

Why is the reason why you learn your mother's language very naturally while endeavoring to learn languages as an adult feels like banging your head against a wall at times?

Also, what is the reason why, except for the regular mix-ups and misunderstandings, we are really proficient at communicating with one another almost fluently?

The answers to all these questions depend on the nature of language and our innate skill to communicate with words: our language instinct.

In this book chapter, you'll understand the structure of language and the reason why humans are particularly good at learning it. Also, you'll discover the entire neuroscience behind our remarkable linguistic abilities.

## Chapter 1 – All of us are born with a language instinct.

Reason for a minute about how it is very to change the thoughts in your head into meaningful words. Where did we get this ability from? Though a lot of people think that we learn sentence structure in the classroom, our knowledge of it takes over the instant we are born!

Truly, young children have an inborn knowledge of grammatical structures that they couldn't probably have learned. The notion that grammatical rules are fixed into the brain was first mentioned by Noam Chomsky the popular linguist in his theory of Universal Grammar.

He said, children don't learn how to talk from their parents or from anybody else; instead they learn by utilizing their innate grammar skills. As a result, Chomsky thought, every language has the exact basic fundamental structure.

One of Chomsky's key opinions for this is the poverty of the stimulus, which shows that children understand verb and noun structures they couldn't have learned.

For instance, to change the phrase "a unicorn is in the garden" into a question, you need to just shift the "is" to the front of the sentence. But, for the phrase "a unicorn that is eating a flower is

in the garden,” you need to rearrange more than only the first “is” to change the phrase into a question. In order to make a grammatically sound sentence, you need to shift the second “is.”

Chomsky rightly asserted that children would never make the error of misusing the first method for forming a question to the second, more difficult sentence. In later trials, no children shifted the wrong “is,” even with sentences they could possibly have never heard before.

Additionally, deaf children utilize the right grammar in their signs without ever studying it.

Psychologists observed a deaf boy called Simon, whose two deaf parents just learned sign language in adulthood, and hence did numerous grammatical mistakes.

In contrast, Simon didn’t make the same mistakes, in spite of only ever being exposed to his parents’ pattern of signing. The only approach to explain this is that Simon had an innate knowledge of grammar that excluded him from making the same errors as his parents.

## Chapter 2 - The common notion that our words have an influence on our perception is wrong.

In spite of its popularity, there’s no root for what is called linguistic relativity, i.e., the notion that the structure of our language affects the manner we perceive and understand the world. Also, Linguistic relativity is known as the Whorfian Hypothesis, named after the linguist Benjamin Whorf.

Whorf was an amateur scholar of Native American languages and had numerous assertions that Native Americans perceived the world differently as a result of the structure and vocabulary of their language.

For instance, “a dripping spring” translates basically as “whiteness moves downward” in one Apache language. Whorf said that this difference shows that Apaches don’t see the world in terms of separate objects or actions.

But, other psycholinguists were fast to indicate that Whorf never really observed Apaches in person. In fact, it's not even clear that he ever encountered one person from there!

Also, he translated sentences in manners that made them sound very much mystical than they really were. However, you can do the exact thing with any language. For example, the phrase "he walks in" could be as easily be changed to something mystical, such as "as solitary masculinity, leggedness proceeds."

In addition, some believe that people see colors differently according to their mother language. For example, some cultures have just two color words: either "black" (dark hues) or "white" (light hues).

However, does this signify that they only two colors? Barely! It would be absurd to assume that language could by some means get into their eyeballs and alter their physiology.

In spite of this, belief in linguistic relativity lives because of urban myths. For instance, The Great Eskimo Vocabulary Hoax shows how untrue linguistic relativity is.

The common belief is that Eskimos have plenty of words for snow than are seen in English. Experts say they really have 12 – barely a great difference from English's various variations on the word, such as snow, sleet, slush, hail and so on.

## Chapter 3 - Language is founded on two principles.

How do we really fluently speak with each other? Well, human language has two principles that enable ease in communication.

The arbitrariness of the sign is the first principle. This notion, first established by Ferdinand de Saussure the Swiss linguist, relates to the manner in which we pair a sound with a meaning. For instance, the word "dog" doesn't sound like a dog, doesn't bark like a dog, neither does it walk like a dog. The word has no inherent "dogness," however, maintains its meaning.

Why?

Every English speaker makes the same connection between the sound “dog” and man’s best friend through numerous occurrences of rote learning.

The arbitrariness of the sign is a massive advantage for language communities because it enables them to transfer notions near-immediately without needing to rationalize pairing a specific sound with a specific meaning.

The other principle is that language uses an infinite way of finite media. In layperson’s words: we have a finite group of words that we can combine to form an infinite number of larger things, for instance, sentences.

We add up of these infinite possible combinations by creating rules that direct changes in word combinations. For instance, what is the difference between “dog bites man” and “man bites dog”?

Aside from one being a disastrous daily incidence and the other being attention-grabbing, the difference is in the foundational grammar that guides meaning.

Each of the words in “dog bites man” has its specific own meaning that doesn’t rely on the full sentence. Grammar is what lets us structure these words in particular combinations in order to evoke particular images and meanings.

There’s a finite amount of words; however, grammar offers us an infinite amount of methods to combine them.

## Chapter 4 - Grammar might have the whole focus; however, words are interesting as well.

Just like how we are made up of cells, which themselves are made of smaller particles, sentences and phrases are made of words, which are composed of turn from small bits of grammatical information known as morphemes. These morphemes are directed by the rules of morphology.

Consider the hypothetical word wug, for instance. “Wug” is a morpheme. By adding the morpheme for pluralization, the suffix –s, at the end of a “wug,” we have a group of wugs.

Therefore, it looks like there is a rule for forming plurals for nouns: adding the morpheme -s.

Incredibly, we didn’t acquire this rule as children, as was confirmed by Jean Gleason the psycholinguist.

In research that she conducted, she displayed preschool children a drawing and said to them, “This is a wug.” Afterward, she displayed to them two wugs and asked, “Now, there are two, so we have . . . ?”

The outcome? All the children added the suffix -s. There is no means a child could have known the word “wugs” before, which shows that we need to possess the innate skills to create plurals and also that we have mental rules for creating new words.

We can learn more about morphemes by observing the differences between languages.

English, for instance, is regularly stated to be simpler than German; however, the difference is only morphological.

Or consider Kivunjo, the Tanzanian language. In terms of inflectional morphology, the language is somewhat sophisticated.

Verbs can consist of seven prefixes and suffixes in Kivunjo –and all of them are morphemes – that change the verb’s meaning. The word “naikimlyiia,” meaning “to eat,” is an explanation of the verb “-lyi-.” The extra letter combinations are numerous morphemes.

Contrast this with English, where the majority of the verbs have just four kinds (e.g., quack, quacks, quacked, quacking).

But, what English doesn’t have in inflection it balances with derivational morphology – the formation of new words from old. For instance, by joining the suffix “-able” to the word “learn,” you form a new word: learnable.

Now that you understand the manner in which languages are made, the next chapters will look at the actual reason why it’s really easy for us to communicate with each other.

## Chapter 5 - Our skill to know the speech is like a sixth sense.

How is it possible that we can place a man on the moon and still be unable to make a computer that repeats what we say?

Speech, in contrast to written language, lacks any clearly fixed breaks between words.

The whole, fluid connection between spoken words is basically a series of phonemes or units of sounds that compose a morpheme. These phonemes approximately relate to the alphabet; therefore, if you think of each sounds when you spell out b-a-t, each sound is a phoneme.

Every phoneme has its personal exceptional acoustic signature. For instance, the word “beat” has three sounds (“b,” “ea” and “t”), each with its own exceptional sound wave. Therefore, couldn’t we just program a computer to identify these sound waves and repeat the word “beat” back to us?

Unluckily we can’t do that; this is because of a phenomenon known as coarticulation, the process whereby the sounds of every phoneme fit into each other as we speak.

When you utter the word “beat,” the three sounds that encompass the word are not different and are determined by the sounds spoken before and after. Computers can’t explain the radical diversity produced by coarticulation in the acoustic signatures of phonemes and hence have a tough time dictating our speech.

However, why are we really good at it? Presently, there is no definite answer. However, we can be fairly sure that it isn’t as a result of top-down processing, meaning, shifting from a general to a specific analysis.

Some researchers believe that we understand the complex sounds of speech from context – for example, that when we talk about the environment, we expect someone to say “species” instead of “special.”

But, given the promptness of normal speech, this looks unlikely. In the majority of the instances, it's not possible for us to foretell which word our discussion partner will say next. Furthermore, if you call a friend and recite ten random words from the dictionary, he'll know all of them regardless of the different lack of context.

## Chapter 6 - We know about written language since we are extremely skilled “parsers.”

Up till now, we've concentrated majorly on spoken language. However, how precisely do we understand the strange symbols written in a book?

We know sentences by parsing them first, splitting them up into their parts and indicating their grammatical functions in order to know what it means.

But, grammar particularly is just the code for how language functions, identifying just which sounds match to which meaning. Afterward, the mind then parses this grammatical information, searching for the subject, verb, objects, and so on, and combines them together to give the meaning of the sentence.

Linguists think that there are two types of parsing: breadth-first search and depth-first search.

A breadth-first search is a type of parsing that views individual words so that it can find a sentence's meaning. While analyzing individual words, the brain will think, but for a short time, various and sometimes strange meanings for ambiguous words (for example, the word “bug” could maybe an insect or a device for spies).

A depth-first search looks at whole sentences because there are occasionally basically a lot of to compute just at once. Here, the brain selects one possible meaning for the sentence and works with it.

Occasionally, depth-first searches cause confusion, particularly with garden path sentences, so named since they direct you up a “garden path.” These sentences show how parsers can not

just fail to pick a possible meaning for a sentence; however, it also consistently grab the wrong one.

Let's look at the sentence, "The man who hunts ducks out on weekends," for instance. In spite of being perfectly grammatically sound, it confuses the majority of the people, since it's meaning transforms halfway through (the hunter transforms from "hunting ducks" to "going AWOL"); therefore, our brains get stuck on the original meaning and can't make sense of the remaining ones.

Obviously, we're somewhat proficient in the art of speech. However, where did this language skill originate from? The next chapters will answer this question.

## Chapter 7 - Childhood is a crucial phase for developing our innate language abilities.

As we have seen and understood, all of us are born with the innate skill to learn a language. But, we still require a playground to improve our abilities.

While we were still growing up and young, children are basically vacuum cleaners for words. It was estimated by the author that an average six-year-old has a remarkable vocabulary of about 13,000 words!

This is an amazing accomplishment because preliterate children just hear words through speech and have no chance to study them. Rather, they learn a new word every two hours for every waking hour, regularly.

This is particularly extraordinary since the best effective ways for memorization, mnemonic devices, don't assist with individual words.

A mnemonic is a learning method that changes what we wish to remember into something more memorable. For instance, if you desire to learn to read music; so an easy approach to learning the lines on the treble clef (EGBDF) is to recall the sentence Every Good Boy Deserves Fudge.



However, that doesn't apply to individual words. Due to the shortage of easy methods to recall words, children's brains need to have an innate, powerful system for fastly learning a language.

But, as we become older, we start to lose this remarkable skills. Every adult finds it difficult when it comes to learning a different language, as the skill looks to rust with age.

Elisa Newport is a psychologist who did research on immigrants to America. She discovered that those who immigrated between the ages of three and seven were as proficient in English grammar as those born in the country. But, those who arrived between eight and 15, did much worse.

The same thing can be noticed when learning our first language. Throughout history, a small number of children have grown up without any form of human touch, regularly as a result of neglect. They are called the "wolf children," like "Genie," a 13-year-old girl who was found in 1970. Since she grew up without human touch, she was unable to create even simple grammatical sentences.

## Chapter 8 - Our language ability could have originated from evolution.

We haven't looked at the roots of the language instinct yet. It is possible that our natural skill for language was part of the evolutionary process?

Some, as well as Chomsky, are uncertain of the language instinct's compatibility with Darwinian evolution.

The present view on Charles Darwin's theory of evolution is that difficult biological systems are made by the steady gathering of random genetic mutations over generations. These mutations increase the organism's reproductive success, and therefore its ability to transfer its good genes.

Conventionally, there are two arguments against language instinct as a cause of evolution.

Firstly, one is that language is pointlessly powerful and difficult. Due to that, the development of language wouldn't have helped reproductive success.

But, this critique is just like saying a cheetah is faster than it "needs" to be. Over time, small advantages lead to big changes, and something just as small as a 1% reproductive advantage in growing 1% larger could, over a couple of thousand generations, cause a mouse to grow to the size of an elephant.

Secondly, language is not compatible with evolution since it is exceptional to humans – even chimpanzees, our closest relatives, don't have any language. Because chimps and humans grew from a related ancestor, who evolved from lesser primates, shouldn't chimps and monkeys have the same languages as ours?

Not essentially!

Evolution isn't like a linear hierarchy whereby every organism originates from the same root; for example, an amoeba.

Evolution is a bush and not a hierarchy. Chimpanzees and humans evolved from a similar ancestor that is now extinct; therefore, it's likely for we humans to have language without chimps ever needing to have it.

Our language instinct possibly originated through natural selection, the process whereby small differences between individuals provide greater or lower likelihoods for survival and reproduction.

Therefore, our ancestors probably profited in some way from a skill to communicate with one another, which offered them the adaptive edge essential for surviving in their surroundings.

Our last chapters will look at how we can use this understanding of the roots of language and our tendency for learning to know more about ourselves.

## Chapter 9 - Relax about good grammar – it's more arbitrary than you reason.

Present decades have observed an increasing obsession with grammatical rules. The present “grammar Nazis” are fast to indicate things such as confusing “their” and “there,” or criticize split infinitives as the sign of the uneducated. However, is this fair?

In brief: no, it's not.

There is a huge difference between how we are “supposed” to speak and how we can or do speak. Therefore, people who really study language have various ideas of grammar rules to an average person.

Prescriptive rules are the rules we learn and strive within the school, and they direct how we're “supposed” to talk. These are the tools of grammar Nazis.

On the contrary, scientists handle and try to isolate and clarify descriptive rules, i.e., the ones that direct how people really talk.

Scientists are more worried about descriptive rules since only prescriptive rules are not adequate to form a language.

For instance, the prescriptive rule that you shouldn't begin a sentence with the word “because” wouldn't seem reasonable without the descriptive rules that outline both infinitives and what a sentence is, and group the word “because” as a conjunction.

Put in the best way, prescriptive rules are a bit beyond decorations of descriptive rules. Therefore, it's likely to speak grammatically (like descriptively) while also talking ungrammatically (non-prescriptively), just like how a taxi can follow the laws of physics while at the same time breaking the laws of California.

Therefore, who chooses what makes up “correct” English?

Well, that's difficult to know. Prescriptive rules vary with changes in fads and politics.

For example, the rule of not separating infinitives (not placing words between “to” and a verb) that was really carefully instilled into us as children, doesn’t look really grating when Jean-Luc Picard states that he needs “to confidently go where no one has been before.”

The rule itself has its origins in eighteenth-century England when people needed London English to surpass Latin as the language of the upper class. Split infinitives aren’t there in Latin; therefore, they basically copied the rule.

## Chapter 10 - With the understanding that language is a human instinct, we can learn more about how the brain functions.

Current developments in neuroscience, together with our knowledge of a language as an instinct, could assist us to solve the mysteries of the brain.

For instance, knowing that language is an instinct provides us insight into how the brain is composed.

Important parts of the brain have now been acknowledged as being related to language. For instance, the left perisylvian is now viewed to be the brain’s “language organ.” In 98% of brain damage incidences leading to language impairment, the left perisylvian part is affected.

While the connection between brain structure and its role is difficult and not completely understood yet, it seems that specific faculties are stored in certain spots in the brain, known as modules.

Different parts of a language, like speech production, comprehension, and all, all include parts of the brain that are found near to one another in the left hemisphere.

Also, our understanding that we have a language instinct lets us wonder about other fixed instincts we might have.

For instance, just like how we have a language instinct, it is possible that we might also possess “a biology instinct.” Brent Berlin, an anthropologist proposed the notion that human beings have innate folk biology. Meaning, people have an innate knowledge that plants and animals are part of different species or groups – all without being taught.

Elizabeth Spelke a psychologist has proven the validity of folk biology in the research she did with children.

Firstly, she displayed to the children a picture of a raccoon, which changed to resemble a skunk. Afterward, the children were shown a coffee pot that changed to resemble a bird feeder.

The children acknowledged the coffee pot’s change; however, couldn’t admit that a raccoon had changed into a skunk. It didn’t matter to them if an inanimate object altered its form, but a raccoon was a distinct being that couldn’t just turn into something else. This displayed an intuitive knowledge of the difference between natural and artificial things.

Our ability for language is extremely complicated; however, the more we understand about it, the more we learn about ourselves.

## The Language Instinct: How the Mind Creates Language by Steven Pinker Book Review

Everyone is born with a language instinct that is fixed in our brains. Our ability for language is really deeper than the grammar we are taught in school and is perhaps even one of the causes of our persistent survival as a species.

<https://goodbooksummary.com/the-language-instinct-by-stein-pinker-book-summary/>