

KEYNOTE ARTICLE

Phrase-final prepositions in Quebec French: An empirical study of contact, code-switching and resistance to convergence*

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In this study, we investigate whether preposition stranding, a stereotypical non-standard feature of North American French, results from convergence with English, and the role of bilingual code-switchers in its adoption and diffusion. Establishing strict criteria for the validation of contact-induced change, we make use of the comparative variationist framework, first to situate stranding with respect to the other options for preposition placement with which it coexists in the host language grammar, and then to confront the variable constraints on stranding across source and host languages, contact and pre-contact stages of the host language, mainstream and “bilingual” varieties of the source language, and copious and sparse code-switchers. Detailed comparison with a superficially similar pre-existing native language construction also enables us to assess the possibility of a language-internal model for preposition stranding. Systematic quantitative analyses turned up several lines of evidence militating against the interpretation of convergence. Most compelling are the findings that the conditions giving rise to stranding in French are the same as those operating to produce the native strategy, while none of them are operative in the presumed source. Explicit comparison of copious vs. sparse code-switchers revealed no difference between them, refuting claims that the former are agents of convergence. Results confirm that surface similarities may mask deeper differences, a crucial finding for the study of contact-induced change.

Keywords: grammatical convergence, code-switching, language contact, preposition stranding, variation theory, French

1. Introduction

Grammatical convergence, or the achievement of structural similarity among languages, is widely considered to be a natural outcome of language contact, and much recent work implicates CODE-SWITCHING (CS)

as its major catalyst. Code-switching, in the sense of alternating between distinct languages during a single discourse event, is an online process whose diachronic precursors cannot be reconstructed, so, in contrast to other potential triggers of contact-induced change, its effects must be measured synchronically. To our knowledge, however, convincing demonstrations of this kind of change in progress are few and far between, and, with the notable exception of Torres Cacoullos and Travis (2010), empirical reports of the role of CS in the process, nonexistent.

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To be sure, a scientific test of convergence in progress requires an enormous amount of infrastructure. A first requirement is a study site in which languages have been in long and intense enough contact to even render grammatical transfer feasible, and whose socio-linguistic makeup is conducive and appropriate to CS. A second is a sample of speakers who can be observed to switch between the languages unreflectingly in discourse, as well, for purposes of comparison, as others who do not. From a linguistic perspective, there must be a likely candidate for the contact-induced change, a corpus of

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data furnished by members of the bilingual community containing sufficient occurrences to enable the analyst to detect patterns of use and contextualize them with respect to the linguistic system hosting it, and a real- or apparent-time component against which to assess whether anything HAS in fact changed. Now, until it goes to completion, change manifests itself synchronically in competition among variant forms for the same linguistic work. The method employed must therefore be capable of accounting for such alternation, distinguishing stable variability from change, and differentiating contact-induced change from internal evolution. Abandonment, or at least suspension, of the widespread belief that variability IS change (e.g. Montrul, 2004, p. 130; Sorace, 2004, p. 144; Toribio, 2004, p. 167) will also be required.

With this foundation, and the methodology of variationist sociolinguistics, we propose in this paper to determine whether a stereotypical and stigmatized grammatical feature of Quebec French can be shown to have developed as a result of intense long-term contact with English, as is widely believed, and if so, whether copious code-switchers are its instigators. The candidate for convergent change is variable preposition placement in relative clauses, as illustrated in (1), where speakers alternate between the Standard French option of placing the preposition in clause-initial position along with the remainder of the prepositional phrase, as in (1a), or leaving it bare: in phrase-final position with no adjacent complement, as in (1b).

(1) a. *Clause-initial preposition*

Les anglaises **avec** qui je parlais, ils le croyaient pas. (OH.082.1695)¹

“The anglophones **to** whom I was talking, they didn’t believe it.”

b. *Phrase-final preposition*

J’avais pas personne à parler **avec**. (OH.013.1964)
“I had no one to talk **to**.”

Phrase-final prepositions are prescriptively unacceptable in French, but they are the norm in English, the language with which it has been in intense contact in Canada for centuries. One of the goals of this paper will be to determine whether the placement of *avec* in (1b) is a result of this contact, or – despite the surface similarity with English stranded prepositions – something altogether different. Poplack and Levey (2010) outline a number of hard tests, or criteria, of convergence, most of which involve comparisons with relevant benchmark varieties.

¹ Codes in parentheses refer to speaker number and line number in the *Corpus du français parlé à Ottawa-Hull* (OH; Poplack, 1989), the *Quebec English Corpus* (QEC; Poplack, Walker & Malcolmson, 2006), or the *Récits du français québécois d’autrefois* (RFQ; Poplack & St-Amand, 2007), speaker and line number. All examples, standard and non-standard, are reproduced verbatim from speaker utterances.

A conclusion in favor of contact-induced change should rest on the demonstrations that the candidate feature

- (i) is in fact a change,
- (ii) was not present in the pre-contact variety,
- (iii) is not present in a contemporaneous non-contact variety,
- (iv) behaves in the same way as its putatively borrowed counterpart in the source variety, and
- (v) differs in non-trivial ways from superficially similar constructions in the host language, if any.²

In this paper we address each of these criteria, focusing especially on (iv) and (v). By means of systematic quantitative comparisons, we situate phrase-final prepositions with respect to their apparent counterparts in the presumed source variety on the one hand, and to co-existing native (i.e. not borrowed) French options for preposition placement on the other.

1.1 *Code-switching and convergence: The received wisdom*

At least since Gumperz and Wilson famously implicated CS in the convergence of Kupwar Urdu, Marathi and Kannada into a “single syntactic surface structure” (1971, p. 256), CS has been identified as a key mechanism for contact-induced change in general, and structural convergence in particular (e.g. Backus, 2004, 2005; Fuller, 1996; Heath, 1989; Muysken, 2000; Thomason, 2001; Toribio, 2004; Winford, 2005). The evidence underlying Gumperz and Wilson’s sweeping claim was thin,³ and current accounts of exactly HOW such a mechanism might operate to bring about language change remain vague. Winford’s (2005, p. 90) explanation of the Kupwar situation is that CS weakens language boundaries and makes them more permeable to external influence. For Backus (2005, p. 334), CS “function[s] to model syntactic patterns which are then subsequently imitated in the base language”. Silva-Corvalan (1998) and Toribio (2004) implicate the processing demands of CS as motivations for convergence. Heath (1989, p. 35) suggests that CS and “vanguard” borrowings set up “routines” for future borrowing. Such accounts could be multiplied. But the literature offers more in the way of assertions than explanations: CS is a “powerful vehicle for diffusion of structural and other features across languages” (Winford, 2005, p. 86), CS brings about structural borrowing

² Some (e.g. Heine & Kuteva, 2005) would argue that criterion (iv) is not strictly necessary, since contact could simply act as a trigger for internal development. Absent a straightforward test of this hypothesis, however, we continue to rely on systematic comparison between the candidate for convergence and the purported source.

³ Based as it was on unsystematic observation of some 10,000 words of unidentified text.

(Backus, 2005, p. 309), structural elements introduced by CS progress to permanence in the same way as internal innovations (Thomason, 2001, p. 136), CS “promulgates the striving towards convergence” (Toribio, 2004, p. 172), among many others. Indeed, the candidate for contact-induced change under investigation here was reported by Winford (2005, p. 69) to have been initiated in Prince Edward Island French by “fluent bilinguals who practiced frequent CS” (despite the pains taken by King (2000, p. 176), the author of the study, to rule out CS as a cause).

It is in this context that we situate the present study of preposition placement in Quebec French, and the role of code-switchers in introducing the bare variant and propagating it across the bilingual speech community. The research we report here was specifically designed to instantiate the social and linguistic conditions considered to be propitious to convergence (Poplack, 1989), while bringing rigorous methodology to bear on the evidence. In keeping with Thomason’s (2001, p. 94) requirements for making a “solid case for contact-induced change”, we (i) identify the presumed source of the change; here, English, (ii) determine the existence of shared structure by means of detailed comparative analyses of the factors affecting preposition placement in source and host varieties, (iii) situate the candidate for convergence with respect to the host linguistic system of preposition placement, and (iv) assess whether the phrase-final variant represents a change by investigating its presence in an earlier, pre-contact variety of French. The specific contribution of code-switching, if any, to initiating and propagating contact-induced change emerges from detailed comparison of the linguistic behavior of copious vs. sparse code-switchers in the community. Consideration of all of these lines of evidence will enable us to rule out contact as a determining factor, and confirm that phrase-final prepositions are the product of internal evolution via analogical extension to a novel context of a similar native strategy.

1.2 Preposition placement in the source: English relative clauses

We begin with a brief overview of the relevant properties of the candidate for convergence in the putative source. We cannot do justice here to the vast literature, synchronic and diachronic, on preposition placement in English; since convergence arises out of usage, we limit this discussion to key patterns that have emerged from corpus-based studies. In deciding where to place the preposition, English speakers may also choose between placing the preposition at the head of the phrase, to which, following Ross (1967), we refer as *PIED-PIPING* (PP), as in (2), and leaving it in phrase-final position with no adjacent complement, commonly known as *STRANDING* (S; (3a–c)).

(2) *Pied-piping* (with *wh*-relative)

I think that- that the direction **in** (PP) which Canadians want to go today is getting better. (QEC.317.746)

(3) *Stranding*

a. *wh*-relative

I don’t know which place they’re **from** (S) just by looking at them. (QEC.308.1019)

b. *that*-relative

This is something that I could probably get interested **in** (S). (QEC.192.66)

c. zero relative

And this is the guy \emptyset I’ve always had a crush **on** (S). (QEC.301.1372)

These options are available in three major contexts: relative clauses, *wh*-questions and prepositional passives. In the French data we examine here, however, phrase-final prepositions occur only in the first, so for purposes of comparison, we focus on English relative clauses. Here, the choice between pied-piping and stranding is not free, but is said to be constrained by a complex set of rules, mediated in the first instance by choice of relative pronoun. With *that* (3b) and zero (3c) relatives, stranding is categorical; only *wh*-relativizers admit variation ((2) and (3a)). Where variant choice is an option, contextual factors like syntactic function of the prepositional phrase, type of phrase into which the prepositional phrase is embedded, and most important, speech style (pied-piping being associated with formal registers), have been found to play a role in the British component of the *International Corpus of English* (ICE-GB) studied by Hoffmann (2005, p. 259). Idiosyncratic lexical effects have also been cited: some prepositions (e.g. *beyond*, *under*) are said to require pied-piping, some phrasal verbs (e.g. *put up with*, *get rid of*, *look out for*) strand obligatorily, and some types of antecedent trigger pied-piping (e.g. Culicover, 1999; Pullum & Huddleston, 2002). Still, Hoffmann (2005, p. 263) reports that few prepositions in contexts admitting variability were stranded in ICE-GB; pied-piping accounted for 92% of the *wh*-relative clauses. Studies of other corpora of contemporary educated spoken British English (Johansson & Geisler, 1998; Quirk, 1957, cited in Bergh & Seppänen, 2000) likewise found stranding to be relatively rare (under 21%), albeit more frequent, if not the norm (Herrmann, 2003) in the “dialects”. Such inter-dialectal differences in stranding rates raise the question of the *STRENGTH* of the target model, a key, though understudied, predictor of convergent change. We return to this issue in Section 5.1 below.

1.3 Preposition placement in French relative clauses

In contrast to the complexity of the English patterns described above, the Standard French prescriptive rule is quite straightforward: the preposition must be followed

by its complement, as exemplified by the citation from *Le bon usage* in (4).

- (4) L'usage ordinaire demande que la préposition soit suivie immédiatement de son régime.

(Grevisse & Goosse, 2008, p. 1330)

“Normal usage requires that the preposition be followed immediately by its complement.”

Vernacular French offers other options, however, one of which, as in (1b) above, is leaving the preposition bare, with no adjacent complement. These are variously referred to in the literature as *INTRANSITIVE* (Vinet, 1979, 1984), *STRANDED* (King, 2000; King & Roberge, 1990; Roberge & Rosen, 1999) or *ORPHAN* (Barbaud, 1998; King, 2005; Roberge, 1998) prepositions. Although, as detailed in Section 7 below, Standard French occasionally admits prepositions with no overt complement as well, relative clauses do not figure among the contexts in which this is sanctioned. In this paper, for ease of exposition, we provisionally retain the term *STRANDING* for bare French prepositions in relative clause contexts (i.e. contexts admitting this process in *ENGLISH*), reserving the term *ORPHANING* (Zribi-Hertz, 1984) for phrase-final prepositions in other indicative sentence constructions (Zentz, 2006; and Section 7 below). After establishing the properties of the two classes of context and the prepositions that occur within them, we return in Section 9 to the question of whether prepositions in examples like (1b) are more appropriately characterized as *STRANDED* or *ORPHANED*.

Phrase-final prepositions are a well-documented feature of North American French (Flikeid, 1989, for Nova Scotian French; King, 2000; King & Roberge, 1990, for Prince Edward Island French; Roy, Lefebvre & Régimbald, 1982; Vinet, 1984, for Montreal French; and Roberge & Rosen, 1999, for a comparison of Louisiana, Alberta, Quebec, Ontario and Prince Edward Island French), though its varieties are reported to differ somewhat in terms of the number and type of strandable prepositions, as well as the contexts where stranding is admissible.⁴ The general consensus, as emerges from syntactic analysis of the underlying structure of the null complements, is that both Vernacular French relative clauses and bare prepositions differ in crucial ways from their English counterparts. The conclusion is that bare prepositions in Quebec French relative clauses cannot be equated with English stranded prepositions; the surface similarities between them are apparent only (Barbaud, 1998; Bouchard, 1982; Roberge 1998; Roberge & Rosen, 1999; Vinet, 1979, 1984; Zribi-Hertz, 1984). We return to this issue in Section 9.

Still, the rarity of bare prepositions in the languages of the world (van Riemsdijk, 1978; Vinet, 1984), and the

purported absence of this construction in other Romance languages and other varieties of French (Vinet, 1979, p. 117; 1984, p. 234), coupled with the intense contact with English in North America, would support the inference that this state of affairs is somehow attributable to contact with English. Indeed, Roberge (1998, p. 57) observes that no one would doubt it. Few linguists would endorse direct syntactic influence, however, though whether it is mediated by lexical borrowing (King, 2000; Vinet, 1984) or is a consequence of reanalysis elsewhere in the grammar triggered by the contact with English (Barbaud 1998; Roberge, 1998; Roberge & Rosen, 1999) is unclear.

While this work has gone a long way towards clarifying the syntactic structure of prototypical prepositional complements in the two languages, none of it (with the possible exception of King, 2000, 2005, for Prince Edward Island French) has examined speech. Whether speakers' *ACTUAL USE* of these constructions follows English-like or French-like patterns thus remains an open question. The answer to this question is key, since, as we noted earlier, convergence can only arise from usage. This is the focus of the research reported here. In addition, we test the further hypothesis that French-speaking individuals who regularly code-switch to English (where preposition stranding is the norm), may also, presumably by virtue of frequent activation of English grammar, come to draw on it in deciding where to place their French prepositions while speaking French.

Moreover, the foregoing examples show that preposition placement is a *VARIABLE* process. Previous studies have not explicitly contextualized the phrase-final variant with respect to the other options for preposition placement with which it competes in the relevant (relative clause) context. These include the (standard) pied-piping, described in (4) above and exemplified in (1a) and (5), and elimination of the preposition altogether, in a process known as *ABSORPTION* (A; Barbaud, 1998; see also Bouchard, 1982; Frei, 1929; Gadet, 2003; Roberge & Rosen, 1999; Vinet, 1984), as in (6). In (6) and subsequent examples of absorption, “[]” indicates an absorbed preposition, with no stand taken as to position.

- (5) *Pied-piping*

Oui, ça dépend **avec** (PP) qui je parle.

(OH.40.3020)

“Yes, that depends on **with** whom I'm speaking.”

- (6) *Absorption*

Il y avait un gars que je parlais [] (A) une journée, puis j'étais bien chum avec. (OH. 013.1645)

“There was a guy that I talked [] one day, that I was real friendly with.”

An accurate account of preposition stranding in French cannot be achieved without ascertaining how

⁴ Most of this work is based on native-speaker intuitions and/or acceptability judgments, and may or may not represent actual usage.

the putatively borrowed structure interacts with these native options for preposition placement, as well as the motivations for selecting one over another. These are questions we will address in ensuing sections.

2. Data and method

2.1 The contact situation

The linguistic materials we report on here were gathered along the Quebec–Ontario border in the national capital region of Canada. This is the site of intense and long-term contact between French, the official and majority language of Quebec, and English, its counterpart in the province of Ontario. A computerized corpus was constructed from data provided by a random sample of 120 bilingual francophones resident in the region, stratified according to age and intensity of contact. Crucially for this study, their individual bilingual proficiency and propensity to code-switch were also controlled.⁵ The *Ottawa-Hull French Corpus* (Poplack, 1989) is a massive compendium of informal speech, containing many spontaneous manifestations of French and English alone and in a variety of combinations. The one which interests us here is code-switching, operationally defined as the “alternation, within a single discourse, between sentences or multiword sentence fragments, each of which is internally consistent with the morphological and syntactic (and optionally, phonological) rules of the language of its provenance” (Poplack, 1993, p. 256). This is illustrated in (7).

(7) Code-switching

Vois-tu? Puis ça c’est toute bien pas trop de sa faute à lui, *he just can’t do it*, vois-tu? Tu sais, il est pas capable. Fait que *you have to*. (OH.007.1426)

“See? And that’s not all his fault, he just can’t do it, see? So you have to.”

Although the issue of just what should count as “code-switching” remains controversial, it stands to reason that the larger the chunks of the donor language involved, the more grammatical structure available for transfer (e.g. Backus, 2005; Winford, 2005). For the purposes of this study, then, informants were selected on the basis of their ability to engage in such alternation between multiword fragments in the two languages, rather than on their rates of lexical borrowing.

The 19 participants whose preposition placement we study here display different levels of bilingual ability and propensities to code-switch, classified as “copious” (20 or

⁵ Bilingual proficiency was calculated from scores on a cumulative English Proficiency Index created for each sample member (Poplack, 1989).

more switches per recording), or “sparse” (under 20; see Zentz [2006] for details of sample constitution). Needless to say, these labels are only relative: absolute rates of code-switching cannot be established given that it is unclear what would constitute the denominator. Nonetheless, if the claims of Backus (2005), Thomason (2001), Toribio (2004) and others are correct, individuals who code-switch more should also lead contact-induced changes. In Section 4, we test this prediction empirically.

2.2 Applying the comparative variationist framework to the investigation of grammatical convergence

The variationist approach to language seeks to account for the fact that in normal discourse, speakers, bilingual as well as monolingual, continually engage in choices amongst alternatives which have the same referential meaning or function in specific linguistic contexts. These choices are not free, but are subject to constraints imposed by the features of the linguistic (and extra-linguistic) environments in which they occur. The features are operationalized as factors, which themselves are hypotheses about what motivates variant choice. Among the hypotheses regarding preposition placement examined here, some involve aspects of the preposition (function, semantic weight, lexical identity), others relate to the verb it complements (necessity of the prepositional phrase to interpret the verb semantics, lexical identity), still others involve the complement (type, humanness, adjacency to the verb). As described in the next section, each of these has been invoked in the literature in connection with choice of one or another preposition placement strategy.

2.3 Factors relating to the preposition

Lexical identity

A number of scholars stress the idiosyncratic lexical properties of the preposition as contributors to placement strategies. Togeby (1984) notes that “conjoined” prepositions (*de, à, en, par, sur, sous, dès, hors, dans, chez, vers, parmi*) are always followed by a complement. Likewise, Kayne (1975) asserts that the prepositions *de, à* and *en* cannot stand alone, echoing Grevisse and Goosse (2008) in (8). Accordingly, each preposition was coded according to its individual lexical identity.⁶

(8) Avec les prépositions *à* et *de*, l’omission du régime est impossible. (Grevisse & Goosse, 2008, p. 1509)
“With the prepositions *à* and *de*, omission of the complement is impossible.”

⁶ Absorbed prepositions, where no overt material is involved, were coded as “unidentifiable” when the intended preposition could not be clearly inferred, as in (6).

Semantic weight

Another factor widely considered (Ambrose, 1987; Bouchard 1982; Koster, 1978; Takami, 1992; Vinet, 1984; Zribi-Hertz, 1984) to affect preposition placement is semantic weight. Semantically rich prepositions are considered more prone to stranding, while “weak” (semantically empty) prepositions would be more likely to be absorbed (Bouchard, 1982). To operationalize this notion, we distinguished prepositions in environments where their meaning could only be decoded in conjunction with the context or the verb they co-occur with (e.g. *parler de* “talk about”, *venir de* “come from” in (9)), which we coded as WEAK, from those whose semantic reading is context-independent. These were coded as STRONG (10).⁷

(9) *Semantically weak*

- a. C’est **du** (PP) passé je parle là, je déterre les morts là. (OH.082.1191)
 “It’s **about** the past I’m talking, I’m digging up skeletons.”
- b. Je lui ai demandé le lieu **d’où** (PP) il venait. (OH.082.1334)
 “I asked him the place **from** which he came.”

(10) *Semantically strong*

- a. Ça c’est le nom de celui que je reste **avec** (S). (OH.090.1080)
 “That’s the name of the one that I’m living **with**.”
- b. Ça dépend **avec** (PP) qui-ce tu te tiens. (OH.105.1176)
 “That depends on **with** whom you hang out.”
- c. Puis il y a bien des affaires j’avais de la misère **avec** (S). (OH.052.1216)
 “And there are lots of things I had trouble **with**.”

2.4 Factors relating to the complement**Construction type**

Another factor cited in connection with variant choice is construction type. In ordinary relative clauses (on subject NPs; (11a)), pied-piping is said to be favored (Grevisse & Goosse, 2008), as is absorption. Absorption is also said to be particularly promoted in pseudo-clefts (phrases headed by *ce* + preposition + *quoi*, which according to Barbaud (1998, p. 11) become relexicalized as [skə], as in (11b), or [kəsk], as in (15a) below, absorbing the preposition). Bare prepositions, on the other hand, are categorically disallowed in Standard French ordinary relatives on subject NPs (Vinet, 1984), while CLEFT constructions (11c) are said to favor stranding (at least for interrogative structures (ibid.), not included in this

analysis), an effect we also test on the indicative structures of interest here.

(11) a. *Ordinary relative (on subject NP)*

Je protégeais le monde **avec** (PP) qui je traitais. (OH.082.2947)

“I protected the people **with** whom I dealt.”

b. *Pseudo-cleft*

Ils m’ont donné là, disons le nécessaire là, ce **que** j’avais besoin [] (A). (OH.111.421)

“They gave me, let’s say the essentials, that I needed [].”

c. *Cleft*

C’est toute du monde de leur âge là-dedans qu’ils peuvent se- s’arranger **avec** (S). (OH.052.781)

“It’s all people their age in there that they can get along **with**.”

Based on the claims in the literature, we hypothesize that stranding will be favored in the same contexts as absorption, with the exception of pseudo-clefts, which should favor only absorption.

Humanness of the complement

Animacy or humanness of the NP complement of the prepositional phrase in question has also been invoked to explain preposition placement. Porquier (2001), for instance, claims that certain prepositions only occur with animate complements (also Zribi-Hertz, 1984, but see Vinet, 1984, for a contrary view). Here we distinguish human (12a) from non-human (12b) complements.

(12) a. *Human complement*

Mais celui je travaillais **pour** (S), . . . ses enfants ils parlaient anglais. (OH.060.1426)

“But the one I worked **for**, his kids they spoke English.”

b. *Non-human complement*

Définiment [sic], oui. Il y a- les fêtes qu’on allait [] (A), ça durait plus longtemps. (OH.002.976)

“Absolutely, yes. There are- the parties that we went [], they lasted longer.”

Proximity and place of preposition with respect to verb complement

Proximity of the preposition to the verb it complements is also considered to affect preposition placement (Vinet, 1984): the greater the distance, the more likely an overt complement. Proximity is difficult to measure directly, however, since French complements may either intervene between verb and preposition or be cliticized. Our operationalization distinguishes verbal complexes that, in addition to a prepositional phrase complement, contained a cliticized (13a) or post-verbal (13b) complement, from no additional complement to the VP at all (13c).

⁷ The widely invoked role of FUNCTION of the preposition in relation to the verb it complements as a factor in preposition placement was initially considered, but found to overlap almost completely with SEMANTIC WEIGHT (Zentz, 2006). We do not consider it further here.

- (13) a. *Clitic complement present (other than the prepositional phrase analyzed)*
 Mon amie de femme, c'est ça qu'elle me parlait [] (A). (OH.22.1188)
 "My girlfriend, that's what she talked to me []."
- b. *Post-verbal complement present (other than the prepositional phrase analyzed)*
 D'autres gens de ton âge là, **avec** (PP) qui tu peux parler de différentes choses. (OH.111.583)
 "Other people your age, **with** whom you can talk about different things."
- c. *No other verbal complement present (other than the prepositional phrase analyzed)*
 Et puis j'aimais ça la manière qu'ils Ø parlaient [] (A) Ø. (OH.116.2003)
 "And I liked the way that they talked."

As separating the preposition from the verb could arguably affect interpretability, we hypothesize that pied-piping would be favored under such conditions, while stranding would be preferred when no other complement intervenes.

2.5 Factors relating to the verb

Obligatoriness of the prepositional complement

Another question concerns the necessity of the prepositional complement for the correct interpretation of the verb semantics.⁸ "Intransitive" prepositions, which in formalist accounts are base-generated with the verb (Hornstein & Weinberg, 1981; Kayne, 1975) are essential to the verb's meaning. These are the prepositions that tend to be stranded in English. We coded verbal events that require a complement to complete their meaning as OBLIGATORY, as in (14a), hypothesizing that these will favor stranding and (following Vinet, 1984) disfavor absorption. Cases where the complement is not required to interpret the meaning of the verb were coded as NON-OBLIGATORY, as in (14b).

- (14) a. *Obligatory prepositional complement*
 Ça va faire sept ans je reste **avec** (S). (OH.90.1170)
 "It's going on seven years I'm living **with**."
- b. *Non-obligatory prepositional complement*
 Puis ils s'attendaient que les grosses familles étaient pour le faire nourrir. Lui assis dans son... dans son domaine là, **où-ce-qu'il** (PP) avait quasiment absolument rien à faire. (OH.003.420)

⁸ This factor differs from SEMANTIC WEIGHT of the preposition insofar as the latter focuses on the meaning of the preposition itself, while obligatoriness concerns the interpretation of the verb.

"And they expected that the big families would feed him. Him ensconced in his manor there, **where** he had almost absolutely nothing to do."

Lexical identity

According to some accounts (e.g. Koster, 1978; McBriarty, 1935; Porquier, 2001; Zribi-Hertz, 1984), idiosyncratic lexical properties of the verb which the preposition complements may also affect preposition placement. As with the prepositions, we distinguished every verb employed in a context in which one of the variants under study is admissible.

2.6 Multivariate analysis of the contribution of factors to preposition placement strategy

From the recorded conversations of the copious and sparse code-switchers constituting our speaker sample, we extracted every preposition occurring in a restrictive relative clause with an overt or null prepositional complement (the "variable context" for stranding), and coded them for each of the factors listed above. Independent multivariate, or VARIABLE RULE analyses (Rand & Sankoff, 1990) allow us to determine which ones contribute significant effects to choice of preposition placement strategy, as well as the magnitude and direction of the effect. We construe the constraint hierarchies yielded by variable rule analysis as the STRUCTURE of the choice mechanism, and we use this information – in ways we demonstrate below – to determine the provenance of phrase-final prepositions in relative clause constructions. By comparing this variable structure across cohorts, we assess whether change has occurred and if so, whether, and to what extent, CS can be implicated.

3. Results

3.1 Stranding

Table 1 displays the distribution of preposition placement strategies in the data.

A first surprising finding, in view of the amount of attention bare prepositions have garnered, is that contexts

Table 1. Overall distribution of preposition placement strategies in stranding contexts.

Variants	%	N
Absorption	51	172
Pied-piping	37	127
Stranding	12	41
Total	100	340

Table 2. Variable rule analysis of the factors selected as significant to preposition STRANDING.

Total N:	41/340		
Corrected mean:	.01 ^a		
	Probability	%	N
Construction type			
Pseudo-cleft	.93	18	7/39
Ordinary relative	.43	13	29/217
Cleft sentence	.40	6	5/84
Proximity of preposition to V complement			
No additional complement	.63	16	33/203
Additional clitic complement	.50	8	5/62
Additional post-V complement	.20	4	3/75
Semantic weight			
Strong	.99	50	39/78
Weak	.20	1	2/262

^aWhereas in general the corrected mean closely reflects the overall rate of variant selection in the community, because of the asymmetrical distribution of stranded tokens across weak and strong prepositions discussed below, this relationship appears distorted.

where they are even an option in French are themselves very rare – of the thousands of (subject and object) noun phrases in the data that could have been relativized, only 340 were – and within those contexts, prepositions occur phrase-finally no more than 12% of the time.⁹ This is a very minor phenomenon in French.

What motivates a speaker to choose to leave a preposition bare rather than to absorb or pied-pipe it? Variable rule analysis of the factors hypothesized to contribute to the choice of stranding (Table 2) shows that two syntactic factors play a role: construction type – stranding is favored with PSEUDO-CLEFTS, as in (11b) above – and proximity of the preposition to the verb complement – stranding is favored when there is no additional complement.¹⁰ We return to these effects below. But by far the strongest predictor of stranding is semantic weight.¹¹ With a probability of .99, strong prepositions are extremely likely to be stranded. On the other hand, weak

⁹ Relative clauses are notoriously uncommon in running speech in general (Lealess & Smith, 2008; Poplack et al., 2006; Tottie & Harvie, 2000; etc.). There were only 262 occurrences of relative clauses in the 282-thousand-word *Oshawa-Whitby English Corpus* studied in Section 6.

¹⁰ Because the factors of humanness and obligatoriness of the complement were not significant in earlier analyses (Zentz, 2006), we do not consider them further in this or ensuing analyses.

¹¹ Relative magnitude of effect of a factor, here and in what follows, is measured by its RANGE: the difference between the highest and lowest factor weights in a factor group. The range for the factor of semantic weight is 79.

Table 3. Rate of preposition STRANDING by lexical identity and semantic weight of the preposition. (The shading highlights the discrepancies in the behavior of weak and strong prepositions.)

Preposition	Weak		Strong	
	% stranding	N	% stranding	N
<i>à</i>	0	0/159	0	0/1
<i>de</i>	2	2/88	0	0/2
<i>avec</i>	—	—	64	25/39
<i>dedans</i>	—	—	75	3/4
<i>pour</i>	—	—	60	3/5
<i>dessus</i>	—	—	100	4/4
Other	0	0/15	17	4/23
Total	1	2/262	50	39/78

prepositions never appear bare. The only two exceptions, shown in (15), are flagged with discourse markers like *tu sais* “you know” and *hein* “eh”, further evidence of their anomalous status.¹²

- (15) a. C’est pas croyable qu’est-ce qu’ils peuvent sortir, tout ce qu’on peut se servir **de-** (S) tu sais?
(OH.116.146)
“It’s unbelievable, what they can come up **with**, everything we can use, you know?”
- b. Beaucoup de choses qu’on parle **de** (S), hein, que... disons c’est confidentiel ces choses-là.
(OH.040.2074)
“A lot of things that we talk **about**, eh, that... let’s say those things are confidential.”

But closer inspection (Table 3) shows that the labels STRONG and WEAK are masking an idiosyncratic lexical effect: 94% (247/262) of all prepositions labeled as WEAK are actually instances of *à* and *de*, both of which virtually never appear phrase-finally, while *avec* makes up exactly half (39/78) of the STRONG category, and by itself accounts for nearly 2/3 (25/41) of the stranded prepositions. In fact, so lexically restricted is stranding that 85% (35/41) involves just four prepositions (all strong): *avec* “with”, *pour* “for”, *dedans* “in” and *dessus* “on”.

3.2 Other strategies for preposition placement in relative clauses

Absorption

We noted above that prepositions are stranded in only 12% of eligible contexts. How are they treated in the remaining 88% of the materials? One solution is to eliminate them altogether, in the process we have referred to as ABSORPTION, exemplified in (6) above and (16).

¹² We thank one of the reviewers for calling this to our attention.

(16) *Absorption*

(Pourquoi tu as changé [d'école]?) Pour faire quelque chose de différent, du nouveau monde à parler [] (A). (OH.002.040)
 “(Why did you change [schools]?) To do something different, new people to speak [].”

Barbaud analyzes absorption as a bid to AVOID stranding, resulting from a “growing tendency” towards fronting arguments (via clefting, pseudo-clefting, left dislocation, relativization, etc.), leading to weakening of verbal subcategorization constraints, and facilitating in turn omission of the preposition. From a somewhat different angle, Roberge and Rosen (1999) invoke the ongoing replacement in spoken French of relative pronouns which embody the semantic content of prepositions (e.g. *dont* “of whom/which”, *duquel* “of which”) by *que* “that”, which does not. The presence of *que*, then, makes post-verbal position the only available site for the preposition, which speakers would (presumably) rather eliminate than strand.

Table 1, which charts the distribution of preposition placement strategies in stranding contexts, reveals that more than half of all prepositions are absorbed, making THIS the majority variant. Note that absorption has no real counterpart in English, as can be seen from the glosses to examples (6) and (16).

Multivariate analysis (Table 4) reveals that two factors contribute equally (as assessed by the range) to the choice of absorption: construction type, with pseudo-clefts disfavoring this time, and semantic weight of the preposition. Here weak prepositions PROMOTE absorption, the opposite of what we found for stranding. In fact, 91% (157/172) of the absorbed prepositions are weak. The lexical effect is overwhelming here too (Table 5): by far the majority turn out to be *à* and *de*. These most frequently absorbed prepositions are exactly the ones which, as we have seen, are virtually never stranded).¹³

¹³ Another reviewer points out that the prepositions we have coded as semantically weak are also phonologically weak (insofar as they cannot bear stress, are often cliticized to the following article, etc.), and this may also contribute to their avoidance of stranding. These prepositions may be stranded in other dialects, however (see King, 2000, 2005; King & Roberge, 1990; Roberge, 1998; Roberge & Rosen, 1999); see the example in (i) from Timmins (Ontario) French.

- (i) Il était à la même école que moi j'étais à (S).
 (FO.001.159, cited in Dion, 2003)
 “He was at the same school that I was at.”

This, in conjunction with our finding that only a very small cohort of the prepositions normally classified as (semantically OR phonologically) weak or strong is affected, is behind our suggestion (Section 7.2) that the determining factor is more accurately described as lexical.

Table 4. Variable rule analysis of the factors selected as significant to preposition ABSORPTION.

Total N:	172/340		
Corrected mean:	.47		
	Probability	%	N
Construction type			
Cleft sentence	.62	62	52/84
Ordinary relative	.55	53	114/217
Pseudo-cleft	.11	15	6/39
Semantic weight			
Weak	.62	60	157/262
Strong	.17	19	15/78

Table 5. Lexical distribution of absorbed prepositions.

Preposition	%	N
<i>à</i>	42	72
<i>de</i>	41	70
Other	17	30
Total	100	172

Pied-piping

The final option for preposition placement is the standard pied-piping, exemplified in (17) (as well as (1a), (5), (9), (10b), (11a), (13b) and (14b) above).

(17) *Pied-piping*

Ça fait que tout partout où (PP) ce que je sais je pouvais me faire une cenne . . . je travaillais.
 (OH.105.3573)

“So everywhere **where** I knew I could make a buck, I worked.”

Though this variant has not attracted nearly as much attention as the other two, we note that it too is quite robust, accounting for almost 40% of the data (Table 1). Table 6 displays the factors conditioning its selection.

Here again, construction type exerts a significant effect, this time with pseudo-clefts highly favoring pied-piping, the opposite of what we found for absorption. It is also promoted where the preposition is separated from the verb by an additional post-verbal complement, as in (13b) above, or a clitic, as in (13a), thus ensuring that both preposition and complement are explicit in the phrase. It is disfavored when there is no other complement; this is a more favorable context for stranding. Most interesting for these purposes is the fact that semantic weight of the preposition has no effect on pied-piping, the first process

Table 6. Variable rule analysis of the factors selected as significant to preposition *PIED-PIPING*.

	Probability	%	N
Total N:	127/340		
Corrected mean:	.37		
Construction type			
Pseudo-cleft	.80	67	26/39
Ordinary relative	.47	34	74/217
Cleft sentence	.41	32	27/84
Proximity of preposition to V complement			
Additional post-V complement	.66	51	38/75
Additional clitic complement	.58	42	26/62
No additional complement	.42	31	63/203

Table 7. Comparison of factors selected as significant to preposition placement strategy in relative clauses. (Favoring effects are given in bold.)

	Stranding	Absorption	Pied-piping
Total N:	41/340	172/340	127/340
Corrected mean:	.02	.49	.37
Proximity of preposition to V complement			
No additional complement	.63	[]	.44
Additional complement	.31	[]	.59
Semantic weight			
Strong	.98	.18	[]
Weak	.24	.61	[]

we have examined in which this factor does not play a role.

3.3 Comparing preposition placement strategies in French relative clauses

The preceding analyses suggest that the three strategies – stranding, absorption and pied-piping – work in concert to divide up the labor of preposition placement. To determine how they fit together in relative clause contexts, we re-analyzed the data (Table 7), taking account only of the factors selected as significant in Tables 2, 4 and 6 above.

As construction type is no longer significant, we focus on the remaining two.¹⁴ We now observe a remarkable pattern of near-complementary distribution, revealing that

¹⁴ These analyses only distinguished ordinary relatives from (pseudo-)clefts due to the rarity of stranding in the latter.

each variant has a dedicated role in the system. Absorption works to eliminate weak prepositions from the surface. This solves the issue of what to do with them, since they cannot be stranded. Pied-piping ensures that the preposition and the relativizer are correctly analyzed as a single constituent with an interpretable syntactic function. This explains the preference for this strategy when additional verbal complements are present in the phrase.¹⁵ Situated with respect to the entire system of preposition placement, the role of stranding becomes clear: it is selected most often in contexts where no intervening element might hinder the interpretation of the discontinuous prepositional phrase as a single constituent. But this strategy is reserved for strong prepositions.

We have seen that the distribution of prepositions in relative clauses is highly skewed. Over three-quarters of them were classified as “weak”, but this class consists almost uniquely of *à* and *de*, with which, we have found, stranding is eschewed. Such asymmetry could affect the contributions of the other factors if any of them are disproportionately associated with these two prepositions. To determine whether the factors affecting stranding in fact apply equally to ALL prepositions, as suggested by Table 7 and our interpretation thereof, we redid the analysis excluding the tokens of *à* and *de*. The results are basically the same (see the table in fn. 16).¹⁶ This confirms that the factors affecting variant choice operate on all prepositions, and not just the quantitatively preponderant weak ones.

4. Code-switchers as agents of convergence

We may now return to the question raised earlier regarding the role of code-switching in promoting convergence. Accordingly, we compare the grammars of preposition

¹⁵ The fact that this effect is so modest, however, suggests that, as in English, a strong stylistic effect is operative here too, no doubt contributing to the primacy of absorption, which is not a marker of formal speech.

¹⁶ This problem does not apply to the analyses of absorption and pied-piping, where prepositions are more evenly distributed across contexts.

Comparison of factors selected as significant to *STRANDING* among different classes of prepositions, cf. Table 7 in the text. (The shading highlights the effects described in the text; favoring effects are given in bold.)

	All data	<i>à</i> and <i>de</i> excluded
Total N:	41/340	39/90
Corrected mean:	.02	.41
Proximity of preposition to V complement		
No additional complement	.63	.67
Additional complement	.31	.26
Semantic weight		
Strong	.98	52%
Weak	.24	(0%) K/O

K/O = knockout. In the presence of a knockout factor the variable is invariant.

Table 8. Variable rule analysis of the factors selected as significant to preposition placement strategy among sparse and copious code-switchers. (Favoring effects are given in bold.)

	Stranding		Absorption		Pied-piping	
	Sparse	Copious	Sparse	Copious	Sparse	Copious
Total N:	25/224	16/116	124/224	48/116	75/224	52/116
Corrected mean:	.01	.04	.54	.41	.33	.45
Semantic weight						
Strong	.99	.93	.10	.34	[]	[]
Weak	.26	.22	.62	.58	[]	[]
Proximity of preposition to V complement						
No additional comp	.62	.66	[]	[]	.43	.45
Additional comp	.33	.27	[]	[]	.61	.57
Construction type						
Cleft/pseudo-cleft	[]	[]	.40	[]	[]	[]
Ordinary relative	[]	[]	.56	[]	[]	[]

placement in the speech of copious and sparse code-switchers, as inferred from the hierarchy of constraints conditioning variant selection. If the former were in fact agents of change, we would expect the conditions governing the choice of the candidate for convergence, phrase-final prepositions, to differ from those of bilinguals who avoid switching to English while speaking French.

Table 8, which displays the effect of code-switching on the incidence and conditioning of preposition placement strategy, lends no support to this scenario.

We note first, from the corrected means, that while copious code-switchers employ the standard pied-piping somewhat more than their sparse counterparts, who in turn show a somewhat greater tendency to absorb, there is no difference between cohorts in terms of overall rate of stranding. Far more striking, in terms of relative magnitude and ranking of constraints for all factors selected as significant but one, is the fact that both cohorts behave identically. Thus not only is the propensity to use English independent of the propensity to place prepositions phrase-finally, it has no effect on the remainder of the prepositional system either. If anything, copious code-switchers strand FEWER prepositions (40%) in the most favorable (strong) environment than those who tend to eschew English while speaking French (60%). These findings constitute compelling counter-evidence to claims that code-switchers are agents of structural change.

5. Comparison with the putative source

Thus far we have demonstrated that (i) stranding forms part of a tight-knit system of preposition placement in French relative clauses, and (ii) the constraints governing preposition placement hold regardless of a speaker's

propensity to code-switch to English while speaking French. But we have not yet ruled out the possibility that preposition placement is subject to these constraints in English as well, and that BOTH cohorts display the same convergent change.

In keeping with the requirement that a candidate for convergence should behave, in a non-trivial way, like its counterpart in the putative source (Poplack & Levey, 2010; Thomason, 2001), we now examine patterns of preposition placement in a non-contact variety of English likely to constitute a target model for the bilingual francophones whose behavior we have studied here. Spoken in the largely monolingual adjacent cities of Oshawa and Whitby in Southern Ontario, this variety is representative of mainstream Canadian English (Poplack et al., 2006). As such, it constitutes a more appropriate benchmark for comparison.

5.1 Preposition placement in mainstream Canadian English

We noted earlier that English has two options for preposition placement, pied-piping, as in (2), and stranding, as in (3), repeated here as (18) and (19).

(18) *Pied-piping (with wh-relative)*

I think that- that the direction **in** (PP) **which** Canadians want to go today is getting better. (QEC.317.746)

(19) *Stranding*

a. *wh-relative*

I don't know **which** place they're **from** (S) just by looking at them. (QEC.308.1019)

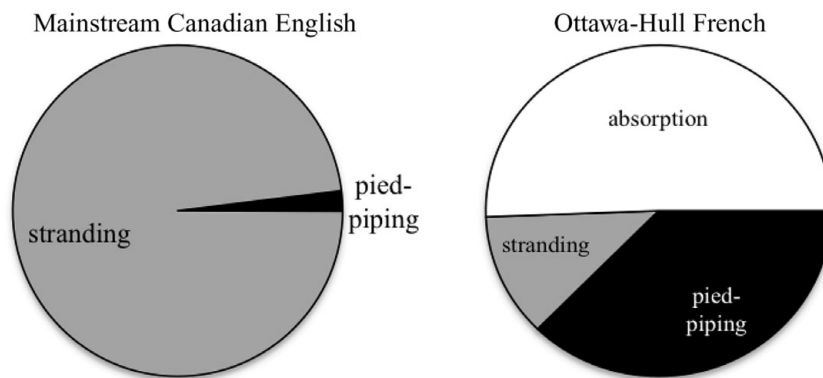


Figure 1. Comparison of variant distribution in the contact languages.

Table 9. Distribution of data by variant and relativizer in mainstream Canadian English.

Variant	Relativizer				All data	
	<i>wh</i> -		<i>that/zero</i>		%	N
	%	N	%	N		
Stranding	90	54	100	202	98	256
Pied-piping	10	6	0	0	2	6
Total	100	60	100	202	100	262

- b. *that*-relative
This is something that I could probably get interested **in** (S). (QEC.192.66)
- c. zero relative
And this is the guy Ø I've always had a crush **on** (S). (QEC.301.1372)

Table 9 displays the overall distribution of these variants in mainstream Canadian English.

Note that over three-quarters (202/262) of the relative clauses are headed by *that* or zero, and in these contexts, as in other dialects of English, prepositions are categorically stranded, as in (19b, c). Pied-piping occurs only with *wh*-relativizers, as in (18), which themselves account for less than a quarter (60/262) of the relative clauses. Even in this context, it occurs no more than 10% of time. In actuality, pied-piping is still more constrained: five out of the six tokens co-occur with *which*, the rarest by far of the *wh*-relativizers. With regard to the strength of the target model, then, we can confirm that stranding, selected in 98% of all relative clauses, is the default option; it is the “standard” pied-piping that is the marked choice here. Thus, while stranding may not be particularly SALIENT, there is no doubt that it is quantitatively robust enough in Canadian English (in contrast to the reports of scant usage in British English cited in Section 1.2) to constitute a model of preposition placement for bilingual francophones.

6. Comparing preposition placement in source and host: English vs. French

To support a claim that French bare prepositions are NOT the product of convergence with English, we must demonstrate that despite the surface similarity, the SYSTEM of preposition placement in English differs from that operating in French. It is to this that we turn in this section.

A first point of comparison involves the overall distribution of preposition placement strategies in the languages in contact. The results presented in Figure 1 display striking cross-linguistic differences not only in variant repertoires, but also in variant distributions: whereas English prepositions are almost categorically stranded, this is the least frequent option in French (12% overall). Pied-piping accounts for more than a third (37%) of the French data; it is selected only 2% of the time in English. And the major French strategy, absorption (51%), is not attested in English at all.

Distributionally, then, there is little compelling evidence to support a convergence analysis. But the overwhelming dominance of stranding in English could arguably have triggered its still incipient infiltration into French. A better gauge is the CONDITIONING of variant choice, which as noted above, we construe as the grammar underlying variant selection. We now compare the constraints governing variable preposition placement in French with those operating in English. Although the massive disproportion of stranding in the latter necessarily dilutes its linguistic conditioning, we can nonetheless bring whatever patterning there is to bear on the comparison.

6.1 Lexico-semantic conditioning of variant choice

Turning first to the lexical identity of the RELATIVIZER (Table 10), we note that while in English pied-piping is virtually restricted to *which*, in French it occurs with an array of relativizers (albeit to varying degrees; *où* “where” makes up more than half of them (70/127)).

Table 10. Distribution of relativizers by preposition placement strategy in the contact languages.

Relativizer	French				English		
	Absorption %	Stranding %	Pied-piping %	Total N	Stranding %	Pied-piping %	Total N
<i>que/that</i>	81	15	2	178	100	0	109
Ø	39	25	36	28	100	0	93
<i>à</i>	86	14	0	14	—	—	—
<i>pour</i>	44	56	0	9	—	—	—
<i>où</i>	—	—	100	70	—	—	—
Other	0	0	100	41	—	—	—
<i>which</i>	—	—	—	—	58	42	12
<i>who</i>	—	—	—	—	96	4	25
<i>what</i>	—	—	—	—	100	0	25
Total	51	12	37	340	98	2	264

Stranding, on the other hand, occurs at least once with every English relative pronoun in the English data; in French it is restricted to *que*, Ø, *à* and *pour*.¹⁷

Lexical identity of the PREPOSITION also plays a role in variant choice (Table 11). In both English and French, the data are dominated by a few prepositions. Four of them (*with*, *to*, *about* and *for*) account for 2/3 (175/260) of the English data. All are extremely propitious to stranding, but so are the less frequent prepositions. In French, a full 85% of the prepositions are made up of *avec*, *à* and *de*. But in stark contrast to the situation in English, only *avec* participates freely in stranding, the others hardly ever do. In fact, all the other French prepositions, regardless of their frequency, break up along similar lines: Table 11

¹⁷ The prepositions *pour* and *à* may function as relativizers in alternation with traditional relative pronouns, as in (1b) above and (i).

- (i) Ça prend quelqu'un pour pouvoir s'amuser **avec** (S).
(OH.111.410)

“You need someone to have fun **with**.”

(vs. Ça prend quelqu'un **avec** **qui** (PP) s'amuser. “You need someone **with whom** to have fun.”)

Zero relatives are exemplified in (9a), (10c), (12a) and (14a) above, among others. While in English, zero relativizers are invariant, requiring stranding categorically, in French, overt and null relativizers are distributed across all three variants (Table 10a). This, in conjunction with the fact that (*pace* Roberge & Rosen, 1999) relative pronoun deletion is phonologically rather than syntactically conditioned (Poplack & Levey, 2010; Poplack et al., 2006) explains why we do not distinguish overt and null relativizers.

Distribution of relativizers by preposition placement strategy in French, cf. Table 10 in the text.

Relativizer	Absorption	Stranding	Pied-piping	Total
	%	%	%	N
Overt	52	11	37	312
Null	39	25	36	28
Total	51	12	37	340

shows that either they always or rarely (if ever) appear without an overt complement. Those that are always stranded are among the cohort we had labeled STRONG (Tables 3 and 5 above), while the two prepositions making up most of the WEAK class are overwhelmingly absorbed, as is shown in Table 12. No such distinction operates in English, where, despite disproportionately high frequencies of certain prepositions, stranding is equally probable with all of them, weak ones, as in (20), included.

(20) *Stranded weak preposition*

So- that's- pretty much all I could think **of** (S).
(QEC.046.806)

6.2 Preposition placement in the English of bilingual francophones

Having examined the preposition placement strategies in the French of bilingual francophones, it will now be instructive to examine how they and the other members of their speech community use them when they are speaking ENGLISH. A systematic search of the 2.5 million word *Ottawa-Hull French Corpus* turned up 1504 English prepositions, either embedded in otherwise French discourse, as in (21a), or within code-switches to English, as in (21b) and (21c).

(21) *English prepositions*

- a. embedded in French discourse
Là le pressure était **off** moi pour un petit boutte, tu sais? (OH.053.1061)
“Then the pressure was **off** me for a little while, you know?”
- b. in (intra-sentential) code-switch to English
Sont pas mal **up to** date. (OH.056.1673)
“They're pretty much **up to** date.”

Table 11. *Rate of preposition STRANDING by lexical identity of the preposition in the contact languages.*

English			French		
Preposition	% stranded	N	Preposition	% stranded	N
<i>with</i>	100	92/92	<i>avec</i>	64	25/39
<i>to</i>	100	39/39	<i>à</i>	0	0/160
<i>about</i>	100	24/24	<i>de</i>	2	2/90
<i>from</i>	71	5/7			
<i>for</i>	100	20/20	<i>pour</i>	60	3/5
<i>at</i>	100	18/18			
<i>of</i>	100	18/18			
<i>in</i>	88	15/17	<i>dedans</i>	75	3/4
			<i>dans</i>	0	0/9
<i>on</i>	93	14/15	<i>dessus</i>	100	4/4
<i>into</i>	100	5/5			
<i>under</i>	50	1/2			
<i>around</i>	100	2/2			
<i>through</i>	100	1/1	<i>à travers de</i>	100	2/2
			<i>après</i>	100	2/2
			Unknown (absorbed)	0	0/22
			Other	0	0/3
Total	97	254/260		12	41/340

Table 12. *Distribution of preposition placement strategies by semantic weight of preposition in the contact languages. (The shading highlights the effects described in the text.)*

Semantic weight	English		French					
	Stranding		Stranding		Absorption		Pied-piping	
	%	N	%	N	%	N	%	N
Strong	99	68/69	50	39/78	19	15/78	31	24/78
Weak	97	186/254	1	2/262	60	157/262	39	103/262
Total	98	254/260	12	41/340	51	172/340	37	127/340

- c. in (sentential) code-switch to English
 “I had to cut the fat **off** and give it **to** the dog.”
 (OH.71.1543)

Unsurprisingly, in view of the general paucity of relative clauses noted earlier, very few of these occurred in this context. In all, we could locate only six eligible tokens, two of which are reproduced in (22):

- (22) a. That’s something given by God that you shouldn’t fool **with** (S), as far as I’m concerned.
 (OH.053.1402)
- b. He says to me, that- that little girl he’s going out **with** (S), that her father caught a fish.
 (OH.071.1601)

This is of course too sparse to admit meaningful quantitative analysis, but it is nonetheless noteworthy

that ALL of them were stranded, paralleling exactly the distribution displayed by monolingual anglophone speakers of mainstream Canadian English (Table 9 above). NONE were pied-piped or absorbed, in stark contrast to the way these very same individuals treat their prepositions while speaking French. In that language they strand rarely, only certain prepositions, and only under very specific conditions. We conclude that the bilingual speakers studied here have different grammars for preposition placement, one for French and another for English. This constitutes the strongest evidence that their phrase-final prepositions in French are not the product of their use of this strategy in English.¹⁸

¹⁸ It also runs counter to King’s (2005, p. 247) claim that the presence of borrowed prepositions always coincides with preposition stranding.

Summarizing, we have demonstrated that (i) French patterns of preposition placement differ from those of mainstream Canadian English, the putative source, (ii) the factors governing preposition stranding for copious code-switchers are the same as those for sparse code-switchers, and perhaps most convincing, (iii) bilingual francophones themselves display one pattern of placing prepositions in French discourse, and quite another when they are speaking English. These facts taken together effectively rule out convergence with English as the explanation for phrase-final prepositions in French. What then is their source? The fact that this variant is so well integrated into the host-language grammar of preposition placement (Table 7 above) rather than being superimposed upon it (as might be expected of transfer of a non-native construction) suggests a possible internal motivation. Accordingly, in keeping with Poplack & Levey's (2010) criterion (iv) (Section 1), in the next section we investigate the possibility of a native French model for stranding.

7. Comparison with a native French model: Preposition orphaning

In situating bare prepositions within host-language patterns of preposition placement, we confront a superficially similar native process, which also results in phrase-final prepositions with no overt complement in surface structure, exemplified in (23). As with bare prepositions in relative clauses, these too are sometimes called intransitive prepositions (Vinet, 1979, 1984) or Standard French-type stranded prepositions (Roberge & Rosen, 1999). Here, following Bouchard (1982), Roberge (1998), Zribi-Hertz (1984) and others, we will refer to them as ORPHANS (O). In this and subsequent orphaning examples, square brackets indicate a missing complement.

(23) Orphaning

Oui mais, il veut pas payer **pour** [] (O).
(OH.013.260)¹⁹
“Yes but, he doesn't want to pay **for** [].”

Orphaning is perfectly acceptable in standard French,²⁰ as illustrated in the excerpt from *Le bon usage* in (24).

The dialect under study has borrowed many English prepositions – if only for the nonce – but, as we will see in Section 9, does not display English-type preposition stranding.

¹⁹ In this discussion of the costs of an expedited divorce, the speaker observes that her husband would like one, but doesn't want to pay “for [it]”. Here, as in the other examples of orphaning, the identity of the null complement is retrievable from the discourse.

²⁰ Albeit somewhat colloquial (Grevisse & Goosse, 2008, p. 1327). Zribi-Hertz (1984) specifies that when the null complement has a [–human] referent, as in (23), it is standard; it is only when the complement is [+human] (27) that orphaning tends to be (prescriptively) frowned upon.

(24) Avec les prépositions *après, avant, contre, depuis, derrière, devant*, l'omission du régime appartient à l'usage le plus général.

(Grevisse & Goosse, 2008, p. 1327)

“With the prepositions *after, before, against, since, behind, in front of*, omission of the complement [orphaning] is in general use.”

Orphaning does not occur in relative clauses, but is (theoretically) eligible to occur in any indicative transitive verb complex containing a prepositional complement (including indirect object and adjunct prepositional phrases modifying the verb), where the complement has already been introduced. For most prepositions, the orphaned variant competes with a pronominal clitic variant (C), as in (25a), and a preposition + pronominal NP complement (N), as in (25b).²¹ A subset of prepositions (e.g. *contre, pour, avec, à part de, après, sans* and *avant*, to which we refer in Table 14 as COHORT A) co-varies only with the latter. As previously, these were analyzed separately.

(25) a. Pronominal clitic

Ouais, mais même ça . . . j'y (C) penserais avant tu sais. (OH.002.1331)

“Yeah, but even that . . . I'd think about it beforehand, you know.”

b. Preposition + pronominal NP complement

Non, on chantait pas **avec ça** (N). (OH.013.792)
“No, we didn't sing **with that**.”

Orphaning thus differs from what we have been calling stranding not only in terms of the contexts in which it appears, but also in terms of the variants with which it competes. It is therefore NOT interchangeable with (i.e. a variant expression of) the prepositions with no complement in relative clauses. Nonetheless, because non-contact French provides this model for bare prepositions, determination of the trajectory by which stranding emerged in relative clauses – via borrowing from English or analogical extension – must consider this structure as well. In what follows, we will first ascertain the grammar that gives rise to orphaning, as instantiated by the quantitative conditioning of variant choice, and then compare it to that of stranding. If the two phenomena obey the same linguistic constraints, this will support the analysis that phrase-final placement of prepositions in relative clauses is an internally-motivated extension of

²¹ A fourth variant, clitic + preposition + pronominal NP complement variant, as in (i), was coded, but ultimately proved too rare to analyze quantitatively (Zentz, 2006).

(i) Anglais, bien je vas **lui** parler **à elle** puis lui- lui astheure français, puis il comprend. (OH.013.2108)
“English, well, I'll speak **to her**, and him- him French now, and he understands.”

orphaning to a new context, and not borrowed. Although some English prepositions also orphan (e.g. *in*, *on*, *inside*, [temporal] *before*, and with a few verbs, *with*), we note that orphaning is generally not admissible in English with the translations of the relevant French prepositions, as can be seen from the glosses to (23) above and (26)–(28) below. This qualifies the orphaned preposition as a CONFLICT SITE (Poplack & Meechan, 1998), which, together with the relevant cross-variety comparisons, is a powerful tool for detecting change and identifying its source.

7.1 Factors conditioning the selection of orphaning

To facilitate comparison of orphaning and stranding, we replicate our analysis of the factors contributing to choice of preposition placement strategy in relative clauses (Section 2.3 above), altering only the factor of construction type. French generally allows orphaned prepositions in topicalized sentence structures. Assuming, as previously, that the nearer the topic is to its pronominal referent, the less need to state it explicitly, we distinguish topics according to whether they are INTRA-SENTENTIAL, as in (26a), or RETRIEVABLE from the wider discourse, as in (26b).

(26) a. *Intra-sentential topic*

Lui avait trouvé ce charbon là, puis il se chauffait **avec** [] (O). (OH.082.1431)
 “He had found that coal there, and he was warming himself **with** [].”

b. *Discourse-retrievable topic*

Puis j’aurais dû la mettre dans l’école anglaise. ... Mais j’ai fait la bêtise. ... Il faut pâtir **pour** [] (O). (OH.071.1644)
 “And I should have put her in English school. ... But I made the mistake. ... You have to suffer **for** [].”

Basing ourselves on the claims in the literature, we predict that orphaning will be favored with intra-sentential topics (Grevisse & Goosse, 2008; Kayne, 1975; King, 2000; Vinet, 1984; Zribi-Hertz, 1984), strong prepositions (Barbaud, 1998; Vinet, 1979, 1984; Zribi-Hertz, 1984), nonhuman complements (Kayne, 1975; Zribi-Hertz, 1984; and the examples in Vinet, 1984), and when the prepositional phrase is not essential to the meaning of the verb (i.e. non-obligatory) (Vinet, 1984).

7.2 Analysis of orphaning

In keeping with the principle of accountability (Labov, 1972), all indicative transitive verb complexes containing a prepositional complement were extracted from the data (N = 1644). Table 13, which displays the distribution of the three main variants in the variable context for

Table 13. Overall distribution of preposition placement strategies in orphaning contexts.

Variants	%	N
Orphan	10	160
Clitic	44	720
Pronominal complement	46	764
Total	100	1644

orphaning, shows that despite its prescriptive acceptability exemplified in (24) above, orphaning is certainly not a common option, occurring in only 10% of eligible tokens.

Recall that this is the same low rate observed for bare prepositions in relative clauses (Table 1 above). The phrase-final preposition, whether in orphaning or stranding contexts, is clearly the minority variant.

Variable rule analysis (Table 14) reveals that, of all the factors we had hypothesized to affect the choice of orphaning (over one of its more frequent competitors), three appear to play a role, and as can be observed from comparing the constraint rankings in Table 14, these apply to both classes of preposition in parallel fashion. First, in keeping with the observations of Kayne (1975) and Zribi-Hertz (1984), orphaning is in fact favored with [–human] complements, although it is quite robust with [+human] complements as well, as illustrated in (27).

(27) Si elle a quelque chose à dire, qu’elle vienne me le dire, puis que je vas m’asseoir **avec** [] (O), puis je vas essayer de la comprendre. (OH.040.1003)
 “If she has something to say, let her come tell me, and I’ll sit down **with** [], and I’ll try to understand.”

Obligatoriness of the complement also appears to play a role. Here, however, the effect is the opposite of what was predicted by Vinet (1984) and Zribi-Hertz (1984): prepositional phrases which are required to complete the meaning of the verb FAVOR orphaning. We have no explanation for this result at this time. But the greatest effect by far is contributed by SEMANTIC WEIGHT of the preposition: with only two exceptions, one of which we reproduce in (28), weak prepositions are never orphaned, a result that is consistent with sanctioned usage (24) and previous observations (Barbaud, 1998; Roberge, 1998; Zribi-Hertz, 1984). Only their semantically rich counterparts, which we have labeled STRONG, are orphaned regularly.

(28) *Orphaned weak preposition*

Là ils prenaient la poche le lendemain matin travailler, ils charriaient pas un outil **à** [] (O) seulement. (OH.082.1219)
 “So they took the bag the next morning to work, they didn’t even bring one tool **to** [].”

Table 14. Variable rule analysis of the factors selected as significant to preposition ORPHANING. (The shading highlights the effects described in the text.)

	All data			Cohort A		
	Probability	%	N/N	Probability	%	N/N
Total N:	160/1643			93/211		
Corrected mean:	.01			.44		
Semantic weight						
Weak	.16	0.2	2/1198	K/O (0%)	0	0/1
Strong	.99	35	158/446		44	93/210
Obligatoriness						
Obligatory	.57	7	65/886	.71	67	29/43
Non-obligatory	.42	13	95/758	.44	38	64/168
Humanness						
Non-human	[.53]	11	119/1042	.58	50	60/120
Human	[.44]	7	41/602	.40	36	33/91

K/O = knockout. In the presence of a knockout factor the variable is invariant.

Table 15. Rates of preposition ORPHANING (O) and STRANDING (S) by lexical identity and semantic weight of the preposition. (The shading highlights the effects described in the text.)

Preposition	Orphaning				Stranding			
	Weak		Strong		Weak		Strong	
	% O	N	% O	N	% S	N	% S	N
<i>à</i>	0	2/928	0	0/15	0	0/159	0	0/1
<i>de</i>	0	0/266	0	0/8	2	2/88	0	0/2
<i>avec</i>	—	—	40	47/117	—	—	64	25/39
<i>dedans</i>	0	0/1	31	20/65	—	—	75	3/4
<i>pour</i>	0	0/1	46	26/57	—	—	60	3/5
<i>dessus</i>	—	—	45	23/51	—	—	100	4/4
Other	0	0/2	25	42/133	0	0/15	17	4/23
Total	0	2/1198	35	158/446	1	2/262	50	39/78

Such explanations as have been offered for this semantic effect tend to revolve around the interpretability of the preposition in the absence of its complement, or the strength of the link between preposition and complement (Vinet, 1984). But closer inspection (Table 15) suggests that here too, the label SEMANTIC WEIGHT is masking an idiosyncratic lexical effect: 99.7% of the prepositions coded as “weak” are in fact *à* and *de*, and these, consonant with their behavior in relative clauses, are never orphaned. Likewise, nearly two-thirds of those coded as “strong” are made up of four prepositions: *dedans*, *pour*, *dessus*, and especially *avec* (which itself represents nearly a third (47/160) of all the orphaned tokens), and these are quite conducive to orphaning. These of course are the very same prepositions that account for the bulk

(67%) of the preposition stranding in relative clause contexts! To be sure, prepositions themselves constitute a small closed class. But most are considered eligible to be orphaned (Zribi-Hertz, 1984). In this context, what is particularly noteworthy is that of the 52 prepositions listed in Zribi-Hertz (1984, p. 33, fn. 6), only a few are actually orphaned in usage data, the SAME few that tend to appear bare in relative clause contexts (Table 2 above). We conclude that the strongest predictor of a preposition’s propensity to appear without a complement in the two contexts we have studied is LEXICAL IDENTITY. As far as establishing convergent change is concerned, however, this determination is irrelevant: French differs from English in terms of the effects of both lexical preposition AND semantic weight.

Because orphaning is a purely native process, there is no *a priori* reason to expect bilingual proficiency to distinguish speaker cohorts. But copious code-switchers are not only considered to lead the way in introducing contact-induced change, they are also frequently assumed to use their native language less natively. If they were in fact agents of change, the conditions governing their orphaning behavior should differ from those of bilinguals who avoid switching to English while speaking French. As with the relative clauses (Section 4 above), however, analysis shows no such effect. Instead, regardless of cohort, by far the most important effect – for copious code-switchers, the only effect – is contributed by the lexical identity of the preposition, in the by now familiar direction (Zentz, 2006).

Summarizing, we have examined a NATIVE French process that results in phrase-final prepositions, and have found it to be overwhelmingly lexically constrained, admissible for the most part with a small set of frequently occurring strong prepositions. When we compare the candidate for convergence, we find remarkable parallels: it occurs at the same low rate as orphaning, and applies above all to the same lexical prepositions. These parallels would be uninterpretable if what we have been calling stranding were not an extension of the native French process of orphaning.

8. Preposition placement in a pre-contact stage

In keeping with Poplack and Levey's (2010) criteria (i) and (ii) (Section 1), it now remains to establish whether stranding is the result of CHANGE. If it had been transferred from English, we should not expect to find it in a pre-contact stage of French. Such a stage is represented by the data contained in the *Récits du français québécois d'autrefois* (Poplack & St-Amand, 2007), the informal speech of insular rural québécois born in the second half of the 19th century, prior to (and in isolation from) the current intense contact with English. We searched this corpus systematically for phrase-final occurrences of the 15 prepositions found to be most frequent in the contemporary *Ottawa-Hull French Corpus*. After winnowing down an initial harvest of over 30,000 data points, almost all of the 102 eligible bare tokens remaining turned out to be orphans. Eighty-two percent of them were *avec*, as in (29a, b), mirroring the disproportion observed in 20th-century Ottawa-Hull French. The other current major players were represented as well, albeit to a much lesser extent, as exemplified in (29c). Orphaning was clearly already robust in 19th-century French.

(29) 19th-century orphaning

- a. with *avec*
Prends cet âne là, puis va-t-en chez vous **avec** []
(O)! (RFQ.014.30)

“Take that donkey over there, and go back home **with** []!”

- b. Puis elle le pogne puis elle s'en va dans la forêt **avec** [] (O). (RFQ.023.1879)

“And she grabs it and she goes into the forest **with** [].”

- c. with *pour*

Il dit: “M'en vas te donner mille piasses **pour** [] (O).” (RFQ.028.286)

“He says, ‘I'm gonna give you a thousand bucks **for** [].’”

But the candidate for convergence, although relatively rare in these materials (N = 5),²² was definitely attested as well, as illustrated in (30). The fact that it only occurs with *avec* (the most frequent bare preposition in 20th-century French (Table 3 above), as well as the most frequently orphaned) is further testimony to the synergetic relationship between what we have been calling stranding and orphaning.²³

(30) 19th-century stranding

- a. Elle se nourrit aux crabes. Une quantité de crabes que la morue mange, qu'elle-qu'elle se nourrit **avec** (S). (RFQ.043.1057)

“It only eats crabs. A quantity of crabs that the cod eats, that it nourishes itself **with**.”

- b. Elle leur a emporté trois plombs qu'ils pêchent **avec** (S). (RFQ.043.1420)

“She brought them three weights that they fish **with**.”

Finally, we would be remiss if we did not mention that phrase-final prepositions also appear in relative clauses in a contemporaneous non-contact variety, albeit (judging from the dearth of relevant examples) to a far lesser extent. This is Metropolitan French, which is not generally considered prone to convergence with English. They were already attested in Frei's *Grammaire des fautes* (1929, p. 187), which despite its title (“grammar of mistakes”), identifies itself as a linguistic description of spontaneous popular (Metropolitan) French; some examples are given in (31).²⁴

- (31) La jeune fille **qu'**il doit se marier **avec**; Le pont **qu'**il est passé **dessus**; La caisse **que** c'est mis **dedans**; Je n'ai pas reçu le colis **qu'**elles étaient **dedans**

²² We cannot say just HOW rare vis-à-vis the other variants with which it co-varies (recall that stranding is by far the rarest variant in 20th-century French as well), since this portion of the study focuses on phrase-final prepositions and not on relative clause contexts.

²³ *Avec* distinguishes itself as the preposition that most frequently appears bare. This is because it happens to be the most frequent preposition in both variable contexts, making up 61% of all stranded prepositions and 29% of all orphaned prepositions. Beyond this, it shows no particular propensity to be stranded (Table 15).

²⁴ A more recent attestation can be found in the popular French singer Renaud's song, “La gonzesse, celle que je suis **avec**” [The broad, the one I'm **with**].

“The young girl that he’s supposed to get married **to**; The bridge that he passed **over**; The crate that it is put **in**; I have not received the package that they were **in**”

9. Stranding or orphaning?

We mentioned earlier that phrase-final prepositions have become a shibboleth of North American, and especially Canadian, varieties of French, because they have been attested in (at least some of) these varieties in (at least some) contexts which are inadmissible in Standard French, but coincidentally sanctioned in English, the majority and dominant language in the region. As such they have long attracted the attention of syntacticians, who have sought first to unravel the structure of these constructions and then to compare it with that of English on the one hand and of Standard French on the other. This research has culminated in a general consensus that the prepositions in examples like (1b), (10a, c), (11c), (12a), (14a), (15) and (30) above are NOT English-type stranded prepositions. This conclusion emerges, on the one hand, from analyses of the underlying structure of the relative clause (in English they are analyzed as involving movement of the *wh*-form, while in Vernacular French relative clauses there is no movement), and on the other, the structure of the null arguments of the phrase-final prepositions (in English they consist of the trace left behind by *wh*-movement; in Vernacular French they represent a null pronominal element *pro* (Bouchard, 1982; Roberge, 1998; Vinet 1979, 1984)).²⁵ Because Standard French orphan prepositions have also been analyzed as governing a null pronominal element rather than the trace of a moved antecedent (Bouchard, 1982; Zribi-Hertz, 1984), scholars have suggested that these phrase-final prepositions in indicative transitive verb complexes and those in Vernacular French relative clauses are one and the same (although only King, 2000; King & Roberge, 1990; and Roberge, 1998 have explicitly suggested, as we do here, that the latter are an extension to a new context of the former).

Evidence for these claims comes from standard syntactic tests (e.g. the absence in Vernacular French of intransitive prepositions in interrogatives and (pseudo-) passives, subjacency violations, etc.), and these in turn are based on native speaker intuitions, coupled in some cases with the judgments of an informant (King & Roberge, 1990; Roberge & Rosen, 1999). As such, with the possible exception of King (2000, 2005), they shed little light on actual usage. We stated earlier, and we stress again, that

²⁵ Contrasting case-assignment properties of English and French prepositions have also been invoked (Bouchard, 1982; King & Roberge, 1990; Roberge, 1998; Vinet, 1979, 1984).

convergence arises from usage, and its agents must be bilingual SPEAKERS.

It is in this context that we set out to study this phenomenon. We combed a very large corpus of French speech, produced by speakers of varying bilingual abilities, for examples of phrase-final prepositions in contexts where stranding is an option in ENGLISH. A first important finding was that only one of them – relative clauses – featured such prepositions, echoing earlier descriptions of this phenomenon in Quebec French, and explaining why this portion of our study of variable preposition placement is necessarily limited to relative clauses. We then returned to the corpus to examine the contexts in which phrase-final prepositions are admissible in FRENCH. In addition, because in each construction the option of placing prepositions phrase-finally co-exists with other options (i.e. they are VARIABLE), we also took account of all of the cases in which phrase-final prepositions were NOT selected, in keeping with the principle of accountability that underlies the variationist approach to language use (e.g. Labov, 1972). Rather than rely on reports or inferences of what is admissible in the putative target language, we analyzed patterns of preposition placement in a variety of mainstream Canadian English towards which the bilingual speakers in our sample would likely have converged, had convergence occurred.

This approach has enabled us to contribute crucial elements to the discussion. For example, prior to the present research, there was no indication of the incidence or extent of these phenomena. Our analysis shows that the bare variant, in relative clauses as elsewhere, represents only a small minority of prepositions in the relevant contexts. Likewise, while the majority of French relative clauses differs from the prescribed standard (as instantiated in the Grevisse & Goosse quote in (4) above), this is not due to stranding OR orphaning, but rather to the prevalence of a purely native variant, preposition absorption, which is not generally admissible in English.

Because the tests used by theoretical linguists are often simply not pertinent to speech (e.g. the all-important criterion of whether subjacency is violated is moot, since even in a very large corpus we find no examples like *la fille que je connais très bien le gars qui sort avec* “the girl that I know very well the guy that goes out with” (King, 2005; Roberge, 1998; Vinet 1979, 1984), we replicated a variety of other claims about preposition placement culled from the literature. Only a very few were found to play a role in either of the two contexts studied. However, the factor that accounts for the overwhelming majority of the variance in the data – lexical identity of the preposition – was shown to operate in exactly the same way in the native French orphan prepositions and the bare prepositions in relative clauses we had initially labeled stranded. Thus, remarkably, we arrive at the exact same

major conclusions as the syntacticians, using an entirely different approach and actual usage data. We conclude, as did they, that the French phrase-final prepositions in relative clauses that LOOK like English stranded prepositions can in fact be analyzed as French orphan prepositions extended to the relative clause context. Our evidence for this is that they PATTERN with French orphan prepositions, while simultaneously differing from English stranded prepositions, which occur with different lexical prepositions and different relativizers. This leads us to stress once again (see King, 2000, 2005; Poplack & Tagliamonte, 2001) that surface similarity may be masking underlying structural difference, a problem which must be faced head-on in any study of contact linguistics.

10. Discussion

The research we have reported here has sought to address the questions of whether bare prepositions, a stereotypical non-standard feature of North American French, could be shown empirically to result from convergence with English, and whether bilingual code-switchers play any role in its adoption and diffusion. A partial motivation was curiosity over why so many reported contact-induced changes appear to be so radical and abrupt in nature (see Poplack & Levey, 2010, for detailed discussion), especially as compared to language-internal evolution, which is almost always gradual, moderate and more conservative. To address these issues, we made use of a highly ramified methodology to operationalize and test hypotheses about preposition placement, complying with each of the prerequisites enunciated by Thomason (2001) and others for the establishment of contact-induced change. Rather than attempting to replicate the conditions propitious to convergence in a laboratory setting (e.g. Toribio, 2004), we went straight to the source, privileging a thriving bilingual community as a research site, and the spontaneous interaction of its members as data. It is only through such regular interactions that change, convergent or otherwise, arises and spreads.

This work is informed by the recognition that detecting change requires going beyond the standard identification of apparently deviant forms with superficially similar surface counterparts in a contact language, and even beyond calculation of their rates of occurrence (though even these are rarely provided in the existing literature). It involves recognizing, first and foremost, that change in progress is inexorably linked to linguistic variability, and that variability entails competition among variant forms. This fact forces us to situate the form of interest in the larger linguistic system in which it operates, as opposed to restricting the focus to the candidate for convergence only. We have shown that variant choice is subject to a set of discoverable conditions; these make up the

structure of the variability. Once ascertained, this structure becomes diagnostic of stability or change. Making use of the comparative variationist framework (Poplack & Meechan, 1998; Tagliamonte, 2002), we confronted the variable constraints on preposition placement across source and host languages, contact and pre-contact stages of the host language, mainstream and “bilingual” varieties of the source language, copious and sparse code-switchers, and most telling, with the variants with which it coexists in the host language system. Detailed comparison with a superficially similar pre-existing native language construction enabled us to assess the possibility of a language-internal model for phrase-final prepositions.

These analyses turned up several lines of evidence militating against an interpretation of convergence. A first important element is the discovery that the conditions giving rise to bare prepositions in French relative clauses are none other than those operating to produce the native strategy of orphaning in other contexts. Second, by situating phrase-final prepositions with respect to other options for preposition placement in the variable context of relative clauses, we learned that rather than INTRUDING into this tight-knit system, as might be expected of an externally-motivated change, bare prepositions play a dedicated role in it. Third, comparison with a pre-contact stage of the language reveals that orphan prepositions were not only already present in the crucial relative clause context, but followed the same patterning observed in the contemporary materials. Fourth, comparison with the presumed source shows that none of the constraints on orphaning in French is operative in English, which instead strands prepositions freely – indeed, quasi-categorically! – in all eligible contexts, and these in turn differ from those admitting orphan prepositions in French. Finally, explicit comparison of the preposition placement strategies of individuals who code-switch frequently and those who rarely use English revealed no difference between them, constituting a rare empirical test – and refutation – of the claims that the former are agents of contact-induced change.

This comes as no surprise to us; indeed those who claim that CS causes convergence have not yet elucidated the mechanism by which a structure from one language passes into another with which it happens to coexist in a given geographical territory (especially, as is so often the case, when they may not even be spoken by the same cohorts of people). Community-based research has consistently shown that copious code-switchers (in the sense defined in Section 2.1 in this paper) tend to be those with the GREATEST command of both languages, most convincingly demonstrated by the fact that their CS behavior is overwhelmingly constrained by linguistic conditions that respect the grammaticality requirements of both languages simultaneously. In this context, it is unclear how they could act as agents of

change, as suggested by e.g. Backus (2005), Thomason (2001), Toribio (2004) and Winford (2005), among others. Indeed, our comparison of the SAME speakers' preposition placement strategies in both languages (Section 6.2 above) shows that despite intense contact on the community level, bilingual individuals can maintain two separate grammars, one for English and another for French. Interestingly, the only other systematic study of the role of CS in bilingual convergence employing accountable methodology that we know of (Torres Cacoullos & Travis, 2010) arrived independently at exactly the same result, despite its focus on a different linguistic variable, language pair and contact situation. As those authors observed, if bilinguals are ALTERNATING between languages rather than mixing them, as per the definition of CS given in Section 1 above, it stands to reason that the grammatical patterns of each language are maintained and, by extension, that copious code-switchers do not differ from those who engage in CS more rarely.

In view of the findings presented here, we cannot help but be struck by the disconnect between the amount of (negative!) attention stranding has garnered, especially among laypeople, as emblematic of contact-induced change in Canadian French, when in fact, this is a very minor phenomenon, both in terms of contexts in which it can occur and in terms of contexts in which it DOES occur. The apparently widespread belief that surface similarity can (or should) simply be equated with structural similarity makes contact-induced change a logical inference. But when we study the conditions constraining variable selection of the candidate for convergence, we learn that the surface parallels often mask underlying structural divergence.

The primacy of the spoken language in the origin and spread of change is an incontrovertible fact. The hallmark of speech is inherent variability, which is constrained by factors that can only be uncovered by systematic quantitative analysis, such as the one we have implemented here. Once we use it to situate the candidate for change with respect to all the relevant contexts in which it evolves, its role becomes clear, as does the trajectory by which it developed. That would be in conjunction with native orphaning and not via borrowed stranding.

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