The Digital Climate of English Change

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Language is technically digital and thus greatly affected by modern technology.

Recently, I was taken aback by the lead-in to a widely published newspaper report: "Traditional spellings of English words could be killed off by the Internet within a few decades, according to a leading language expert" (tinyurl.com/yb9bjqd). This expert turned out to be David Crystal, described as a "world authority on the English language" at the front of the nearest-to-hand of his several books on my bookshelf. This somewhat understates his standing given that he is also a prolific contributor, as anyone seeking more information about various aspects of English and language generally will find if they go to his website at davidcrystal.com.

Hence my surprise at the apparently drastic prediction. Later in the item, however, the reporter states that Crystal does not "believe the Internet would lead to a complete breakdown in spelling rules, just the development of different rules." Crystal also does not "believe that schools should abandon the teaching of traditional English spelling."

The English language has many aspects. Any form of language is itself a digital technology composed using a limited set of components such as letters or phonemes. Modern digital technology thus has the potential to be either a threat or benefactor to any language.

Language being primarily a social tool, computing professionals have a distinct responsibility, springing from the IEEE's Code of Ethics (tinyurl.com/2dvdn3), to understand this potential and lessen its threat while boosting its beneficence.

The first step is to understand the nature of language, which has two main dimensions: the meaning being conveyed, and the medium of that conveyance. These two dimensions are called, according to the two most important and most ignored definitions in the profession's international standard vocabulary (The Profession, May 2001, pp. 96, 94-95), *information* and *data*.

INFORMATION

Meaning is a social construct, so the different kinds of information correspond to the different kinds of social context. Social context itself has dimensions, in time ranging from the transient to the enduring, in attitude from the provocative to the declarative, and in mood from the emotional to the cogent. The social context of party chatter is transient, provocative (ideally), and emotional; of the Gettysburg Address, enduring, declarative, and cogent.

Transient information can be provocative and cogent, as in debating; declarative and emotional, as in TV advertising; or declarative and cogent, as in lecturing. It is typically spontaneous.

Enduring information can be provocative and emotional, as in poetry; provocative and cogent as in literature; or declarative and emotional, as in propaganda. It is made enduring by the nature of its medium, and is typically composed.

Information was mainly transient in the early years of human language, except for what was kept in memory. Writing was developed to make communication enduring, and represented speech.

DATA

Media are technical vehicles for data—technical in the sense of requiring skills for their use. Media differ in the kinds of language they take in and the kinds they put out. People differ in the media they can use, the blind and deaf in particular.

Speech is sound presented by the voice and perceived by the ear. Conversation is speech accompanied by gestures and other bodily expressions. Writing is an arrangement of visible symbols the writer composes and the reader scans.

Early electronic digital technology merely complemented existing technology. Digital telephony has replaced and improved analog telephony, which replaced telegraphy (tinyurl.com/yzrh7wj), which replaced the semaphore. Unassisted speech is restricted in its physical range. Telephony removes this restriction.

Computers stored keyed-in or transcribed written language, and printed out stored data directly or algorithmically transformed. Traditional printing is productive by repetition. Computer printing is productive by programmed variation. Curiously, much early electronic computing was of administrative data, just as early writing often was, such as for keeping track of property with cuneiform tablets (tinyurl.com/ykc2r74).

computing profession's duty clearly is working to encourage the benefits and diminish the harm.

CONVERSATION

Face-to-face conversation is the foundation of society. It is also complex because it's more than simple speech. Timing, intonation, and body language supplement the information the spoken word conveys.

Digital technology can diminish adventitious conversation. Working of an evening in the front garden of our home near the center of a regional city, I get great pleasure from conversations with neighbors and passers-by. What is noticeable, however, is that even making eye contact with people listening to iPods or viewing their mobile phones is now

automatically sending updated information to online people registered as friends. Again, this doesn't seem like real conversation to me, and given that, for example, Australian social networkers spent an average of seven hours per month as of last October, this must decrease their opportunity for real social networking.

In any case, the mere fact that *The Economist* has published a special report on social networking on the Internet, and that many of the articles in that report discuss its use within business, shows that it is here to stay. There are undoubtedly great potential benefits.

The danger is that use outside business of various forms of social networking on the Internet will reduce both the incidence of ordinary conversation and the skills in such conversation. This danger would be lessened by creating and promoting forms of online social networking that more closely resemble ordinary conversation by displaying spoken language and body language—at least the facial part of it. This is a form of video conferencing, which is of particular interest to business and government.

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More recently, digital technology has collapsed the distinction between transient and enduring information by coupling mobile telephony and the Internet with its numerous attached computers. It allows easily feeding text into the Internet, storing it on the Web, retrieving it, and broadcasting it. It allows editing text in the Web, searching it, and sabotaging it. And it allows collecting and organizing digital representation of music and speech, and of still and moving pictures, on the Web.

This development has changed what was once a separation of transient and enduring information in society into an amalgamation that is huge, anarchic, and impermanent. Of course, the separation still exists outside the online world, but it is of rapidly diminishing importance.

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impossible. This technological social isolation spills into the shopping streets as well (tinyurl.com/yd82j2c).

We can argue that the Internet supports other forms of social networking that vastly outweigh this disadvantage. One example is Twitter, which supports broadcasting of text messages up to 140 characters long to "followers"—friends or strangers. According to a recent special report on social networking (*The Economist*, 30 Jan. 2010; tinyurl.com/y9u4rqw), Ashton Kutcher has 4.3 million followers, and Oprah Winfrey has 3 million. However, this seems to be more display than conversation to me, an impression confirmed by a visit to twitter.com.

There are other kinds of social networking sites, including the popular Facebook. As far as I can make out without registering on Facebook, the idea is to maintain a personal page that provides a kind of dynamic autobiography with text and pictures,

WRITING

Much of the social networking I've described is done with written language. However, the information is typically transient, provocative, and emotional.

Such information is often written informally. Examples are given in the news item on David Crystal, but these greatly resemble alphabetic shorthand systems (tinyurl.com/6dhtes). Perhaps the online world of blogging, twittering, and e-mailing would benefit greatly from the adoption of a systematic alphabetic shorthand rather than ad hoc abbreviation. Not only could this be optimized for brevity, which is important for small handheld devices, but a standard would enable optional expansion for beginners and translation for foreigners.

If handheld tablet devices come into popular use, then providing for a phonetic shorthand such as Gregg (tinyurl.com/6kkag3) would be very effective, as would software for teaching it on the machine that would be using it (The Profession, Mar. 2008, pp. 104, 102-103). Indeed, for blogs, twitters, and e-mail, users could opt to see the shorthand directly, rather than the transcription, and this would take up less space on the display and be easier to read. Gregg would probably be preferable to Pitman, which distinguishes line thicknesses.

Phonetic shorthand would not be suitable, at least as a recording medium, for enduring English text of the opposite kind, particularly if it's declarative and cogent—for the same reason that reforming English spelling into phonetic form would not be desirable. Josef Vachek explained this in detail in "English Orthography: A Functional Approach" in 1982 (tinyurl.com/yfeyuko). The problem is the resolution of ambiguity.

Transient English is conversational to some degree and in a social context, so that ambiguities are mostly resolved without thought because of that context, and can be resolved conversationally if necessary.

Enduring English is isolated in the sense that the reader is not necessarily familiar with the context of the information, so it is useful to remove ambiguities by using homophony—that is, by spelling words differently even though they are pronounced the same way. A well-known example is *right–rite–wright–write*.

This is not to argue that spelling reform can or should attempt to remove ambiguity altogether. There are far too many meanings to go around, and far too many homonyms in ordinary English, such as the verb and noun *bear*. To complicate matters, there are also homographs such as the verb and noun *lead*.

The role of English as an international language offers one reason for simplifying it. Spelling reform is an approach that deserves consideration provided it is toward an orthography that removes the worst inconsistencies and is carried out in stages.

An alternative is quasireform through using digital typographic techniques to indicate the pronunciation without changing the spelling (The Profession, Aug. 2006, pp. 104, 102-103). A computer hosting quasireformed text could modify the strength of the pronunciation markings to suit the reader, and this could be used to teach learners how to read text aloud.

Yet another approach is pronunciation reform, which would need to be instituted gradually by, for example, first pronouncing the *h* in words like *which* and *what*, which would then be distinct from *witch* and *watt*.

Still another approach is the gradual reintroduction and extension of diacritical marks, so that *résumé* would be distinct from *resume*, for instance. In the long run this would require upgrading keyboards to make it easy to key such marks in, although as an interim measure software could apply some marks. There is a curious precedent for this. Microsoft's Word, at least the version I use for writing these essays, automatically puts a dieresis over the *i* in *naïve* but not in *naïf* nor in *Chloë*.

Any representational changes to a language like English would be difficult to implement. Were any such changes to be made, however, digital technology and the cooperation of the computing profession would be needed to make the changes succeed.

The online society is assuredly here to stay, but it will change. "Thankfully, there are now the stirrings of a backlash against the cult of social media. In his forthcoming book, *You Are Not a Gadget*, Jacob Lanier will "defend authorship and individuality against the deafening banality of the online crowd" (tinyurl.com/yjywd43).

The banality is the pity. Its most likely source is the lack of individuality and depth in the culture of the banal. This can be traced back to the failure of the education system. One aspect is, in David Crystal's words, that "Kids have got to grow up realising that in this day and age, standard English is an absolute criterion of an educated background and you're not going to get certain types of jobs if you don't spell well." In my opinion, correct spelling is best learned through computer-administered drill and practice (The Profession, Mar. 2008, pp. 104, 102-103). ⊏

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