[The Stuff of Thought: Language as a Window into Human Nature, Steven Pinker, Viking, 484 pages]

Speaking Your Mind

By John Derbyshire

BACK IN 1854, English mathematician George Boole published a book entitled An Investigation of the Laws of Thought. The objects of his inquiry, Boole tells us, were "the fundamental laws of those operations of the mind by which reasoning is performed." He sought to mathematize those laws and hoped, incidentally, to gather "some probable intimations concerning the nature and constitution of the human mind." Looking back on Boole's work a half-century later, Bertrand Russell sniffed, "If his book had really contained the laws of thought, it was curious that no-one should ever have thought in such a way before."

What Boole in fact succeeded in doing was creating symbolic logic, a branch of applied mathematics—the algebraization of deductive reasoning. True, there's much more to thought than just deductive reasoning, so Russell had a point. Still, the idea that our thoughts obey their own laws and that those laws can be worked out and expressed mathematically, like the laws of physics, is very appealing. It is more appealing now than ever before, as experimental neuroscience, fortified by new techniques for brain imaging and new understandings of the human genome (which has a construction template for the brain, as for every other organ), allows us to treat thought as a physiological process, like digestion, and observe it taking place and speculate about its evolutionary history.

Since we use language to express our thoughts, one obvious way to investigate the "laws of thought" is by studying language. This is Steven Pinker's approach in his new book, The Stuff of Thought: Language as a Window into Human Nature. Pinker reminds us, though, that this commonsensical point of view is controversial. Twentiethcentury behavioral psychologists came close to asserting that thought does not exist and that only language, along with other forms of observable behavior, is worthy of study. Their spirit was carried forward by linguists Edward Sapir and Benjamin Whorf, who in 1956 famously hypothesized that the "laws of thought" are different for speakers of different languages. So pervasive were these ideas, Pinker tells us, that while writing this book, he had to stop telling people it was about "language and thought" because they all assumed it would be about how language shapes thought-"the only relation between the two that occurred to them."

Modern psycholinguistic theories can in fact be laid out in a spectrum. At the left end of the spectrum (using "left" here with Orwell's Newspeak in mind) is Linguistic Determinism, the idea that if thoughts exist at all, they are entirely at the mercy of language. I don't think anyone believes the precisely opposite thing, that language has no influence on thinking at all, but Pinker's "conceptual semantics" is well to the right of center on the spectrum.

In The Stuff of Thought, he gives over a whole chapter to refuting three different current language-drivesthought theories: Extreme Nativism (nothing to do with immigration, Nativism is a term of art in cognitive science, referring to innate mental structures), Radical Pragmatism, and Linguistic Determinism. None of these can be fairly summarized in a sentence or two. Suffice it to say, Pinker is properly respectful of serious intellectual opponents, but succeeds in showing that each of these three theories has loaded onto a single true idea more weight than it can bear. At the end of this chapter—the most difficult but most rewarding in the book—Pinker nails his own theses to the church door. The parentheses are my own.

Word meanings can vary across languages [the true idea overloaded by Linguistic Determinism] because children assemble and fine-tune them from more elementary concepts. They can be precise [Extreme Nativism] because the concepts zero in on some aspects of reality and slough off the rest. And they can support our reasoning because they represent lawful aspects of reality—space, time, causality, objects, intentions, and logic—rather than the system of noises that developed in a community to allow them to communicate [Radical Pragmatics]. Conceptual semantics [Pinker's own outlook] fits, too, with our common-sense notion that words are not the same as thoughts, and indeed, that much of human wisdom consists of not mistaking one for the other.

What, then, does language tell us about the "laws of thought"? In Pinker's account—what he calls "a word's-eye view of human nature"—language tells us that, in the first place, we build our thinking from a modest inventory of fundamental concepts like "events," "states," "things," "changing," "having," "containing," and "causing"; and in the second place, that we apply and extend these fundamental concepts via metaphor, analogy, allusion, and allegory in wonderfully imaginative ways. Here, for instance, is the Pinkerian reduction of a very famous sentence:

Some people are hanging beneath some other people, connected by cords. As stuff flows by, something forces the lower people to cut the cords and stand beside the upper people, which is what the rules require. They see some onlookers, and clear away the onlookers' view of what forced them to do the cutting.

That is the opening sentence of the United States Declaration of Independence ("When in the course of human events...") with its metaphors stripped

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down to their roots. Something has of course been lost in the reduction, but it is instructive to see the basic mental concepts lurking beneath the surface of those proud, familiar words.

That our thinking depends on mental models of space, time, substance, and causality would not have been news to Kant or Aristotle. The pleasure of Pinker's book is in watching the careful skill with which he peels back the linguistic layers that clothe those models. The whole performance brought to my mind (very Pinkerishly, I now see) those elaborate colored diagrams in anatomy textbooks, in which you can leaf through successive transparencies to remove the skin, musculature, and organs to reveal at last the skeleton.

Kant and Aristotle both get several mentions in The Stuff of Thought, registering the fact that it is hard to discuss these topics without trespassing into metaphysics. The essential quality of thought is that it is about something. Some thoughts—the ones Boole was interested in, for example—are about

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Subscription Department P.O. Box 9030 Maple Shade, NJ 08052-9030 other thoughts. The rest, though, are about things and persons in the external world, or as much as we can know of that world through our senses. "Reality," as a great novelist observed, is one of the few words that mean nothing without quotes. The idea of the world as illusion, or at any rate of our knowledge of it as irredeemably imperfect, informs all philosophy and religion. In the West, this idea found its canonical articulation in Plato's allegory of the cave, with our impressions of the world as flickering shadows on the cave's wall.

Pinker puts this image at the center of his closing chapter, "Escaping the Cave," but as a starting point for a much more expansive view of human mental capability. We are not, he says, prisoners of some pre-set menu of thinkable thoughts. We can enlarge our understanding by the psycholinguistic tricks he has been describing-by dreaming up new metaphors and analogies. Our natural mental inclination regarding number, for example, is "one, two, many," yet we can educate children to manipulate numbers like 54,201. We can even, in higher mathematics, say nontrivial things about infinite numbers.

Likewise in our social thinking:

In the governance of institutions, openness and accountability can be reinforced by reminding people that the intuitions of truth they rely on in their private lives—their defense against being cheated or misinformed or deluded-also apply in the larger social arena. These reminders can militate against our natural inclinations towards taboo, polite consensus, and submission to authority.

I am a great fan of Pinker's work, and I enjoyed this new book very much. Like his others, it breathes the spirit of goodnatured, rational, humane inquiry. A few commentators—our own Steve Sailer, for instance—have criticized Pinker in the past for being excessively diplomatic about human group differences. But surely a scholar who has said in public that yes, men and women have different innate capabilities, and yes, Ashkenazi Jews have higher mean intelligence than the rest of us, and no, parenting styles have little effect on the maturation of personality, and a great many other things very shocking to the PC sensibility of our time, is paying his dues. In any case, the only part of this new book likely to bring a blush to the cheek of a Chief Diversity Officer is one titled "The Seven Words You Can't Say on Television," which is about swearing and taboo speech. If teenage boys still frequent bookstores, this chapter will be the best-thumbed one in shelf copies.

Also, like Pinker's previous books, this one is filled with small linguistic delights-jokes, puns, paradoxes, and even a scattering of familiar comic strips to illustrate some of the author's points. I learned some words, too: "momentaneous," for instance, to describe an event, like the swatting of a fly, that, while it occupies some measurable amount of time in the real—sorry, "real"-world, can be treated by language as instantaneous. Though I think my favorite is "whimperative"—the excessively diffident way of getting someone to do something, as in, "I was wondering if you might pass the salt."

The author explains in his introduction that The Stuff of Thought is intended as the third volume in a trilogy about language and mind (that is, following Pinker's 1994 The Language Instinct and 1999 Words and Rules), and at the same time as the third in another trilogy about human nature (following his 1997 How the Mind Works and 2002 The Blank Slate). This book is intended, in other words, as a sort of capstone on an inverted-V structure of previous works. If this means that Steven Pinker is done with writing books for lay readers about linguistics and cognitive science, I take it as very bad news.

John Derbyshire is a contributing editor of National Review and the author of, most recently, Unknown Quantity: A Real and Imaginary History of Algebra.

[Fathers and Sons: The Autobiography of a Family, Alexander Waugh, Nan A. Talese, 472 pages]

The Waugh at Home

By Daniel McCarthy

They f--k you up, your mum and dad. They may not mean to, but they do. They fill you with faults they had, And add some extra, just for you. —Philip Larkin, "This Be the Verse"

AUBERON WAUGH came home Easter Sunday 1966 to find a policeman waiting for him. His father, the great novelist Evelyn Waugh, had died. That came as a relief-Auberon at first feared something had happened to his children. He made his way to his father's house. By the time he got there, the body was gone but not his father's last remains. "On arrival," Auberon later recalled, "I found a small pile of excrement on the carpet outside the downstairs lavatory" where Evelyn died. "Others must have noticed it too, but, being Waughs, they all pretended not to have done so until the daily help arrived, when it vanished without anything being said."

Other Waughs kept their peace; Auberon put the story in his autobiography. His son Alexander always wondered why he did it. To dump on his father's memory? To show the clan's indifference to "dung, death and other worldly horrors"? In Fathers and Sons: The Autobiography of a Family, Alexander speculates that his father appreciated the symbolism of Evelyn's death—that it came on Easter, appropriate for a devout Catholic, and that he left behind something obscene, befitting a comic novelist.

Whatever the case, this episode—and a half dozen like it involving deaths, weddings, wars, and bananas—illustrates the ambiguous relations between the Waugh fathers and sons. Alexander

revered his father, but he was the exception: Evelyn resented his father for the favoritism he showed his other son, Alec; Auberon, for his part, warmed up to Evelyn in adulthood, but earlier they were not close. Evelyn did not hide his feeling that his children were bores-"Of children as of procreation," he wrote Nancy Mitford, "the pleasure is momentary, the posture ridiculous, the expense damnable."

Four generations of Waugh boys from Evelyn's father Arthur, born 1866, to Alexander, born 1963—have grown up to be writers. Between them, Arthur's descendents—daughters, too—have produced 180 books of all kinds: biographies, novels, journalism, poetry, even treatises entitled Time and God. The last two are among Alexander's previous works: warm-ups for tackling the Waughs, one might say.

Alexander begins with the last of the nonliterary Waugh patriarchs, his greatgreat-grandfather and namesake Alexander, known to posterity as "the Brute." (The author claims he was not named after the Brute but an earlier Alexander, "the Great and Good," first of the English Waughs. The family name itself is of Scottish origin, and good evidence suggests it is the singular of Wales.) The Brute read the Bible, Shakespeare, and Wisden's Cricketing Almanac, but not much else. His old-fashioned ideas of child rearing involved sticking son Arthur high up in a tree and firing off a shotgun near his ears to cure his nerves. Arthur, a boy of his time, was dutifully eager to please his father, but the only interests they shared were cricket and amateur theatricals.

Arthur turned out to have a literary streak: at Oxford he won the Newdigate Prize—past winners included John Ruskin, Matthew Arnold, and Oscar Wilde—for "Gordon in Africa," a poem celebrating the British general decapitated at Khartoum. The poem impressed the Brute. Four years later, Arthur published a life of Alfred Lord Tennyson and was on his way to minor fame as a biographer of eminent Victorians. He fondly wished to be one himself, affecting Dickensian mannerisms and an outmoded style of dress that would later grate on his younger son, Evelyn.

It took a while for Arthur to catch on to that; his attention was fixed on his elder son, Alec. Reacting against the hard ways of the Brute, Arthur doted on Alec—"the son of my soul," he called him-and when Alec was kicked out of boarding school for homosexual activity, Arthur was crestfallen but stood by his boy. In disgrace and out of school, the only path open to Alec was His Majesty's army, then fighting the First World War.

Alec wanted to enlist; like other young men, he expected the war to be short and glorious. He was soon disabused. "What is there fine and noble in young men carrying boxes up the line, suddenly hearing a shell and dropping everything and falling flat in a ditch?" he wrote home, "Knight and Jackson were two of the best fellows you could meet-blown to bits." His disgust came out in a poem called "Cannon-Fodder." The title was a concession to his shocked father—originally, it had been called "Carrion." It told of vermin eating away at the leftovers of some mother's son, a young man mourned at home but unburied where he fell, "uncared for in the unowned place / that you fought so hard to keep."

Alec wrote his first novel as a 17-yearold soldier before leaving for France. The Loom of Youth was an autobiographical account of boarding school life, including the bits that had got him in trouble. It was a succès de scandale. Later novels and nonfiction would often be as scandalous but rarely so successful, although one, 1955's Island in the Sun, about interracial adultery on Grenada, was a hit in America and spawned a film, a song by Harry Belafonte, and even the name of Island Records. By then Alec had long since discovered his heterosexual side. The war, or at least the French brothels, helped straighten him out, and he became a prodigious womanizer. By the time Evelyn went to Oxford, he was calling his chrome-domed brother "the