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English Spelling for International Reports

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Abstract: Globalization has created situations where collaborators across many countries write articles together. I have written some notes in a perhaps futile attempt to convince collaborators what spelling convention – “British” or “American” -- should be used. I review some fundamentals for the American and British conventions. The most challenging suggestion proposed to adherents of the British conventions is that, when given a choice, one should always use acceptable British variants that most closely match the American convention. For example, use ‘-ize’ rather than ‘-ise’ to end words such as ‘organize’. The most challenging suggestion proposed to adherents of the American spelling convention is that they should be much more willing to learn and use the British convention in global contexts. I have had to at CERN, and it didn’t kill me.

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Introduction

In a simple world an American scientist based in America writes an article for an American journal, using American English conventions. This is not our world. Americans are abroad. Collaborators are mixed among all nationalities. Institutions are transnational. English language publishers are global, and many are based even in non-English speaking lands.

The question of which spelling convention to use faces many when working in the international context. Although most international organizations edit for British spelling, there are many cases of ambiguity. These situations include a Brit preparing a talk for an American audience and vice versa; a Peruvian working with a German to write a paper for a Polish journal; or, an American working with a Brit to publish in a Dutch journal that has no prescribed style guide for usage or spelling. There are innumerable permutations of such conundrums.

Many Americans would say to just spell words like Americans do! After all they have more people, bombs, and money than the UK. Furthermore, there is precedence for the colonists

overtaking the colonizers in dictating the new standard rules of language. A famous recent example is the "compromise" on Portuguese spelling forged by the Portuguese and the Brazilians and the other Portuguese speaking nations of the world. Basically, the Brazilians got their way on almost everything and pushed around their former colonial overlords and the other smaller countries (Cabral 2010). Why shouldn't the Americans do the same?

There are two good reasons why it is awkward to force American English conventions on the rest of the world. First, Britain publishes more books per capita than any other country in the world by a large margin. Total book publishing is usually larger in the United States each year, but Britain is not far behind, and during some years even outpublishes the United States in total number (Goldfarb 2006). There is no clear dominance of American publishing over even just Britain.

The second reason to not try to thrust American English on the world is that its conventions are adhered to by a far fewer fraction of English speakers than British English conventions. I am speaking somewhat loosely, because no country outside of United States and Britain precisely adheres to American or British conventions, but the vast majority are much closer to the conventions of British English. Canada and Australia are two obvious cases that lean strongly British, given their amicable and more recent break from the empire. One must also include the billion people in India, who have their own unique and interesting style, but whose conventions are decidedly more British.

Furthermore, most of English speaking Africa sides with the Brits, and it is growing fast. Nigeria's top newspaper, Punch (Punch 2013), employs British spellings as do most other sources in Nigeria. Nigeria is presently about 150 million people, which is about half the size of the United States. By 2100 its population should exceed 700 million, whereas the United States is projected to grow to less than 500 million. Even Tanzania, which is English speaking (and Swahili speaking) and currently has less than 50 million, will grow to greater than 300 million by 2100 (Population 2011).

There is a rapid explosion of non-American English speakers in the world, putting Americans and their conventions increasingly in the minority. Even their economic might is not propelling them to the majority of English language publishing. In this increasingly global world, Americans must adjust.

In this article I present suggestions for how to come to a decision on how to spell English words, and a short guide to the differences between the two main conventions (American and British English) for readers who are not familiar with them. Some of the American conventions and their allowed variants might be surprising for even American readers, and likewise for the British conventions for Brits.

Deciding how to spell

The first suggestion in deciding how to spell is to make a conscious decision to decide. Many articles in the physics literature have clashing styles. This is distracting, and readers may try to attach British spelling sections to some authors and American spelling authors to others. This is an unlikely goal of the authors. Furthermore, serious care in language usage gives confidence in the reader that the author has given serious care to the subject and wants to do his best to clearly impart his message. Spelling is an obvious indicator of this care. This has yet again been emphasized recently in the popular media with Jessica Lahey proclaiming in *The Atlantic*, "Yes. Spelling counts" (Lahey 2013).

The second suggestion is that publishers and audience are primary. If your publisher or audience has requirements (e.g., American spelling for Physical Review) or even strong expectations (e.g., British spelling for unpublished work intended for European advisory group) you should follow it, despite how awkward it might feel at first. Most often this rule is obvious and is not unnoticed. Oxford University Press generally is not going to be happy with American spelling, nor is Chicago University Press with British spelling¹.

Sometimes audience expectations can be subtle. Stephen Hawking's slides for a public talk in Des Moines should probably be in British English, as the audience will enjoy the exoticism of the whole experience even more. On the other hand, an ex-pat from Bristol writing a letter to the editor of the Des Moines Register about unfair local water restrictions should do it in American English spelling.

As a third suggestion, if the publisher or audience expectations do not resolve the issue, then the decision should rest completely on author preferences. If universal agreement can be achieved then it is set.

So far these these suggestions are mostly intuitive and not controversial. However, if after all the considerations of the first three suggestions there is still no resolution for the convention, then my fourth suggestion comes in play and is perhaps more controversial: When in doubt use British English conventions, and in particular those of Oxford English Dictionary (OED 2009). There is simply no other source more recognized, of higher approbation, and more aligned with the majority of English speakers in the world than the OED.

¹ Nevertheless, there are many permutations of what publishers allow. *Dynamics of the Standard Model* (Donoghue et al. 1994) published by Cambridge University Press is written by American-based authors using American English spelling convention. *Gauge Field Theories* (Pokorski 1990) published by Cambridge University Press is written by a Poland-based author using British spelling convention. *Gauge Theory of Elementary Particle Physics* (Cheng and Li 1988) published by Oxford University Press is written by American-based authors using British spelling conventions. Each employs a consistent convention.

Defining the spelling conventions

In this section I would like to discuss what I consider to be the most compelling conventions for American English usage and for British English usage, the two most used standards in the world. Of course, if the circumstances require the writer to adhere to another convention, those should be used and the appropriate style guides followed. For example, Canadian publications may wish their writers to follow spelling conventions of the *Oxford Canadian English Dictionary* (Barber 2005). Or Australians may require following *Macquarie Dictionary* conventions (Delbridge 2005).

Webster: The American spelling convention

American usage convention has many potential sources. *The New York Times Manual of Style* (NY Time 2002), *Chicago Manual of Style* (Chicago 2010), *MLA Style Manual* (MLA 2008), etc. and numerous other organizations publish their own style guides, which often include dictating that spelling be "American". They will sometimes provide some spelling examples that otherwise could be confusing. There is even a wonderful little book, often referred to as Strunk & White (Strunk et al. 1999), which has been a favorite of Americans for several generations now. However, that book is by no means prescriptive and exhaustive on spelling conventions.

With the goal of choosing a convention that is both American and complete, there is no better choice than Webster's dictionary (Webster 2002). For generations almost every American college student had Webster's Collegiate Dictionary (Collegiate 2008) on his or her shelf, which was the final say in all word definitions and spellings. The usage guide is also an overall standard in American language (M-W Usage 1994), although the more pithy Strunk & White was probably read more.

Henceforth we will call the American standard "Webster". Practically speaking, if one wants to check the spelling in this convention he or she need only consult the word on <http://merriam-webster.com>. Words that have different spelling conventions are noted in the online dictionary. In the Webster convention all variants that are labeled "Brit." or "Chiefly Brit." should be eschewed.

Oxford: The British spelling convention

As for the British spelling convention, there is no other source more recognized for British English than the Oxford English Dictionary (OED 2009). It is still the highest achievement among dictionaries of any language in the world today. Its influence is unparalleled. It is the obvious choice. For this reason I will call the British English spelling convention "Oxford".

We should remark that there are many Brits who are taken by the insight of Fowler's *Dictionary of Modern English Usage* (1965). The first and second editions were powerful books that held great sway over British writers. Much of it reflected Oxford University Press's conventions, and some conventions were later influenced by Fowler's entries. The more recent 3rd edition,

updated by Burchfield (2004), was widely panned by scholars (Simon 1997), causing its influence to diminish. I would just like to emphasize that whatever may or may not be said in the Fowler editions, the source to look to is the OED.

Henceforth we will call this specific British spelling convention "Oxford". Practically speaking, if one wants to check the spelling in this convention he or she need only consult the word at <http://oxforddictionaries.com>. Words that have different spelling conventions are noted appropriately. The word in question is always filed under its primary spelling, with the secondary alternative given in parenthesis. For example, 'organize' is defined under its primary spelling 'organize', and the secondary spelling is given in parentheses just below it as '(also organise)'. An unacceptable American alternative for British writers is prefaced by 'US'. For example under the definition of 'analyse' one finds '(US analyze)'.

Choices for global English among the accepted variants

Whether one chooses the Webster convention or the Oxford convention, there are still some choices to be made. For example, in each convention there are words that allow alternative spellings. I think it is a good idea generally to choose the spelling convention that overlaps with the other convention.

For example, Americans should spell 'catalogue', since it is widely used and matches the British standard. Likewise Brits should write 'realize' and 'organize' since it not only overlaps with the Webster convention but it is arguably the more acceptable way of writing it in British English, the '-ise' endings of such words being an unfortunate recent mutation. See the compelling discussion in Folwer (Fowler 1965) on this topic.

Examples of American-British spelling differences

Let us now end with a representative listing of spelling differences between American and British English among some common words. Some entries have a reference letter in parenthesis that indicates that an endnote to the listing has further clarifying discussion. Some of the words are different (aluminum vs. aluminium) which could be chalked up to vocabulary differences rather than spelling differences, such as truck vs. lorry, elevator vs. lift, etc. However, when the spelling is very close and it is a small variant, it is eligible to be included as an example here. This comment also applies to the different forms of the past tense for some verbs (e.g., burned vs. burnt).

The entry before / in the listing below is the spelling from Merriam-Webster (Webster convention), which is the primary American source. A second spelling indicates an acceptable variant. The entry after / is spelling from Oxford English Dictionary (Oxford convention), which is the primary British spelling source. A second spelling indicates an acceptable variant. The examples should be enough to get an accurate feel for the spelling differences to be applied to many other words not listed. When in doubt, of course, the writer should consult the dictionaries.

American English (Webster) / British English (Oxford)

airplane / aeroplane (but airport / airport)
aluminum / aluminium
analogue, analog / analogue
analyze / analyse (a)
apologize / apologize, apologise (a)
canceled / cancelled (c)
catalize / catalyse (a)
catalog, catalogue / catalogue
center / centre
color / colour
coauthor / co-author (b)
co-owner / co-owner (b)
co-parent / co-parent (b)
copartner / co-partner (b)
cooperate / cooperate, co-operate (b)
defense / defence
dialogue, dialog / dialogue
estrogen / oestrogen
fetus / foetus
fiber / fibre
flavor / flavour
fueled / fuelled (c)
feuling / fuelling (c)
globalization / globalization, globalisation (a)
humor / humour
labor / labour
learned / learned, learnt (e)
leukemia / leukaemia
license / licence
liter / litre
maneuver / manoeuvre
naive, naïve / naive, naïve
neighbor / neighbour
offense / offence
organize / organize, organise (a)
organization / organization, organisation (a)
paralyze / paralyse (a)
pediatric / paediatric
pretense / pretence
program / programme, program (computer coding) (d)
realize / realize, realise (a)

recognize / recognize, recognise (a)
reelect / re-elect
reelection / re-election
resource / resource
role, rôle / role, rôle
spelled / spelled, spelt
theater, theatre / theatre
traveled / travelled (c)
traveler / traveller (c)
traveling / travelling (c)
Web site, website / website
while / while, whilst (f)

(a) -ize vs. -ise and -yze vs. -yse (or rather -lyze vs. -lyse)

This is one of the thorniest differences between American spelling convention and British spelling convention. Many Brits do not appreciate that words such as organize and realize have a longer history with the -ize spelling and a more sound etymology. Many Americans do not realize that words such as paralyze and analyze have a longer history with the -yse spelling and a more sound etymology. The Oxford University Press still prefers -ize endings for the appropriate words, as do many other prominent English sources. A helpful rule to remember is that if the stem can be completed also by -ism (organism), or -ization (organization), or by -y (agony), the -ize ending is the correct form.

All words in American English ending in -yze generally follow from a different Greek origin than words ending in -ize, and are universally rendered by -yse in British English with no exceptions: paralyze/paralyse and catalyze/catalyse are two examples. The helpful rule to remember here is that these words really have the suffix -lyse, which is a distinctly different Greek etymology from the -ize suffix. Thus, you can be sure that if the word ends in -lyze in American English it must end in -lyse in British English. Another helpful reminder is that if the stem can be combined with -lysis to make a noun, the verb form -lyse is the only British option. American convention dictates that analyze becomes analysis, which is awkward etymologically, but nevertheless the convention.

(b) coauthor vs. co-author, reelect vs. re-elect, etc.

Americans generally do not like the hyphen in such words. However, when it is extremely awkward not to, they do use it. This occurs when co- prefixes a word that starts with an o. For example, co-owner is the required American convention. But coauthor, codependent, coparent, etc. have no hyphen. I know of only three common exceptions to this rule in American English spelling: co-brand, co-edition, co-parent. British English convention is much easier. When the co- prefix means with, the hyphen is always used to join it with a stem. Cooperate is one common exception, where British English does not allow a hyphen.

In words beginning with re-, Americans do not have a hyphen, whereas Brits generally do. With regard to re- and also co- prefixes, American conventions utilize the diaeresis umlaut to

separate the syllables of two adjoining vowels: coöperate and reëlect are two examples. This convention is used famously by The New Yorker magazine. However, as a rule, Webster's American convention does not allow it. A well-known exception is naïve, which is an accepted variant of naive in both American and British English conventions.

(c) traveled vs. travelled

For verbs that end in -el, such as cancel, travel, label, the participles and nouns are formed by keeping a single l in American English but doubling the l in British English: traveled/travelled, traveling/travelling, traveler/traveller.

(d) program vs. programme

There are several meanings of the word program. For all meanings the American convention is to spell it program. If the meaning is a set of instructions that a computer or machine carries out, an accepted variant in British English is program. It is widely used that way, and advisable since it adds clarity to language without inventing something people are not able to immediately recognize and understand. Americans should use these two spellings as well, but alas that is not the convention. For other meanings of the word, it is obligatory in British English to spell programme (e.g., exercise programme).

(e) spelled vs. spelt

The simple past tense and past participle of some verbs are regular in American English but can be irregular in British English, and vice versa. Generally speaking, when the American verb has a regular form and the British form has an irregular form, the regular form is acceptable in British English. However, American irregular forms generally must stay irregular, even if the British forms are regular. These should be memorized, and is one of the hardest tasks of a non-native English speaker to master. A rather exhaustive list of these anomalies are given below (Irregular 2013).

infinitive: American past, past participle / British past, past participle

burn: burned, burned / burnt, burnt

bust: bust, bust / busted, busted

dive: dove, dived / dived, dived

dream: dreamed, dreamed / dreamt, dreamt

got: got, gotten / got, got

kneel: kneeled, kneeled / knelt, knelt

lean: leaned, leaned / leant, leant

leap: leaped, leaped / leapt, leapt

learn: learned, learned / learnt, learnt

plead: pled, pled / pleaded, pleaded

saw: sawed, sawed / sawed, sawn

smell: smelled, smelled / smelt, smelt

spell: spelled, spelled / spelt, spelt

spill: spilled, spilled / spilt, spilt

spoil: spoiled, spoiled / spoilt, spoilt

(f) while vs. whilst

In British English whilst is used by some when it is being employed as a conjunction or adverb. This is more common to see in writing than in speech. Since while is more common in British English than whilst, and since it is common and accepted British usage, it is recommended to use this form.

Conclusion

In conclusion, my main messages are

- Consciously decide on the spelling convention and do not mix and mash among conventions.
- Choose convention by audience expectations, with all the obviousness or subtlety that might imply.
- When in doubt choose British conventions.
- American convention should be Webster's (Webster 2002) unless otherwise dictated.
- British convention should be OED (OED 2009) unless otherwise dictated.
- Choose accepted spelling variants with a global, unifying outlook, such as 'organize', 'catalogue', etc.

Of course it goes without saying that content is more important than issues like spelling, but a consistent approach to usage conventions will be less distracting to the reader, enabling more concentration on the content. Writing with consistent convention tailored to the audience increases the readability and quality of the written work, and it increases the trust readers will have in the authors' carefulness, both in their precision of language and in the substance of their work.

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