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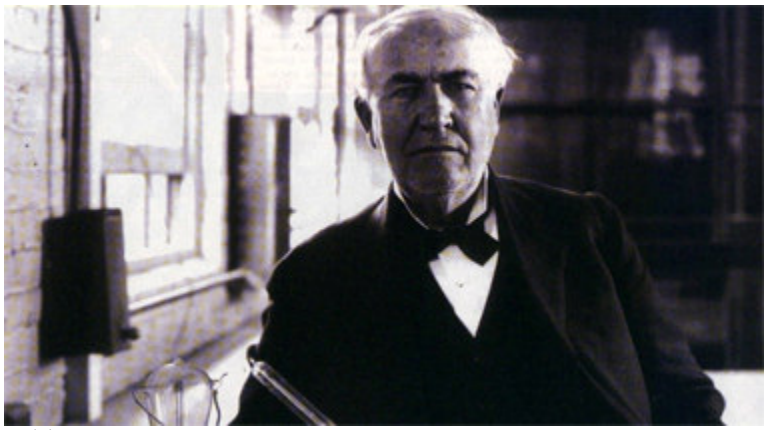
Is Language a Technology?



Thomas Edison was a well-publicized inventor. Was there an even greater long-ago inventor who gave us language?

Last week's post drew a comment (here) that said language began, "The same way the wheel usage and invention began." It's a commonsense idea and worth pursuing. Is language a technology, an instinct, or something else?

The subtitle of the paper discussed last week is, "Language as Technology." The phrase built on an idea quoted from Edward Sapir's *Language: An Introduction to the Study of Speech*, "Walking is an inherent, biological function of man [but] speech is a non-instinctive acquired, 'cultural function.'" [pp. 3-4]

Was Sapir right? Or was Steven Pinker correct-when he wrote, "Language is no more a cultural invention than is upright posture. …[It is] a biological adaptation to communicate information." [*The Language Instinct*, p. 5]

The most obvious evidence of cultural invention is that language varies from culture to culture. People walk more or less the same way on two legs, but we don't speak the same languages. If language was as biologically instinctive as bipedal walking, wouldn't languages be more similar?

A second source of evidence is the artistic creativity we see around us today. Writers and orators consciously coin words, phrases, and even invent grammaticalizations. If such conscious invention goes on today, why say it wasn't there at the very beginning?

Thirdly, we have to learn language. I commonly read that we learn our language in the first five years, but that strikes me as a gross underestimate. A few years ago, when I was working on a book about Einstein, I learned many new things about using language, and I can assure you that I was well beyond age 5. Speech may look easy, but instinctive behavior like upright walking comes much more easily and stabilizes much more quickly.

There may be other arguments as well, but these three are sufficient to make the commonsense case. Yet when we think about it, the invention process cannot have been quite the same as, say, inventing a wheel and axel.

We don't really know how wheels were invented, but it is not perfectly mysterious. Somebody had an insight and either worked on it or let others in on the idea and they built on it. Presumably there was a period of tinkering. Maybe the first wheel was a potter's wheel, and then somebody thought of putting it on its side. Or perhaps there was some dragging and somebody figured a way to improve the system. Others learned the secret either by looking at a functioning wheel or having somebody tell them how it worked. That's the general inventive process: Insight + tinkering + telling.

But language cannot have begun that way. "Telling," obviously, can't have been part of it. Tinkering too presents a problem of circularity. Suppose, for example, that gestures preceded speech. Well, then we've just pushed the story back. How were gestures invented? We could say they are biological, so old that even apes have some attention-getting gestures, but now we've pushed the inventing right back to biology. Can't do that and keep the invention story.

That leaves us with insight. It's a bit of an unusual insight because it improves on nothing. The wheel was superior to carrying or dragging. Language is *sui generis*, without rival. It must have been the most original insight in human history, but we can skip that part. The challenge is that language isn't of much use by itself. We can imagine a fellow thinking to call something *stick*, but how is anybody else to know what that sound is doing? Can't tell them. Just point at the item and shout *stick*? How is anybody to determine that the sound is a name (an unheard of thing) rather than a bark of some kind?

There's the problem in a nutshell. Language is no good without a group of users, but you cannot get a group to accept a new idea like language without using language to explain, or justify, or teach it. This paradox is so old that linguists eventually made a rule forbidding discussion of possible solutions. When I raised the question in my college days, that's exactly what I was told: you can't ask how language began.

But every science has its mysteries. It took 300 years for Einstein to come up with the explanation for Galileo's demonstration that objects of different weights fall at the same speed. We can't rule out commonsense just because it raises some puzzles.

Even though I was forbidden to pursue the issue, I did sometimes wonder about language origins and once, as I was falling into bed, it occurred to me that I might be wrong in my assumption that language is passed down from generation to generation. Maybe each generation imagines language on its own. That idea was so new that I immediately sat up in my bed and began taking notes. Over twenty years later I ran across a similar thought in Pinker's book, "The crux of [my] argument is that complex language is universal because *children actually reinvent it*, generation after generation—not because they are taught." [20, italics Pinker's]

The first chink in commonsense is this one: our understanding of how language is passed from generation to generation has been flawed. Although my bedtime idea was too simple—most children are raised in cultural surroundings and begin to show cultural influences right away—the first words and phrases they make are their own. The full change from *ad hoc* speech to cultural usages only comes when they are about three years old, which by the way is when children shift from being social, parent-oriented creatures to community-oriented ones. Three is also the age when it becomes painfully obvious that children with a language deficit are not advancing to true speech.

Human infants, unlike those of any other primate, begin making sounds and words at an early age. Normally, adults and older children immediately begin directing them toward the words spoken around them, but even without encouragement they will make sounds. During their second year toddlers begin putting words into phrases, and again they are normally directed to use local-sounding phrases but their progress does not require it. At age three, as they become increasingly

communal, they begin picking up many elements of the culture including language. This process, in its pre-cultural stages, is much more like the way birds learn their songs than like the way people invent things like wheels.

The other commonsense arguments have to be modified as well. It is true that people make deliberate coinages, but very few of them make their way from individual invention into the culture at large. Most changes come from borrowings and other happenstance changes. Language evolves even without the input of poets.

Similarly, the cultural forms of language are more constrained than once expected. Just as a language can generate an infinite variety of sentences and yet remain rule bound, so humanity can generate an infinite variety of languages and yet be following fixed laws. Our speech is more shaped by biology than the focus on culture predicts, and these biological influences are not just overlaid on organs (tongue, vocal cords, lips, lungs, brain, etc.) that exist for other reasons. Our bodies have adapted to speech and have a series of innate behaviors (e.g., babbling, phrase-making) that promote its creation at the pre-cultural level.

Culture and biology is as mixed together as mind and matter. You can talk about either side of the mixture and ignore the other, just as long as you remember you are only considering part of the story. Among humans, eating, giving birth, raising kids, and many other routinge biological tasks require cooperation, and the indispensible glue that makes cooperation possible is language. Many learned activities among humans —like illustration, music, ritual— satisfy purely culturally defined needs, and the indispensible glue that makes culture possible is language. In short, language is the bridge that ties biology and culture together. Depending on your concern of the moment you can call it either one. You are only wrong when you insist that your answer is the whole answer. Sapir made that mistake, as does anybody else who says it is a technology. Pinker made that mistake too, from the other side, calling it an instinct and thinking that was the whole of it.

Links:
here: http://www.babelsdawn.com/babels_dawn/2009/05/classical-linguistics-defended.html#comments
Edward Sapir: http://www.mnsu.edu/emuseum/information/biography/pqrst/sapir_edward.html
Language: http://www.amazon.com/gp/product/1103409573?ie=UTF8&tag=telllingitcom-20&linkCode=xm2&camp=1789&creativeASIN=1103409573
Steven Pinker: http://pinker.wjh.harvard.edu/
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