It's Human Nature

Steven Pinker, Ph.D.

Photo: Rebecca Goldstein

Steven Pinker has been called many things: Harvard professor, linguist, cognitive scientist, evolutionary psychologist, author, intellectual rock star. He's been named one of TIME magazine's 100 Most Influential People in the World; his research has won prizes from the National Academy of Sciences, the Royal Institution of Great Britain, and the American Psychological Association. And he has a way with words. His books—The Language Instinct, How the Mind Works, The Blank Slate, *and, most recently,* The Stuff of Thought: Language As a Window into Human Nature—*translate his research into bestsellers. In this interview adapted from his appearance on BigThink.com, Pinker talks about what we're born with, what language reveals about our relationships and our creativity, and why all this makes him hopeful about the future.*

What Makes Us Tick

Since adolescence, I was always interested in what makes people tick, and what the implications are for larger questions. If we know something about human emotion and human motivation, does that provide implications for how we ought to run society? It's an ancient question, and one that I was eager to be involved in. I majored in cognitive psychology, which at the time was a relatively new field, and I thought a tremendously exciting field. It combined experimental psychology with linguistics, and philosophy of mind, and artificial intelligence. And I thought that was an exciting growth area in the 1970s when I picked a major. And I'm still excited by it.

What I basically try to do is understand human nature, how the mind works, what makes us tick. What are the patterns of thought and emotion and motivation that characterize our species? I focus on language partly because you can't make a living out of studying human nature. It's just too big a topic. You've got to pick something tractable to study. For me it has been language, and I think it sheds light on larger questions about what makes the mind work.

Born with It

In the late 1950s, Noam Chomsky used language as a way to rehabilitate the idea of innate mental structure. He said language was a good candidate for something that is innately and uniquely human. It's very hard to make sense of language—of our ability to string words into new combinations, into sentences that other people have never heard before but can very quickly understand—without appealing to the idea that we have a mental algorithm, a set of rules that picks words out of a memory store and strings them together in combinations where the order, as well as the choice of words, is meaningful.

Language makes the idea of an innate mental structure concrete. We could not possibly be born with English; on the other hand, it's not enough to be born with just an ability to learn. If you give a baby and a cat the same environment, the baby will learn to speak and the cat won't. Something innate must be there.

In the case of language, what's innate is a motive and an ability to analyze the signals coming out of someone else's mouth. The brain mechanism that is equipped to do that—to find the words, the nouns, the verbs, the phrases, and to analyze speech as having logic—is what's innate.

Creative Mistakes

I did what I think is the most exhaustive study of one aspect of child language development: the fact that kids make errors like, ''We holded the baby rabbits,'' and ''The alligator goed kerplunk.'' I analyzed 20,000 of those forms from computer transcripts of children developing language.

The essence of language is that you aren't restricted to a fixed list of messages that you've memorized and then regurgitate like a parrot. When children make an error like that, they are doing something that makes language powerful: combining things by rules. And in trying to understand that one phenomenon, I hope that my students and I shed light on the process of linguistic generativity or creativity in general.

On Not Saying What You Mean

My main preoccupation today is using language as a window into human nature. I'm interested in the interface between language

and the rest of the mind, such as how language can illuminate our social relationships. For example, why is so much of language use veiled, or indirect, or done via innuendo rather than people blurting out exactly what they mean? Why do I say, ''If you could pass the salt, that would be great?'' instead of ''Give me the salt''? Why does someone make a sexual overture by asking, ''Would you like to come up and see my etchings?'' Why are threats so often veiled, like, ''Nice store you got there. Would be a real shame if something happened to it.'' Given that the listener knows exactly what the speaker had in mind, it's not that anyone is fooled by this charade; but nonetheless, some aspect of the social relationship seems to be preserved if the request is slipped in between the lines. I'm interested in what that says about human relationships.

So why *do* you say, ''If you could pass the salt, that would be great''? In issuing an imperative—if you say, ''Pass the salt''—you're changing the relationship. You're turning it into one of dominance. You're saying to a friend or to a stranger, ''I'm going to act as if I can boss you around and presuppose your compliance.'' You may not want to move the relationship in that direction. At the same time, you want the salt. So if you say, ''If you could pass the salt that would be great,'' it's such a non sequitur that the listener can figure out that it really is a request. But both of you know that you haven't actually turned the relationship into a superior-inferior one. I think that's the key to understanding all of these. Being indirect is a way of preserving relationships as we transact the business of life.

Hardwired Potential

Because I do believe that there is such a thing as human nature, I think there are some things that will always be with us. I think people will always have a measure of self-deception, so we always think we're right and virtuous and omniscient. And so we will always have to have that beaten out of us by arguments, debate, and reality checking, and mechanisms like peer review, science, laws, and fines in the legal system. I think children will always be unruly. I think men and women will always be distinguishable. I

think we'll never be born knowing how to read or to do math, and we'll always need education. I think there are a large number of traits that will be here in a thousand years.
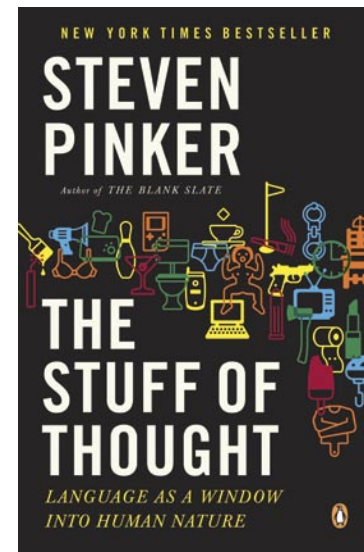
Among those traits are combinatorial abilities like the ones that I believe power language. Combinatorial abilities can give rise to an explosion of possibilities. Even if there's a fixed set of rules that cranks out those sentences, there is in effect no limit to the number of thoughts we can express in words.

By analogy, if human nature, the thoughts that we can think, the goals that we can have are combinatorial as well, there are maybe no limits in practice to the behavior we can expect from people. That's why even though I believe in a fixed human nature, I don't believe in a fixed human condition. Because with the resources of human nature, there's no limit to the kinds of discoveries we can make or the ways we can figure out to get along with each other.

Drawing the Big Picture

I'd like to think that I have helped draw the big picture in the case of language: the idea that language works by an interplay between memorized units that we call words and rules for combining them; and that we have language because we are a species that lives off social cooperation and know-how; and that language is an evolutionary adaptation that multiplies the power of technological know-how by allowing us to share it and allows us to negotiate relationships.

I'd also like to think that I've helped to do something like that for the human mind: the idea that the mind is a system of organs of computation, information processing subsystems that evolved by natural selection as a survival strategy for homo sapiens. It is a general idea, but it does help make sense of the whole shebang. I think it offers some potential of a satisfying answer to why we have a mind and what it does. So both at the microscopic end of why kids make errors on irregular verbs, and a macroscopic view of what language is, what the mind is, I hope I've advanced the discussion a bit. **i**

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STEVEN PINKER

Author of THE BLANK SLATE

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LANGUAGE AS A WINDOW INTO HUMAN NATURE

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