25 Europe needs terms, less theory

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ABSTRACT

Terminology is about creating terms and doing it right. That is the message of this paper. The paper opens the discussion with summary descriptions of two very different but successful terminology projects oriented to the creation of real solutions for terminology by the actors directly concerned and affected: mycological societies interested in classifying and documenting newly discovered fungi in the sparse woods of the Netherlands and Flanders; and a national society of pathologists that embarked in 1965 for a long mission to set up a new and comprehensive classification system and nomenclature for objects and events of medical importance, eventually available in any desired language.

The paper continues to report about problems our European languages encountered in the decades past, but that it is necessary to maintain those ‘culture’ languages, if only because Europe will be completely out of control if it would lose its multi-lingual and multi-cultural identity.

The final part of the paper is a long plea to do something on the European scale about the problems encountered by our languages and their users, and by all those in need for language and terminology support to solve real problems and provide real solutions.

Η Ευρώπη χρειάζεται όρους, λιγότερη θεωρία

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ΠΕΡΙΛΗΨΗ

Η Ορολογία πραγματεύεται τη δημιουργία όρων και μάλιστα τη σωστή. Αυτό είναι το μήνυμα τούτης της ανακοίνωσης. Η ανακοίνωση ανοίγει τη συζήτηση με περιληπτικές περιγραφές δύο διαφορετικών αλλά επιτυχημένων έργων ορολογίας προσανατολισμένων στη δημιουργία πραγματικών λύσεων ορολογίας από ανθρώπους που ενδιαφέρονται και επηρεάζονται άμεσα: τις επιστημονικές εταιρείες μυκητολογίας που ενδιαφέρονται για την ταξινόμηση και τεκμηρίωση των νεοανακαλυφθέντων μυκήτων στα αραιά δάση της Ολλανδίας και της Φλάνδρας· και μια εθνική εταιρεία παθολόγων που ξεκίνησε, το 1965, μια μακρόχρονη αποστολή για την καθιέρωση ενός νέου και εκτενούς συστήματος ταξινόμησης και ονοματολογίας αντικειμένων και γεγονότων ιατρικής σπουδαιότητας, διαθέσιμου τελικά σε κάθε επιθυμητή γλώσσα.

Η παρούσα ανακοίνωση συνεχίζεται με αναφορά στα προβλήματα που αντιμετώπισαν οι ευρωπαϊκές γλώσσες μας στις περασμένες δεκαετίες και τονίζει ότι είναι ανάγκη να διατηρηθούν αυτές οι γλώσσες του «πολιτισμού» και μόνο για τον λόγο ότι η Ευρώπη θα τεθεί εντελώς εκτός ελέγχου αν χάσει την πολυγλωσσική και πολυπολιτισμική ταυτότητά της.

Το τελευταίο μέρος αποτελεί μια μεγάλη έκκληση να γίνει κάτι σε Ευρωπαϊκή κλίμακα για τα προβλήματα που αντιμετωπίζουν οι γλώσσες μας και οι χρήστες τους, και όλοι εκείνοι που χρειάζονται γλωσσική και ορολογική υποστήριξη ώστε να λυθούν πραγματικά προβλήματα και να δοθούν πραγματικές λύσεις.

1 Five hundred (500) newly found fungi and the related terms added to existing collections

Figure1. The Members of the joint Nomenclature Committee of the Dutch and Flemish Mycological Societies standing behind one of the objects they found in their prize kits: specially designed bath towels. Courtesy: Nieuwe Gracht Producties, Haarlem, the Netherlands, 5 October 2018

Every year, the Dutch Language Foundation awards a person or a group for an outstanding performance, that benefitted the Dutch language and the users of the language. The subjects of the prizes differ greatly, but on this occasion the winning team had made a great effort of a terminological nature. In the 5-year period before 2018, members of the mycological societies and amateurs had discovered 510 new species of fungi (mushrooms and other fungi). These were added to the already existing collection of over 3000 species found earlier in the fields and woods of the Netherlands and Flanders and needed to be systematically classified and described according to the standards for the documentation of these objects. In addition to the descriptions of the nature of each new fungus and pictures of them, an appropriate Dutch name was given to each as well as its scientific Latin name. The joint committee performed brilliantly and finished the job before the deadline. The results of their work are stored in the Dutch library of fungi. The complete classification and documentation, according to the *International Code of Nomenclature for algae, fungi, and plants (ICN),* including the images of the fungi, the Dutch and Latin names and-so-on is

available from a publicly accessible data bank (soortenbank.nl). This project is an almost ideal example of the realisation of what is required to explore, document and disseminate acquired knowledge about a particular aspect of nature as manifested in a particular region. By dedicated specialists covering the chain of tasks leading to the end result, established at the beginning of the project.

Not implemented yet is the embedding in a European or even worldwide fungi knowledge system which would support the sustainable global biodiversity in the first place. As well as the scientific research and understanding of this wide domain of biological species, and the exploitation of fungi for agricultural and pharmaceutical purposes. Later on in this paper the inclusion of fungi terms in a Terminology Infrastructure will be discussed at some length. *Summary discussion.*

- The well-organised project added to our knowledge of a specific domain of living organisms (fungi). The project fits in a long-term effort to discover and document the fungi in a region of Europe, the Netherlands and Flanders.
- The results of the project are well-documented, whereas the documents are compatible with similar documents produced in the past. Thus, the users of the collection can be assured that the document reflect the true content of the collection.
- The naming of the items in the collection ensures that amateurs and professionals (mycologists) can converse about fungi in their language.
- The project is executed by a team of domain (mycology) experts well-equipped and motivated to do this work, who have an excellent knowledge of the field of fungi. They saw their project involvement as an element of their daily professional work.
- The results of the project should be integrated into a possibly hypothetical collection of fungi on the European or possibly even wider scale. They should be embedded in the ‘future’ European terminology infrastructure.

2 Probably the most ambitious terminology initiative ever, the systematised nomenclature of medicine: SNOMED

SNOMED was launched in 1965 as SNOP(athology) by the American College of Pathologists, as an overambitious project, to embrace all terms used in medicine in a complete and logically interconnected set. In 1965 a new much more powerful generation of computers had been launched. This ground-breaking event stirred the imagination of many professionals and individuals about the potential for application in their fields of interest. Definitely also among medical professionals, who started to think about computerised medical records and even such far away application as computer-assisted diagnoses. For

many individuals, the sky was the limit, whereas some went even further. Compare this to the perceived unlimited potential of artificial intelligence today.

There are few other fields that offer so many opportunities for positive human activity and challenges for research, as does the health care field. Treating patients over time implies that a detailed and accurate record is kept of symptoms, social and environmental conditions, technical measurements of physiological conditions, images of internal and external conditions, diagnoses, medical treatments etcetera. The importance of documenting all such facts and opinions is evident, and thus the need for standardised yet flexible specialised languages and terminology to record these data in a comprehensible and compact way. One of the most challenging unique enterprises in terminology, SNOMED, is situated in this domain. Today, SNOMED already comprises 340.000 defined medical terms in English and an equal number in Spanish, whereas partial translations are available in many other languages. Clearly, if SNOMED were available in many more languages, a powerful tool would be available for the exchange of patient data across language barriers, for treatment, education and research.

Summary discussion

- Whether SNOMED will break through in many or all countries, is not clear. But the effort to create and maintain it over the years have already led to a much better understanding of the giant proportions of such term collections and of the efforts required to create them and to keep them up to date.
- This is yet another example of a terminology collection that Is initiated, maintained and actually used by the profession that has the required knowledge and the interest to do this work because of the need for it.
- Maintaining SNOMED globally and over time, requires a dedicated yet widely spread team for the management and a very large number of medical expert collaborators.
- Numbers matter. The size of the data bank with medical terms implies that the efforts and costs to maintain the collection is considerable, as are the costs of duplications to other languages. Quite a few scientific term banks and banks about technical parts – airplanes, large ships etc. – are even larger, containing millions of items!

Society needs medical doctors, construction engineers, judges, teachers, law makers, etcetera in the first place. Medical doctors, engineers and-so-on speak and write specialist languages, and these languages use a specialist vocabularies called terms in People using brains and hands to extend lives, provide water and energy and houses, prepare people to

function in a complex society, and-so-on. Most professionals mentioned are trained in higher education institutions. These institutions have always been involved in teaching as well as research, to ensure that teaching would be at the leading edge of science. Changes in attitudes as well as changed methods of financing have heightened the status of researchers over professionals, who are trained to use their brains to solve real problems or construct solutions for existing needs. This reversal of the status of teaching and research is not in the interest of society and should be redressed.

3 European identity challenged but firmly established by founders

The cold wave of neoliberalism: finance rules the waves, culture disappears

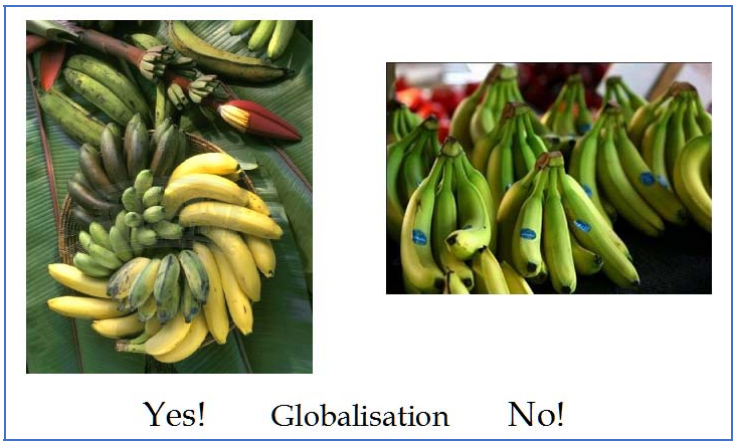

Figure 2. The globalisation of the banana symbolises the impact of the combined forces of neoliberalism and globalisation on the human nutritional – and natural - environment. Large global banana suppliers offering a few varieties, replaced already many local and small suppliers worldwide, offering over a thousand banana varieties. Two suppliers, Chiquita and Dole, are reported to supply 55% of the international banana market. (This image is reused here by the author)

In the last decades of the 20th century, the cold winds of new capitalism – also called neoliberalism – threatened to level off the diverse cultural societies of Europe. And elsewhere. The adagium: maximise financial profit by increasing the volume of products, thus maximise the number of buyers; always keep costs of production, transport, handling and ‘bureaucracy’ low.

Product standardisation and diversity reduction are main mantras of neoliberalism, as are brainwashing of buyers to ‘guide’ their preferences. As this is not a paper about economy, we leave it to the imagination of the reader where all this has led to in our modern societies.

What concerns here is the impact of new capitalism on cultural diversity and in particular on that outstanding and powerful aspect of culture: language.

The quasi disappearance of physical barriers to global communication and transport, due to technological advances, facilitated the trading of goods and even more the trading of services. The barriers remaining are due to cultural differences between the 'national' markets in Europe and other continents. The strongest element of culture in this respect is language. Language differences proved difficult to brainwash away, but the pressure by the global actors remains strong. Increasingly higher education institutions, the flags and flowers of European culture, adopted the neoliberal ideology to compete internationally in research to end up high in international university rankings, rather than to provide excellent education for the citizens of the countries nurturing them. And if strong industrial and trade actors have an interest, certain political orientations do not hesitate to follow them.

European Union: maintaining European language diversity is key to our cultural policy

Since the early 1980s the political elite in and around the European Union increasingly suggested that the Union was composed of independent pieces weakly kept together with too weak external ties and required much stronger internal ties to keep the organisation together for the future. The need of a European identity, 'all Europeans should look and feel alike', at least more than they did, became an issue of concern in some circles. As well as the concept of a European leader, implying that Europeans would be prepared to follow the leader and thereby look alike. There had always been suggestions to copy the monocultural United States of America, the state that was most successful overall after the last World War. The suggestion to drop the many European colours was spread widely among business leaders, some politicians and 'internationalists. Even in institutions as the European Parliament. The idea to drop the European languages as instruction languages in universities, still very popular in some countries, were a spin-off of this idea. But Europe, if it were deprived of its rich cultural heritage and the richness of the languages of their peoples, that Europe wouldn't be Europe any more, and she would certainly not have the strength to extend its rich history into an equally bright future. During half a millennium this continent provided the world with an unprecedented wealth of political, scientific, technological, artistic, social and legal achievements, and freed the world of superstitions of many kinds. Yes, this also was a continent of devastating internal and external aggression, but it has learned from its own wrongdoing and promised to make the world a better place to live in.

The Holy Grail of the European identity, embedded in the first European Treaty

Since 1957, the year the first European Treaty was signed in Rome, the preamble of this and the subsequent Treaties confirmed that cultures and languages served as an internal framework of the Union and would guide its future evolution. Later on, the same concept was phrased over and over again, in similar words. A small selection of such instances:

- (1957) the Union shall respect its rich cultural and linguistic diversity, and shall ensure that Europe's cultural heritage is safeguarded and enhanced;
- (1992) the Union shall take cultural aspects into account in its action under other provisions of the Treaties, in particular in order to respect and to promote the diversity of its cultures;
- (2000) the millennium change; the Union reaffirmed the importance of the divers cultures of the European peoples, by adopting the official motto of the EU: *Unity in Diversity;*
- (2009) the Union shall contribute to the flowering of the cultures of the Member States, while respecting their national and regional diversity and at the same time bringing the common cultural heritage to the fore.

Undoubtedly, the essence of these phrases comes close to the European identity as conceived by the high representatives of the Member States and by the chosen representatives of the citizens of the Union. For all practical purposes, this could be summarised in the motto

Unity in Diversity

In 1996, in an effort to make the official EU texts about culture, language and diversity more concrete, the European Institutions adopted a multiannual initiative to

> *"promote the linguistic diversity of the Community in the information society"*
> *and to create the Multilingual Information Society (MLIS)*

This concept is as relevant today as it was in 1996. Implemented, these goals would substantially increase the trust of European citizens that the EU does take care of the richness of the cultural specificities and interests of the European peoples. At the time, the reactions to these proposals differed between EU member states governments: some proved more reluctant than others, focused as they were on the more tangible economic and technological achievements. But in the end all governments were in favour. The European parliamentarians however were unanimously in favour and acted as the guardians

of the cultural and linguistic diversity: it is not exaggerated to say that there was an atmosphere of enthusiasm among them during the discussions about this issue.

The main practical goal of this initiative is to ensure that finally the users of the internet and the services provided via internet would be available in the languages of the users, or as it was phrased actually, in the languages chosen by the users. The latter formula took into account that some users were multilingual themselves or were working and even living in multilingual environments, or for whatever reason needed to switch from one to another linguistic environment.

The Institutions at the time (1996) were aware that this goal could only be achieved if certain linguistic and technological developments would lead to positive results, at least to 'acceptable' results as perceived by the human users. This applied for example to the need for the digital availability of full sets of reliable linguistic data on the internet for all the languages of concern to the users, ultimately worldwide. And to the availability of technological tools that would be able to transfer documents in one language into the user-selected language in real time. Speculations about real-time transfer between spoken languages were considered somewhat too speculative at the time, but a quarter of a century later this would have been an element of the proposal.

Support for European languages by developing the language infrastructure

The first paragraph of this paper mentioned two very different illustrations of some observations in this last paragraph. Both illustrations are about real and sizable terminological development actions requiring human creative capabilities and imagination, as well as deep knowledge of the fields for which the terms need to be defined. But the fields of mycology and medicine differ in many ways. Whereas in the first case (mycology) the objective was to add new fungi and their associated terms to and existing globally accepted classification. In the second case the founders of SNOMED decided to create a new and overall classification of objects relevant for medicine in which to replace and redefine basically known objects and objects to be defined in the future. The two may be graphically presented as attaching newly found and defined leaves on the branches of an existing tree; respectively, constructing a new tree on whose branches numerous existing leaves are attached that may need to be redefined to fit their place in the tree.

In both cases the results of the projects are part of the virtual European Terminology Infrastructure, launched as part of the MLIS initiative in 1996. Virtual, because the Terminology Infrastructure is not implemented (yet). Neither is the Language Infrastructure, which largely has the same characteristics, but applied to the even wider scope of

languages including sub-languages and specialised domains such terminology. The general characteristics of an infrastructure are:

- all the known elements of a language or linguistic domain are included and updated;
- all the data included are systematically documented and stored in connected data banks;
- all the data banks for a language are connected to the data banks for other languages;
- the infrastructure is accessible for all the potential users of linguistic data.

The Language Infrastructure is essentially a huge digital dictionary, enriched with 'intelligent tools' facilitating the handling of the data.

Terms are urgently needed, the European Terminology Infrastructure is very incomplete

Many people, mainly professionals, work hard defining and documenting terms and making the results of their work available. Often, these professionals do not work according to more widely accepted schemes or procedures, nor in the framework of professional societies. As a consequence, much of the results of the hard work risks to get lost sooner or later, whereas huge gaps in the availability of European Terminology Infrastructure remain.

As a matter of fact, in the 21st century many European scientists are not capable (any more) to write scientific papers about their own research subjects. The arguments are double: up-to-date terminology in their language does not exist, and even if the terms would exist, they would not be known because since the year 2000 the great majority of our scientists always write and speak about their research in English. The scope of this statement can be widened dramatically: it is not possible (any more) to produce handbooks or textbooks for an ever- increasing number of scientific and technological disciplines, in the majority of European languages. As a consequence, students are not able to study these disciplines in their language and they will continue to behave as their masters did. The next generations will have no choice either. They will not doubt any more: English has become the Latin of the Middle Ages. Good for the church, bad for free science. This phenomenon characterises the academic community these days, but that is not the only group having chosen the wrong path. Management and technical staff in companies, dealing with such rapidly evolving technologies such as information technology or space and energy technology behave similarly.

As a matter of fact, no terminology expert can tell by approximation what the size of a 'complete' Terminology Infrastructure for terms might be. Even more of a disgrace: there are no such experts, able to estimate the number of existing terms for a particular discipline, and

even less the terms needed but not existing. Quite astonishing: terminology professors and other experts know about definitions of a terminologist as they understand it, or of training such professionals, or structuring and managing terms in a data bank or of translating terms. But only exceptionally do they have an insider's view and understand disciplines and professions requiring specific terms and specialised languages for their daily work. This issue should be raised with priority: who out there in science, industry, business and society in general are dealing with terminology; what are their needs and to what extent do solutions comply with their needs?

It is therefore impossible to even estimate how far we are away from the ultimate goal of an up-to-date Terminology Infrastructure in Europe. In getting to grips with this problem of huge importance and proportions, and to comply with the need for adequate terms in large sectors of our European societies, a number of measures may be envisaged and are recommended:

- The European Commission should launch an investigation to arrive at a map of the terminology needs in all member states and in a large but manageable number well-selected subject areas in each of them; this map should be the basis for discussion about the real needs in the broad societal terminology scene and create the societal support for a major policy initiative;
- Organise a European conference jointly with the EU member states, with the participation of many European actors concerned, to discuss the map-of-terminology-needs to create a wide consensus that this is the basis for a policy initiative to create concrete solutions for the problems observed;
- The European Commission should subsequently prepare a long term Europe-wide all-sector terminology initiative on the basis of what has been found and discussed in the study and the conference mentioned above; it is likely that the financial envelope for such an initiative of long duration is in the order of several billion euros.

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