN*$_i$ denn wohl t_i?
OK but where(R).against MP MP
'OK, but what did she vote against, you think?'

c. B´: OK, aber **wo**$_i$ denn wohl t_i *GEGEN*?

d. B´´: *OK, aber **wo**$_i$ denn t_i *GEGEN* wohl?

The take away is that German and Dutch pattern with SF and other Class 4 languages in showing an inability to omit prepositions under sluicing, but unlike Class 4 languages, these cases are still derivable as standard instances of P-stranding under R-pronoun movement.[8]

LFF on the other hand, diverges from both SF and German and Dutch. Since it allows unrestricted, bona fide P-stranding, it allows preposition omission under sluicing in both matrix and embedded clauses:

(14) a. A: Elle est sortie avec quelqu'un. – B: Vraiment! Qui?
she is gone.out with someone really who
A: 'She went out with someone.' – B: 'Really! Who?'

b. Elle est sortie avec quelqu'un, mais je ne sais pas qui.
she is gone.out with someone but I NEG know not who
'She went out with someone, but I don't know who?'

As the translations for the LFF examples above show, we see that LFF patterns with English, a Class 1 P-stranding language.

In his seminal work on sluicing, Ross (1969) observed that English additionally allows a subtype of sluicing in which the preposition is retained, but unlike in (2-c) follows rather than precedes its *wh*-complement. This is of course the swiping construction introduced in section 5.1. Thus, the continuation in (15-a) has the elliptical variant in (15-b).

(15) Jack borrowed some money, but...

a. I don't know who he borrowed it *from*.

[8]The facts observed in German and Dutch can be connected back to our earlier discussion in this section and my comments in fn. 3. German and Dutch, along with Swedish, Icelandic, and (dialects of) Norwegian allow (at least some form of) P-stranding, but do not allow prepositions to be stranded under sluicing. These facts lend further credence to the suggestion that P-stranding alone is not a sufficient condition to allow sluicing and swiping to take place. Quebec French, would present an interesting comparison study where these factors are concerned. Acceptability of P-stranding in Quebec French is still debated (e.g. Giancarli 2017; Poplack et al. 2012, a.o.). Preliminary consultations with speakers of Quebec French on the other hand suggests swiping is uniformly illicit. If (at least some degree) of P-stranding is licit in Quebec French, then it joins the list of languages that go against Merchant's PSG. This discrepancy between languages where the link between P-stranding and sluicing is concerned opens up interesting avenues of research into the link between P-stranding and sluicing. This is something I will have to leave to future work on this topic.

b. I don't know who *from*.

According to Merchant (2002), the construction is also found in Danish and "some varieties of Norwegian" (see his paper for examples; also Hasegawa 2007).

LFF on the other hand again patterns with English. Since it permits bona fide movement derived P-stranding (16), swiping constructions are possible in both embedded (16-b) and matrix contexts (16-c):

(16) a. Je ne sais pas qui qu'il a acheté un cadeau *pour*.
I NEG know not who that.he has bought a gift for
'I don't know who he bought a gift for.'

b. Jean a acheté un cadeau, mais je ne sais pas qui *pour*.
Jean has bought a gift but I NEG know not who for
'Jean bought a gift, but I don't know (who he bought a gift) for.'

c. A: Jean a acheté un cadeau. – B: Qui *pour*?
Jean has bought a gift who for
A: 'Jean bought a gift.' – B: 'Who for?'

I note here that the non-inverted order (*pour qui*) is equally if not more natural.[9] Nevertheless, swiping constructions are possible in LFF, showing that it patterns again with English, thus belonging to the inventory of Class 1 P-stranding languages [10].

The data provided in this section has shown that SF diverges significantly from LFF in patterning with Class 4 languages in both sluicing and swiping. Even in languages like German and Dutch, which have a restricted form of P-stranding, these also diverge from LFF and pattern with Class 4 languages in sluicing, requiring retention of prepositions, which under R-pronoun movement results in a type of obligatory swiping. Sluicing and its subform of swiping thus provide

[9]Swiping in LFF generally has a slightly marked character, similar to what several authors have noted about English. I will not speculate here on the reasons for this, which may reduce to extra-grammatical stylistic preferences.

[10]I note that LFF also patterns with English in ellipsis involving aggressively non-D-linked *wh*-phrases. It has been observed for English in the literature on ellipsis phenomena that aggressively non-D-linked *wh*-phrases are illicit in sluicing (i-a), but can appear in swiping constructions (i-b) (e.g. Kim and Kim 2023; Hartman and Ai 2009; Merchant 2001):

(i) a. *He voted for someone, but I don't know *who the hell*.
b. He voted, but I don't know *who the hell for*.

These facts carry over directly to LFF, showing again its nature as a Class 1 P-stranding language:

(ii) a. *Il a voté pour quelqu'un, mais je ne sais pas *qui diable*.
he has voted for someone but I NEG know not who the hell
'*He voted for someone, but I don't know who the hell.'
b. Il a voté pour quelqu'un, mais je ne sais pas *qui diable pour*.
he has voted for someone but I NEG know not who the hell for
'He voted for someone, but I don't know who the hell for.'

further robust evidence that P-stranding in LFF is not a special case of P-stranding of the type seen in German and Dutch,[11] nor is it simply orphaning of the type observed in SF. Furthermore, LFF even diverges from Class 2 P-stranding languages, which do not have the P-passive and in some cases also disallow swiping (e.g. Icelandic). The P-stranding patterns in LFF show that it must be ranked along with English into the inventory of Class 1 P-stranding languages.

5.3 Properties of swiping in LFF

5.3.1 Distribution

So far in this chapter, I have established that swiping is permissible in LFF. Given this fact, I will examine some further distributional facts that have been observed in swiping and see if these are extendable to LFF. Following Rosen (1976), Merchant (2002) and Hartman and Ai (2009) claim that swiping is most acceptable when the sluiced PP is a *sprouted* adjunct in the sense of Chung, Ladusaw, and McCloskey (1995), (i.e. when it has no overt correlate in the antecedent). Hartman and Ai provide the following contrast (from Hartman and Ai 2009):

(17) a. She has a date tonight, but she won't tell me who *with*.
b. *She has a date *with* some guy, but she won't tell me who *with*.

Hartman and Ai note that judgments regarding cases of sprouting vary considerably, providing a number of counterexamples. In my own judgment, I feel that cases of swiping as in (17-b) are fairly natural, or at least as natural as their counterparts (17-a), given that swiping overall has somewhat of a marked feeling to it. In general, I find this judgment extends to swiping in English; although I find swiping cases felicitous in English, they also have somewhat of a marked feeling to them, whether sprouted or not. I will also note here that my judgment on sprouted cases extends to swiping in LFF in both embedded (18-a) and matrix contexts (18-b), where the non-sprouted variant is at most slightly degraded.

(18) a. Jean a acheté un cadeau (?*pour* quelqu'un), mais je ne sais pas qui *pour*.
Jean has bought a gift for someone but I NEG know not who for
'Jean bought a gift (for someone), but I don't know who for.'
b. A: Jean a acheté un cadeau (?*pour* quelqu'un). – B: Qui *pour*?
Jean has bought a gift for someone who for
'A: Jean bought a gift (for someone).' – B: 'Who for?'

[11] As pointed out by Ott (2023), P-stranding under R-pronoun movement in Dutch and German differs from that seen in English (and by extension LFF) in having all the hallmarks of other split constructions (e.g. *was-für* split constructions in German) in requiring retention of adpositions under ellipsis. For the relevant facts see Ott (2023).

Overall, having a PP correlate in the antecedent thus does not appear to affect the acceptability of LFF swiping in any significant manner. Given this fact, I will consequently abstract away from this issue throughout the remainder of this chapter. I also remain agnostic as to whether (in-)sensitivity to the presence of a correlate constitutes a difference between LFF and English, given the inconsistency of judgments reported in the literature.

As noted by Merchant, the phenomenon of swiping cannot take place outside of sluicing (see Merchant's 2002 *Sluicing Condition* on swiping) if we assume as he does that the inverted order $wh \prec P$ is derived via a PP-internal inversion mechanism, applying after PP has pied-piped to the Spec-CP position. This extends directly to LFF. The inverted order $wh \prec P$ we observe in swiping is robustly unacceptable outside of elliptical contexts. This is exemplified below in a matrix question (19-a), a cleft (19-b), an embedded question (19-c), as well as a non-*wh* fragment (20).

(19) a. *Qui *pour* a-t-il acheté un cadeau?
who for has-T-he bought a gift
'Who did he buy a gift for?'

b. *C'est qui *pour* qu'il a acheté un cadeau?
it.is who for that.he has bought a gift
'Who is it that he bought a gift for?'

c. *Je me demande qui *pour* qu'il a acheté un cadeau.
I wonder who for that.he has bought a gift
'I wonder who he bought a gift for.'

(20) A: Elle a acheté un cadeau. – B: Oui, {*pour* lui / *lui *pour*}.
she has bought a gift yes for him him for
A: 'She bought a gift.' – B: 'Yes, for him.'

When looking at multiple sluicing in LFF, what we can observe is that only the first remnant can undergo swiping (21); inversion of the preposition and *wh*-phrase cannot take place in any subsequent remnants (22).

(21) Il a gagné, mais je ne sais pas qui *contre* *dans* quel match.
he has won but I NEG know not who against in which match
'He won, but I don't know who against in which match.'

(22) Elle a acheté quelque chose, mais je ne sais pas quoi {*pour* qui / *qui *pour*}.
she has bought something but I NEG know not what for who who for
'She bought something, but I don't know what for whom.'

The felicity of swiping in multiple sluicing constructions like LFF (21) above have been questioned by Merchant for English (see Merchant (2002, 314 fn. 13)). Nevertheless, judgments for English examples analogous to the LFF example above have been reported by Richards (1997, 164) as being acceptable. The LFF data above backs up Richards' claims for English, and if these are in

fact correct, then LFF once again parallels English, in this case in multiple sluicing constructions.

Looking at further distributional properties, we see that in LFF the *wh*-phrase and preposition can be separated by certain kinds of non-sentential adverbs (23-a), as well as an unelided main clause (23-b), but not at all by an island boundary (24).

(23) a. Qui exactement / précisement / ??probablement / ??possiblement *pour*?
who exactly precisely probably possibly for
'Who exactly/precisely/probably/possibly for?'

b. Qui penses-tu *pour*?
who think-you for
'Who do you think for?'[12]

(24) *Elle a dénié qu'elle connaissait un homme qui avait voté (*pour* quelqu'un) dans
she has denied that-she knew a man who had voted for someone in
le référendum, mais je ne sais pas qui *pour*.
the referendum but I NEG know not who for
intended: 'She denied that she knew a man who had voted (for someone) in the referendum, but I don't know which person *x* is such that she denied that she knew a man who had voted for the person *x* in the referendum.'

I note here that the island-sensitivity seen in (24) above obtains regardless of whether or not the swiped *wh*-remnant is sprouted.[13]

Despite being island sensitive, swiping in LFF is not clause-bounded. Example (25) below permits both a short (25-a) and a long construal (25-b), depending on whether the ellipsis is resolved against the entire preceding matrix clause or just the embedded clause.

[12]Conceivably, the string *penses-tu* can be parsed as a parenthetical insertion, but no corresponding prosody is required. For similar cases in English, see Hartman and Ai 2009; Larson 2014, and Radford and Iwasaki 2015.

[13] Unsurprisingly, the same violation obtains in non-swiped and non-elliptical variants of (24):

(i) a. *Elle a dénié qu'elle connaissait un homme qui avait voté *pour* quelqu'un dans le référendum,
she has denied that-she knew a man who had voted for someone in the referendum
mais je ne sais pas *pour* qui.
but I NEG know not for who

b. *Elle a dénié qu'elle connaissait un homme qui avait voté (*pour* quelqu'un) dans le référendum,
she has denied that-she knew a man who had voted (for someone) in the referendum
mais je ne sais pas qui qu'elle a dénié qu'elle connaissait un homme qui avait voté *pour*
but I NEG know not who that-she has denied that-she knew a man who had voted for
dans le référendum.
in the referendum
(same intended interpretation as (24))

I assume that sluicing in (24) and (i-a) does not permit a semantically equivalent 'short' (non-island-containing) source, hence shows sensitivity to the island boundary; see Lasnik 2001; Merchant 2001 for discussion.

(25) Jean croit que Marie a acheté un cadeau, mais je ne sais pas qui *pour*.
Jean thinks that Marie has bought a gift but I NEG know not who for
'Jean thinks that Marie bought a gift, but I don't know who for.'

a. … but I don't know who she bought a gift *for*.

b. … but I don't know who he believes that she bought a gift *for*.

The take away from the discussion in this subsection is that first and foremost, swiping exists in LFF. Secondly, swiping is possible whether there is a correlate in the antecedent clause or not (recall sprouting). As in English, swiping in LFF can also only occur in (initial) sluicing remnants, and the *wh*-phrase and preposition can be separated as long as locality of movement is respected. In what follows, I investigate which *wh*-phrases and prepositions can appear in LFF swiping.

5.3.2 *Wh*-phrases in LFF swiping

The *wh*-phrasess that can appear in swiping are reported as being fairly limited, but there is some debate on this issue. For English, Merchant (2002) claims that only morphologically simplex *wh*-elements are felicitous in swiping; by contrast, Hartman and Ai (2009) and other authors report that certain complex *wh*-elements are felicitous as well. When looking at LFF, an equally diffuse picture emerges: while by and large, swiping in LFF prefers simplex *wh*-phrases, not all of them can appear in swiping; furthermore, LFF swiping does tolerate some types of complex *wh*-phrases.

We can see in the examples below that LFF conforms with Merchant's (2002) claim (based on English data) that complex *wh*-phrases are typically infelicitous in swiping:

(26) a. *Il a voté, mais je ne sais pas quel candidat républicain *pour*.
he has voted but I NEG know not which candidate republican for
'He voted, but I don't know for which republican candidate.'

b. Elle a été déclarée gagnante. *Devinez quel juge *par*!
she has been declared winner guess which judge by
'She has been declared the winner. Guess by which judge.'

c. A: Marie a reçu des fleurs. – B: *Quel prétendant *de*?
Mary has received some flowers which suitor from
A: 'Mary received some flowers.' – B: 'From which suitor?'

I note here that all the examples above are permissible in their non-elliptical form. Their illicit nature is therefore not reducible to these being unacceptable cases of P-stranding:[14]

[14]The same is true when the *wh*-phrase and preposition appear in the uninverted order:

(i) a. … mais je ne sais pas *pour* quel candidat républicain.
but I NEG know not for which candidate republican
'… but I don't know for which republican candidate.'

(27) a. … mais je ne sais pas quel candidat républicain qu'il a voté *pour*.
but I NEG know not which candidate republican that-he has voted for
'… but I don't know which republican candidate he has voted for.'

b. Devinez quel juge qu'elle a été déclarée gagnante *par*!
guess which judge that-she has been declared winner by
'Guess by which judge she was declared a winner!'

c. Quel prétendant est-ce qu'elle a reçu des fleurs *de*?
which suitor is-it that-she has received some flowers from
'From which suitor did she receive flowers?'

Below I provide some cases of swiping with simplex *wh*-phrases. Noticeably, the acceptability judgments here contrast with the cases using complex *wh*-phrases in (26).[15]

(28) a. Il a voté, mais je ne sais pas qui *pour*.
he has voted but I NEG know not who for
'He voted, but I don't know who for.'

b. Il a reçu un paquet, mais je ne sais pas où *de*.
he has received a package but I NEG know not where from
'He received a package, but I don't know where from.'

c. La voiture a été vendue aux enchères, mais combien *pour*?
the car has been sold at auction but how.much for
'The car was sold at auction, but how much for?'

---

b. Devinez *par* quel juge!
guess by which judge
'Guess by which judge!'

c. *De* quel prétendant?
from which suitor
'From which suitor?'

[15] As before, the judgments of the non-elliptical variants match their elliptical counterparts:

(i) a. Il a voté, mais je ne sais pas qui qu'il a voté *pour*.
he has voted but I NEG know not who that-he has voted for
'He voted, but I don't know who he voted for.'

b. Il a reçu un paquet, mais je ne sais pas où qu'il l'a reçu *de*.
he has received a package but I NEG know not where that-he it-has received from
'He received a package, but I don't know from where he received it.'

c. La voiture a été vendue aux enchères, mais combien a-t-elle été vendue *pour*?
the car has been sold at auction but how.much has-T-it been sold for
'The car was sold at an auction, but how much did it sell for?'

d. ?Marie doit être à l'école, mais je ne sais pas quand qu'elle doit y être *pour*.
Marie must be at the-school but I NEG know not when that-she must there be for
'Marie must be at school, but I don't know for when/what time she needs to be there.'

e. Il a voté pour un des trois condidats, mais lequel a-t-il voté *pour*?
he has voted for one of.the three candidates but which.one has-T-he voted for
'He voted for one of the three candidates, but which (one) did he vote for?'

d. ?Marie doit être à l'école, mais je ne sais pas quand *pour*.
Marie must be at the.school but I NEG know not when for
'Marie needs to be at school, but I don't know for when/what time.'[16]

e. Il a voté pour un des trois candidats, mais lequel *pour*?
he has voted for one of.the three candidates but which.one for
'He voted for a candidate, but for which (one)?'

With the exception of *lequel* (and possibly *combien*), the above *wh*-phrases are monomorphemic. (I defer discussion of *que*/*quoi* 'what' to section 5.4.)

The contrast in acceptability between (26) and (28) seems to suggest that only simplex, head-like *wh*-phrases can undergo swiping. The data provided below show that this is in fact not the case in LFF. *Wh*-phrases of the form *combien de N* 'how much/many N' and *quel(le) N* 'which N' are acceptable in some instances:

(29) a. Elle a dû attendre, mais combien de temps *pour*?
she has must wait but how.much of time for
'She had to wait, but for how long?'

b. Becky a été recommandée pour une promotion. Devinez quel poste *pour*!
Becky has been recommended for a promotion guess which position for
'Becky has been recommended for a promotion. Guess for which position.'

The LFF data provided so far suggest the following restriction: beyond the simplex *wh*-phrase *qui*, only a minimal [D_{wh} N] remnant is potentially licit in swiping; any additional complexity renders the configuration unacceptable.

(30) Elle a voté, mais je ne sais pas...
she has voted but I NEG know not
'She voted, but I don't know...'

a. qui *pour*.
who for
'who for.'

b. quel étudiant *pour*.
which student for
'for which student.'

c. *quel étudiant de linguistique *pour*.
which student of linguistics for
'for which linguistics student.'

d. *quel jeune étudiant *pour*.
which young student for
'for which young student.'

[16]The *quand pour* sequence sounds slightly contrived, presumably due to the unusual use of *quand* as a P-complement.

e. *quel jeune étudiant de linguistique *pour*.
which young student of linguistics for
'for which young linguistics student.'

Thus, while the claim that "swiping is perfectly well-formed with simple *wh*-phrases [but] systematically excluded with complex ones" (van Craenenbroeck, 2012, 57) is too strong at least for LFF, we see that LFF swiping is restricted with regard to the *wh*-phrases that can occur in the construction. This is no different than what has been reported for English (Culicover, 1999; Culicover & Jackendoff, 2005), showing that these two languages again pattern together.

5.3.3 Prepositions in LFF swiping

In this section, I examine which prepositions can appear in LFF swiping. My goal here is not to give a comprehensive inventory of all LFF prepositions where swiping is concerned, but rather to develop a first sketch of the general picture, establishing a set of data that can be built upon and refined in future research on this topic. The initial picture that emerges will show that the set of prepositions that can participate in swiping in LFF is somewhat limited in scope.

In examining swiping in English, Ross (1969, 266) observed that the ability to strand a preposition correlates directly with its ability to be used in swiping constructions. This fact carries over directly to LFF swiping. As an exemplary case, the complex preposition *jusqu'à* cannot be stranded under regular *wh*-movement (31-a), and is likewise excluded from swiping (31-b).

(31) a. *Quand est-ce que Marie sera à l'école *jusqu'à*?
when is-it that Marie will.be at the.school until
'Until when will Marie be at school?'

b. *Marie sera à l'école, mais je ne sais pas quand *jusqu'à*.
Marie will.be at the.school but I NEG know not when until
'Marie will be at school, but I don't know until when.'

In examining strandable LFF prepositions, we find that functional *de* 'of/from,' semi-functional *pour* 'for' and *par* 'by,' are all permissible in swiping:

(32) a. A: Il a reçu une lettre. – B: Vraiment? Qui *de*?
he has received a letter really who from
A: 'He received a letter.' – B: 'Really? Who from?'

b. Il a voté, mais je ne sais pas qui *pour*.
he has voted but I NEG know not who for
'He voted, but I don't know who for.'

c. Elle a été choisie comme candidate. Devinez qui *par*!
she has been chosen as candidate guess who by
'She has been chosen as a candidate. Guess who by!'

Additionally, the two lexical prepositions *contre* 'against' and *entre* 'between' can be used in LFF swiping constructions:

(33) a. Il a gagné le match, mais qui *contre*?
he has won the match but who against
'He won the match, but against who?'

b. Il y a eu une bataille, mais qui *entre*?
it there has had a battle but who between
'There's been a battle, but between who?'

Unlike the preposition *pour*, which is commonly rated as acceptable in swiping constructions, judgements on certain other prepositions are not as clear cut. The purely functional preposition *à* 'to' as well as comitative *avec* 'with' receive mixed judgements, being judged as both acceptable and unacceptable.[17]

(34) a. %Marie parlait, mais qui *à*?
Marie talked but who to
'Marie was talking, but who to?'

b. %Lois parlait, mais je ne sais pas qui *avec*.
Lois talked but I NEG know not who with
'Lois was talking, but I don't know who with.'

Judgements for the temporal prepositions *après* 'after' and *avant* 'before' on the other hand showed these are both unacceptable in swiping:

(35) a. *On doit présenter notre projet, mais qui *après*?
we must present our project but who after
'We have to present our project, but after who?'

b. *Elle est arrivée à la réunion, mais qui *avant*?
she is arrived at the reunion but who before
'She arrived at the meeting, but before who?'

As indicated in the translations in (34), English swiping appears to be a bit more liberal than LFF swiping in terms of the range of prepositions that can be used in swiping in at least some cases (i.e. *who with* and *who to* are both perfectly acceptable in English, whereas the judgements for equivalent cases in LFF differ).[18]

[17] One of my informants accepted swiping with *à* (34-a) and *avec* (34-b), whereas my other informant judged these cases as being infelicitous. In Ott and Therrien 2020, I gave judgements that were in line with the second informant. At this time, in giving these examples further consideration, my judgement is that swiping with *à* is more marginal but still acceptable, while the example using *avec* is fully acceptable, thus falling in line with the judgement of my first informant.

[18] English *against* and *between* have been claimed to resist swiping (Culicover, 1999; Culicover & Jackendoff, 2005), whereas their LFF counterparts *contre* and *entre* naturally appear in swiped orders (33). This claim about English *against* and *between* however is contradicted by attested examples, at least for the preposition *against* (see e.g. Hartman

In examining complex prepositions such as *à côté de* and *en faveur de*, we find that these are likewise excluded from participating in swiping:

(36) a. *Elle s'est assise, mais qui *à côté de*?
she REFL-is sat.down but who at side of
'She sat down, but beside who?'

b. *Les juges sont biaisés, mais qui *en faveur de*?
the judges are biased but who in favour of
'The judges are biased, but in favour of who?'

Importantly, I make note of the fact here that all the illicit prepositions above can be stranded under *wh*-movement in non-elliptical constructions. The infelicity of these prepositions when following the associated *wh*-phrase in linear order is thus specific to the swiping construction. The following examples give a sample set illustrating the licit nature of these prepositions in stranding scenarios:

(37) a. Qui est-ce qu'elle a parlé *à*?
who is.it that.she has talked to
'Who did she talk to?'

b. Qui est-ce qu'on doit présenter notre projet *après*?
who is-it that-we must present our project after
'Who do we need to present our project after?'

c. Qui est-ce qu'elle s'est assise *à côté de*?
who is-it that-she REFL-is sat.down at side of
'Who did she sit down beside?'

As a final point of discussion on permissible prepositions in LFF swiping, I note that the prepositions *dans*, *sur* and *sous* cannot appear in swiping constructions:[19]

and Ai 2009). It is not at all clear that English *against* and *between* cannot participate in swiping. It is thus possible that English and LFF do in fact converge in allowing theses prepositions in swiping scenarios.

[19]I make note of the fact here that a single counter-example to my claim was included in Ott and Therrien (2020) using the preposition *sous*, given below:

(i) Au XVII siècle, ils vivaient sous le règne d'un certain roi, mais qui *sous* exactement?
in.the 17th century they lived under the reign of.a certain king but who under exactly
'In the 17th century they lived under the reign of a certain king, but which one?'

This example was somewhat of a last minute addition to Ott and Therrien (2020) in order to try to add to the inventory of prepositions tested in LFF swiping and was not corroborated by my consultants. This case is of course problematic for the DR-morpheme proposal given that it is a non-strandable preposition. My initial intuition in Ott and Therrien (2020) was that I had mixed feelings about the licit nature of this example, but in the end decided to add it. In revisiting this case, my judgement leans much more strongly towards it being illicit. My intuition is that perhaps the fact that a simplex *wh*-phrase is being used here (i.e. *qui*), in conjunction with the idiomatic nature of this case led to my decision to include it as acceptable. Admittedly, judgements for some of these swiping cases can be quite subtle and my intuition is that prosody plays a role in determining their acceptability and the prosody of *qui sous* matches that of the highly acceptable LFF swipe *qui pour*, which I feel may also have affected my judgement at the time. I now maintain that this particular example using *qui sous* is illicit, a factor I have now recently corroborated with two other native speakers of LFF.

(38) a. *Le chat s'est caché, mais je ne sais pas quelle boîte *dans*.
the cat itself.is hid but I NEG know not which box in
*'The cat hid, but I don't know which box in.'

b. *Il s'est abrité, mais je ne sais pas quel auvent *sous*.
he himself.is taken.shelter but I NEG know not which awning under
*'He took shelter, but I don't know which awning under.'

c. *Il a placé le livre, mais je ne sais pas quelle table *sur*.
he has placed the book but I NEG know not which table on
*'He placed the book, but I don't know which table on.'

In comparing the cases above against equivalent examples where the prepositions incorporate the DR-morpheme, swiping–although marginal–is much improved:

(39) a. ?Le chat s'est caché, mais je ne sais pas quelle boîte *dedans*.
the cat itself.is hid but I NEG know not which box in
'*The cat hid, but I don't know which box in/inside of.'

b. ?Il s'est abrité, mais je ne sais pas quel auvent *dessous*.
he himself.is taken.shelter but I NEG know not which awning under
'??He took shelter, but I don't know which awning under.'

c. ?Il a placé le livre, mais je ne sais pas quelle table *dessus*.
he has placed the book but I NEG know not which table on
'*He placed the book, but I don't know which table on/on top of.'

I contend that the marginal nature of the examples using *dedans*, *dessus* and *dessous* may be due to several factors. The first is that certain locative prepositions seem to be generally resistant to swiping. As the translations for (39) show, this applies to English as well, where I find that only the preposition 'under/beneath' is marginally acceptable. Other versions of these locative prepositions, whether simplex or complex (e.g. 'on' versus 'on top of') do not seem to work in these particular cases of swiping, even though they are strandable prepositions in English.

Morphological complexity also seems to be a factor, at least to some extent, in the acceptability of swiping constructions. This can be observed if we take into account the complexity of the *wh*-complements being used. If we alter the above examples to ones using the simplex *wh*-phrase 'what', there is a clear effect of an increase in acceptability:

(40) a. The cat hid, but I don't know what ?*in*/**inside of*.

b. He took shelter, but I don't know what *under*.

c. He placed the book, but I don't know what ?*on*/**on top of*.

As the above shows, using a simplex *wh*-phrase significantly improves all of these locative cases, unless the preposition being used is complex in nature, where complexity here refers to multi-word preposition sequences; morphologically complex prepositions (e.g. *dedans*) may still be acceptable

in combination with simplex *wh*-phrases. This extends directly to LFF. Although LFF examples equivalent to (40) using the simplex *wh*-phrase *quoi* cannot be constructed due to the in situ nature of this element (which will be discussed in detail in section 5.4), we can imagine contexts in which the animate complement *qui* might be used, at least with LFF *dessus*:

(41) ??Une mouche a atterri, mais qui *dessus*?
A fly has landed but who on
'??A fly landed, but who on?'

The generalization noted in 5.3.2 on how the complexity of *wh*-phrases affects swiping configurations can be built on here by further taking into account the prepositions they combine with. Below I present a tentative hierarchy on swiping configurations, from least acceptable to most acceptable:

(42) *Hierarchy of complexity in swiping configurations*

a. Complex *wh*-phrase + Complex P (i.e. multi-word Ps) = illicit (e.g. quelle fille *à côté de*)
b. Complex *wh*-phrase + Morphologically complex P = licit (but may be marginal in nature) (e.g. quelle boîte *dedans*)
c. Simplex *wh*-phrase + Morphologically complex P = licit (but may be marginal in nature) (e.g. qui *dessus*)
d. Simplex *wh*-phrase + prosodically complex (i.e. multi-syllabic) P = may be licit or not (i.e. subject to speaker variation) (e.g. qui *avec*)
e. Simplex *wh*-phrase + simplex P = typically licit (e.g. qui *pour*) but some prepositions may show intra-speaker variation in acceptability (e.g. qui *à*)

A generalization we can make of the above is as follows: The less complexity there is in a *Wh-P* swiping remnant, the more likely it is to be acceptable. Of course, the hierarchy above does not capture the full empirical picture where LFF swiping is concerned and applies only to the limited set of prepositions that appear to work in LFF swiping. Some other factor(s) must also come into play in determining why certain strandable prepositions remain unswipable, regardless of the type of *wh*-phrase they combine with or whether the preposition is simplex or complex. Identifying these additional factors must be something that I relegate to future work and constitutes a weakness not only in my own approach to swiping, but all current proposals addressing this topic.[20]

[20]In terms of further identifying the prosodic factors at work in swiping in a more thorough and sophisticated manner, for the time being I suggest a possible experiment to be completed in future work. This experiment could consist of eliciting potential LFF swipes by native speakers and recording these sessions. The pitch tracks of both the swipes considered to be illicit and those considered to be licit could then be compared and examined, looking for prosodic similarities and discrepancies in the different *wh*-phrase + P combinations in an attempt to shed more light on this aspect of swiping. Again, this is something that I will have to relegate to future work.

The empirical picture that emerges in this initial investigation into LFF swiping is a bit murky and in need of further clarification, which I hope future work can provide. The prepositions permissible in LFF swiping do not seem to form a natural class, neither syntactically nor phonologically nor semantically. In addition, although LFF and English converge in many cases where the set of permissible prepositions in swiping is concerned, there are nevertheless some discrepancies. Furthermore, a more careful consideration and side by side comparison of swipes using the prepositions *dans/dedans*, *sur/dessus* and *sous/dessous* shows that although merger of the DR-morpheme leads to marginal cases, these are nevertheless acceptable in comparison to cases using their non-strandable counterparts. The analysis of swiping developed in this thesis thus converges to an extent with the DR-morpheme account of LFF P-stranding. That is, the two phenomena (prepositions without complements and swiping stuctures) find common ground in that both are dependent on merger of a DR-morpheme which allows *wh*-movement out of PPs to avoid violations of anti-locality. This being said, certain prepositions that can freely merge with the DR-morpheme and be stranded in non-elliptical scenarios nevertheless resist swiping. A precise account of the factors which restrict some strandable prepositions from participating in swiping remains elusive at this juncture. This applies not only to my proposal, but every current account on swiping.

5.3.4 Interim summary

So far, we have seen that swiping exists in LFF sluicing (including multiple sluicing), that it is parasitic on *wh*-movement and P-stranding via merger of a DR-morpheme but does not seem to require sprouting, and shows general properties of *wh*-movement. Like English swiping, it only tolerates a subset of *wh*-phrases and prepositions, with a preference for elements of minimal internal complexity. Additionally, LFF patterns with English in that swiping constructions with the set of locative prepositions consisting of *dans/dedans*, *sur/dessus* and *sous/dessous* leads at best to marginal cases. This I argued is likely due, at least in part, to prosodic factors that have as of yet to be clearly identified.

5.4 Theoretical implications

In this section, I discuss some rather significant implications of LFF swiping for the theory of swiping and sluicing. To begin, I will briefly lay out the existing approaches to swiping and then suggest an alternative analysis according to which swiping is derived via standard P-stranding under *wh*-movement(as originally suggested in Ross, 1969). I will ultimately show that although this approach does not immediately derive all properties and constraints observed above, it does avoid certain serious problems faced by alternative analyses.

There exists two main approaches in the literature in accounting for swiping. I label the first type as *internal*-inversion and the second type as *external*-inversion. Building on a suggestion in van Riemsdijk (1978), Lobeck (1995, 61f.) and Merchant (2002) use the concept of an *internal*-inversion approach, proposing that swiping is the result of inversion between the preposition and the *wh*-phrase within the PP remnant. Merchant (2002) suggests the proposed inversion is achieved by *wh*-to-P head movement while Lobeck assumes that the *wh*-phrase moves to the PP's edge.[21] Abstracting away from this difference in implementation, the analysis is schematically illustrated in (44) for the example in (4), repeated in (43) for convenience.

(43) Jean a acheté un cadeau, mais je ne sais pas qui *pour*.
Jean has bought a gift but I NEG know not who for
'Jean bought a gift, but I don't know who for.'

(44) *Internal inversion*
$[_{CP}\ [_{PP}\ qui_i\ pour\ t_i\ ]_k\ \ldots\ \sout{[_{TP}\ \ldots\ t_k\ \ldots\ ]}\ ]$

Variants of the alternative external-inversion approach are developed by Hartman and Ai (2009); Richards (2001); van Craenenbroeck (2004) and Radford and Iwasaki (2015). In the external-inversion approach, it is suggested that the PP containing the *wh*-phrase is raised to some left-peripheral position (labeled XP in (45)),[22] and subsequently the *wh*-phrase is subextracted to an even higher position:[23]

[21] For a recent version of this analysis, assuming articulated structure within the sluicing site (unlike Lobeck), see Murphy (2016).

[22] Modifying this external-inversion approach, Hasegawa (2007) and Larson (2014) suggest that the *wh*-containing PP moves not leftward but rightward (i.e. is extraposed) prior to *wh*-extraction, exempting it from deletion:

(i) *Extraposition*
$[_{CP}\ qui_i\ \ldots\ \sout{[_{TP}\ \ldots\ t_k\ \ldots\ ]}\ [_{PP}\ pour\ t_i\ ]_k\ ]$

The postulated extraposition operation is exceptional and construction-specific, however, since ordinary extraposition in non-elliptical contexts does not permit P-stranding in English and LFF alike (cf. Baltin, 2012; Wexler & Culicover., 1980):

(ii) Who$_i$ did John talk (*yesterday) [*to* t_i] (yesterday)?

(iii) Je ne sais pas qui$_i$ qu'il a acheté un cadeau (*hier) [*pour* t_i] (hier).
I NEG know not who that.he has bought a gift yesterday for
'I don't know who he bought a gift for yesterday.'

Furthermore, given the general clause-boundedness of extraposition (Baltin, 2012), such an approach cannot account for long-distance construals of sluices (as in (25) above) in any principled way (as also observed in Murphy, 2016). Given these facts, I will not consider the extraposition analysis further here.

[23] Regarding the fact that some external-inversion analyses assume that movement of PP is to a TP-external focus position in swiping (e.g. Radford and Iwasaki 2015; Hartman and Ai 2009), these seem to make false predictions where focused PPs are concerned. For instance, Radford and Iwasaki (2015) assume the preposition in swiping is stranded in a Focus head position in a Focus Phrase (FP) above TP, leading to the prediction that PP focus movement could be taken as a prerequisite for swiping to occur (Marc Authier p.c.). This is however not borne out. There seems to me to

(45) *External inversion*

$[_{CP}\ qui_i\ [_{XP}\ [_{PP}\ pour\ t_i\ ]_k\ \ldots\ \sout{[_{TP}\ \ldots\ t_k\ \ldots\ ]}\ ]]$

The commonality between the two types of approaches is the assumption that sluicing is the result of TP-deletion. Consequently, all and any remnants must be evacuated from TP before deletion occurs.[24] But this assumption turns out to be problematic. The relevant configuration that is proposed to derive the swiping order cannot be created outside of elliptical contexts. As the examples below clearly show, regardless of how the inversion of P and *wh*-phrase is assumed to come about, it can never occur in *wh*-in situ configurations (46-a) or when no deletion takes place (46-b) (recall analogous examples from LFF in (19)).

(46) a. *He was talking WHAT *about*?!
b. *What *about* was he talking?

In order to deal with this problem, Merchant (2002) stipulates that his head-movement operation, which adjoins a minimal *wh*-complement to its selecting P-head, can only apply under sluicing, but no principled reason for this restriction is given. Furthermore, where multiple sluicing is concerned, it is not at all clear why this operation can only apply in initial remnants (recall (21) vs. (22)). In fact, it is not even clear on this approach why P–*wh* inversion could not take place in a language like German (a Class 3 restricted P-stranding language, which consequently lacks swiping; recall (9) above). Given that the head-movement operation postulated by Merchant is assumed to apply

be no direct correlation between focused PPs and strandable prepositions in LFF. That is, both productively strandable and robustly non-strandable prepositions are equally felicitous in focused PPs in LFF. This is exemplified below in clefts and fragment answers for non-strandable *jusqu'à* and strandable *pour*:

(i) a. C'est [*jusqu'à* huit heures ce soir]$_F$ qu'elle va rester chez Julie.
it.is until eight o'clock this night that.she will stay at Julie
'It's until eight o'clock tonight that she will stay at Julie's.'
b. A: Elle va rester chez Julie? – B: Oui. [*Jusqu'à* huit heures ce soir]$_F$.
she will stay at Julie yes until eight o'clock this night
A: 'She's going to stay at Julie's?' – B: Yes. 'Until eight o'clock tonight.'
c. C'est [*pour* Lise]$_F$ qu'il a préparé un gâteau.
it.is for Lise that.he has prepared a cake
'It's for Lise that he prepared a cake.'
d. A: Il a préparé un gâteau (pour quelqu'un)? – B: Oui. [*Pour* Lise]$_F$.
he has prepared a cake for someone yes for Lise
A: 'He prepared a cake (for someone)?' – B: Yes. 'For Lise.'

Given that both strandable and non-strandable prepositions are equally felicitous in focused PPs, it seems unlikely that focus movement of PPs could be a prerequisite for swiping to occur in LFF. This factor further weakens the validity of external-inversion approaches relying on movement of PPs to a left-peripheral FP above TP, with subsequent stranding of P in this position.

[24] An exception is Kimura's 2010 analysis (couched in a general in situ approach to sluicing; see also Abe 2015), according to which the *wh*-containing PP remains *in situ* and movement of the *wh*-phrase to the PP's specifier derives the inverted order. On this analysis as on those discussed in the main text, it remains mysterious why no such inversion is possible in the absence of sluicing.

at PF, it is formally entirely distinct from P-stranding under phrasal $\overline{\text{A}}$-movement. Furthermore, an analysis of swiping in terms of head movement falsely rules out any swiping with non-minimal *wh*-phrases (as in (30-b)), as proponents of external-inversion analyses have pointed out (e.g., Hartman & Ai, 2009).

Turning now to external-inversion approaches, I will firstly point out that although they permit complex *wh*-phrases in swiping, the proposals illustrated in (45) above do not fare much better with regard to the other points mentioned. To rule out cases like (46-b) (and, by extension, their LFF counterparts in (19) above), these analyses must restrict swiping to sluicing contexts purely by stipulation. Similarly, the asymmetry between initial and non-initial remnants in multiple sluicing again remains unaccounted for.[25] Nonetheless, external-inversion approaches might appear to have an edge over Merchant's 2002 approach as they attempt to draw a more direct link between inversion in swiping and genuine P-stranding. Hartman and Ai (2009) for example claim that the *wh*-extraction that takes place from PP once it has moved to the left periphery is an instance of P-stranding, which must be independently licensed in the language for swiping to occur. Problematically, as observed by Merchant (2002, 300) (in response to Richards, 2001), the inversion operation they propose takes place in swiping has very little in common with *bona fide* P-stranding since the preposition is left stranded in a derived position in the left periphery.[26] As pointed out by Merchant, the type of P-stranding derivation they propose takes place in swiping actually *violates* a robust and general ban against stranding prepositions in left-peripheral positions (first discussed in Postal, 1972). This is exemplified below:[27]

(47) *Who$_i$ do you think [$_{\text{CP}}$ [*to* t_i]$_k$ (that) John talked t_k]?

Problematically, the type of illicit P-stranding seen in (47) is essentially what all external-inversion analyses of swiping explicitly predict takes place (recall (45)). The fallout of the external-inversion approach to swiping is that it proposes the existence of an *exceptional* type of P-stranding. Furthermore, this exceptional P-stranding must be licensed—for unspecified reasons—only when sluicing takes place but not in any other instance. But then, there is no longer any direct, principled link between swiping and *bona fide* P-stranding, which means in turn that external-inversion approaches fail just like internal-inversion analyses at explaining why English and LFF permit swiping whereas German does not. In short, a major generalization about swiping—its dependence on

[25] Due to their insistence on TP-deletion in sluicing, multiple sluicing must be assumed by such approaches to be derived either by exceptional multiple *wh*-fronting (Merchant, 2001; Richards, 2001) or else by extraposition of the second remnant (Lasnik, 2013). Whichever option we choose, the result is that we are left with an approach that makes the false prediction that both remnants should permit the inverted swiping order, unless the inversion operation applying to the first remnant is blocked from applying to subsequent remnants by stipulation.

[26] The same applies to Lobeck's 1995 and Murphy's 2016 internal-inversion analysis that relies on phrasal movement rather than head movement.

[27] A reviewer for Ott and Therrien (2020) noted that this ban can be taken to follow from Wexler and Culicover's 1980 *Generalized Freezing Principle*, which prohibits extraction from moved XPs.

P-stranding, recognized clearly by Ross (1969)—ultimately remains unaccounted for on all existing approaches.[28]

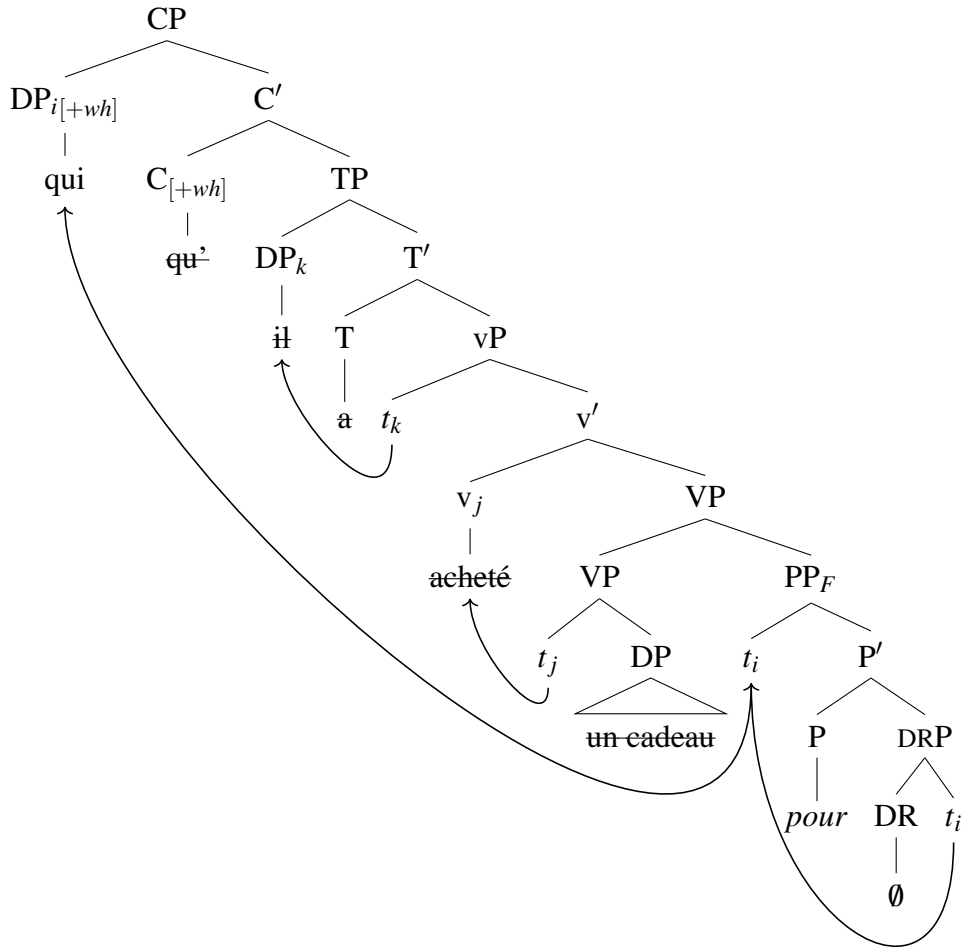
The analysis of swiping I present in this chapter follows the original one put forward in Ott and Therrien (2020). This analysis remedies the serious shortcoming noted above about *internal* and *external*-inversion approaches. That is, the alternative approach I will suggest here draws a direct link between swiping and P-stranding. This is accomplished by rejecting the core assumption that all *internal* and *external*-inversion analyses rely on: sluicing is deletion of a syntactic constituent (IP/TP). Instead, I propose that in swiping, deletion targets all given and prosodically demoted material in the clause (the clausal *background*, excluding any F-marked material including *wh*-phrases; cf. Reich 2007). The analysis is exemplified below for example (16-b), repeated here as (48):

(48) … je ne sais pas qui$_i$ ~~qu'il a acheté un cadeau~~ [*pour* t_i]$_F$

The prosodic deletion analysis I suggests here merges naturally with my DR-morpheme proposal on P-stranding. On the assumption that swiping is derived via standard *wh*-movement, leaving a preposition stranded, the DR-morpheme approach straightforwardly accounts for these derivations, as exemplified in the tree below. Merger of the DR-morpheme (in the standard fashion I have outlined in chapter 4) allows the *wh*-phrase to move to the edge of the PP and escape the PP phase via successive-cyclic movement up to Spec-CP. The preposition remains stranded, and being part of a focused-marked constituent, is exempted from deletion, along with the moved *wh*-phrase. The redundant, prosodically demoted material between the *wh*-phrase and stranded preposition remains unpronounced at PF, yielding the swipe *qui pour*:

[28] I note here that an anonymous reviewer of Ott and Therrien (2020) further points out that this also means that the non-swipability of prepositions that resist stranding (e.g. English *during*) remains unaccounted for. What is more, paired with Merchant's 2004 move-and-delete analysis of non-*wh*-fragments, all existing approaches falsely predict swiping in declarative fragments, which is never an option (recall (20)). This is so because Merchant unifies the syntax of sluicing and fragments, analyzing both as a combination of $\overline{\text{A}}$-movement and subsequent TP-ellipsis. (As also pointed out by an anonymous reviewer, Hartman and Ai 2009 argue that declarative fragments lack a relevant movement step, but as far as I can see this is no more than a convenient stipulation on their part.) If all remnants of clausal ellipsis front alike, it is not clear why only a subset (those containing a *wh*-phrase) should be able to undergo swiping. To be clear, none of the approaches mentioned in the text explicitly adopt Merchant's 2004 analysis of fragments; but all subscribe to an analysis of clausal ellipsis as TP-deletion and countenance exceptional movements, making an analogous approach to non-*wh* remnants virtually inevitable.

(49)



Along the lines of this alternative approach, the preposition is exempted from being deleted not because of any sort of exceptional, ellipsis-induced evacuation movement, but simply by virtue of being part of a surface-discontinuous focal constituent; inversion of preposition and *wh*-phrase is effected by P-stranding *wh*-movement of *qui* alone, allowable via merger of the DR-morpheme which separates the prepositional complement from its selecting phase head, thereby allowing further feature valuation in accordance with Last Resort, and by extension circumventing a violation of the ALC. This analysis of swiping via P-stranding under *wh*-movement is not new: it spells out Ross's 1969 original suggestion that "it is possible to delete everything in [a question] but the question word and a stranded preposition" (p. 265).[29] This view of swiping as deletion aligns it with deaccentuation, an alternative means of prosodic givenness-marking, which can likewise affect non-constituents (cf. Chomsky & Lasnik, 1993; Tancredi, 1992).[30] The insistence on single-

[29]Ott and Struckmeier (2018, 400) also point out that this is the most natural analysis of swiping once clausal ellipsis is analyzed as background deletion rather than TP-deletion.

[30]On deaccentuation ('dephrasing') in French, see Féry 2001.

constituent deletion has been argued to be problematic by Bruening (2015) and Ott and Struckmeier (2018) on independent grounds and is rejected in earlier works such as Hankamer (1979) and Morgan (1973).

By setting aside the exceptional type of operations proposed by *internal* and *external*-inversion approaches, the alternative view of clausal ellipsis in swiping as purely prosodic deletion of recoverable material suggested herein explains straightforwardly why swiping can occur only where P-stranding is independently possible (i.e. under merger of the DR-morpheme), and why the swiping pattern can only arise in elliptical contexts: as shown in (48)/(49), the order $wh \prec P$ arises simply as a result of ordinary P-stranding under *wh*-movement due to merger of the DR-morpheme into the derivation (potentially with intervening material: (23)). Thus, swiping in LFF is dependent on P-stranding which in turn is dependent on merger of the DR-morpheme.

By the same token, this analysis correctly predicts the availability of long-distance construals in swiping (25) as well as the island-sensitivity of the construction (24).[31] Multiple sluicing with swiping in the first remnant is the result of combining P-stranding with a second *in situ* remnant, as shown below for (21):

(50) … je ne sais pas qui$_i$ ~~qu'il a gagné~~ [*contre* t_i]$_F$ [*dans* quel match]$_F$

This reduction of swiping to P-stranding under merger of the DR-morpheme makes sense of the fact that initial but not non-initial remnants in multiple sluicing permit the swiping pattern (recall (22)): the latter always necessarily remain in situ, LFF not being a multiple-*wh*-fronting language. As mentioned earlier and as far as I can see, none of the existing, inversion-based analyses make accurate predictions about swiping in multiple sluicing.

To wrap up the discussion on swiping and provide some evidence for my claims, I present two empirical arguments that favour the alternative approach I have presented, based on LFF data. The first argument concerns the immobile *wh*-phrase *quoi* 'what', which fails to participate in swiping. I argue here that only the PF deletion approach I have presented herein provides a principled explanation for the inability of *quoi* to appear in swiping structures in LFF. My second argument then looks at some interpretive differences between a PP where the preposition is left stranded versus when the entire PP is pied-piped. In examining the two variants (i.e. pied-piping versus P-stranding), I show that it can be detected that swiping does in fact involve genuine P-stranding

[31] Although sluicing has been argued to ameliorate island effects in certain cases (Merchant, 2008; Ross, 1969), there are good reasons accounting for why this sensitivity obtains. Recent research has converged on the conclusion that island amelioration under sluicing (and other forms of clausal ellipsis) does not amount to literal *repair* of a movement violation, but rather constitutes *evasion* of the violation by means of a non-island-containing, semantically parallel source structure (e.g., Barros, 2012; Barros, Elliott, & Thoms, 2013, 2014; Merchant, 2001). However, as shown by Abels (2019), sluices where such construals are impossible *are* just as island-sensitive as regular *wh*-movement in non-elliptical contexts. Furthermore, it has been known since Chung et al. 1995 that 'sprouting'-type sluicing without an overt correlate, which subsumes typical instances of swiping, *is* generally island-sensitive. From this perspective, it is natural to expect island-sensitivity in LFF swiping; see also footnote 13.

rather than initial pied-piping of P (followed by some type of inversion operation), contra to what all other existing approaches propose.

Like European French, LFF has *wh*-phrases that robustly resist fronting. One example is the French counterpart of English 'what', which has a strong (tonic) form *quoi* and a weak (clitic) variant *que*.[32] The former only appears in situ, whereas *que* must surface ex situ:

(51) a. Que/*quoi faut-il faire?
what must-it do

b. Il faut faire quoi/*que?
it must do what
'What must be done?'

As observed by Dagnac (2019), *quoi* can be sluiced; in fact, only *quoi*, but not its weak ex situ counterpart *que* can appear in a sluiced question:

(52) Il faut faire quelque chose. Mais quoi/*que?
it must do something but what
'Something must be done. But what?'

The ability to sluice a robustly immobile element like *quoi* receives a straightforward explanation within the theory of sluicing I am arguing for here as it permits deletion of a non-constituent string. Within the PF-deletion approach, *quoi* in (52) is simply an in-situ remnant of deletion. Approaches that insist on single-constituent deletion must resort to either exceptional evacuation movement, or else a process of ellipsis-conditioned allomorphy.[33] Either type of approach will struggle to capture the facts discussed immediately below, however.

There is one important exception to the general immobility of *quoi*:[34] when it is the complement of a preposition, this *quoi*-containing PP *can* be fronted, as long as the preposition is pied-piped.

(53) a. L'homme a été tué avec quoi/*que?
the.man has been killed with what
'What was the man killed with?'

b. Avec quoi/*que a-t-il été tué?
with what has-T-he been killed
'With what was he killed?'

c. *Quoi a-t-il été tué *avec*?

[32] On *que*/*quoi* as allomorphs, see Hirschbuhler 1978.

[33] Some such process may be independently needed for embedded *quoi*-sluices (as in (22)), where the need for overt *wh*-movement in conjunction with stress assignment appears to override the general immobility of *quoi*, unless such cases could be shown to be composed paratactically. Be this as it may, the facts discussed presently, which use matrix contexts, are inconsistent with the assumption that movement of *quoi* is generally licensed under sluicing.

[34] Another one, irrelevant here, is certain nonfinite contexts; see Obenauer 1976.

We can observe here, that as in previous cases, only strong *quoi* can appear in this context, while the clitic *que* cannot. This includes under sluicing (54). In non-sluicing contexts on the other hand, *quoi* can never invert with and precede its selecting preposition, whether in situ or ex situ (55).

(54) A: Il parlait. – B: De quoi/*que?
he talked about what
A: 'He talked.' – B: 'What about?'

(55) a. *Quoi de parlait-il?
what about talked-he
'What did he talk about?'

b. *Il parlait quoi *de*?
he talked what about
'What did he talk about?'

Merchant's 2002 analysis fails in accounting for the facts observed with *quoi*. Since *quoi* can be fronted as part of a PP (53), his analysis predicts that it should optionally be able to invert with its selecting preposition just in case sluicing applies. This prediction is not borne out, however:[35]

(56) a. A: Il parlait. – B: *Quoi *de*?
he talked what about
A: 'He talked.' – B: 'What about?'

b. *Il a été tué, mais quoi *par*?
he has been killed but what by
'He was killed, but by what?'

By contrast, in applying the alternative analysis I am arguing for here, an illicit swiping construction as in (56-a) is derived as shown in (57-a), making it underlyingly identical to the non-elliptical case in (57-b), which is equally infelicitous.[36]

(57) a. *quoi$_i$ ~~a-t-il parlé~~ [*de* t_i]$_F$

b. *Quoi a-t-il parlé *de*?

As regards external-inversion analyses and the facts surrounding immobile *quoi*, I ask the reader to recall the fact that theses analyses establish no direct link between illicit P-stranding in non-elliptical contexts as in (57-b) and the infelicity of swiping as in (56). This is the case because these approaches all resort to an exceptional type of P-stranding that occurs after the preposition has already been pied-piped. In other words, on such an approach there is no reason why the infelicity

[35] I note here that clitic *que* is equally infelicitous in these configurations (**que de*, **que par*), showing that the infelicity of (56) is not merely due to a wrongly-chosen morphological form.

[36] I will point out here that cases involving *quoi* do not mitigate in any way against the DR-morpheme approach to P-stranding I have proposed herein. Whether the DR-morpheme merges or not, these cases remain illicit simply due to the immobile nature of *quoi*.

of P-stranding in (57-b) should block the application of the sluicing-specific inversion operation illustrated in (45) above, since PP-contained *quoi* can move to the left periphery (53-b) (and appear in sluicing, (54)). I thus argue that the fact that *quoi*-sluices are categorically illicit in LFF points to the conclusion that analyses that propose that swiping is derived by an inversion process that takes place after pied-piping of PP occurs are flawed. Rather, swiping reduces to standard P-stranding under merger of a DR-morpheme and deletion of recoverable material separating the fronted *wh*-phrase from its selecting preposition.[37]

My second and final argument militates even more directly against both internal- and external-inversion analyses of LFF swiping. This argument capitalizes on meaning differences between otherwise identical questions with and without P-stranding. The following paradigm illustrates a case in point.[38]

(58) a. Tu aimerais avoir une des photos de qui?
you would.like to.have one of.the pictures of who
'Who would you like to have one of the pictures of?'

b. Qui aimerais-tu avoir une des photos *de*?
who would.like-you to.have one of.the pictures of
'Who would you like to have one of the pictures of?'

c. De qui aimerais-tu avoir une des photos?
of who would.like-you to.have one of.the pictures
'Who would you like to have (get) one of the pictures from?'

In LFF, the intuition is that that the most natural interpretation of the in situ question in (58-a) is that the PP *de qui* is a complement of the NP *photos*, where the interpretation is that we are being asked 'who we would like a picture of', rather than 'who would we like to receive a picture from'. The case in (58-b) naturally receives the same 'picture of who' interpretation as (58-a). This fact indicates that (58-b) is derived by the *wh*-phrase being subextracted from the complement PP, leaving its selecting preposition stranded. In contrast, the case in (58-c) yields a different interpretation. When the entire *de qui* PP is pied-piped, this case is interpreted as someone asking about the source of the picture rather than its content (i.e. 'from who'). In this last case, the extracted PP is therefore construed as a modifier in the underlying structure, rather than a complement. [39]

The cases exemplified above allow us to make a direct comparison of the predictions made by inversion analyses (both internal and external) of swiping on the one hand and the P-stranding anal-

[37]The force of this argument might appear to be diminished by the fact that we currently lack an understanding of why swiping only tolerates certain *wh–P* sequences. Nevertheless, given that the prepositions *de* (32-a) and *par* (32-c) and other simplex *wh*-phrases (28) can appear in swiping, whereas the infelicity of *quoi*-swipes appears to be categorial, I take the above facts to point to the conclusion that swiping does *not* involve PP-extraction at all.

[38]The examples are modelled after similar cases discussed in Starke 2001, but without any reference to P-stranding.

[39]I suspect that this reading is in principle also supported by (58-a), but is near-inaccessible due to a preference for parsing the postnominal PP as a complement rather than an adjunct in the absence of any indications to the contrary.

ysis I am suggesting on the other, since the former approaches assume that the source of swiping is PP-extraction as in (58-c), whereas I derive it directly from P-stranding as in (58-b). To see this, consider the following swiped variant of the above questions, in an analogous context:

(59) A: J'aimerais avoir une des photos.
I.would.like to.have one of.the pictures
'I'd like to have one of the pictures.'

B: Qui *de*?
who of
'Who would you like to have a picture of?'

According to all TP-deletion-based analyses of swiping, B's response must involve fronting of the PP *de qui* and subsequent inversion, either internal to the PP or by means of subextraction of *qui*. The latter analysis is illustrated below.

(60) a. $[_{XP}\ [_{PP}\ de\ \text{qui}\ ]_k \ldots\ [_{TP} \ldots\ t_k \ldots\ ]] \rightarrow$

b. $[_{CP}\ \text{qui}_i\ [_{XP}\ [_{PP}\ de\ t_i\ ]_k \ldots\ \sout{[_{TP} \ldots\ t_k \ldots\ ]}]]$

As we saw with (58-c), fronting of the entire PP yields the modifier reading (source of the picture, "from who"); consequently, the swiped question in (59) should have the same reading, given that it derives from an analogous source (60-a). However, this is not the case: the interpretation of the swiped example matches that of (58-b), not that of (58-c).[40] While inversion analyses make the wrong prediction about the meaning of B's response in (59), the PF-deletion approach derives the swiping order directly from the meaning-identical question with P-stranding in (58-b):

(61) Qui_i ~~aimerais-tu avoir une des photos~~ $[de\ t_i]_F$?
'Who would you like to have one of the pictures of?'

I thus submit that the interpretation of swiping constructions as in (59) strongly suggests that LFF swiping—and presumably swiping in general—involves bona fide P-stranding derived via merger of a DR-morpheme and prosodic deletion of the informational background, not exceptional P-stranding fed by PP-fronting and TP-deletion.[41]

[40] Interestingly, a non-swiped sluice in response to A's statement in (59), *De qui?* 'Of who?' also appears to match the reading of (58-b) rather than that of (58-c). This might suggest a preference for deriving sluices in LFF from in situ questions where possible. I leave exploration of this interesting question to future research.

[41] An analogous argument based on English data is mentioned in passing by Merchant (2002, 314 fn. 13). He observes that the combination of *for* and *what* can have an idiomatic reading (roughly meaning 'why, for what reason') if and only if *for* is stranded:

(i) a. What did he do that *for*? (≈ Why did he do that?)
b. #*For* what did he do that?

Merchant points out that a corresponding swiping construction has the idiomatic reading (as already noted by Ross,

What is left open by this approach (and any other, as far as I can tell) is an account of the contrasts and subtleties described in sections 5.3.2 and 5.3.3, where only a subset of the possible combinations of (strandable) prepositions and (mobile) *wh*-phrases was found to be permissible in swiping, while others are perceived as less natural or illicit. I will leave it to future research to address this gap in the current understanding of swiping. Given that the observed restrictions concerning permissible prepositions and *wh*-phrases have no obvious characterization in syntactic or semantic terms, it seems likely to me that the $wh \prec P$ surface sequence remaining after deletion must satisfy prosodic constraints and conform to phonotactic preferences. Future work should seek to unravel these factors which, jointly with syntactic constraints pertaining to the mobility of the *wh*-phrases and strandability of the prepositions involved, determine the range of felicitous swiping configurations. Hopefully these investigations will also shed light on the vexing question—left unanswered by all approaches, including my own—why certain languages that permit P-stranding under non-elliptical *wh*-movement, such as Quebec French and Icelandic, nevertheless do not appear to tolerate swiping.

5.5 Conclusion

In this chapter, I have shown that swiping exists outside the Northern Germanic languages: like English but unlike Standard French, LFF permits P-stranding under *wh*-movement and swiping under sluicing. However, as in English the swiping pattern in LFF is heavily constrained: only *wh*-phrases of relatively low internal complexity consistently yield natural results, and the range of prepositions that can appear in LFF swiping is quite limited. Why this is and how the relevant constraints are to be stated remains to be elucidated in future work. I indicated furthermore that swiping in LFF poses significant problems for the widely-adopted TP-deletion approach to sluicing, and that a purely prosodic approach to clausal ellipsis that permits in situ remnants establishes a

1969, 265), suggesting that it does *not* derive from the same source as (i-b).

(ii) He did it, but I don't know what *for*. (≈ . . . why he did it)

As with the above LFF case, it is unclear how any approach assuming movement of the entire PP to the left periphery could account for this fact, given that such an approach necessarily postulates an underlying structure for the swipe in (ii) that is isomorphic to that of (i-b) in relevant respects. By contrast, the P-stranding-*cum*-deletion analysis advocated here does not face this problem, since it analyzes (ii) as shown in (iii), correctly predicting interpretive equivalence with (i-a).

(iii) what$_i$ ~~did he do it~~ [*for* t_i]$_F$

The above observations strongly suggest that inversion analyses are untenable for English and LFF swiping alike and that swiping should instead be analyzed as ordinary *wh*-movement and P-stranding in syntax and subsequent prosodic (non-constituent) deletion at PF. The facts above also add to the body of evidence presented in this thesis that these two languages pattern together and belong to the same class of P-stranding languages (i.e Class 1).

more insightful and empirically accurate link between swiping and P-stranding. Like all other approaches, the analysis leaves open the important question of why P-stranding is a necessary but not a sufficient condition for swiping both in LFF and more generally across languages.

Chapter 6

Conclusion

In this thesis I have investigated both the empirical and theoretical side of the phenomenon of P-stranding in the Franco-Ontarian dialect of Lafontaine French, or LFF. My discussion in chapter 2 provided criteria by which bona fide preposition stranding is to be defined; only syntactic movement of adpositional complements–specifically leftward movement–to a higher position derives bona fide P-stranding. I showed that like English, and unlike Standard French, LFF can productively strand prepositions in accordance with my definition of P-stranding. I further showed that LFF allows this to take place with an array of both simplex and complex prepositions under $\overline{\text{A}}$-movement in question formation as well as different types of relative clauses. Additionally, I provided data that demonstrated that LFF also productively allows P-stranding under A-movement in P-passives, a marked construction which only occurs in a small subset of the languages of the world that allow P-stranding, most of them Germanic.

To begin my investigation into LFF P-stranding, I first provided the necessary background on what the literature on P-stranding tells us about this phenomenon in chapter 2. Beyond defining the characteristics of bona fide P-stranding, I established a P-stranding typology for the languages of the world. Again, this consisted of a division into four classes: Class 1: productive; Class 2: semi-productive; Class 3: restricted; Class 4: illicit. The characteristics that define Class 1 and separate it from the others is that P-stranding is productive under both A and $\overline{\text{A}}$-movement. Based on this typology, I stated that empirical evidence and argumentation provided throughout the rest of the thesis would show that LFF, like English, belongs in the inventory of Class 1 P-stranding languages. The remainder of the chapter provided background on constraints and the distribution of P-stranding under both A and $\overline{\text{A}}$-movement as well as a review and critique of the different theoretical approaches to P-stranding. In this discussion I argued that a structural approach to P-stranding was the most promising way to account for this phenomenon.

In chapter 3 I provided an empirical survey of P-stranding in LFF. I showed that although LFF has a construction known as orphan prepositions, in the same manner as Standard French, there is

much more happening in the grammar of this dialect. I provided data sets backing up my claim that LFF productively allows P-stranding under A and $\overline{\text{A}}$-movement. Using diagnostics on movement and the interpretive properties of pronouns, I further showed that the examples in the data I provided cannot be analyzed as cases of orphaning, but are true cases of movement derived P-stranding; the syntactic movement in these instances leaves evidence of a trace and the gaps cannot be analyzed as containing the null pronoun argued to be present in cases of orphaning. Discussion of a select set of LFF prepositions showed that their use in both OPs and P-stranding differs in significant ways from their Standard French counterparts. The chapter concluded with a discussion of language transfer and presented some preliminary results on a reading time experiment. I argued that this initial data could possibly be showing a trend of LFF patterning together with English in its acceptance of P-stranding. Nevertheless, a more refined analysis and subsequent future experimental work will have to be conducted in order to determine whether the fact that LFF patterns with English in its acceptance of P-stranding constructions is an effect of language contact and reverse transfer.

My syntactic analysis in chapter 4 then provided a theoretical account of why P-stranding is permissible in LFF. Based on work by Abels (2003b, 2012), I argued that PPs in LFF (and all other P-stranding languages) have additional structure that separates adpositions from their complements in P-strandinng scenarios. This additional structure comes in the form of a DRP headed by a DR-morpheme. Evidence for the existence of this morpheme was shown to be present in German and Dutch (and potentially a select set of other languages). In LFF, the DR-morpheme comes in an invariant form *de-* which obligatorily appears on the prepositions *dans*, *sur* and *sous* in P-stranding scenarios. In all cases of P-stranding without an overt DR-morpheme, this element is assumed to be phonologically null. I argued that the additional structure provided by the DR-morpheme allows prepositional complements to move to the edge of a PP phase. The presence of the DR-morpheme separates the prepositional complement from its phase head, allowing movement for reasons of feature valuation via the principle of Last Resort and circumvents any violations of anti-locality. I then applied the DR-morpheme approach to LFF, showing how it can derive P-stranding under both A and $\overline{\text{A}}$-movement, as well as account for the optionality of pied-piping in conjunction with the mechanism of feature percolation. I concluded the chapter with some suggestions about how the idiosyncrasy of individual prepositions may affect their ability to strand, but that ultimately this remains an open question.

Chapter 5 discussed the theoretical implications of swiping in LFF. I discussed the distribution of both *wh*-phrases and prepositions in LFF swiping structures. A review of the current *internal* and *external*-inversion approaches to swiping was provided. I showed that approaches strictly relying on deletion of TP and evacuation of the PP from this domain before ellipsis takes place encounter significant theoretical problems. Crucially, these accounts are not able to draw a meaningful link between P-stranding and swiping. Using evidence from LFF, I argued that swiping can

be derived by non-constituent deletion. I suggested that swiping is reducible to simple prosodic deletion of given material between a moved *wh*-phrase and stranded preposition. Incorporating the DR-morpheme proposal, I demonstrated that the DR-morpheme allows the P-stranding that derives swiping structures. Although the account I provided did not answer all questions where swiping is concerned, I argued that it does allow us to account for Merchant's Preposition Stranding Generalization. By allowing in situ remnants, we are able to draw a more credible link between swiping and P-stranding, a factor that is missing from all other proposals on swiping.

Overall, this thesis has provided empirical evidence and an account of how P-stranding can take place in LFF, thus providing an answer to my central research question. The empirical survey and analysis of P-stranding in LFF showed that this dialect belongs with English among the inventory of Class 1 languages within my P-stranding typology, answering my secondary research question. Nevertheless, like all proposals, there are questions that remain unanswered. Foremost among these is why some prepositions robustly resist stranding. Are these prepositions simply unable to either merge with a DRP or morphologically fuse with a DR-morpheme as I have suggested? Or is prosody at the heart of the issue? Identifying the exact factors restricting these prepositions from participating in P-stranding remains an unsolved puzzle. This factor extends directly to swiping. That is, it remains unclear why the set of prepositions and *wh*-phrases that can participate in swiping in LFF is so restricted, apparently even more so that what has been observed in English.

The ability of LFF to produce P-stranding and swiping structures thus leaves some questions unanswered but at the same time also opens up future avenues of research. Given that LFF arguably has a DR-morpheme like German and Dutch in its grammar, we can ask how widespread this phenomenon is cross-linguistically. The question can be raised of whether or not the DR-morpheme analysis can be extended to languages like Turkish, Russian, Cape Verdean Creole and Papiamentu, accounting for the (restricted) P-stranding that has been observed in these languages. A theory of the distribution of the DR-morpheme would thus be the next step in investigating this element's role in P-stranding cross-linguistically. Interesting possibilities within the realm of experimental work in prosody are also available given what we see in LFF P-stranding and especially swiping, where reduced complexity of the $wh \prec P$ sequence seems to increase the acceptability of these structures. Future work in the areas of syntax, prosody and possibly even semantics and pragmatics may eventually provide us with some answers to these interesting puzzles.

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