

Awareness and acquisition of new dialect features*

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1 Introduction

1.1 Awareness, variation, and second dialect acquisition

Moving to and settling in a region that is different from the one a person grew up in is a fairly common experience in North America. Observations that one's native region and adopted region differ in terms of accent or dialect seem to be just as common, followed closely by claims about how one's accent has or hasn't changed as a result of spending time in the new community. A growing body of research has demonstrated that mobile adults do change some aspects of their speech as a result of exposure to new dialects (e.g. Munro et al. 1999, Bowie 2000, Conn and Horesh 2002, Sankoff 2004, Evans and Iverson 2007). But to what extent do such changes rely on explicit speaker awareness of dialect differences?

Sociolinguists have long posited a link between speaker awareness of a linguistic variable and behavior with respect to that variable. Labov (1963) remarks that in selecting linguistic variables for sociolinguistic study “we would like the feature to be salient, for us as well as the speaker, in order to study the direct relations of social attitudes and language behavior. But on the other hand, we value immunity from conscious distortion, which greatly simplifies the problem of reliability of the data.” (p. 8)¹ The assumption is that if a feature is *too* salient, speakers are more likely to change the way they use it in erratic and generalization-muddling ways. Labov (1972a) more formally links awareness and variability, distinguishing *indicators* - variables used by a particular group which are below the level of conscious awareness and do not vary stylistically - from *markers* and *stereotypes*, which rise above the level of conscious

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¹Salience in linguistics is a complex and often problematic notion, but many discussions of salience include speaker/listener awareness as a definitional component. See Kerswill and Williams (2002) for a review of how this term has been defined and employed as an explanatory principle in the language contact literature, Choksi & Meek (this volume) for a discussion of salience in linguistic anthropology, and Siegel (2010):120–127 for the use of this term in second dialect acquisition studies specifically.

awareness and show stylistic variation. Because they are subject to conscious awareness, markers and stereotypes may also be subject to ‘conscious distortion’ if speakers become too focused on linguistic form; thus a major focus of sociolinguistic work has been the development of methods which attenuate awareness at a local conversational level (that is, reduce attention paid to speech), so that patterning of variables will be as unaffected by conscious processes as possible (Labov, 1972b). To the extent that these methods are successful, variationists can observe systematic patterns in speech which reveal the implicit knowledge (or unconscious awareness) that speakers have about the use of sociolinguistic variables (see Squires, Preston in this volume for additional discussion of implicit vs. explicit knowledge).

Scholars interested in second dialect (D_2) acquisition have similarly claimed a connection between awareness of features and the likelihood of speakers changing their behavior as a result of new dialect input. In such cases, awareness can intervene at two points: speakers may drop or modify features of their first dialect (D_1) or accommodate towards features of the D_2 . Trudgill (1986) addresses both points, stating that “in contact with speakers of other language varieties, speakers modify those features of their own varieties of which they are most aware” (11), and that “accommodation does indeed take place by the modification of those aspects of segmental phonology that are salient in the accent to be accommodated to” (20), though he further notes that linguistic constraints and social factors may play a mediating role. For Trudgill, ‘awareness’ seems to specifically mean conscious awareness (10), while ‘salient’ describes features which are ‘most prominent in the consciousness’ of speakers (12). For Auer et al. (1998), salience is a complex construct comprising objective linguistic characteristics (such as lexicalization) as well as subjective characteristics which essentially reflect conscious awareness (style differences in read vs. interview speech, representation in writing, stereotyping). Similar to Trudgill, Auer et al. claim that “salience is a necessary but insufficient condition for dialect loss and acquisition”, as the “attitudinal polarity” of and social meaning attached to a variable may protect it from change (184). Siegel (2010) agrees, concluding that “in order to be acquired, a variant must be salient enough to be noticed.” *Noticing* is a term used in second language learning research to refer to conscious awareness and subjective experience of a linguistic feature; it is a step beyond mere “perception” of a feature, where speakers may have awareness of its patterning that is “not necessarily conscious” (Schmidt, 1990).² Though terminology varies, the focus of the work reviewed here is the same: *conscious* awareness and its role in D_2 acquisition. Explicit awareness of a feature is seen as prior to, and indeed a prerequisite for, change with respect to that feature. However, additional (presumably explicit?) awareness of the feature’s social meaning and the speaker’s attitudes around that meaning may inhibit its maintenance or adoption.

²The concept of noticing and its usefulness in the study of second language acquisition has been subject to some debate (e.g. Cross 2002, Schmidt 2010), but the issue of awareness and how to relates to the acquisition of features remains a central concern (cf. Robinson et al. (2012)). See also Preston (this volume) for a somewhat broader definition of noticing.

Preston (1996) presents a more detailed discussion of the relationship between awareness and language behavior, which on one reading may seem to support this view. He outlines four ‘modes of awareness’ which capture different aspects of how non-linguists think about and use linguistic variables. Three of these modes represent facets of the knowledge that speakers have about linguistic form. A feature may have more or less *availability* to a speaker as a topic of explicit linguistic discussion; this mode more or less maps onto the notion of awareness as discussed in the literature reviewed above. In addition, a speaker’s grasp of how that feature patterns linguistically or socially may vary in its degree of *accuracy* and *detail*. The fourth mode captures the degree to which speakers consciously *control* their use of a variety or feature, reflecting differences in behavior. The modes are conceptually independent, and Preston gives concrete examples of cases in which they do not align: in one case, a speaker claims to be a proficient speaker of African-American Vernacular English (AAVE), but declines to perform the variety when prompted by her parents and an interviewer, stating that she can’t really speak it unless among others who do so themselves. This case illustrates the dissociation between availability, which in this case is high (the speaker freely talks about AAVE as a variety and even claims to use it) and control, which is very low (she cannot perform this variety when asked to do so). Yet while availability and control are not clearly correlated (one could easily imagine or even call to mind specific cases of speakers for whom AAVE is highly available and who are able to shift into the variety with ease), an implicational relationship still seems to hold (try to find a speaker who is completely oblivious to the existence of AAVE, and ask them to perform this variety). *If* dialect change is largely a matter of controlled linguistic behavior - that is, a conscious choice to jettison old features or adopt new ones - then the claim that conscious awareness (high availability) is necessary for such change seems to follow.

Revisiting his modes (this volume), Preston points out that there is much more going on under the surface with respect to both awareness and behavior. The behavior he specifically addresses is language perception - the ways in which listeners interpret speech signals in a given ostensible social context, or react to particular signals (or indeed, to more abstract mentions of specific varieties). It seems clear that listeners are not consciously controlling their perceptions or reactions in relevant cases; moreover, it is likely that the explicit post hoc rationales listeners may give for their responses reflect only a small portion of the complex network of ideologies and associations underlying them (see also Campbell-Kibler, this volume).³ The same is surely true of language production: the vast majority of ‘decisions’ that speakers make about which variant to use when in real-time speech cannot be subject to conscious reflection, and speakers’ grasp of the reasons behind these decisions must be incomplete at best.⁴

³The inaccessibility of the cognitive processes underlying behavior is not limited to language (e.g. Nisbett and Wilson 1977).

⁴“Why did I delete the /t/ so much in *west side*? Because we were speaking casually. Also, the preceding segment shares two features with the /t/, which is, moreover, followed by an obstruent.”

There is growing evidence that accommodative processes in speech production are similarly subject to largely unconscious, automatic forces. Laboratory studies of spontaneous imitation (e.g. Goldinger 2000; Delvaux and Soquet 2007; Nielsen 2011) demonstrate that speakers alter their realizations of particular sounds to converge towards that of heard voices, even though they are not instructed to imitate those voices. That is, speakers change aspects of their accent without any indication of conscious control directing this change; moreover, they are not consciously aware of the relevant differences as they do so. Unconscious convergence of this kind is not inevitable: the tendency to converge may be reined in by social or attitudinal factors which favor accent maintenance or even divergence (Babel, 2010). However, such evidence suggests a different view of the role of explicit awareness in D₂ acquisition: explicit awareness is not a prerequisite to individual dialect change, but instead may act as a filter on the unconscious accommodative processes which set dialect change in motion.

In the remainder of this chapter, I describe the results of a study examining the acquisition of two new dialect features which differ markedly in the type of awareness speakers have of them, arguing that implicit, unconscious awareness drives the observed pattern of acquisition; however, explicit awareness of the social meaning attached to these features may impede this automatic process.

1.2 Canadians in the New York City region

In previous work (Nycz, 2011, 2013) I describe the findings of a sociolinguistic study of mobile adults - specifically, native speakers of Canadian English (CE) who have moved to the New York area. This work focused on speakers' fine-grained phonetic realization of two features which distinguish their native dialect from that of their new home, but also probed awareness of and attitude about these features through qualitative means.

One of the features I examined is the quality of the diphthong /aʊ/ before voiceless consonants, in words like *about* and *mouse*. CE is characterized by so-called Canadian Raising, in which the nucleus of this allophone of /aʊ/ is raised in the vowel space compared to /aʊ/ in non-prevoiceless position (Joos 1942). Canadian Raising occurs in both /aɪ/ and /aʊ/ and is not limited to Canada. Raising of /aɪ/ has been found in Martha's Vineyard (Labov 1963), Philadelphia (Labov 1994), the Inland North (Eckert 2000), and Ocracoke Island (Schilling-Estes 1998). Raising of /aʊ/ has also been documented in Martha's Vineyard, and in Virginia (Kurath and McDavid 1961). However, /aʊ/-raising is still largely associated with CE by non-linguists (Niedzielski 1999); the phrase *out and about*, produced with hyper-raised nuclei (*oot and aboot*) is a popular, if phonetically inaccurate, stereotype of CE. The English spoken in and around New York City (henceforth NYaE), in contrast, does not exhibit raising of either /aɪ/ or /aʊ/. Labov et al. (2006) notes the "conservative character of New York City upgliding vowels", in particular the facts that the nuclei of /aɪ/ and /aʊ/ are no higher than those of the low vowels /æ/ and /ɑ/.

The second feature I analyzed is the structure of the low back vowel system - whether there is evidence for two vowel categories, typically transcribed /ɑ/

and /ɔ/, in the low back region of the vowel space, or just a single category. The Atlas of North American English (ANAE) includes Canada within the large region which makes no distinction between words such as *cot* and *caught* (Labov et al., 2006), and according to Boberg (2008), “virtually all native speakers of Canada today” have this merger, which has been present in Canadian English for several generations (150). The situation in New York City and surrounding areas is quite different. The mid-Atlantic region is noted in the ANAE as being one of a few areas in which the *cot/caught* distinction remains robust; here, the raised quality of the vowel in *caught* helps to maintain the contrast. In neighboring New Jersey, these vowels are also distinct. Coye (2009) reports, based on questionnaire data, that the merger of these vowels is “gaining a solid foothold in New Jersey”; this is perhaps true of counties in the northwest, where around 30% of questionnaire respondents report that the vowels of *Don* and *Dawn* sound the same, but the responses for the majority of counties in NJ are overwhelmingly (>85%) distinct.

These two features differ markedly in the extent to which speakers of North American varieties of English are generally aware of them.⁵ In Preston’s terms, Canadian Raising in /aʊ/ is subject to very high availability as a stereotype of CE, but generally low phonetic accuracy, as the quality of the stereotyped vowel does not reflect its actual quality in CE. Awareness with respect to detail may be incomplete: metalinguistic commentary tends to focus on the words *out*, *about*, and *house*, rather than the conditioning context or the vowel category.⁶ Finally, there seems to be a high level of control, at least with respect to the stereotype; whether this extends to more authentic realizations is unclear.

The low back vowel system is not subject to the same levels of explicit awareness. Mergers and distinctions are thought to be below the level of conscious awareness, and not subject to social evaluation (Labov 1994); studies of the low back merger in particular do not contradict this conclusion (e.g. Baranowski 2013). Thus the distinction (or lack thereof) is typically not available for commentary. The quality of the individual vowels is a different story. Speakers may comment on the way that New Yorkers say *coffee*, for example, imitating a very high, back, and diphthongal vowel in this word, and revealing at least a limited awareness of this feature of NYaE. I return to the implications of this vowel-specific awareness in the Discussion.

This difference between the two features allows us to formulate some soft predictions. If explicit awareness is a prerequisite for dialect change, then we would expect that the Canadian speakers in this study would show no acquisition of the D₂ feature of low back vowel distinction per se. If they have some explicit awareness of the quality of the vowel in specific words like *coffee*, it’s possible they may alter their pronunciation of these words towards the D₂ realization, or pointedly not do so. Behavior with respect to Canadian Raising is harder to

⁵They also potentially differ in terms of their formal linguistic status; see Nycz (2011) for discussion of this point.

⁶Cf. Michael Moore’s film *Canadian Bacon*, in which a belligerent American warns a member of the Royal Canadian Mounted Police that ‘we got ways of making you pronounce the letter *o*’, revealing the screenwriters’ more general grasp of the feature.

predict: either high explicit awareness will lead to maintenance of this D₁ feature (because of positive associations with Canadian identity) or its eradication (if there is a desire to assimilate).

If explicit awareness is *not* a prerequisite for dialect change, but instead functions as a filter on change, then we should find evidence of convergence towards the D₂ in both features. This convergence may be attenuated for Canadian Raising, depending on the attitude and desire of the individual speaker. Convergence towards the low back vowel system will probably not show such filtering effects, if speakers indeed lack explicit awareness of the distinction *per se*; however, there may be effects in words like *coffee*, if speakers are aware of the local stereotype associated with this feature.

The remainder of this chapter thus addresses the following questions. Are these specific Canadians who now live in the New York region explicitly aware of either (or both) of these features? If a feature is available for comment, how do they talk about it - is the social evaluation positive or negative, and do they express a desire to change the feature in question? How are each of these features actually used by the speakers in this sample? Finally, with which view of the role of explicit awareness are the observed patterns most consistent?

2 Methods

The data are drawn from sociolinguistic interviews I conducted with 17 native speakers of Canadian English in 2008. All of these speakers were born and grew up in Canada and later moved to New York City or nearby towns in New Jersey after the age of 21. These speakers comprise 12 females and 5 males, hail from a variety of Canadian provinces, and vary in age at time of interview and age of move (Table 1).⁷ All but two interviews took place in New York City; the remaining two interviews were held in New Jersey, in venues near the speakers' homes. My own dialect in 2008 more or less reflected what was at the time my regional background (born and lived 17 years in New Jersey, less than an hour's drive to New York City; 4 years residence in New Hampshire, 7 years residence in New York City) and social network structure (not very dense, not very multiplex): I natively produce a low back vowel distinction and do not raise the nucleus of /aʊ/ in prevoiceless contexts, but my production varies a great deal according to audience and other contextual factors.⁸ In my communication with speakers before, during, and after the interview I presented myself as an American Canadaphile who has knowledge and appreciation of some regions (e.g. southeastern Ontario) and aspects of Canadian culture (musical & culinary) and is eager to learn more about other regions and aspects (the Western

⁷For analysis of these social factors and their effect on linguistic behavior, see Nycz (2011).

⁸I have not carried out a detailed acoustic analysis of my own speech in the interviews reported on here; however, impressionistically speaking, I was surprised to hear many apparently merged low back vowel tokens in my speech from the start of these conversations. This, combined with my apparent lack of Canadian Raising, assuages my initial concerns that the speakers in this study may have simply accommodated to my dialect features in the short term of the interview, rather than revealing more general patterns in their speech.

Speaker	Gender	Age	Years in NYC area	From
LC	female	30	1	Ottawa/Toronto
LW	female	31	10	New Brunswick
PW	male	32	<1	Vancouver/Toronto
BW	male	37	2	Toronto
NW	female	39	14	Alberta
TM	female	41	3	Toronto/Manitoba/Ottawa
ES	male	42	5	Manitoba/Alberta
JF	female	45	14	Manitoba
LG	female	46	7	northern Ontario/Toronto
JC	male	48	18	Montreal
EW	male	50	16	Saskatchewan
BK	female	54	21	Ottawa/Montreal
GH	male	54	15	Montreal/Toronto
CW	female	54	28	Montreal
SS	female	54	27	Montreal
DB	female	58	11	Halifax/Toronto
VJ	female	70	44	Toronto

Table 1: Speakers in the study described by gender, age and number of years spent in the New York City area at time of interview, and region of origin.

provinces; politics and national identity).

Each of these speakers participated in four activities. First, we engaged in a one-on-one *conversation* about their life as a Canadian in the New York region. Topics in these conversations included what their hometown in Canada is like, their experiences growing up there, their reasons for moving to the United States, and their feelings about their home and adopted countries. Next, the speaker read individual words from a *word list* presented with flashcards, then completed a sociolinguistic *minimal pair task*. Then the speaker completed a *minimal pair judgment task*, in which they were asked to look again at the minimal pair list and say whether they thought there were any pairs which people from the New York region would have different judgments on or pronounce differently. Finally, the conversation resumed with additional discussion of linguistic features and impressions of their native and the local dialect. The conversational data were phonetically analyzed⁹ to determine how each speaker produced the features of interest, while the metalinguistic commentary generated by all tasks was used to assess each speaker’s awareness of these features.

⁹Brief descriptions of the phonetic analyses are given in relevant sections below. Further details are given in Nycz (2011, 2013).

3 Results

3.1 Canadian Raising

3.1.1 Awareness of Canadian Raising

The results regarding awareness of Canadian Raising in /aʊ/ are easily summarized: every speaker interviewed is consciously aware of this D₁ feature. Many speakers mentioned raising in /aʊ/ as a feature of CE before they were even asked about language in the conversation; for the rest, raising was the first or second¹⁰ feature they responded with when asked about features of their native dialect. In Preston’s terms, this feature has high or common availability for the participants in this study. Their knowledge of this feature is also characterized by a high level of accuracy and detail; while the speakers acknowledge the phonetically inaccurate American *oot and about* stereotype, they accurately perform the phonetics of this feature, can distinguish their own naturally raised productions from the stereotype, and can characterize the set of words that contain it.

While /aʊ/ is subject to high awareness among these speakers, it does not receive an evaluation that is straightforwardly positive or negative. Instead, speakers consistently note simply that it is a very *Canadian* feature, one that instantly outs them to Americans as being ‘not from here’ (1). For this reason, several speakers, assuming high amounts of control over this feature, claimed to have consciously reduced their use of it since moving to the States, as JF does in (2):

(1) Honest to God I think “about” - I don’t say it with a Canadian pronunciation... except sometimes in conversation people who know Canadians will go “Aha! I caught you!”...Sometimes apparently I will say ab[ʌʊ]t (ES, 42)

(2) I feel like I wanna be the one who reveals I’m Canadian, I don’t want people to hear it in my speech. So that’s why I’m saying “ab[a:ʊ]t...so I have changed, consciously changed... (JF, 45)

It is important to note here that speakers are not in any way ashamed of being identified as Canadian; quite the opposite. However, they would like to have some control over how this information is revealed,¹¹ and claim to take this control by deliberately manipulating their use of salient dialect features. In this group of speakers we thus have across-the-board explicit awareness of a first dialect (D₁) feature plus in many cases a desire to attenuate it, and a belief that one is successful in this goal.

¹⁰The discourse marker ‘eh’ is the other feature that speakers invariably mentioned.

¹¹My sense is that this is not because speakers want (even temporarily) to keep their Canadian identity a secret, but because speakers do not want to risk derailing a conversation towards discussion of the fact that they are Canadian.

3.1.2 Use of Canadian Raising

1210 tokens of /aʊ/¹² were measured across all speakers. An F_1 measurement was taken for each token at the nuclear F_1 maximum. An Analysis of Variance (ANOVA) using treatment contrasts was carried out for each speaker with F_1 as the outcome variable and a predictor variable dividing the tokens into four groups: instances of *about*, instances of *out*, tokens of other raising context words such as *shout* or *gout*, and nonraising context words like *loud* or *how*. The nonraising group was set as the control level against which the other three raising context groups were compared. What results from each of these analyses is two pieces of information per raising context group: 1) an assessment of whether the average F_1 for the group is significantly different from that of the nonraising group (i.e. whether that group shows significant raising) and 2) a coefficient indicating the magnitude of this difference.

The results of these analyses are summarized in Fig. 1, which plots the regression coefficient (in Hz) associated with each word group for each speaker. A horizontal line has been drawn at -60Hz, reflecting the threshold value used by ANAE to categorize tokens as raised or not. Seven of the speakers are consistent raisers, with each of the three groups having a significantly lower F_1 value than the baseline nonraising group; these differences are also all above the 60Hz threshold. Four speakers show significant raising only in *about* and *out* (again, with both of these word classes sitting above the ANAE threshold), while their other raising context words are not significantly different from the nonraising baseline. Finally, four speakers show significant raising only in *about*.

A closer look at the other-raising group indicated, however, that not all lexical items within this group showed raising to the same extent: higher word frequency was associated with higher F_1 , suggesting that the greater frequency of exposure to D_2 tokens of these items has resulted in them shifting towards D_2 realizations at a faster pace.

To summarize, nearly all of the speakers continue to use Canadian Raising in /aʊ/ in at least some contexts. An implicational trend can be seen: *about* is the most raised group, typically followed by *out*, then other raising-class words; this trend holds even for the two speakers who did not show any significant differences between the raising groups and nonraising baseline. That is, the very words to which the greatest awareness of Canadian Raising attaches are also the words which most exhibit this feature - despite speakers' specific desire to attenuate it. Within the other raising-class words, higher frequency items show more convergence towards D_2 realizations.

3.2 Low back vowels

3.2.1 Awareness of low back vowel contrast

As noted previously, mergers and distinctions per se are not typically subject to conscious awareness and overt commentary. The generalization is largely borne

¹²in non-prenasal contexts only; words like *down* were excluded from analysis.

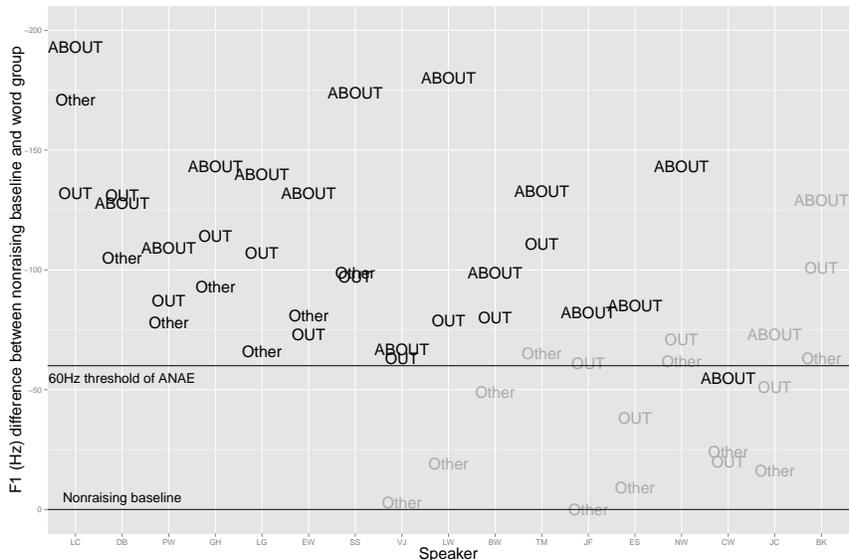


Figure 1: /aʊ/ raising in ABOUT, OUT, and OTHER RAISING WORDS among Canadians in the New York City area. Black type indicates significant differences.

out in the current data: no speaker mentioned the low back vowel distinction in their interview, either on their own or when asked to comment on the features of NYaE they’ve noticed.¹³

Moreover, in the ordinary minimal pair task all speakers demonstrated a merger in both production and perception. Word pairs such as *cot/caught* and *don/dawn* were produced homophonously and speakers accordingly noted that they sound the same. That is, not only did speakers not comment on the D₂ feature of low back vowel distinction in the context of a conversation about language, it did not even come up naturally in a task which specifically calls attention to potential contrast.

More interesting results emerged from the minimal pair judgment task. When asked to comment on how New Yorkers might pronounce or judge the pairs on the minimal pair list, seven speakers revealed a robust awareness of the low back vowel distinction in their new dialect, producing many or all of the relevant pairs with a phonetically exaggerated distinction, using an extremely high and often diphthongal vowel for *caught* class words. In contrast, four speakers showed no explicit awareness of this feature in the judgment task: these individuals picked out other pairs as sounding different in the ambient dialect (e.g., pointing out that the words *higher* and *hire*, a distractor pair, would be

¹³One speaker, TM, notes that people from Brooklyn say ‘dawg’ [dʌʊg], but neither generalizes beyond this lexical item to other CAUGHT class words nor compares this realization to COT class words.

produced without /r/s), but passed over the low back vowel pairs without comment. Finally, the remaining six speakers showed some explicit awareness of low back vowel differences, but this awareness seemed to be limited to specific lexical items. VJ, for example, commented that *doll* may be produced with a more “drawn out” vowel than *tall*, but otherwise did not spot any low back differences, nor generalize to other words. The low back vowel distinction thus has low availability even for the speakers who have some explicit awareness of it, insofar as discussion of this feature can only be elicited using very targeted prompts. Moreover, the accuracy and detail of this awareness varies widely for those speakers who demonstrate it.

For those speakers who do comment on the low back vowel pairs, social evaluation focuses on the quality of the vowel in *caught*. For the most part, these evaluations are rather neutral - while a few speakers think the New York /ɔ/ is ‘grating’ or ‘annoying’, the individuals in this study are mostly amused by the difference.

Unlike Canadian Raising, then, the low back vowel system is subject to variable awareness among the expat Canadians in this study: some speakers are explicitly aware of the distinction as such, some speakers are explicitly aware of differences only in specific lexical items, and others seem to have no explicit awareness of this difference.

3.2.2 Use of low back vowels

Formant measurements were taken at the F_1 maximum of the low vowel in 3,288 tokens of *cot*-class words and 2,052 tokens of *caught*-class words across all speakers.¹⁴ Mixed effects linear regression was used to determine whether each speaker produced a significant distinction between these two groups in spontaneous speech. For each speaker, two analyses were run, one with F_1 as the dependent variable and one with F_2 . For each formant, a model containing phonological predictors such as following place and following manner and a random effect of word was compared to a similar model containing those same terms plus a factor coding Word Class. If the model including Word Class was found to be significantly better than the model that did not include this factor, this indicates that there is variation between the word classes that cannot be attributed to phonological factors alone, and can be interpreted as showing that the speaker makes a distinction between these word classes on the relevant formant dimension. In addition, the effect size associated with Word Class in this more complex model can be interpreted as the magnitude of this distinction.

The results of the analyses of conversational data are shown in Fig. 2, which plots the effect size (in Hz) associated with Word Class obtained in the F_2 and F_1 analysis of each speaker. Eleven of the seventeen speakers produce a significant (if in some cases not very large) difference between *cot* words and *caught* words in some dimension in spontaneous speech. However, this behavior is not clearly related to awareness of the feature. While five of the speakers

¹⁴Here, the *cot* class consists of words in the LOT lexical set (Wells, 1982), while the *caught* class comprises words in the THOUGHT and CLOTH sets.

who display a contrast also have a general explicit awareness of the contrast, the other six speakers in this group appear to have acquired a distinction with limited explicit awareness or no awareness of it. Meanwhile, two speakers who have a general explicit awareness of the contrast do not exhibit a significant difference between these word classes.

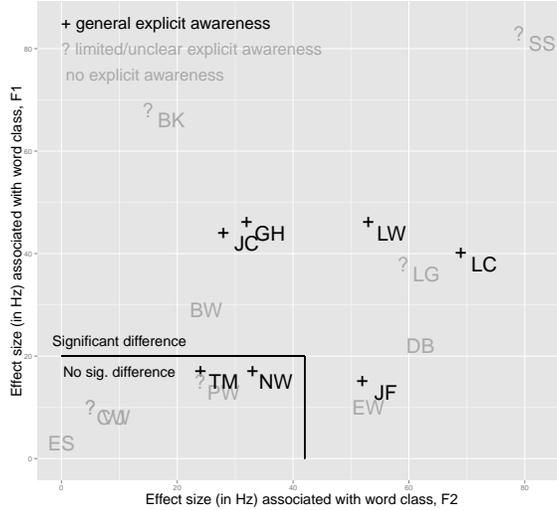


Figure 2: The effect size (in Hz) associated with Word Class obtained in the F_2 and F_1 analysis of each speaker. Speakers with a large difference along both dimensions are plotted farther away from the origin, while those with little or no difference between word classes are plotted closer to the origin.

There are also significant frequency effects associated with the realization of these tokens. Table 2 shows the results of analyses of each word class across speakers. Higher frequency *cot* words tend to be lower and fronter (that is, more D_2 -like) than lower frequency words of this class, while higher frequency *caught* words are higher (again, more D_2 -like) than lower frequency *caught* words. These effects are not symmetrical: the frequency effects associated with the *cot* words are somewhat greater than and more significant than those of the *caught* words.

		Effect (Hz/Count)	<i>p</i> -value
<i>caught</i>	F_1	-0.38	<0.05
	(F_2)	(-0.03)	(1)
<i>cot</i>	F_1	.52	<0.01
	F_2	1.72	<0.001

Table 2: Frequency effects on F_1 and F_2 for each word class.

To summarize, the majority of speakers show evidence of having acquired a distinction between *cot* and *caught* words in their conversational speech. However, this acquisition does not seem to require explicit awareness of the D₂ feature. In addition, higher frequency words of both classes show greater evidence of convergence towards D₂ realizations, though these effects are more pronounced for the *cot* words.

4 Discussion

Canadian Raising in /aʊ/ and the low back vowel distinction differ greatly in the type of awareness they are subject to. The speakers in this sample, like many North Americans, all have explicit awareness of Canadian Raising and its social meaning, and in many cases a belief that they can successfully control this feature. Awareness with respect to the low back vowel distinction is more varied: some speakers have an explicit awareness of the distinction per se, others seem to have a limited explicit awareness connected to particular lexical items or vowel qualities, and others show no evidence of explicit awareness. However, even speakers with a general explicit awareness of this feature only reveal this state when prompted in a very particular way; the distinction does not have very high availability. As described in Section 1.2, expectations about how these features should pattern will depend on whether explicit awareness is, as some scholars have claimed, a prerequisite for loss of a D₁ feature or acquisition of a D₂ feature, or rather a filter which may attenuate automatic, unconscious processes of accommodation.

Canadian Raising, the D₁ feature subject to high across-the-board awareness, shows evidence of both stability and change in the speech of these individuals. On the one hand, there is stability in that all speakers show evidence of continued robust raising in the words *out* and *about*, and several speakers continue to raise in other raising-context words. On the other hand, there is evidence of change, in that higher frequency lexical items (setting aside *out* and *about*) are realized with lower nuclei, indicating that speakers are accommodating to the D₂ in a patterned, lexically gradual manner. Unfortunately, these data cannot be brought to bear on the question of whether explicit awareness is a prerequisite for change, as there are no speakers in the sample who lack explicit awareness of this feature. Moreover, the stability of Canadian Raising is not expected by either the prerequisite or the filter view, given the explicitly stated attitudes and desires of the speakers. If they are aware that this feature marks them as Canadian and want to suppress its use, then not only might we expect less raising overall, but the stereotype items *out* and *about* should be realized with the lowest nuclei, not the highest.

To understand these results, the conversational context in which this data was collected must be considered. As a researcher who specifically recruited expatriate Canadians and expressed an interest in learning about each speaker's experience as a Canadian in the U.S., I no doubt established a setting that was favorable to eliciting CE features; of course, in this context the risk of 'out-

ing' oneself as Canadian was a non-issue. Of course, I was still an American conducting interviews in New York or New Jersey, a context which should prevent wholesale style shifting back into the D_1 . Indeed, it is clear that total style-shifting back into D_1 cannot be happening for most speakers, given their decidedly non-CE realization of the low back vowel system. So while use of certain CE features like Canadian Raising might thus be especially favored in the data collected here, it is probably not the case that this speech is qualitatively different from the speech of these speakers in everyday contexts. However, it is likely that in other conversational contexts, characterized by non-Canadian topics and/or less explicitly welcoming American interlocutors, the speakers in this study might suppress Canadian Raising to a larger extent. If this is in fact the case, it would indicate that explicit awareness and attitude plays a role in how speakers use a feature in particular contexts, but other factors such as topic and audience may exert more of an influence.

The low back vowel findings are more informative. The speakers in this sample vary in their awareness of the D_2 low back vowel distinction, with some exhibiting explicit awareness of this feature while others show no such awareness. This variation thus allows a test of the idea that explicit awareness is necessary for adoption of the D_2 feature: if this idea is correct, those who have explicit awareness should be more likely to show acquisition of this feature (though perhaps less consistently than one might expect for a more available feature), while those with no explicit awareness should show no evidence of a distinction. In the current data, this prediction does not hold: while eleven out of seventeen speakers show evidence of having acquired a difference between the *cot* and *caught* word classes, three of these individuals seem to have no explicit awareness of this feature, and three others have fairly limited explicit awareness (including the speaker who exhibits the greatest distinction between word classes!). These results indicate that explicit awareness is not a prerequisite for acquisition of this feature. Instead, it is likely that automatic accommodative processes drive this acquisition: speakers adjust their realizations of relevant words in the direction of those in the ambient dialect, resulting in the separation of the two word classes.

There is evidence, however, that explicit awareness and the evaluations that accompany it may attenuate these accommodative processes, acting as a sort of filter on dialect acquisition. Findings presented in Section 3.2.2 indicate that convergence towards the D_2 is somewhat less advanced for the *caught* class than for *cot*: frequency effects on the former are both smaller and less significant. These results are consistent with the observation that speakers are typically explicitly aware of the phonetic quality of the NYaE *caught* vowel, and aware that this quality lacks prestige. Automatic convergence towards NYaE *caught* may be stunted by explicit awareness of vowel quality and its meaning, while convergence towards *cot* proceeds unimpeded.

5 Conclusion

This chapter necessarily abstracts away from the many other linguistic and social factors that affect speech production, and that may interact with awareness in complex ways (for more discussion of these, see Nycz 2011.). Despite this limitation, the findings discussed here can be brought to bear on the issue of whether explicit awareness of a dialect feature is necessary for individual change in that feature, as previous work has suggested. These findings indicate that this is not the case: a D₂ feature can be acquired without explicit awareness of that feature, presumably as a result of unconscious, largely automatic processes of accommodation. Explicit awareness likely does play a role in this acquisition process, holding back accommodation towards particular features to which such awareness attaches. However, explicit awareness does not straightforwardly translate into control. Speakers may claim to have consciously changed specific aspects of their accent, but their speech patterns may tell a different story, indicating the importance of contextual factors such as topic or audience.

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