
Computer Language Settings and Canadian Spellings

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The language settings used on personal computers interact with the spell-checker in Microsoft Word, which directly affects the flagging of spellings that are deemed incorrect. This study examined the language settings of personal computers owned by a group of Canadian university students. Of 21 computers examined, only eight had their Windows "Default Input Language" set to English (Canada); the remainder had it set to English (United States). Furthermore, only eight of the computers had the Microsoft Word "Primary Editing Language" set to English (Canada), whereas 11 had it set to English (United States). When asked to state their preferred spelling for words where the spelling differs between Canadian English and American English, a significant proportion of students preferred American spellings for some words. The study indicates that computer language settings may contribute to the increasing use of American spellings among Canadian students. The implications for ESL teaching are discussed.

Les paramètres de langue des ordinateurs personnels interagissent avec le correcteur orthographique de Microsoft Word, ce qui a un impact direct sur la détection de mots jugés mal orthographiés. Cette étude a porté sur les paramètres de langue d'ordinateurs personnels appartenant à un groupe d'étudiants canadiens. Des 21 ordinateurs Windows étudiés, seulement huit avait l'anglais (canadien) comme 'langue de saisie par défaut' ; pour les autres, c'était l'anglais (américain). De plus, seulement huit des ordinateurs avaient l'anglais (canadien) comme 'langue d'édition principale' pour Microsoft Word; pour 11 autres ordinateurs, c'était l'anglais (américain). Quand on demandait aux étudiants de choisir une orthographe préférée (anglais canadien ou anglais américain), une part significative d'eux préféraient l'orthographe américaine pour certains mots. L'étude révèle que les paramètres de langue des ordinateurs peuvent contribuer à une augmentation de l'usage des orthographes américaines chez les étudiants canadiens. Les conséquences pour l'enseignement d'ALS sont évoquées.

A familiar aphorism concerning dialect and language is that "a language is a dialect with an army and navy." This saying expresses the idea that languages or dialects that become dominant in a geographical area do so largely by force. In the days of colonial warfare, this was often true, and history abounds with accounts of the suppression of some languages and the promotion of others. In more recent history, however, with the advent of global

media, what may be termed *cultural imperialism* appears to have the potential to spread particular dialects at the expense of others.

Canadian English has historically occupied an uneasy position between British English and American English, and Canadian spelling is a mixture of British and American spellings. British usage is evident in spellings like *colour*, *theatre*, *defence*, *counsellor*, and so forth, but United States forms are used in *tire*, *organize*, and so forth. The gold standard for Canadian spellings, the *Canadian Oxford Dictionary*, was first published in 1998. According to the publisher's information in the 2004 second edition, entries are based on an analysis of 20 million words of Canadian text supplemented by a survey of a nationwide group of respondents (Barber, 2004).

On September 14, 2008, the *Calgary Herald* reported the publication of the *Oxford Canadian Spelling Bee Dictionary* (Barber, Pontisso, Fitzgerald, & Devries, 2008), co-edited by Katherine Barber, the editor of the *Canadian Oxford Dictionary*. The dictionary is designed for Canadian students who participate in spelling bees and includes more than 36,000 words, focusing on those with particularly difficult spellings. In the *Calgary Herald* report, Barber is quoted as saying, "More than 90 per cent of Canadians polled recently believe that Canadian spelling is threatened by American spelling."

This study arose from my frequent observation of the use of US spellings in written materials created by a group of Canadian university students. When such materials were projected in public presentations, it was frequently evident that the software in use did not flag US spellings as incorrect, but *did* flag legitimate Canadian spellings as wrong. This led to the conclusion that the computer settings used by the students were in fact favoring US spellings. The frequent use of US spellings also prompted the further question as to whether, and to what extent, the university students in fact favored US spellings over Canadian.

Language Settings and the Spelling Checker

In Microsoft Windows and Office, the computer language settings work in conjunction with the spelling checker (Barnhill, 2009). Several settings can affect spell-checking; some are specific to the computer that creates the document, whereas others are specific to the document itself.

The Windows locale settings. These are found in the Windows Control Panel under Regional and Language Settings (Windows XP) or Clock, Language, and Region (Windows Vista). They are normally set during the installation of Windows, and most users probably never access or change these settings. For the purposes of this study, the most important setting is the Default Input Language. This setting determines the default language setting used by applications including Microsoft Word. Although a user can set another default language setting in Word, in practice the value set in Word sometimes falls back to the Windows setting; in a properly set system, the Default Input Lan-

guage and Word's default language should be set to the same value for reliable use (Meister, 2005). The Location setting, found in the same place, is used by Windows to determine formats for dates, measures, and so forth; it has no effect on language.

The Word Primary Editing Language (default language). In Word 2003, this can be found through the Tools menu by choosing Language, Set Language, Default. In Word 2007, it may be found on the Review tab, Set Language, Default or Word button, Word Options, Popular, Language Settings. This setting is used in all new documents created on the computer. As noted above, it should be set to the same value as the Default Input Language; otherwise, it may fall back to the Windows Default Input Language setting.

Enabled editing languages. Other enabled languages are set in the same dialog boxes as the Primary Editing Language. These are the languages that can be used for spell-checking.

The language setting for an individual piece of text. This setting can be found in Word 2003 on the Tools menu by choosing Language, Set Language. In Word 2007, it is on the Proofing tab under Set Language. All text in a Word document has a language setting as part of its formatting, either the default language (Primary Editing Language) or another language chosen by author of the document. Various pieces of text in a single Word document may have their own language settings even within the same paragraph. The purpose of this is to allow spell-checking in more than one language. For example, a document written in Canadian English may contain a paragraph written in Canadian French; if the author wants to spell-check the French paragraph, he or she would set its language to French (Canada), leaving the rest of the document with a setting of English (Canada). Spelling errors appropriate to the two languages would then be flagged. The language settings for a text travel with the text; they do not change if the file is opened on another computer regardless its settings. Furthermore, if formatted text is copied and pasted to a new document, the language setting travels with the pasted text.

The AutoCorrect options. The AutoCorrect feature is designed to change misspelled words automatically without the user's intervention. When this feature is enabled, Word may change the spelling of a word to what it considers correct based on the language setting of the text. For example, in a piece of text with a language setting of English (United States), *organise* will be changed to *organize*. The AutoCorrect feature can be a blessing and a curse, because as well as catching genuine misspellings, it may also "correct" intended spellings without the user's knowledge.

The spelling checker. Word's spelling checker compares every word typed with a list of words contained in a lexicon file (with a .lex extension) that cannot be edited by the user (Barnhill, 2009). The process is as follows.

1. Word notes the language setting for a piece of text and compares the words with the appropriate forms in the lexicon.

2. If a typed word does not match a word in the lexicon, it is flagged as misspelled and underlined with a red squiggle.
3. On seeing the red squiggle, the user right-clicks on the misspelled word and chooses one of the suggested spellings presented.

It is important to note the link between the text language and the spelling checker. If the text language is English (United States) and the user types the word *colour*, it is flagged as misspelled because *colour* is not US English. At this point, the user must decide whether to ignore the “misspelling” or to correct it to *color*.

Users can also use a *custom dictionary* to prevent Word from flagging words that are correctly spelled. This is used most often for specialized words, product names, and so forth that the user may use frequently. Word adds such words to a dictionary file that the user can edit. Adding a word to the custom dictionary also prevents AutoCorrect from automatically changing it.

Method

In this study, I used a questionnaire to investigate the language settings used on personal computers owned by a group of Canadian university students. In the first part of the study, students using Windows XP or Vista and Microsoft Word 2003 or 2007 recorded their computers’ current language settings. The questionnaire provided detailed instructions for finding the relevant settings. There was no requirement for the students to change the settings. The second part of the study asked the students to indicate their preferred spellings for some words that differ in spelling between Canadian and US English.

Participants

Approximately 100 Canadian university students were invited to participate in this study. All were studying at the University of Western Ontario. Of the 21 students who participated, three were graduate students (one each in dietetics, biochemistry, and occupational therapy), and the remainder were undergraduates. The undergraduates’ fields of study varied and included biomedical sciences, business, physiology, engineering, social sciences, and others. All the students were from Asian ethnic backgrounds (1 Japanese, 20 Chinese); two students were born in China, and the others were born in Canada. All had completed their entire high school program in Canada, and all spoke English as their first language. Three were also proficient in Cantonese, two in Mandarin, and one in Japanese.

Survey Questions

The first part of the survey asked the students to record the language settings on their personal computers. The questions were:

- What is the Windows Location setting?
- What is the Default Input Language specified in Windows?
- What is the default language (the Primary Editing Language) specified in Word?
- What other editing languages are enabled in your Office installation?

The questionnaire included detailed instructions for discovering the settings, and there was no requirement to change them.

The second part of the survey listed 14 pairs of words consisting of the Canadian spelling (as in the *Canadian Oxford Dictionary*) and the US spelling as in *Webster’s New College Dictionary* (3rd ed., 2008). The words were chosen arbitrarily as examples that differ in spelling between Canadian and US English. Students were asked to indicate their preferred spelling from each pair. There was no indication as to which spelling was Canadian and which US, and the pairs were randomly arranged as to which spelling was given first.

Results

Twenty-one completed surveys were received. The language settings for the computers are summarized in Table 1.

Location (Windows). Only 12 of 21 computers had the Windows location set to Canada; the remainder were set to United States. Because most of the students live within easy reach of the US border, it is possible that some of the computers with US as their location may have been bought there. The location setting is used by Windows to format dates, times, and so forth, but it is not used in spell-checking.

Default Input Language (Windows). Only eight of the 21 students had English (Canada) as their Default Input Language; the other 13 had English

Table 1
Language Settings for 21 Personal Computers

Setting	Value	Number
Location (Windows)	Canada	12
	United States	9
Default Input Language (Windows)	English (Canada)	8
	English (United States)	13
Primary Editing Language (Word)	English (Canada)	8
	English (United States)	11
	Unable to determine	2

(United States) as theirs. Word uses the Default Input Language setting when it is installed to determine its Primary Editing Language.

Primary Editing Language (Word). Eight of the 21 students indicated English (Canada) as the Primary Editing Language (default language) in Word; 11 indicated English (United States); and two students could not locate this setting. The Primary Editing Language setting determines the language setting of text (and hence the results of spelling checks) in all new documents as long as the Windows Default Input Language is set to the same language. It is well known that if the Primary Editing Language is other than the Default Input Language, Word may revert to the Windows setting without the user's knowledge (Barnhill, 2009). All new documents would then use the Windows language, and this change would be reflected in spell-checking and Auto-Correct actions. The Default Input Language and the Word Primary Editing Language matched on all the computers examined.

Other Enabled Languages

Table 2 shows some of the combinations of enabled languages. Six of the eight students who had English (Canada) as their Primary Editing Language also had English (United States) enabled. Significantly, 11 students had English (United States) set as their Primary Editing Language, and seven of these did not have English (Canada) enabled at all. In five cases, English (United States) was the only enabled language, whereas only one student had English (Canada) as the only enabled language. The frequency with which Chinese languages were enabled is doubtless a reflection of the students' ethnic background.

Table 2
Editing Languages Enabled in Microsoft Word

Microsoft Word Setting	Number
English (Canada) as Primary Editing Language; English (US) also enabled	6
English (Canada) as Primary Editing Language; English (US) not enabled	2
English (US) as Primary Editing Language; others not determined	1
English (US) as Primary Editing Language; English (Canada) also enabled	3
English (US) as Primary Editing Language; English (Canada) not enabled	7
No information	2

Other enabled languages were: French (Canada) – 4; Chinese (Simplified) – 5; Chinese (Traditional) – 3; Greek – 3; Japanese – 1; Russian – 1; Norwegian – 1.

Table 3
Spelling Preferences for 21 Students When Presented with
Canadian or American Spelling

<i>Word Pair (Can./Am.)</i>	<i>Canadian</i>	<i>American</i>	<i>Word Pair (Can./Am.)</i>	<i>Canadian</i>	<i>American</i>
neighbour/neighbor	17	4	cancelled/canceled	17	4
colour/color	19	2	dialogue/dialog	21	0
jewellery/jewelry	18	3	mould/mold	10	11
aesthetic/esthetic	19	2	defence/defense	6	15
axe/ax	19	2	pyjamas/pajamas	9	12
theatre/theater	12	9	worshipping/worshiping	18	3
counsellor/counselor	18	3	traveller/traveler	14	7

Spelling Preferences

Table 3 shows the spelling preferences of the 21 students for the word pairs. The students evidently preferred Canadian spellings for *-our* words such as *neighbour* and *colour*, and generally they retained the double consonants of Canadian spellings (*jewellery*, *counsellor*, etc.). Other words pairs showed much more variability. Respondents preferred the US *defense* and *pajamas* rather than *defence* and *pyjamas*. Interestingly, all 21 students preferred *dialogue* to *dialog* although the latter occurs throughout Microsoft applications (as does *canceled*, which was also not preferred).

Discussion

Language teachers often express concern that spelling checkers prevent students from learning to spell correctly. La Force (2009) asks, "Has Spell-Check Ruined Us?" and Leverett (2010) says that the spell-checker "has made much of the native-speaking world *worse* spellers ... because the technology so routinely changes their poor spelling that they don't feel it's necessary to bother actually learning every word." Leverett also wonders whether spell-checking should be turned off in the classroom. It is likely that some students correct every "error" flagged by the spelling checker, even if the word typed is a perfectly acceptable variant such as *traveller* rather than *traveler*.

Much anecdotal evidence indicates that spelling checkers also lead to the misuse of homonyms that are correctly spelled and therefore missed by the spelling checker. For example, it is not unusual to see "I was lead to" instead of "I was led to." Word 2007 introduced contextual grammar correction to handle these issues, but on computers with less than 1 GB of memory it is switched off by default.

Language settings on a computer affect the results of spell-checking by telling the spelling-checker which word variants to regard as correct. If the language settings are for English (Canada), US spelling such as *traveler* will be flagged as wrong. Conversely, if the language settings are for English (United States), *traveller* will be flagged as wrong. A Canadian whose computer is set to use English (United States) will probably end up using US spellings either by correcting words that are flagged as misspelled or as a result of automatic correction by the AutoCorrect option.

This study suggests that among Canadian students attending Canadian universities, it is almost as common for personal computers to have their Windows location set to US as to Canada. This may be a result of default installation settings. Participants who did have the location set to US were evidently either unaware of the implications or were not concerned enough to change it.

More than half of the computers were set to use English (United States) as their Default Input Language rather than English (Canada). For those computers, all new documents would use US spellings, and any Canadian forms typed by the students would be flagged as incorrect. The study did not investigate what students did when a Canadian spelling was flagged as wrong, but they would probably “correct” anything so flagged simply because it is easier to do so than to isolate and correct the genuine errors.

Most Canadian universities have an official policy on spelling conventions. Whereas some insist on Canadian spelling as used in the *Canadian Oxford Dictionary*, others (including the University of Western Ontario) merely require consistent use of either Canadian or US spellings.

Computer language settings are only a small factor in the amount of US English to which Canadians are exposed. Many of the educational materials used in universities are produced in the US and use US English, and students, like other Canadians, are continually exposed to US media. However, prolonged use of a computer that flags Canadian spellings as incorrect may well desensitize the user to the differences between Canadian and US spellings, with the result that eventually the US forms will be perceived as correct. The results of this survey show that the students surveyed quite often did in fact prefer US spellings. At the very least, there is much uncertainty about which spellings are correct in Canada.

Before extrapolating the results of this study to the Canadian population as a whole, it is important to realize its limitations. First, the sample group is not typical of the wider population; the respondents were all university students, and all were of Asian descent. It would be interesting to know whether these results would differ from those of another ethnic group, for people who are not university students, or for the population as a whole. Furthermore, the sample number is small, so this study should be supplemented with others that look at much larger groups.

In a Canadian ESL classroom, students are frequently exposed to US teaching materials and surrounded by US media, both of which, of course, use US spelling. This study shows that it is also likely that classroom computers or home computers, or both, may be set to use US spelling and will flag Canadian spellings as incorrect. This is likely to cause confusion for ESL students and possibly also for teachers. At the very least, teachers need to be aware of how spell-checkers work and should realize that they have a bearing on students' presented work.

Conclusion

Despite the limitations of this study, the results suggest that US spellings are widely used among Canadian university students and that computer language settings are likely to contribute to their wider use in the future. Barber et al.'s (2008) concern about the disappearance of Canadian spelling appears to be justified.

Most Canadian ESL students—and possibly many ESL teachers—will be unaware of the differences between Canadian and US spellings and may be confused when they see variants of the same word. ESL teachers should, therefore, alert their students to the existence of Canadian forms while reconciling themselves to the likelihood that eventually the distinctively Canadian spelling system will be replaced by US spelling.

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