9-1-2012

The Long Tail of Language Change: Québécois French Futures in Real Time

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Abstract

Since at least the mid 19th century, the inflected future (IF) in affirmative clauses has steadily declined in Québécois French (Poplack & Dion 2009). Indeed, Wagner and Sankoff (2011) reported that in the Montreal French 1971 corpus (Sankoff & Cedergren 1972), decreasing age was correlated with decreasing use of affirmative IF. However, they also found that a panel of 59 speakers had significantly increased their use of IF between 1971 and 1984. They proposed that this be interpreted as a case of age grading rather than retrograde community change.

The current paper reports on a trend study undertaken to test Wagner and Sankoff's proposal. 34 speakers recorded in 1971 were matched for social characteristics with 34 speakers recorded in 1984 (N=68 unique speakers). There was no significant difference (p < 0.5) in the rate of IF use between the two years (for affirmative uses only, 13.2% [N=112/847] in 1971 and 15.6% [N=194/1247] in 1984). Since this finding effectively rules out the "retrograde change" interpretation of the panel results, our trend study confirms Wagner & Sankoff's proposal.

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Gillian Sankoff, Suzanne Evans Wagner, and Laura Jensen*

1 Introduction

To understand the relationship between change in the grammars of individuals and language change as an historical phenomenon, trend studies and panel studies each provide crucial data that can be combined for a fuller picture. Looking at any particular linguistic change in historical time does not enlighten us as to how individual speakers may relate to the change across their lifespans; studying lifespan change alone does not reveal whether trends that occur with aging are part of any historical process. In an earlier study by two of the current co-authors (Wagner and Sankoff 2011), we examined how a long-term change in the expression of the future in Québécois French related to lifespan change as experienced by 59 speakers from Montréal. That paper documented the surprising fact that as they aged over a 13-year period, the panel as a whole registered a lifespan change in a direction that runs counter to the long-term historical trend: the continuing replacement of inflected futures (IF) by periphrastic futures (PF) in affirmative clauses. (Given the polarity constraint discussed in Section 2 below, all results in this paper relate only to affirmative clauses). Whereas in the late 19th century, inflected futures in affirmative clauses were used at a rate of 32%, by the late 20th century this rate had been dramatically reduced to only 9% (Poplack and Dion 2009:573, Table 8).

The current paper reports on a trend study that complements the earlier analysis. On a descriptive level, we seek to establish whether or not the retrograde lifespan trend documented for a substantial minority of our speakers represents a retrograde change at the community level as well. On a theoretical level, we explore how best to interpret the similarities between the results of the two studies, and what factors may lead to the differences. It is clear that many factors constrain the extent to which individual speakers can alter linguistic features in adolescence and adulthood. Lifespan change is surely different with respect to different levels of linguistic structure, from phonetics and phonology to morphology and syntax.[1] Another factor that affects speakers differently is the stage of the change itself: whether the change is incipient or new, or mid-range, or late in its progression. The drastic reduction of IF over the past century to less than 10% of the community repertoire clearly establishes it as a late stage, that is, nearly-completed change.

Closely related to the stage of the change is the social meaning of the linguistic variable: in traditional terms, "indicators" are socially differentiated across speakers, but don't display stylistic variation; "markers" vary along both these dimensions but are not overtly recognized; and "stereotypes" have all three of these characteristics (Labov 1972:314). Social stratification, with working class speakers less likely to use inflected futures, has been clearly established in this alternation (Wagner and G. Sankoff 2011:300–303, Emirkanian and D. Sankoff 1985:198). However, previous studies of future temporal reference in French have not investigated stylistic variation.

Inter-individual differences have also been observed in studies of lifespan change, with a majority of speakers showing stability along with substantial minorities participating in ongoing change even in later life (Sankoff and Blondeau 2007, Sankoff 2005, 2006, 2012a). The retrograde change reported in Wagner and Sankoff 2011 was unexpected, which makes the complementary trend data all the more important in establishing the status of this earlier finding.

2 The Polarity Constraint

All previous studies of Québécois French have found a strong polarity constraint: in the negative, IF is virtually categorical, as illustrated in the first clause in (1). The second clause exemplifies the

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[1]For phonology see Sankoff and Blondeau (2007), De Decker (2006); for morphology and syntax see Rickford and McNair-Knox (1994), Baugh (1996), Cukor-Avila (2002), Renn (2010), Van Hofwegen and Wolfram (2010).

usual use of PF in the affirmative.

(1) Alors cette année pour une fois on y **ira** pas là-bas mais eux **vont venir**.
   *'This year for once we **won't go** down there but they're **going to come** here.'*

<div align="right">Jacques L., 91, 1984, 237[2]</div>

   This constraint does not hold in Acadian French (King and Nadasdi 2003), and in the minority French communities in Ontario, PF has also been making inroads into the negative (Grimm 2010). Nevertheless, since IF is reported as occurring at rates between 97% and 100% in negative clauses in Montréal (Emirkanian and D. Sankoff 1985, Wagner and G. Sankoff 2011), Québec City (Deshaies and LaForge 1981, and Ottawa-Hull (Poplack and Dion 2009) our treatment of variation is necessarily limited to affirmative clauses.

3 Data and Methods

Our data come from two large corpora of Montreal French: the first consisting of 120 sociolinguistic interviews recorded in 1971 (Sankoff-Cedergren corpus, Sankoff and Sankoff 1973). Sixty of the original speakers were relocated and reinterviewed in 1984, and 12 younger speakers were added to represent the youngest generation at that time (Montréal 1984 corpus, Thibault and Vincent 1990). Our panel study (Wagner and Sankoff 2011) reported on 59 of the 60 speakers reinterviewed in 1984 (all of those who used both IF and PF in both interviews). For the trend comparison of the current paper, we selected 34 from each of the 1971 and 1984 corpora to give a total of 68 unique speakers as closely matched as possible on all social characteristics (Tables 1 and 2).[3]

Age	UC/UMC		MC/UWC		LWC/LC		Total		Total
	M	F	M	F	M	F	M	F	
15−30	2	2	2	2	2	2	6	6	12
31−54	2	2	1	2	2	2	5	6	11
55+	3	1	2	1	2	2	7	4	11
TOTAL	7	5	5	5	6	6	18	16	34
	12		10		12		34		

Table 1: Social characteristics of the 34-speaker trend sample of 1971.

Age	UC/UMC		MC/UWC		LWC/LC		Total		Total
	M	F	M	F	M	F	M	F	
15−30	2	2	2	2	2	2	6	6	12
31−54	2	1	2	2	2	2	6	5	11
55+	3	1	1	2	2	2	6	5	11
TOTAL	7	4	5	6	6	6	18	16	34
	11		11		12		34		

Table 2: Social characteristics of the 34-speaker trend sample of 1984.

   Python scripts were used to exhaustively search the transcribed interviews for inflectional and periphrastic forms of the future. Approximately 15,000 tokens were extracted, and inspected first in order to exclude "false positives," negation, tokens primed by the interviewer, and cases that did

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[2]The speaker's pseudonym is followed here by that person's identification number in the corpus, the year of recording, and the line number in the transcription.

[3]Because all of the speakers interviewed in both 1971 and 1984 (n=60) were included in our panel study (Wagner and Sankoff 2011), it followed that 22 of the 34 trend speakers of 1984 had to be drawn from this group of speakers (the other 12 being the younger speakers added in that year). However, in keeping with the aims of a trend study, no speaker is represented in both the 1971 and 1984 trend subsamples (Tables 1 and 2).

not meet our criteria for referencing the future, including frozen forms, habituals, hypotheticals and pseudo-imperatives. We were left with 3658 tokens in the panel study, and 2094 tokens in the current trend study, all hand-coded initially by one of us, and checked again by another. Tokens were coded for a number of features related both to linguistic properties: the form itself, grammatical person, contingency, imminence; and speaker characteristics: age, year recorded, cohort, sex, style, socio-professional status (henceforward SPS).[4] A subset of the tokens in the trend study was also coded for style, as explained further below.

4 Inflectional Futures and Speaker Age

When we examined the panel in 1971, we found a positive correlation between percentage use of IF and speaker age, as shown in Figure 1.
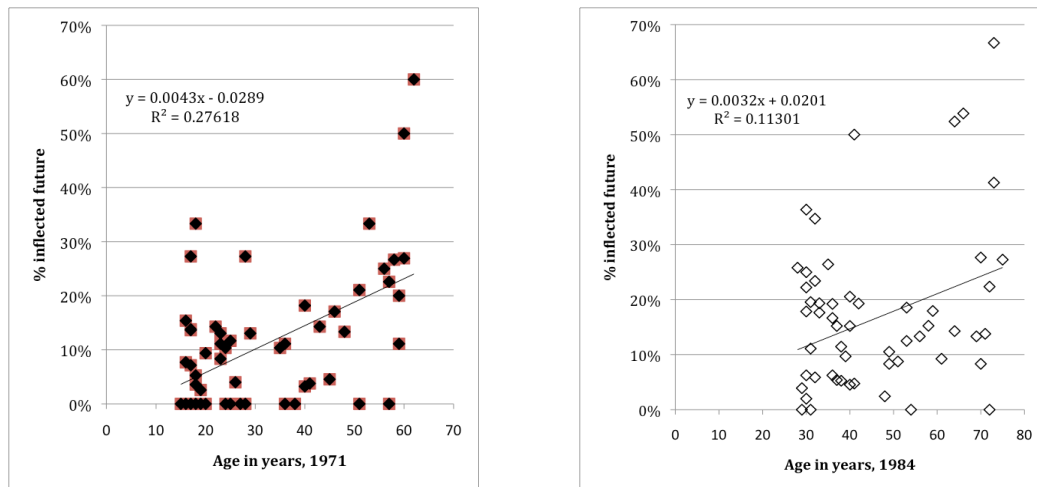
Figures 1 and 2: Percent use of IF by age for 59 panel speakers, 1971 and 1984.

This initially looked to us like a continuation of the historical trend identified by Poplack and Dion. However, as reported in Wagner and Sankoff 2011, the 59 speakers of the panel study, as a group, significantly increased their use of IF as they aged over the 13-year span (Figure 2). Their overall percentage of IF use in 1971 was 10%; in 1984, it was 15.5%. The multivariate analysis (GoldVarb X) indicated "Year of Recording" as a significant factor. Additionally, 20 speakers used PF categorically in 1971, including more than half of those under age 25, but by 1984, the number of categorical users of PF had declined dramatically, from 20 to only 4.

An **increase** in the use of IF by speakers as they age flies in the face of the historical trend, and left us with two possible lines of explanation. The one that seemed most likely was age grading, that is, that aging speakers were, over their lifespans, behaving more conservatively. This was an unusual result, in terms of previous research, for two reasons. Firstly, most studies that had identified individual linguistic lifespan change had shown it to be concomitant with change in progress, such that speakers as they aged went along with the direction of change exhibited by younger speakers (e.g., Cedergren 1987, Sankoff and Blondeau 2007, Harrington, Palethorpe and Watson 2000). Secondly, age grading has typically been associated with linguistic variables that are diachronically stable in the community (see e.g., Cheshire 2006, Wagner 2012b for a review). The alternative explanation was that, despite the apparent reduction in IF use among younger speakers, the community was somehow at the beginning of a retrograde change involving the re-habilitation of the inflected future.

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[4]Speakers are classified here according to the six socio-professional status [SPS] categories as established by Thibault and Vincent (1990), a categorization that is very highly correlated with the Linguistic Marketplace ratings that were also assigned to all speakers in the 1971 corpus (D. Sankoff and Laberge 1978). A detailed account of these procedures is given in Wagner and Sankoff 2011.

The trend results of the present study point clearly in one direction. First, we compared the 34 trend speakers of 1971 (IF 13.2%) with the matched sample of 34 different speakers of 1984 (IF 15.6%). The two rates were not significantly different, ruling out the possibility that the community as a whole was changing in a retrograde direction towards increasing IF use. This was confirmed by a Varbrul analysis (including data from both years) in which Year of Recording was not selected as a significant effect on IF. We concluded that the community was effectively stable over this period, and pursued the age grading explanation.

5 Interpreting Lifespan Change via the Contribution of Other Factors

As we had hoped, the panel results clarified the situation, indicating that age grading was the correct interpretation of our original results. Individual panelists **increased** their use of IF even as the community has been **decreasing** its IF rate over the centuries. The increased likelihood of IF with increasing age is not, however, the only factor that contributes to IF use. Factor weights from separate GoldVarb analyses of each year for the entire trend dataset appear in Table 3.

Factor Group	1971	% IF	N	1984	% IF	N
Contingency						
Contingent	.77	28%	180	.82	37%	318
Non-contingent	.42	12%	667	.37	8%	929
Person						
Formal	.67	26%	90	n.s.		
Other	.48	12%	757			
Age						
Older	.67	22%	214	.66	22%	390
Middle	.61	15%	330	.54	16%	453
Young	.27	6%	303	.33	9%	404
SPS						
High	.67	21%	264	.62	21%	334
Mid	.37	8%	254	.47	14%	556
Low	.46	11%	329	.43	12%	357
Sex	n.s.			n.s.		

Table 3: Factor weights that contribute to the use of Inflected Futures for matched trend samples, 1971 and 1974.

Looking at 1971 and 1984 separately, we see that Contingency of the clause, Age and Socio-professional Status were selected in both years. Contingent clauses favor IF, while non-contingent clauses do not. Increasing age and higher social class also favor IF. The formality of the grammatical subject played a role in 1971 only, with formal pronouns such as second person *vous* and the infrequent first person plural form *nous* favoring use of the inflected future. Sex of the speaker was not selected in either 1971 or 1984. Results were overall quite robust in terms of the high similarity of constraints operating in both years, and across both trend and panel samples. For example, considering the panel data in 1971 (Table 4), we see that Contingency[5] and Grammatical Person influence IF choice just as we saw in the trend analysis, although Grammatical Person was not an operative constraint for the panelists in 1984.

Studying the results more closely, however, we see that the relationships among the social factors were not always identical across the two years of the panel study, particularly with respect to speaker age and social class. Because of interactions in the panel data, we created a combined factor group to look at age cohort (as defined by speaker age in 1971) and socio-professional status. 'Older' refers to speakers over the age of 45. Detailed results of the separate Varbrul runs for

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[5]The 'contingent' factors displayed in Table 4 were collapsed in the trend analysis (Table 3) because of low token counts in some cells. See Wagner and Sankoff (2011:288–290) for more on the coding of contingency.

1971 and 1984 are reported in Wagner and Sankoff 2011.

Factor Group	1971	% IF	N	1984	% IF	N
Contingency						
Contingent: *quand*	.88	32%	63	.86	49%	166
Contingent: other	.79	26%	72	.73	30%	147
Contingent: apodosis of *si*	.66	14%	132	.70	26%	232
Non-contingent	.42	7%	959	.42	10%	1887
Person						
Formal	.75	26%	115	n.s.		
Other	.47	8%	1111			
SPS and Cohort (combined)						
High SPS, older	.83	30%	106	.83	41%	180
High SPS, younger	.71	15%	117	.57	17%	367
Mid SPS, older	.61	16%	51	.56	19%	120
Mid SPS, younger	.43	7%	247	.51	16%	1012
Low SPS, older	.43	7%	338	.47	11%	202
Low SPS, younger	.41	6%	367	.32	7%	551
Sex	n.s.			n.s.		

Table 4: Factor weights for IF in the panel sample, 1971 and 1984.

In 1971, we see that older speakers were much more likely than their juniors to use IF, and among these older speakers, the highest SPS group was considerably more likely to do so. Younger speakers however were indistinguishable in terms of social class in 1971, with all factor weights in the low 40s. Yet in 1984, the ordering of social class and age cohort changed. Older speakers were still likelier than younger speakers to use IF, but this was true only **within** social class groups. Social class dominated, with younger speakers using fewer IFs than their elders in each SPS group.

So, although age was a significant factor in both years of the panel study, it had a different relationship to SPS in the two years. The age of the panelists was less predictive of IF use in 1984 than in 1971. Why?

6 Discussion

6.1 The Effect of Age

We propose that speaker age became less important in 1984 because every panelist was by then an adult. Many younger speakers adjusted their use of IF upwards, (or even introduced it) as they became adults. On the panel, Younger speakers in 1971 registered a greater average IF increase (+6%) over the 13-year span than did Older speakers (+3%). Most of the adolescents who categorically used PF in 1971 were recorded using IF in 1984 as adults. Overall (for both trend and panel) IF occurs most frequently in the speech of middle-aged and older adults, and perhaps carries the appropriate hallmark of seniority. In short, within the adult population, where age is no longer a strong differentiating factor, social status begins to play a larger role.

As a caution, recall that these averages represent groups. Though for some individuals, token numbers are not large enough to report significant increases, we can get a rough idea of the relative number of speakers who can be said to have increased their use of IF over the period by taking a 15 percentage point difference between the two years to represent change for an individual speaker. On this basis, the retrograde trend was clear for one-fifth of our 59 speakers, 12 of whom increased their use of inflected futures by 15 percentage points or more.[6] Trajectories for the indi-

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[6] Wagner and Sankoff 2011 did not present data at the individual level, however the individual results included a further 5 individuals who decreased their use of inflected futures by 15 percentage points or more, and 43 whose rates at the two periods differed by less than 15 percentage points.

vidual speakers in the highest and lowest SPS groups are indicated in Figures 3 and 4. Low SPS panelists present a mixed picture, but the overall rate of use of IF is low, and most speakers remain fairly stable, with a few even reducing their use of IF as they age. High SPS panelists on the other hand have all increased their use of IF substantially, with only three exceptions, marked with the dotted lines.
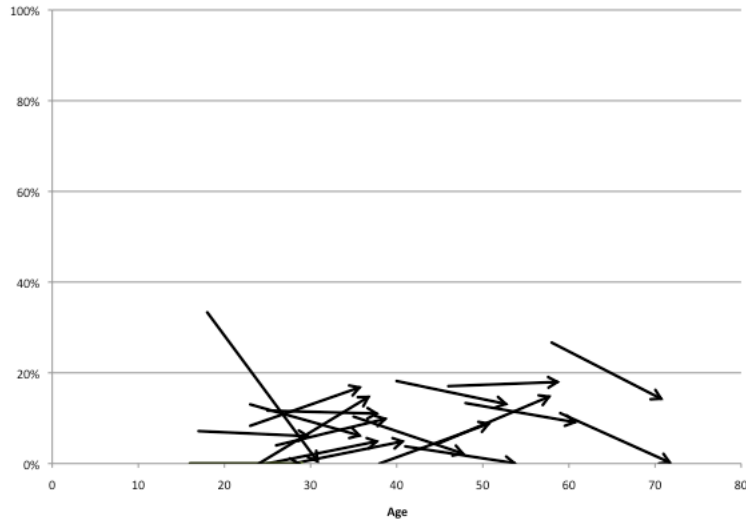

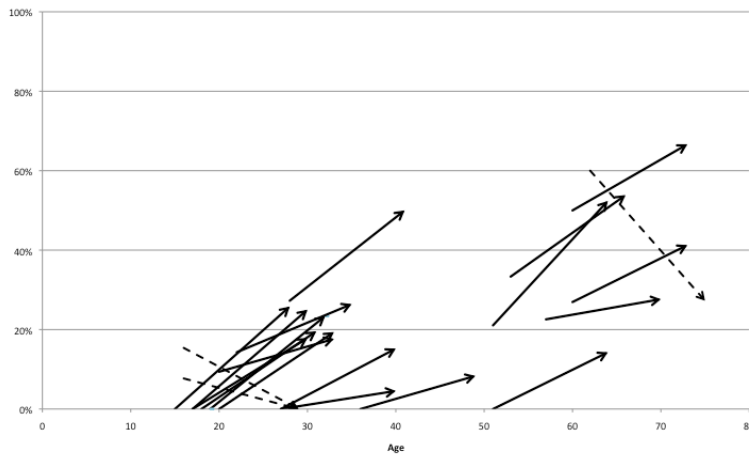Figure 3: IF percentages for low-SPS panelists, 1971–84.

Figure 4: IF percentages for high-SPS panelists, 1971–84.

6.2 The Effect of Socioeconomic Differences

The effects of age and social status on IF use are complementary, and point to behavior that has more commonly been associated with stably age-graded variables: an increase in the use of a conservative variant in later life (Chambers 2008:190), particularly for speakers whose higher socioeconomic status and generally more education makes them especially oriented to more formal, conservative, standard speech.

6.3 The Effect of Style

As the conservative variant, IF is preserved at higher frequencies in writing than in speech, as has

been shown by Lesage (1991). This association with literacy links it to formality and politeness. In our own study, and in others (e.g., Poplack and Turpin 1999), IF was favored with 'formal' grammatical person such as *vous* and *nous* in the 1971 panel data. However, this association did not appear in the 1984 data, which suggested to us that style and formality needed further consideration.

To this end, approximately half of the trend data (data from 36 of our 68 speakers) was coded for style, using the Style Decision Tree coding developed by Labov (2001) for coding sociolinguistic interview data. Categories representing a more formal style include immediate responses to the interviewer, talking about language, 'soapbox' speech, and a residual Careful category. Categories representing more casual speech included narrative, "tangents" on topics introduced by interviewees, and speech to persons other than the interviewer ("Group" in Table 5). Tokens of futures were never found in discussion of childhood games, and in narratives (obviously located in the past) only reported speech contained future tokens. With little data from these two typically informal contexts, the comparison was somewhat lopsided, as is evident in Table 5, and the overall means for the two categories did not prove to be significantly different ($\chi^2 = 1.619$, $p = 0.2$). The fact that the "group" data showed no single instance of IF was tantalizing, but since there were very few such tokens, we cannot claim to have uncovered any stylistic effect in our data.

CAREFUL STYLES	%	N	CASUAL STYLES	%	N
Immediate response	26%	54	Narrative (quoted speech)	22%	358
"Soapbox" style	26%	103	Tangent	21%	92
Topic: language	23%	84	"Group" (speech to others)	0%	30
Residual careful	23%	394			
Mean Careful	23.6%	636	Mean Casual	20.2%	480

Table 5: Percentages of IF by the stylistic categories of Labov's (2001) Style Decision Tree.

This preliminary analysis of style in the trend data appears to show that IF is no more frequent in careful than casual speech, a result that seems anomalous given our finding that IF is associated with aging and upper class social status, as well as to its higher frequency in the written language. If not clearly associated with formality or careful speech in the spoken language, we turn to a final consideration: the stage of this change in Québécois French.

7 The Long Tail of Language Change

The behavior of our panelists represents a retrograde lifespan change. Other lifespan linguistic changes, such as the adoption of uvular [R] in Montreal (Sankoff and Blondeau 2007), or the shift in the vowels of Queen Elizabeth II (Harrington et al. 2000), involved adults following along with linguistic trends in the community. Now we can see that linguistic lifespan change can and sometimes does run counter to the community trend. This may be especially likely for late-stage changes, in contrast to new and vigorous changes such as the (r) change in Montreal. Late-stage changes have often had many generations in which to rise to some level of community awareness, (the 'markers' and 'stereotypes' mentioned previously) and to acquire overt social meanings. We suggest that the increasing rarity of IF over time and its relatively marginal toehold in the modern Montreal French temporal reference system today has made it particularly attractive to older, higher social class, linguistically conservative speakers. Not only does an increased use of IF in their repertoires both reflect and constitute their seniority and social status, but it affords them an opportunity to indulge in conservative linguistic efforts at the community level. We speculate that at the tail end of a morphosyntactic change, when the losing variant is marginal, age grading is a factor in prolonging the life of a conservative pattern, and that older speakers may to some degree be aware of this consequence of their linguistic actions. In this they are not unlike more vocal presciptivists who, alarmed at the rise of for example, "the person that," insist on using "the per-

son who."

It is important to keep in mind that it is not the inflected future per se that is being lost, but rather its use in the affirmative. All of our speakers use IF productively in negative clauses. Increased use of IF in affirmative clauses in adulthood contributes to slowing the disappearance of affirmative IF from the speech community by providing input containing its presence to children, who nevertheless do not adopt it until it is socially appropriate to do so, as adults themselves.

8 Problems, Implications and Future Directions

Much as the *passé simple* in French was replaced in the spoken language by the *passé composé*, the inflected future has long been losing out to the periphrastic future. The change is nearly complete in spoken Canadian French, where PF has become the default in affirmative clauses. We have clearly established by our trend and panel comparisons that the use of IF increases among upper class speakers in adult life, and as such, is an age-graded pattern associated with a conservative linguistic variant. Several issues raised by this account remain to be solved:

1) The question of style is a thorny one in the longitudinal study of individuals. If a speaker's use of a linguistic feature changes over time, can we be sure that this is due to a change in their repertoire, or is it an artifact of different interview contexts? This question has been a specter hanging over panel studies since at least Rickford and McNair-Knox's study of Foxy Boston (1994), in which they studied the effects of speaker stance and attitude, topic, and interlocutor race, age and familiarity on the speech of a single speaker over time. However, careful use of a replicable algorithm for coding style may go some way to mitigating these concerns. In a panel study of the stable morphophonological variable (ing) in American English, Wagner (2012a) also made use of the Style Decision Tree (Labov 2001). Interviews recorded with the panelists in two time periods were not significantly different from one another in terms of style. A decline in use of the non-standard alveolar *–in'* variant with increasing speaker age could therefore be attributed to age grading, rather than to the confounding effect of varying stylistic conditions in the two sets of interviews.

2) Related to this is the issue of speakers who were categorical users of PF in the affirmative. Was the apparently categorical constraint on IF in the affirmative a rule of their grammars that was relaxed later in life? Was affirmative IF present in their grammars, but not yet appropriate to their age and social status? We are dealing with an inherent weakness in corpus-based research: one that we would ideally always address with complementary elicitation techniques, judgment tests and experimental work, although this multi-method approach is probably only feasible for a small selection of potentially interesting sociolinguistic variables in any given corpus or community. Longitudinal work is already quite difficult enough!

3) Does age-grading act as a brake on community change? For this we need more longitudinal studies—both trend and panel—of late stage changes that are comparable to the inflected future. Ongoing work on the very tail end of another late stage change in Québécois French shows a similar pattern to that of the inflected future. The several members of the highest socioeconomic group tracked through the third period of longitudinal research in Montréal (1995) showed a marked increase in the use of *ne* in later life (Sankoff 2012b).

4) Finally, there can be no doubt that trend and panel studies can improve our interpretations of generational community change in apparent time. In the case of panelists in Montreal who moved along with the community in their use of innovative velar [R], apparent time underestimates the rate of community change. In the case of panelists who move in the opposite direction to the community in their use of conservative inflected future forms, apparent time would provide a slight overestimation of the rate of community change—this only a slight overestimation of the community as a whole because, demographically, our sample over-represented this highest socioeconomic group.

Overall, it is clear that "going along with a change" in later life is not the only way in which lifespan change can relate to language change. More surprises are surely in store in the rich field of research opened up by longitudinal research in the speech community.

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