**MOSCOW INSTITUTE OF PHYSICS AND TECHNOLOGY**

**DEPARTMENT OF CONTROL AND APPLIED MATHEMATICS**

Alekseev Vasiliy, 474

**Language Window**

based on the article “Language Acquisition” by Steven Pinker

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Good morning, everyone. I am glad to see you all here now. My name is Alekseev Vasiliy. And today I am going to tell you something about the process of language acquisition in childhood. Has anyone of you ever thought of whether there is a simpler and more efficient way to master a foreign language, than to spend hours per week for many years attending classes at school and university? If a child is able to learn a native language, maybe it is also possible for them to acquire a foreign one by the way as well?

In my speech I am going to cover several points. The first and the main part deals with some details connected with the process of acquisition a language itself will be considered. Then goes explanation of what should be done to make a child succeed in learning a foreign language. And the last point is about overall benefits that can be derived from the enterprise of early language learning.

The presentation will take about 10 minutes. I will be glad to try to answer your questions at the end of it.

In the end, I want to say that learning language as early as possible is definitely wholesome, but here we are all finished. We can’t already take any advantage of it. But I do hope that if you find yourself having children in the future, you will remember something from this speech to help the child. Because when you are young, you don’t realize what an opportunity you possess.

**Maturation of the Language System**

The **maturation** of language circuits during a child's early years may be a driving force underlying the course of language acquisition *(Pinker, 1994, Chapter 9; Bates, Thal, & Janowsky, 1992; Locke, 1992; Huttenlocher, 1990)*. Before birth, virtually all the neurons (nerve cells) are formed, and they migrate into their proper locations in the brain. But head size, brain weight, and thickness of the cerebral **cortex** (gray matter), where the synapses (junctions) subserving mental computation take place, continue to increase rapidly in the year after birth. Long-distance connections (white matter) are not complete until nine months, and they continue to grow their speed-inducing **myelin** **insulation** throughout childhood. Synapses continue to develop, peaking in number between nine months and two years (depending on the brain region), at which point the child has 50% more synapses than the adult. Metabolic activity in the brain reaches adult levels by nine to ten months, and soon exceeds it, peaking around the age of four. Synapses **wither** from the age of two through the rest of childhood and into **adolescence**, when the brain's metabolic rate falls back to adult levels. Perhaps linguistic **milestones** like babbling, first words, and grammar require minimum levels of brain size, long-distance connections, or extra synapses, particularly in the language centers of the brain.

Similarly, one can conjecture that these changes are responsible for the decline in the ability to learn a language over the lifespan. The language learning circuitry of the brain is more plastic in childhood; children learn or recover language when the left hemisphere of the brain is damaged or even surgically removed (though not quite at normal levels), but comparable damage in an adult usually leads to permanent **aphasia** *(Curtiss, 1989; Lenneberg, 1967)*.

Many explanations have been advanced for children's superiority: they can exploit the special ways that their mothers talk them, they make errors **unself-consciously**, they are more motivated to communicate, they like to conform, they are not **xenophobic** or set in their ways, and they have no first language to interfere. But some of these accounts are unlikely, based on what we learn about how language acquisition works later in this chapter. For example, children can learn a language without the special **indulgent** speech from their mothers. *There is no evidence, for example, that learning words (as opposed to phonology or grammar) declines in adulthood.*

Successful acquisition of language typically happens by 4, is guaranteed for children up to the age of six, is steadily compromised from then until shortly after **puberty**, and is rare thereafter. Maturational changes in the brain, such as the decline in metabolic rate and number of neurons during the early school age years, and the bottoming out of the number of synapses and metabolic rate around puberty, are **plausible** causes. Thus, there may be a neurologically-determined "critical period" for successful language acquisition, analogous to the critical periods documented in visual development in mammals and in the acquisition of songs by some birds.

**The Course of Language Acquisition**

Language acquisition begins very early in the human lifespan, and begins, logically enough, with the acquisition of a language's sound patterns. The main linguistic accomplishments during the first year of life are control of the speech musculature and sensitivity to the phonetic distinctions used in the parents' language. Interestingly, babies achieve these **feats** before they produce or understand words, so their learning cannot depend on correlating sound with meaning. That is, they cannot be listening for the difference in sound between a word they think means bit and a word they think means **beet**, because they have learned neither word. They must be sorting the sounds directly, somehow tuning their speech analysis module to deliver the **phonemes** used in their language (Kuhl, et al., 1992). The module can then serve as the front end of the system that learns words and grammar.

While interacting with live human speakers, who tend to talk about the here and now in the presence of children, the child can be more of a mind-reader, guessing what the speaker might have meant (Macnamara, 1972, 1982; Schlesinger, 1971). That is, before children have learned syntax, they know the meaning of many words, and they might be able to make good guesses as to what their parents are saying based on their knowledge of how the referents of these words typically act (for example, people tend to eat apples, but not vice-versa). In fact, parental speech to young children is so **redundant** with its context that a person with no knowledge of the order in which parents' words are spoken, only the words themselves, can **infer** from transcripts, with high accuracy, what was being said (Slobin, 1977).

Shortly before their first birthday, babies begin to understand words, and around that birthday, they start to produce them *(see Clark, 1993; Ingram, 1989)*. Words are usually produced in isolation; this one-word stage can last from two months to a year. Children's first words are similar all over the planet, these are short simple ones like mama, car, dog, eat, yes, no, hi.

Around 18 months, language changes in two ways. Vocabulary growth increases; the child begins to learn words at a rate of one every two waking hours, and will keep learning that rate or faster through adolescence (Clark, 1993; Pinker, 1994). And primitive syntax begins, with two-word strings like the following:

All dry. All messy. All wet.

I sit. I shut. No bed.

No pee. See baby. See pretty.

More cereal. More hot. Hi Calico.

Other pocket. Boot off. Siren by.

Mail come. Airplane allgone. Bybebye car.

Our car. Papa away. Dry pants.

These sequences already reflect the language being acquired: in 95% of them, the words are properly ordered (Braine, 1976; Brown, 1973; Pinker, 1984; Ingram, 1989).

Roger Brown, one of the founders of the modern study of language development, noted that although the three children he studied intensively never produced a sentence as complicated as Mother gave John lunch in the kitchen, they did produce strings containing all of its components, and in the correct order: (Brown, 1973, p. 205):

Agent Action Recipient Object Location

(Mother gave John lunch in the kitchen.)

Mommy fix.

Mommy pumpkin.

Baby table.

Give doggie.

Put light.

Put floor.

I ride horsie.

Tractor go floor.

Give doggie paper.

Put truck window.

Adam put it box.

Between the late two's and mid-three's, children's language **blooms** into fluent grammatical conversation so rapidly that it overwhelms the researchers who study it, and no one has worked out the exact sequence. Sentence length increases steadily, and because grammar is a combinatorial system, the number of **syntactic** types increases exponentially, doubling every month, reaching the thousands before the third birthday (Ingram, 1989, p. 235; Brown, 1973; Limber, 1973; Pinker, 1984).

During the grammar explosion, children's sentences are getting not only longer but more complex, with fuller trees, because the children can embed one constituent inside another.

Children do not seem to favor any particular kind of language (indeed, it would be puzzling how any kind of language could survive if children did not easily learn it!). They swiftly acquire free word order, rich systems of case and agreement and whatever else their language throws at them. It is safe to say that almost all parts of all languages are acquired before the child turns four (Slobin, 1985/1992).

**What Should Be Done**

Children most definitely do need to hear an existing language to learn that language, of course. Children with Japanese genes do not find Japanese any easier than English, or vice-versa; they learn whichever language they are exposed to.

When children join the preschool class of Moreton First at three years of age, they are exposed to four languages: English, French, Spanish and Chinese. It may seem incredible to us, but as the child’s brain is still growing and developing rapidly, multiple languages can be assimilated as seamlessly as a single language at an early age.

Making language exposure meaningful for children is key to getting them excited and involved in learning it. Bombarding children with hours of vocabulary will have less impact than introducing them to a few words within a rich cultural context. Get children excited about language and culture through pictures, dance, songs and more. Introduce meaningful, targeted words within each of these contexts.

Children clearly need some kind of linguistic input to acquire a language. There have been occasional cases in history where abandoned children have somehow survived in forests, such as Victor, the Wild Boy of Aveyron (subject of a film by Francois Truffaut). The outcome is that the children, when found, are mute. Whatever innate grammatical abilities there are, they are too schematic to generate concrete speech, words, and grammatical constructions on their own.

Children do not, however, need to hear a full-fledged language; as long as they are in a community with other children, and have some source for individual words, they will invent one on their own, often in a single generation. Children who grew up in plantations and slave colonies were often exposed to a crude pidgin that served as the lingua franca in these Babels of laborers. But they grew up to speak genuinely new languages, expressive "creoles" with their own complex grammars (Bickerton, 1984; see also the Chapter by Newport and Gleitman.

**Overall Benefits**

It is undoubtedly that learning additional languages increases critical thinking skills, creativity and flexibility of the mind in young children.

Teaching children words from another language actually helps them appreciate and understand the workings of languages in general, broaden their minds, expose to different cultures.

Most adults never master a foreign language, especially the phonology, giving rise to what we call a "foreign accent." Their development often **fossilizes** into permanent error patterns that no teaching or correction can undo. There are great individual differences, which depend on effort, attitudes, amount of exposure, quality of teaching, and plain talent.

It has already been established that children who learn a language when they are very young have a much better chance of not having a “foreign” accent when speaking another language. Research from a team at the University of Washington, which focuses specifically on childhood speech perception, has noted that as we get older, it is harder to pick up additional languages with native-like pronunciation. Thus, one very compelling reason to start children off with another language at a young age is to give them the gift of a native accent!

Bilingualism can delay the onset of Alzheimer’s symptoms. A Canadian science team has found that those who have spoken two or more languages consistently over many years experienced a delay in the onset of their symptoms by as much as five or six years. They could cope with the disease for longer.

Bilinguals are better at multitasking. In one experiment monolinguals and bilinguals were put into a driving simulator. Through headphones, they were given extra tasks to do — as if they were driving and talking on cellphones. As a result, everybody’s driving got worse. But the bilinguals’ driving didn’t drop as much. Because adding on another task while trying to concentrate on a driving problem, that’s what bilingualism gives you — though I wouldn’t advise doing this.

Young children enjoy learning. They don’t care if an activity will improve their cognitive ability or motor skills. They just want to jump in and have a great time doing it. This same approach is true for children learning a new language. We would never try introducing high school students to a foreign language via children’s nursery rhymes, silly songs and hand puppets while sitting in a circle on the carpet. Yet, for young children, this is actually the best way to go about it because it makes language learning so much fun. It is amazing how quickly children will pick up a new language while having fun!

The wonderful thing about young children is that they will give things a try without necessarily worrying if it is correct or not. This applies to language learning as well. Young children will often jump right in to try out what they have learned without worrying about mistakes. They are eager to see the response they will get from other students and adults when trying out their new words and vocabulary. It is an exciting and empowering experience for children.

Not all children will have the opportunity to be exposed to multiple languages in their childhood. They may not grow up with parents who speak another language at home. They may not have the benefits of attending a bilingual school.

Before children become self- conscious they can try out their newly acquired languages without fear of embarrassment.