Connection between language and science

by Juraj Masar

Even though it may seem that they do not have anything common at the first glance, I believe the connection between language and science is in general very tight. I would even dare to say that science can't exist without the language.

Firstly, we have to agree on answer to a simple question: “What is science?”. As Wikipedia, the free internet encyclopedia says, “*Science is, in its broadest sense, any systematic knowledge-base or prescriptive practice that is capable of resulting in a prediction or predictable type of outcome. ... In its more restricted contemporary sense, science is a system of acquiring knowledge based on scientific method, and to the organized body of knowledge gained through such research.”*. Since it might be difficult to understand this definition, I will describe my thoughts on practical example.

I will choose Physics for simple reason – that's my association for the word “science” and, to be honest, it is the part of experimental science which I understand the best. I think that Physics deal with (at least) **two kinds of language**.

The first is “the language of physicists”. Physicists need some terminology, and this terminology usually requires deep understanding. For instance, compare words “apple” and “point mass”. **The fact that learning the meaning and usage of majority of this terminology really requires non-zero amount of understanding is the reason why I consider it as different kind of language.** Another thing I want to encapsulate in this first kind of language involved in Physics is Mathematics – or at least its axioms and symbols. The thing that physicists and mathematicians are sometimes able to understand each other's thoughts without words, only using symbols does not mean that this is not a language. Consider another example, which is pretty similar to the one with “apple” and “point mass”: Euclid's postulates of plane geometry. Basic geometry could not exist without predefined axioms such as “point” or “line”.

The second thing is much easier to explain. It is the classical language (in sentences) which is used to describe ideas, discovers, etc. I believe that **presentation of an idea is equally important as the discovery itself**. You can find out whatever you want, in case you do not share your ideas, it just “does not count”. Science today is matter of collaboration. No one can reinvent everything that has been already invented again – even if he/she wants to; there is just too much information. Scientists have to share their knowledge and outcomes of their research among them. That is the only way how progress can be made. Therefore, since proper presentation (I mean an essay, a book,...) of research can't be done without adequate knowledge of language, science would not exist without language.

To sum up my ideas, I will say that in my opinion language is really important for science – it is its it. I also believe that good scientist has to not only be talented, intelligent and experienced in his field, but they has to be a good writer, too. Maybe that is one of reasons why it is difficult to be a successful scientist.