

article:1789**A Cognitive Study of a Specific Genre in Engineering Discourse**

Starting from the fact that engineering language has not received much attention from the linguistic, and more strictly, from the semantic point of view so far, we believed that this was a neglected area that deserves a good deal of more academic interest. On the other hand, we are now situated at the crossroads of an innovative approach to teaching and learning to adapt to the European Convergence process for Higher Education that will culminate on the European Space for Higher Education (ESHE) and students will be the main protagonists to undergo this experience. In order to cope with this challenge, university educators have the responsibility to facilitate the way towards a new situation where the application of appropriate learning strategies will be necessary.

This paper represents the initial preparatory study of a project work comprising a large corpus. Firstly, we were concerned in pinpointing the more appropriate parameters that would allow us to anchor our research conveniently. The first element to integrate was an interdisciplinary focus, in the sense that civil engineering written discourse was to be examined by applying the principles of one of the most important current linguistic paradigms: the cognitive one and within this, more particularly, metaphor use. Likewise, the main aim to cover was to analyse civil engineering way of communicating as expressed in journal articles.

Therefore, another element considered was genre studies, which by no means is restricted to the linguistic domain, participating instead of ethnographic, social, and cultural aspects as well (Swales 1990). It is through the inclusion of genre in our study that we could approximate the initial piloting text corpus, that we had previously selected, to making our study suitable for learning purposes, e.g. engineering undergraduates are shown authentic and articulated pieces of discourse written by engineers: namely, we are referring to journal research articles published in English and Spanish engineering literature. Thus, students are shown that one single concept may be expressed or a document may be developed using different words depending on the linguistic genre to which it belongs (scientific article, newspaper article, etc.), its register and the associated vocabulary.

This brings us to another part of our analysis, the cross-linguistic study between English and Spanish in the use of metaphor in engineering journal articles, which was thought relevant for two reasons. The first one was to make students aware of the fact that metaphor use is pervasive in both languages, since it fulfils a constituent function in scientific and technical language (Roldán et al. 2001). The second was that despite every language encompasses its own way of employing metaphors, i.e. it is not possible to shift directly from one into another without using the appropriate cultural, conceptual and linguistic filters, and nevertheless they can be practiced and learnt. The study shows, for example that there are resemblances in the conceptual mappings, but, at the same time, there are various ways of manifesting this, e.g. in Spanish the use of metonymy and synecdoche based on pictorial contiguity associations is more recurrent, due to the prevalence of image metaphors, while in English linguistic

realizations of the general conceptual mappings shown are the ones that present a higher frequency.

As already mentioned, this paper tries to lay the foundations for a major future project, which will point out the use of figurative language, mainly metaphor and metonymic expressions in a large civil engineering linguistic corpus. This means the adoption of a quantitative analysis by the application of statistical data and adequate computer programs, such as WordSmith or similar ones. Furthermore, it will also require the design of strategies to make its main findings and conclusions “learnable” for undergraduate students and at the same time “usable” for the rest of the engineering community. Building this corpus will probably entail the expansion of selection criteria to other engineering genres. A major aspect not to be forgotten is the accessibility of the work to the academic and professional community, and therefore its electronic use will be a major factor contemplated.

References (used in this summary and commentaries)

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