

My Mother Tongue is Science

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My Mother was a Mathematician. She was also a fourth generation Israeli born. So I grew up bilingual: My two mother-tongues were Hebrew and Science.

Yes, Science is definitely a language. For some, it is a mother tongue. Others learn it later in life. It has its logic, its rules, much like grammar and syntax, it has its vocabulary, and it even comes in several different dialects. When you speak Science, you can express yourself very precisely, or be tentative and uncertain. You may be able to understand, speak and write Science, not always at the same level. With a rather limited vocabulary, you can already perform simple tasks, and understand what is being said around you. You can never master every little aspect of the language. There is always something new to learn and, as time passes, new expressions are coined, different usages evolve, new dialects emerge.

My mother never taught me Science, and she never taught me Hebrew. You grow up, absorbing your mother tongue "from the air". It is spoken around you, while your process of thinking is developing. You see a four-year-old girl in Tokyo and you are amazed: so young and already speaks Japanese! I have news for you: She may also speak Science. You do not have to be a linguist in order to speak Russian or Italian. You do not have to be a practicing scientist, in order to speak Science.

A century ago, many languages were equally important. There was no great advantage to English over French, German or Spanish. Today, English, spoken with a foreign accent, is the "Lingua Franca" of the world of business, technology and diplomacy. It is likely, although not certain, that the Swedish and Brazilian Ambassadors to China speak English between them, both when they meet in a cocktail party and especially when their wives or husbands exchange e-mails.

A century ago, Science was a language spoken by relatively few people in the world, perhaps fewer than those who spoke Hungarian. Today, Science penetrates every corner of our existence and a certain level of fluency in Science as a language, not as a profession, is becoming indispensable in numerous walks of life and in many activities. It is fair to say that English and Science are the two mandatory languages in the modern, globalized, knowledge-based world.

It is always easier to learn a new language when you are very young. It is almost the only way to learn a language painlessly and to speak without an accent. But hundreds of millions of people learn languages later in life. Their ability is not perfect, their accent leaves a lot to be desired, but they can understand, communicate and operate in an environment, which requires this particular language. The language of Science is no exception. You cannot become a practicing scientist, if you first decide to do it when you are Fifty. But you can certainly learn the language of Science at any age.

The cat chased the mouse all around the yard, and the mouse escaped into a little hole in the wall, too small for the cat to reach. The cat took a few steps back and produced

a rather convincing dog-like barking sound. The mouse figured out that a dog is in the neighborhood, the cat must have been chased away and it is now safe to get out. As soon as he was out, the cat caught the mouse, consumed it, wiped its whiskers with satisfaction and announced: "It is so important to speak many languages".

Living in the age of knowledge and technology, you must decide if you want to be the cat or the mouse. Whatever your profession or occupation is, you must speak Science when you talk to your doctor and when you vote on environmental and economic issues. If you happen to be an attorney dealing with intellectual property, a reception clerk in a hotel, spending the entire day at the computer, an investor in high-tech enterprises, an army officer, a school principal, a top Industrialist or an industrial worker in a modern production line, you must speak, or at least understand, the language of Science.

If you are a politician and you have risen to be a Minister of Industry, Energy, Research, Defense, Communication, Transportation, Health, Education, Environment, Agriculture, to name just a few, much of your time is devoted to issues involving the language of Science. The same applies to your deputies, assistants, parliamentary rivals, their assistants and to the lobbyists trying to influence you. No, you do not have to be a scientist, an engineer or a technician. It is perfectly fine if you deal with all of these matters without a formal scientific background. But you must have a rudimentary ability in the language of Science, or else you will neither comprehend nor be able to decide issues, which come across your desk.

This message is not about scientific problems and discoveries. It is about the language of Science and about our ability to understand it, speak it and learn it. You can learn Spanish by reading good literature, but also by reading newspapers or manuals, by going to the supermarket or by listening to television and radio. You can even learn a language from your children. Science is no different. Your children may already speak it. Listen to them. Every day, your newspaper is full of stories, mostly poorly written, using the language of Science. They involve diseases and cures, food and agriculture, environment, weapons, ethics, patents, energy, telecommunication, new gadgets and on and on. There are many other printed and electronic communications which reach your ears and eyes, all expressed in the language of Science. When you get the results of your blood test, watch a performing magician or wonder why it is so hot today, you are exposed to the language of Science. You may use all of these opportunities, in order to acquire a rudimentary ability in the language.

So here is what we offer you in this message: When you finish reading it, you may have a better awareness of the importance of the language of Science. We, in the professional world of scientific research, have the moral obligation to acquaint you with as many aspects of this language as may be practical, given your age, occupation, desire to learn, and general education in other fields. We try to do so in as many ways as we can.

And, yes, we forgot to tell you. You can also learn a language from jokes and anecdotes. The language of Science is no exception.

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