

Fossil DNA, the Perfect Language, and the Internet

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We all know Snow White and the inevitable seven dwarfs, conceived by the brothers Grimm and immortalized by Walt Disney's drawing pen. Not as well known to the general public is the fact that Jacob, one of the Grimm brothers, was also a distinguished linguist. In 1822, he developed the theory of "Lantverschiebung," or the regular transfer of sounds among the various languages of Indo-European origin.

On the basis of this theory, philologists have been able to "reconstruct," with a process similar to that of a linguistic Jurassic Park, ample segments of the ancient Indo-European language, the ancestral progenitor of almost all of the continent's current languages. By understanding the regular mechanisms by which progressive divergence of various languages has occurred, it has been possible to retrace the path of their evolution in reverse through the millennia. This process is not unlike one in which a television image is projected backwards, showing a thousand fragments of a vase shattered on the ground; instead of continuing to scatter in all directions, the fragments converge toward a single point until, miraculously, the vase reappears perfectly whole again on the screen.

Thanks to this process of reconstructing the linguistic "fossil DNA," today we know many of the original Indo-European words from which the terms that billions of people speak each day are derived.

It has been a significant linguistic study, unquestionably carried out with scientific spirit and intent. Nevertheless, I am tempted to view it as part of a much broader pattern of Western culture, now thousands of years old, which attributes a negative value to linguistic diversity while fantasizing, researching, and doggedly seeking the "perfect language"; the "language of the beginning," the "pre-Babel language."

The concept can be described in the following manner. In the beginning mankind was innocent, uninhibited and contented, and spoke a single language (here we hear echoes of Rousseau's myth of the "noble savage"). Later, man began to speak different languages, which created barriers of incomprehension and hostility from which sprang all of the evils and tragedies which we know so well. If man were able to return to his origins, to the single, perfect language, many of the world's problems would automatically be resolved.

It is the Bible, with its famous story of the Tower of Babel, which begins to introduce this concept. The association of the Tower of Babel with the expulsion from Paradise seems evident. Just as Adam and Eve, motivated by natural human curiosity, wanted to surpass their state of blissful innocence by tasting the fruit of Good and Evil (causing them to be expelled from Paradise), so the Babylonians wanted to construct a tower to the heavens as a symbol of their progress and power. The biblical God, who was rather touchy, took it as a gesture of lese-majesty, and as punishment "condemned" man to speak different languages. The result: the tower's worksite was abandoned and the mortar solidified in the buckets.

Linguistic diversity is therefore viewed as retribution, as the cause and effect of human discord. Consequently, the translator is seen as someone who makes a living by exploiting the evils that such diversity embodies. Such a person is a necessary figure, to be sure, but also a negative, unwelcome one, to be relegated to the shadows.

As the centuries passed, there was never a period in which scholars did not come forward ready to lavish energy and study on the search for the perfect pre-Babel language. Even Dante believed that there must be a universal grammar, of divine origin no less, at the bottom of all languages, which had been lost at the abandoned worksite of the Tower of Babel. But like the good, practical Florentine that he was, he thought it would be wise to drop the idea and write in the vulgar tongue. Then, too, using his *Divine Comedy* as a vehicle to reproach the town fathers who had condemned him to exile, he had two or three little things he wanted to say and wanted his message to be heard by everyone, including the common people.

Much greater commitment had been lavished upon the construction of the perfect language by a contemporary of Dante, the Spanish Franciscan Ramón Llull (Italianized as Raimondo Lullo), with his ambitious project for a universal language called "Ars Magna". Lullo used nine letters for his language, to which corresponded nine divine dignitaries or absolute principles, nine relative principles, nine subjects, nine questions, nine virtues, and nine vices. Then he took his project and went to the Arabs to convert them to the Christian faith and to his perfect language based on combinations of the number nine. The Arabs, who were very gifted in mathematical sciences, did not appreciate his attempts and stoned him to death in 1316.

In the centuries that followed, many other great men were drawn to the subject, including philosophers such as Thomas Moore, René Descartes, and Gottfried Wilhelm Leibniz, but the one who undoubtedly

had the most success was a Polish optician of Hebrew origin, Lejzer Ludovik Zamenhof, the creator of Esperanto.

Despite the fact that Esperanto is studied and known by many in the world, it never became a universal language capable of bringing peace and brotherhood to all peoples as its creator had hoped.

If anything, it is English which, following the wave of American economic and cultural domination over the last 50 years, is becoming a kind of universal linguistic *passe-partout*, aided by modern means of communication which are now present in every home and in every mind. But as was the case with Greek in Homer's world and Latin in the time of the Roman Empire, it is a language imposed for economic, political, and military reasons, to be superimposed on one's "own" language in order to facilitate communication with strangers and foreign powers. Even where Latin became so deeply rooted as to supplant the original language, the process of linguistic differentiation was immediately begun again as soon as the central power, which was the cause and support for the imperial language, began to decline. In fact, Latin's linguistic Diaspora gave rise to French, Italian, Spanish, Portuguese, and Rumanian.

But must the differentiation among languages really be considered a curse upon the human race, an original sin without pardon, a hereditary defect which genetic engineering cannot remedy? Is the translator truly a necessary evil which modern technologies will soon render superfluous by ousting him from the role of ferryman, plying between the shores of understanding, and of exclusive guardian of the narrow opening in the wall of incomprehension?

I don't believe it for a minute. Linguistic diversity is not exclusive to human beings. Ethologists studying animal behavior are well aware that all species of animals endowed with a sufficiently evolved form of vocal communication "speak" different languages, according to the geographical areas in which they are located or the subspecies to which they belong.

It is precisely this consideration that suggests to me the Darwinist significance of language: language understood as a powerful instrument of natural evolution. We do not speak different languages and dialects purely because of an intellectual whim or a congenital defect of our mental configuration. We do so because the natural and social environment that surrounds each of us, every human group whether great or small, is continually changing. It is constantly posing new challenges and new questions, continually putting forward new living or inanimate subjects to classify, identify, and describe, and forever presenting us with new ideas to convey and new experiences to recount.

This entire changing universe which surrounds us must be "translated" into words (we are therefore all translators, in a broad sense). Since the objects to be described are continually changing, our language must be equally flexible and creative, so that the linguistic instrument through which we convey our surroundings to others does not become quickly obsolete and inadequate. It is a kind of adaptation to the environment (not only to the natural world, but to the social, economic, psychological, and political environment as well) comparable to genetic mutation, but occurring a thousand times more quickly.

The capacity to adapt to the environment, both material and non-material, has been the keystone to the success of human evolution. The ability to evolve and modify one's language has been one of the fundamental factors of our extraordinary biological success.

As is always the case in nature, for every benefit there is also a price to pay. If, for example, the penalty for the increase in cranial capacity which enabled humanity to develop a superior intelligence was the human female's complicated labor and a childbirth mortality rate infinitely greater than that of females of all other species of mammals, so the consequences of the extremely rapid adaptation of oral communication and the complex originality of languages and dialects has been a growing difficulty in understanding "others."

Certainly it is frustrating not to understand someone. To be sure, it generates impulses of distrust, hostility, and arrogance in the human spirit. In fact, the ancient Greeks called foreigners "barbarians," a term which derived from mimicking the strange languages which were reduced to an incomprehensible "ba...ba...ba" (the origin of the word). From that point it was a brief step to considering them underdeveloped creatures, subhumans who were not endowed with a level of civilization comparable to theirs. Not only a brief step, but a tragic one.

But if the complex and stately mechanisms of evolution decided that it was worth paying such a high price to have linguistic flexibility and adaptability, it means that in the debit/credit balance sheet of evolutionary accounting the benefits outweighed the disadvantages.

If the cultural tendency to want to see only the negative aspects of linguistic diversity has taken hold over the centuries, and has persisted in pursuing an improbable and chimerical perfect language, it is probably because it is part of human nature to always emphasize the negative side of things rather than the positive, to accentuate differences and overlook similarities, and to view the characteristics of other eras as better in comparison to those of one's own time — like the neighbor's famous grass which is always and irremediably greener.

So that, rather than try to manufacture artificial languages in the alchemist's shop, the formula to exorcize mutual incomprehension should be a higher level of education available to everyone, especially the children of the third world. An education that teaches everyone the basics of one or two foreign languages, so that everyone on the planet can understand one another, at least on a colloquial level. Toward this end, the Internet will be shown to be a fundamental factor in the following decades.

As far as higher levels of communication are concerned (literary works, scientific texts, technical manuals, legal documents, etc.), today and tomorrow, just as it was yesterday, the only suitable answer is to entrust them to the knowing art of the translator.