Using Intra-Speaker Variation to Diagnose Syntactic Structure

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1. Introduction. This paper argues that cross-linguistic studies of patterns of intra-speaker morphosyntactic variation can help solve longstanding puzzles associated with the syntactic structure of the expressions that are in variation. It has been long observed in the field of language variation and change (since Labov, 1966, see the recent discussion in Bresnan 2007 for syntax) that, in addition to social and general cognitive factors, the grammatical structures of synonymous linguistic expressions at least partially determine the patterns of use of these expressions. This paper shows how to exploit this connection between syntactic structure and language use to contribute to the theoretical debate concerning the syntactic analysis of negative concord sentences in Can. French.

2. The Negative Concord Puzzle. Varieties of French spoken in Canada allow the sentential negation marker *pas* 'not' to (optionally) co-occur with a class of indefinites (called *nwords*, ex. *personne* 'no/anyone', *rien* 'no/anything' and *aucun* 'no/any'), creating a single negation interpretation (ex. J'ai (**pas**) rien lu. 'I read nothing'). Within the enormous theoretical literature on negative concord phenomena cross-linguistically, we can identify two main styles of analysis: (what we will call) the **negative quantifier** analysis, which proposes that (modulo the presence of *pas*) the syntactic structure of a concord sentence is identical to that of the corresponding bare sentence (May, 1985, Corblin, 1996, Corblin & Tovena, 2003, de Swart 2010, a.o.), and (what we will call) the **negative polarity item** (NPI) analysis, which proposes that the syntactic structure of a concord sentence is that of a sentence containing negation and a non-negative polarity dependent indefinite (see Laka, 1990, Ladusaw, 1992, Herburger 2001, Déprez 2002, Déprez & Martineau, 2004, Zeijlstra, 2008, Chierchia, 2013, a.o.). In other words, in the NPI analysis, variable negative concord is analyzed as parallel to variation between utterances containing negative quantifiers (such as English *nothing*) and NPIs (such as *anything*).

(1)   a. J'ai rien lu.   ≈ I read nothing.   b. J'ai pas rien lu.   ≈ I didn't read anything.
Although both of these two styles of analysis have been adopted in the literature, choosing between them for the analysis of the Canadian French system is problematic: on the one hand, the negative quantifier analysis is attractive because we know independently (from (1a)) that nwords can be negative quantifiers in the language. However, an analysis in which *rien* in (1b) has a negative interpretation requires a non-canonical semantic composition rule in order to derive a single negation interpretation for this sentence. On the other hand, the NPI analysis is attractive because it keeps the compositional semantics of concord sentences simple, and is consistent with the diachronic observation that in the 17th century (when French was brought to Canada), (most) French nwords were NPIs (see Labelle & Espinal, 2014 for a recent overview). However, the NPI analysis involves proposing the existence of two classes of homophonous items (negative Qs and NPIs) which are proposed to have a syntactic distribution that is (almost) a **proper subset** of the syntactic distribution of the negative Qs. Therefore, from grammaticality judgments alone, it is not clear how such an analysis could be empirically distinguished from its alternative. We argue that cross-linguistic comparison of patterns of intraspeaker variation will allow us to break this stalemate. Given that the NPI analysis assimilates negative concord to NPI licensing, this theory makes the very clear empirical prediction that variable negative concord in Canadian French should be conditioned by the same grammatical factors that condition Neg Q/NPI variation more generally. In order to test this prediction, we compare the grammatical factors conditioning variable negative concord (as observed in Burnett, Tremblay & Blondeau (2015)'s study of the phenomenon in the *Montréal 84*

corpus (Thibault & Vincent 1990)) with the grammatical factors that condition a clearer case of variation between negative quantifiers and NPIs: *no/not. . . any* variation in English.

3. Previous work on Canadian French. Inspired by Zanuttini (1997)'s work on Italo-Romance dialects where these constraints create grammaticality contrasts, Burnett et al. show (using regression analysis) that the most important factor conditioning the use of bare versus concord sentences in *Montréal 84* is the structural configuration in which the nword appears. These authors show that sentences in which nwords and negation appear in a structurally adjacent configuration, i.e. are not separated by any lexical predicate (ex. *Je vois pas personne* 'I don't see anyone'; *Ya pas personne icitte* 'There's no one here') are highly disfavoured (5%) compared to the corresponding structures with bare nwords (*Je vois personne*; *Ya personne icitte*.). However, if the nword is embedded within another verbal or prepositional predicate (ex. *Ya pas eu personne icitte; Je parle pas à personne*), then the NPI variant is much more frequent (41%). With this result in mind, we investigate whether structural adjacency plays the same role in *no/not. . . any* variation in English, as observed in three spoken corpora: the Toronto English Corpus (TEC), the York English Corpus (YEC), and the Roots of English (ROE: rural UK) Corpus.

4. Data collection and annotation. From the English corpora, we extracted all the occurrences of negative quantifiers and *any*-style NPIs that show a non-trivial amount of variation (*no/any one; no/anybody, no/anything, none, no/nee/any, (n)owt*). Then, in our final datasets from the TEC (n=663), YEC (n=695), and the ROE (n=415), we coded for structural adjacency in the same way as Burnett et al: *There isn't anybody here/There's nobody here; He isn't anything/He's nothing* (**structurally adjacent**) vs *He isn't eating anything/He is eating nothing; He hadn't written to anybody/He had written to nobody* (**Not structurally adjacent**).

5. Results and discussion. Although the overall rate of the use of the NPI variant differs across corpora (43% in TEC; 28% in YEC; 17% in ROE), in each case, we find a significant ($p < 0.01$) effect of structural adjacency disfavouring the use of *not. . . any*. That is, the use of an NPI is significantly disfavoured in utterances in which it is (or would be) in the same minimal syntactic domain as its licensor (9% struct. adj. vs 88% not struct. adj. in TEC; 7% vs 82% in YEC; 3% vs 40% in ROE). A logistic regression analysis additionally identified the lexical identity of the indefinite and social factors as significant; however, structural adjacency remains the largest effect across the three corpora studied. Thus, we conclude that structural adjacency is an important grammatical factor conditioning Neg Q/NPI variation and that, moreover, the empirical predictions of the NPI analysis for Canadian French negative concord are borne out. Furthermore, our comparative corpus studies have allowed us to discover a new **anti-locality** effect in NPI licensing in French and English. Typologically speaking, anti-locality effects are common with polarity dependencies (see, for example, *libo*-NPIs in Russian (Pereltsvaig, 2006)). In contrast, non-canonical semantic composition (as would be proposed in the negative quantifier analysis) is generally proposed to require strict syntactic **locality** (Heim & Kratzer, 1998; de Swart & Sag, 2002; Chung & Ladusaw, 2003, a.o.), i.e. such an analysis would predict the opposite variation pattern from the one we observed. We therefore conclude that this result provides an important new empirical argument in favour of the NPI analysis over its alternative for negative concord in Canadian French.