RULE ORDERING IN CANADIAN ENGLISH

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Over ten years ago, "Morris Halle cited Martin Joos' data to demonstrate that some Canadian dialect differences can be characterized in terms of differently ordered rules."[1] Two of these differently ordered rules are T-Voicing and Vowel Shortening, called for short Voicing and Shortening, respectively.

The presence of the Voicing rule is widespread throughout Canada and the rest of North America. This rule applies to words such as bitter, attic, metal, writer, latter, putting, flutter, looter, Alberta, and Minnesota. A common feature of all of these words is the fact that they have a voiceless coronal anterior stop, [t], occurring before an unstressed syllable. People who have this rule voice the /t/ in the above words to become a [d] sound. So the following derivation of the word writer may be made if this rule is applied.

$$/r_{\Lambda}^{1}yt_{\partial}^{2}r/$$

Voicing $_{1}$ d $_{2}$

$$[r_{\Lambda}^{1}yd_{\partial}^{2}r]$$

On the other hand, /t/ does not become voiced in words such as lit, late, put, loot or write. All of these words are monosyllabic and they contain a voiceless coronal anterior stop as well. Here is a derivation of the word write when the Voicing Rule fails to apply.

$$/r_{\Lambda}^{1}yt/$$

Voicing   ⊤⁻

$$[r_{\Lambda}yt]$$

One notices that in this case, no change is made as a result of the rule. Now consider words which contain a voiceless coronal anterior stop, before a stressed vowel. Some examples are: retain, between, attack, petite, and retire. When the Voicing rule is applied to the word retain, again no change occurs.

$$/r_{1}^{1}te_{n}^{2}/$$

Voicing $_{1}$⁻z

$$[riten]$$

Thus, this particular environment does not meet the needs of the Voicing rule either.

From this data, a generalization can be made. This generalization is that a voiceless coronal anterior stop, /t/, must occur before an unstressed syllable in order for voicing to take place. Therefore, the Voicing rule says to voice /t/ in a word when the /t/ occurs before an unstressed syllable. Another way of expressing this rule is:

$$\text{t} \longrightarrow [+\text{voi}] \;/\; \overset{V}{[+\text{stress}]} \underline{\quad} \overset{V}{[-\text{stress}]}$$

By applying the Voicing rule, the following pairs of words optionally become homophones in Canadian English. (In all instances below, the /t/ and /d/ follow a stressed vowel and precede an unstressed vowel.)

bitter	[bɪtər ~ bɪdər];	bidder	[bɪdər]
metal	[mɛtəl ~ mɛdəl];	medal	[mɛdəl]
latter	[lætər ~ lædər];	ladder	[lædər]
putting	[pʊtiŋ ~ pʊdiŋ];	pudding	[pʊdiŋ]
flutter	[flʌtər ~ flʌdər];	fludder	[flʌdər]
beetle	[biytəl ~ biydəl];	beadle	[biydəl]
waiting	[weytiŋ ~ weydiŋ];	wading	[weydiŋ]
looter	[luwtər ~luwdər];	lewder	[luwdər]
(Minne)sota	[sowtə ~ sodə];	soda	[sowdə]

In his article, Chambers cites a particular group of words that apparently meets the environment of the Voicing rule, but to which the rule still does not apply. The reason for this is because these words are characterized by a following unstressed syllable which includes "an alveolar nasal, as in button, in which case the second syllable is a sustained nasal with a brief glottal onset, as in [bʌʔən]."[2] Phonetically, the second syllable is identical to that in fountain, mountain, etc., with an underlying cluster. Hence, the particular rule which accounts for the pronunciation of button and fountain must be ordered before the Voicing rule.[3]

The second rule to be discussed, the Shortening Rule, is also very general and widespread across Canada. This rule applies to words such as leaf, half, loaf, let, tuck, pot, and hit. A common feature of all of these words is the fact that the vowel is followed by a voiceless consonant. People who have this rule shorten the duration of the vowel in the above words. So the following derivation of the word hit is made if the rule is applied.

$$/hɪt/$$
$$\text{Shortening} \quad \smile$$
$$[h\breve{ɪ}t]$$

But the vowels in words such as leave, have, loave, led, tug, pad, and hid do not become shortened in duration as a result of this rule. Note that the vowels in all of these words are followed by a voiced consonant. Below is a derivation of the word hid when the Shortening Rule is applied. Notice that no change occurs.

$$/hɪd/$$
$$\text{Shortening} \quad ----$$
$$[hɪd]$$

Again, a generalization can be made from this data. This generalization is that the duration of a vowel is shortened when the vowel occurs before a voiceless consonant. Therefore, the Shortening rule says to shorten the duration of a vowel when the vowel occurs before a voiceless consonant. This rule may be expressed in the following manner:

$$V \longrightarrow [+ \text{short}]/\_\_\overset{C}{[-\text{voi}]}$$

Most Canadian dialects contain both Voicing and Shortening rules, although the ordering of these rules differ in different dialects. One Canadian dialect orders these rules as follows:

1. Shortening
2. Voicing

We will call this Dialect I. Yet another dialect reverses the order of these two rules so that Voicing occurs before Shortening.

1. Voicing
2. Shortening

This dialect may be termed as Dialect II. Dialect II was actually reported in Ontario by Martin Joos in 1942.[4]

The different ordering of these two rules often results in different phonetic forms for words. By applying Dialect I's rule ordering for the word <u>writer,</u> we attain the phonological derivation below. (Note that Canadian Raising[5] has been applied here before Shortening and Voicing. I will no longer mark stress.)

	/rʌytər/
Shortening	ʌ̆
Voicing	d
	[rʌ̆ydər]

Yet, by applying Dialect II's rule ordering on the word <u>writer</u>, we arrive at the following:

	/rʌytər/
Voicing	d
Shortening	---
	[rʌydər]

The difference between Dialect I, [rʌ̆ydər], and Dialect II, [rʌydər], is that the vowel in Dialect I is short, and this vowel is not short in Dialect II.

So it may be seen that the dialect split that existed in 1942 involving these two dialects was the result of the ordering of these two rules. From the above examples one also comes to realize that the Voicing rule, by which /t/ is changed to [d], potentially creates environments which influence the operation of the Shortening rule. Therefore, if Voicing is ordered before Shortening, as in Dialect II, the shortening will not apply since the structural description is no longer met. But if the order is reversed, as in Dialect I, then both rules will apply, and the surface structure will include short vowels before [d].

For other words, such as <u>rider</u> and <u>lit</u>, the rule ordering does not result in different phonetic forms. Refer below for derivations of these two words.

		rider /raydər/	lit /lɪt/
Dialect I	Shortening	--	̆
	Voicing	--	
		[raydər]	[lɪ̆t]
Dialect II	Voicing	--	--
	Shortening	--	̆
		[raydər]	[lɪ̆t]

Thus, some words are greatly affected by the ordering of the Voicing and Shortening rules, while other words are not affected. Here are some more examples of words which are concerned with the rule ordering of these two dialects. The words are separated into columns, depending on their features.

Column 1	Column 2	Column 3	Column 4
atom	met	pull	kidder
lighter	sat	pod	wading
clouting	cite	log	saddle
waiting	hit	hid	clouting
metal	pat	leg	rider
bitter	let	led	medal
latter	put	pun	cider
putting	pet	pad	fiddle
flutter	pot	kid	saga
better	knot	nod	
looter	peck	peg	
beetle	sack	sag	
kettle	sock	sod	
bottom			
bottle			
litter			
letter			

Dialect I
Shortening ˇ   ˇ   ---   ---
Voicing   d   ---   ---   ---

Dialect II
Voicing   d   ---   ---   ---
Shortening --   ˇ   ---   ---

The difference in the ordering of these two rules will not affect any of the words in Column 2, or 4 in terms of their final phonetic form. But the words in Column 1 will definitely be affected by the order in which the rules are placed. As previously mentioned, the words in Column 1 of Dialect I have the extra feature of being short in vowel length when compared with the words in Column 1 of Dialect II.
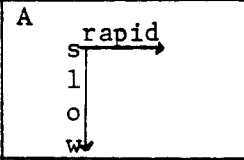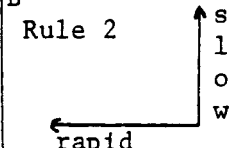
Chambers observes that in the last three decades "Dialect II has disappeared and Dialect I is ubiquitous throughout heartland Canada."[6] It is probable that the people who used Dialect II switched their rule ordering to conform with Dialect I.

It has become a matter of interest why Canadian English came to differ in the ordering of the Voicing and Shortening rules in the first place. "Joos suggests that the split was actually the result of the introduction of the Voicing rule into the grammar of Canadian English."[7] As he sees it, the innovation of Voicing created a split depending upon where in the grammar it was introduced. Robert King supports a somewhat similar line of thought by proposing "that different orderings of rules among neighboring dialects may in some instances be due to a kind of wave effect."[8] That is, rules spread out from prestige core dialects, and different rates of diffusion of the rules lead to different orderings.

King's proposals can be explained by considering two hypothetical dialects, Dialects A and B. "Dialect A has a rule 1 and not a rule 2 in its grammar, whereas Dialect B has rule 2 and not rule 1 in its grammar, and the contiguous dialects C and D have neither rule."[9] This situation may be represented by the following diagram.

A Rule 1	D
C	B Rule 2

One must assume that rules 1 and 2 diffuse away from their original areas toward Dialects C and D, that speakers of Dialect C and D borrow rules 1 and 2 into their grammars, adding them on at the end. Then assume that rule 1 is borrowed immediately from Dialect A into Dialect D but later into Dicalect C, and that rule 2 is transmitted rapidly from Dialect B into Dialect C but later into Dialect D. This could give rise to the situation indicated below where Dialect C has rule 2 followed by rule 1, and Dialect D has the opposite order.

A rapid s l o w	D Rule 1--Rule 2
C Rule 2-Rule 1	B Rule 2 s l o w rapid

King intended this hypothetical example to suggest ways in which dialects may come to have rules identical but in different orders.

But whatever its origins, the fact that there was once a difference in the ordering of the T-Voicing and the Vowel Shortening rules in Canadian English is an important finding in itself for the field of linguistics.

FOOTNOTES

[1]Jack Chambers, "Canadian Raising", The Canadian Journal of Linguistics XVIII (Fall/Automne 1973), p. 117.

[2]Chambers, p. 119.

[3]Chambers, p. 119.

[4]Chambers, p. 120.

[5]Canadian Raising is a rule common to Canadian English and it consists of various versions. Chamber's article, which is cited in the bibliography, deals with one version of this rule that is found in Central Canada. The dialect of Canadian Raising which I am using in the following derivations is the most common variety of Western Canadian English. This variety does not employ the stress condition which is found in the Central Canadian version. In western Canadian English, a low vowel [a] is converted to a mid vowel [ʌ] before a glide and a voiceless consonant. Thus, for the word writer, speakers of Western Canadian English convert the /ay/ to /ʌy/ because it is before a glide and [t], which is a voiceless consonant.

(Speakers of Central Canadian English convert a low vowel [a] to a mid vowel [ʌ] before a glide and a voiceless consonant, and if there is another syllable following the vowel, that syllable must be unstressed.)

[6]Chambers, p. 122. The results of a class survey in 1974 at The University of Calgary confirms Chamber's observation.

[7]Chambers, p. 122.

[8]Robert D. King, Historical Linguistics and Generative Grammar. Englewood Cliffs, Prentice-Hall, Inc., 1969, p. 56.

[9]King, p. 56.