Soft Intervention Effects in Sociolinguistic Variation

1. Introduction. Although formal syntax traditionally studies grammaticality (or *hard*) contrasts, more and more researchers have become interested in incorporating the study of frequency/preference (or *soft*) contrasts into syntactic theory (Bresnan et al. 2001, Adger 2006, among others). Building on this work, this paper provides new evidence that the same syntactic principles hold in sociolinguistic variation as in grammaticality judgements, albeit in slightly different forms. In particular, we argue that a weaker version of *Relativized Minimality* (Rizzi 1990, 2011) or a similar principle, characterizes patterns of variation, and we show this by presenting a new corpus study of future temporal reference in spoken Parisian French.

2. Intervention Effects. One of the major discoveries of Generative syntax is that a syntactic dependency between two constituents can be disrupted by an intervening similar constituent (Chomsky 1964, 1993, Ross 1983, Rizzi 1990, Starke 2001, among many others). For example, in French, the interrogative quantifier *combien* 'how many' can undergo WH movement, optionally stranding its restriction *de livres* 'books' (1a); however, the dependency between *combien* and *de livres* is disrupted when another quantifier like *beaucoup* 'a lot' appears between the two (1bc) (Obenauer 1983, 1994).

(1) a. **Combien** as-tu lu **de livres**? 'How many books did you read?'
     b. Combien de livres as-tu **beaucoup** lu? 'How many books did you read a lot?'
     c. *Combien as-tu **beaucoup** lu de livres?

This being said, the precise definition of the class of interveners, and the conditions under which they intervene, is very complicated and still under investigation. For example, while both *beaucoup* (1c) and negation *pas* 'not' (2ab) block the raising of *combien* in split constructions, manner adverbs, such as *attentivement* 'carefully', do not (Laenzlinger 1998, 2cd).

(2) a. Combien de livres n'as-tu **pas** lu? 'How many books did you not read?'
     b. *Combien n'as-tu **pas** lu de livres?
     c. Combien de livres as-tu **attentivement** lu? 'How many books did you read carefully?'
     d. Combien as-tu **attentivement** lu de livres? 'How many books did you read carefully?'

On the other hand, while negation blocks the raising of *combien*, it doesn't block the movement of the subject in French raising constructions with *sembler* 'seem' or the periphrastic future with *aller* 'to go' (cf. Ruwet 1972, Lamiroy 1987) (3-4).

(3) a. Luc semble fatigué.   b. Luc ne semble **pas** fatigué.   'Luc does(not) seem tired'
     c. Luc va gagner.   d. Luc ne va **pas** gagner.   'Luc will (not) win'

(4) $[_{TP}$ Luc$_k$ $[_{T'}$ ne$_j$ va $[_{NegP}$ t$_j$ pas $[_{VP}$ $[_{TP[-fin]}$ t$_k$ $[_{VP}$ t$_k$ gagner$]]]]]]$

To account for such fine-grained patterns, theories of locality and intervention often emphasize the importance of feature similarity (see Rizzi 2011 for an overview): since *combien, beaucoup* and *pas* are all quantifiers, they create intervention effects with each other. However, since *attentivement* is a manner adverb, its feature make up is sufficiently different from *combien*'s to not intervene. By similar logic, *pas* does not intervene between the raised subject DP *Luc* and its trace in the lower clause. We now argue that intervention effects are also found at the soft/preferential level; however, the feature similarity constraint is much weaker in these cases.

3. Future in Spoken Parisian French. We did a quantitative study of sociolinguistic variation in the expression of the future in the spoken *Multicultural Parisian French* corpus (Gadet & Guerin 2016). As in other dialects, Parisian French speakers can use both the periphrastic future (3cd) and the synthetic future (*Luc gagnera* 'Luc will win') to express a future event. We extracted the occurrences of the periphrastic and synthetic futures from the corpus (N=3807), and we coded them for factors that have been shown to be relevant for conditioning this variation in previous studies on other varieties: social factors (age, gender, education, profession), subject type (Blondeau & Labeau 2016), verb frequency, verb type, temporal distance (Poplack

& Turpin 1999), and the polarity of the clause, where we distinguished between *pas* and other negative quantifiers (*personne* 'no one', *rien* 'nothing', *jamais* 'never' etc.).

Mixed effects logistic regression analysis of the 3,807 future tokens shows that polarity conditions variation in Parisian French, but the effect is limited to negative quantifiers (e.g., *jamais, plus, rien, personne*) other than the simple negative *pas* (negative quantifiers *vs pas*: $z = 6.025$, $p < 0.001$), while utterances with *pas* itself are not significantly different from affirmatives (*pas vs* affirmatives: $z = 1.257$, $p = 0.207$). In other words, speakers prefer the synthetic future with negative quantifiers, but not in affirmatives or in utterances with *pas*.

4. Analysis. We suggest that negative quantifiers are disfavoured with the periphrastic future compared to the synthetic future because the presence of negative quantifiers in SPEC NegP creates a soft intervention effect with the raising of the subject. As mentioned above, the periphrastic future is a biclausal construction in which the subject of the infinitive clause raises to the SPEC of the finite TP (Ruwet 1972, Lamiroy 1987, Tellier 2015). Negative adverbs like *jamais* and *plus* occupy the SPEC of a NegP located between the higher and lower TP (Pollock 1989), and so create a soft intervention effect when the subject raises (5): *Luc gagnera jamais* is preferred to *Luc va jamais gagner*. Note that the preverbal particle *ne* is generally omitted in spoken French (Ashby 1981); indeed it is almost never used in our corpus.

(5) a. Luc va jamais gagner.   'Luc will never win.'

   b. $[_{TP}$ Luc$_k$ va $[_{NegP}$ jamais$_i$ $[_{VP}$ $[_{TP[-fin]}$ t$_k$ $[_{NegP}$ t$_i$ $[_{VP}$ t$_i$ $[_{VP}$ t$_k$ gagner]

Following Kayne (1998), Burnett, Koopman & Tagliamonte (2018), we assume negative quantifier DPs raise to the higher clause's SPEC NegP, so *personne* 'no one' and *rien* 'nothing' also create intervention effects (6): *Luc gagnera rien* is preferred to *Luc va rien gagner*.

(6) a. Luc va rien gagner.   'Luc will win nothing.'

   b. $[_{TP}$ Luc$_k$ va $[_{NegP}$ rien$_i$ $[_{VP}$ $[_{TP[-fin]}$ t$_k$ $[_{NegP}$ t$_i$ $[_{VP}$ t$_k$ gagner t$_i$]

Since the synthetic future is a monoclausal structure, the subject does not raise out of a clause, and elements in SPEC NegP do not create an intervention effect. Although Pollock (1989) argues that the negative adverb *pas* is in SPEC NegP in formal French's bipartite negation *ne…pas*, Moritz & Valois (1994) argue that, in varieties that have lost preverbal *ne*, *pas* is the negative head, not a phrase. Consequently, our analysis correctly predicts that *pas* should not intervene in the raising of the subject in the periphrastic future.

5. Dialectal Variation. Another prediction of our analysis is that, in dialects where propositional negation behaves like other negative quantifiers, *pas* should also intervene and sentences like *Luc va pas gagner* should be dispreferred to sentences like *Luc gagnera pas* in these dialects. We argue that this prediction is borne out: in some varieties of Canadian French, unlike in Multicultural Parisian French, *pas* can participate negative concord with other negative quantifiers (eg. *J'ai pas vu personne* means 'I didn't see anyone' in these dialects) (Daoust-Blais 1975, Lemieux 1982). Correspondingly, studies of sociolinguistic variation in these dialects have shown that the synthetic future is strongly preferred ($\geq 97\%$) in negative contexts, most of which feature *pas* (Poplack & Dion 2009, Wagner & Sankoff 2011).

6. Conclusion. We argue that studying sociolinguistic variation can make valuable contributions to syntactic theory: it can reveal subtle syntactic patterns that are only observable when two nearly synonymous grammatical constructions are in variation, and help refine our understanding of locality and intervention effects.

7. Selected References. 1. Adger, D. (2006). Combinatorial Variability. *J. of Linguistics*, *42*, 503–530. **2.** Bresnan, J., Dingare, S., & Manning, C. D. (2001). Soft Constraints Mirror Hard Constraints. *LFG 01*. **3.** Burnett, H., Koopman, H., & Tagliamonte, S. (2018). Structural explanations in syntactic variation: The evolution of English negative and polarity indefinites. *Language Variation and Change*, *30*, 83–107. **4.** Lamiroy, B. (1987). The Complementation of Aspectual Verbs in French. *Language*, *63*, 278–298. **5.** Kayne, R. (1998). Overt vs. Covert Movement. *Syntax*, *1*, 128–191. **6.** Moritz, L., & Valois, D. (1994). Pied-Piping and Specifier-Head Agreement. *Linguistic Inquiry*, *25*, 667–707. **7.** Obenauer, H.-G. (1983). Une quantification non canonique. *Langue française*, *58*, 66–88. **8.** Poplack, S., & Dion, N. (2009). The evolution of future temporal reference in French. *Language*, *85*, 557–587. **9.** Rizzi, L. (2011). Minimality. In *The Oxford handbook of linguistic minimalism*. OUP. **10.** Ruwet, N. (1972). *Théorie syntaxique et syntaxe du français*. Seuil.