A Word *with* Steven Pinker

MIT professor Steven Pinker's New Year's thoughts for language professionals.

Language International: Based on current trends in computing—rapid advances in processing speed, storage capacity and retrieval, database technology, neural networks—do you see a new model evolving for machine translation and similar language tools in the years ahead? Do you see machine translation becoming a common and commercially viable technology down the road? Why/why not?

Steven Pinker: One of the problems in being seen as an expert on language in general is that one cannot be an expert in the vast majority of specific topics in language research—merely knowing "something" about each topic is enough, compared to most hyperspecialized academics. So I can't claim to be able to prognosticate on this question with any expertise, but I'll hazard a guess: that machine translation will, indeed, be a viable technology. If a key limitation of MT in the past has been an obliviousness to the common-sense knowledge necessary to disambiguate language, then advances in computing power may very well overcome that limitation.

One direct solution may be Doug Lenat's CYC project, which actually attempts to duplicate human sense in a computer, in the form of millions of interconnected facts. Indirect solutions might range from those that are good approximations to common sense, such as scanning the information in a large dictionary or encyclopedia into an intelligent system that can compile the real-world knowledge contained in them, to systems that do the job in a dumber way, such as assembling statistical databases of the immediate contexts of each reading of each ambiguous word. Any of these technologies might lead to smarter but practical MT systems.

Language International: As international trade booms, the demand for language professionals—translators, localizers, technologists—is booming as well. What technologies do you see arising in the next two decades that will have a practical impact on global cross-language communication, whether of a human or technological dimension?

Steven Pinker: Machine translation, and the human pre- and post-processing needed to make it usable, is one. Another might be intelligent, multilingual Web-search tools—the ones available now are still user-unfriendly and maddeningly inaccurate, with far too many false alarms and misses. A third would be natural-language understanding systems, at first in narrow domains such as making airline reservations, but eventually as general interfaces between people and their computers. A key component of those systems will be an ability to incorporate new information about grammar and vocabulary, allowing the systems to become better and better at mastering the nuances and complexities of standard English, to keep up with new idioms and slang, and to adapt to the many Englishes spoken in different parts of the world.

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Language International: You've probably seen Systran's translation tool within the search engine AltaVista. Is this a gimmick or useless toy, or does it have real applicability today? Does it point in the direction of things to come?

Steven Pinker: I think it has some applicability today—I was able to get the gist of the German article I had translated. But I was shocked at how grammatically stupid the translation was. In many of the translated sentences elementary aspects of English grammar, such as that the verb goes in the middle of the clause rather than at the end (as in German), were unimplemented, as if the program just translated words and ignored sentence structure. I was surprised at how much I could get out of the words, but suspect that a little syntax would go a long way in making the translation more natural and useful.

Language International: If you had a moment to give advice to the translators and interpreters of tomorrow, what would it be?

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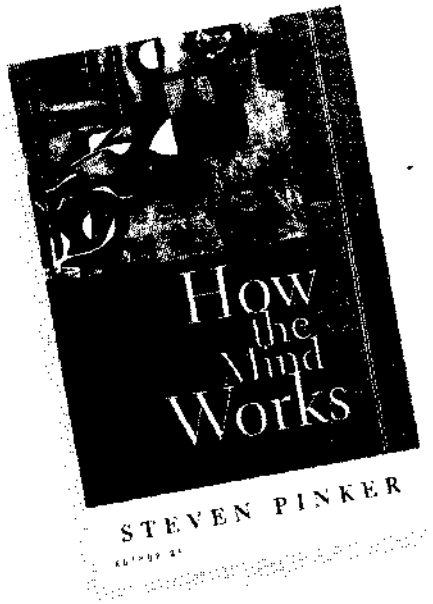
Steven Pinker: I suspect that translators and interpreters would have as much advice to give me—and other linguists and psycholinguists—as we would have for them. Of all the language behaviors that the human brain is capable, translating and interpreting must be the most demanding, and I suspect that scientists have much to learn by studying the process. At the same time I think that academic linguistics and psycholinguistics should be of great interest to language professionals. It's tragic that so much of what linguists have learned remains sealed within the walls of academia, imprisoned by jargon, formalisms, and disputes among theories. The reason I wrote *The Language Instinct* is that it was time for us to start giving linguistics and psycholinguistics away to those who can best use it in the world.



Chapter and Verse

Excerpts from the Pinker best-seller,

The Language Instinct

Their foibles [those of the language "experts"] can be blamed on two blind spots. One is a gross underestimation of the linguistic wherewithal of the common person. I am not saying that everything that comes out of a person's mouth or pen is perfectly rule-governed (remember Dan Quayle). But the language mavens would have a much better chance of not embarrassing themselves if they saved the verdict of linguistic incompetence for the last resort rather than jumping to it as a first conclusion. People come out with laughable verbiage when they feel they are in a forum demanding an elevated, formal style and know that their choice of words could have momentous consequences for them. That is why the fertile sources of howlers tend to be politicians' speeches, welfare application letters, and student term papers (assuming there is some grain of truth in the reports). In less self-conscious settings, common people, no matter how poorly educated, obey sophisticated grammatical laws, and can express themselves with a vigor and grace that captivates those who listen seriously—linguists, journalists, oral historians, novelists with an ear for dialogue. The other blind spot of the language mavens is their complete ignorance of the modern science of language—and I don't mean just the formal apparatus of Chomskyan theory, but basic knowledge of what kinds of constructions and idioms are found in English, and how people use them and pronounce them. In all fairness, much of the blame falls on members of my own profession for being so reluctant to apply our knowledge to the practical problems of style and usage and to everyone's natural curiosity about why people talk the way they do.

I hope to have convinced you of two things. Many prescriptive rules of grammar are just plain dumb and should be deleted from the usage handbooks. And most of standard English is just that, standard, in the same sense that certain units of currency or household voltages are said to be standard. It is just common sense that people should be given every encouragement and opportunity to learn the dialect that has become the standard one in their society and to employ it in many formal settings. But there is no need to use terms like "bad grammar," "fractured syntax," and "incorrect usage" when referring to rural and black dialects. Though I am no fan of "politically correct" euphemism (in which, according to the satire, *white woman* should be replaced by *melanin-impoverished person of gender*), using terms like "bad grammar" for "nonstandard" is both insulting and scientifically inaccurate. As for slang, I'm all for it! Some people worry that slang will somehow "corrupt" the language. We should be so lucky. Most slang lexicons are preciously guarded by their subcultures as membership badges. When given a glimpse into one of these lexicons, no true language-lover can fail to be dazzled by the brilliant wordplay and wit: from medical students (*Zorro-belly, crispy critter, prune*), rappers (*jaw-jacking, dissing*), college students (*studmuffin, veg out, blow off*), surfers (*gnarlacious, geeklified*), and hackers (to *flame, core-dump, crufty*). When the more passé terms get cast off and handed down to the mainstream, they often fill expressive gaps in the language beautifully.

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Steven Pinker received his Ph.D. in psychology from Harvard. He began teaching at MIT in 1982, where he is currently professor in the department of Brain and Cognitive Sciences and director of the McConnell-Pew Center for Cognitive Neuroscience. His *The Language Instinct* was named among the 10 best books of 1994 by the *New York Times* and *London Times*, and won prizes from the American Psychological Association and the Linguistics Society of America. His latest offering, *How the Mind Works*, won the *Los Angeles Times* Book Prize in Science and was a finalist for the Pulitzer Prize and the National Book Critics' Circle Award.