

Scientific Report Short Term Scientific Mission COST ISO703 – Ascensión Pagán- May 17th until the 24th of May 2010

Purpose of the visit

The aim of my PhD project is to study the temporal agreement processing and the nature of the on-line management of pregraphic supervision in writing sentences in French and Spanish languages. The first study has been carried out in French to examine the role of phonological marking in written sentence production by adults.

During the Short Term Scientific Mission it was scheduled to achieve two main goals. The first one was to get the design of the Spanish experiment related to the role of phonological marking in subject-verb agreement in written sentences. The second aim was to test if it was possible to reproduce the same advices (eye and pen software, eyelink 2...) in both labs to be able to collaborate.

Description of the work carried out during the STSM

During my Short Term Scientific Mission the following things have been carried out:

(i) Discussions about the possibilities to replicate the French experiment (based on Largy and Fayol, 2001) in Spanish. Finally, it is not possible because Spanish is a language very regular and the plural is always marked. So, we cannot use the same design in the Spanish version.

(ii) An extensive literature review about the Spanish studies in subject-verb agreement was discussed to get more insight in possible ways to design the following experiment in my PhD (Vigliocco, Butterworth and Garret, 1996; Franck, Vigliocco, Antón-Mendéz, Collina, Frauenfelder, 2008).

(iii) Search on the Spanish material taking into account the Spanish lexical corpus in which are calculated the frequency of each word according to the Real Academia de la Lengua Española (an official institution that manages the rules of acceptance of Spanish Language).

(iv) Test the possibilities to reproduce the same advices at University of Murcia that we have at University of Poitiers. In this case, University of Murcia has a big room in which the Eyelink 2 is installed. It is big enough to add another table with the digital tablet and the Eye and Pen software. It is well illuminated by a small window and it is easily to hide the light to be able to measure the eye movements correctly.

Description of the main results

During this STSM the following results have been obtained:

- (i) We concluded that it was difficult to replicate the French experiment in Spain because Spanish language marks always the plural with a –s at the

end of the nouns, and the all the verbs are consistent (it does not exist the phonological irregularity between the 3rd person of singular and plural as in French and as manipulated on the replication of Largy & Fayol, 2001 experiment).

- (ii) One possibility is, in any case, to adapt the French material to Spanish and test if the subject-verb agreement procedure in Spanish is similar to the agreement processing in France, but only in the case of irregular verbs (that they are marked phonologically as in Spanish). In this case, we should compare the pattern of results (in terms of attraction errors and temporal variables) in both languages, based on similar material. The comparison of the two languages could show the potential influence of the stability of the inflexion at phonological level (Spanish) and a potential instability (in French, the phonological mark is more difficult to manage in irregular verb). It could show us more evidence on the pregraphic control dynamics and the condition of its functioning, comparing languages.
- (iii) As another possibility, if we want to manipulate phonology in a different way that we did in the previous experiment in French (instead of verb's phonology), we can focus on plural marks in the nouns of the sentences. We can show evidence of the influence of phonology in Spanish taking into account different types of communities: we can compare Spanish from Albacete (that speaks standard Spanish) and Spanish from Murcia (that shows some interesting dialectal variations of Spanish that could be used to test some of our hypothesis). These two groups of people mark the plurality in a different way.
- (iv) If we do not consider the phonology cues in Spanish, so, we should consider other variables as syntactic distance or semantic that could influence in the subject-verb agreement procedure.
- (v) We also searched the material to start the design of the Spanish experiment in relation to subject-verb agreement in written sentences.
- (vi) Finally, the laboratory in Murcia is adaptable perfectly to be able to reproduce the same Eye and Pen advices as in Poitiers. So, we are interested in continuing the collaboration between both.

Future collaboration with host institution

This short term scientific mission has been very productive. The opportunity to work together with Dr. Javier Marin from the University of Murcia has helped me to know how we can manipulate the phonology in Spanish from other perspective. Furthermore, this Short Term Scientific Mission also gave me the opportunity to develop my training to carry out my PhD project. And finally, future collaborations will, therefore, also be regarded as valuable contributions for my training as a PhD student.

Projected publications/ articles resulting or to result from STSM

Dr. Marin has proposed me to collaborate in his project about the role of phonology in Spanish, specifically between a Spanish dialect (Murcia) and the standard Spanish (Albacete) in which the plural mark is different between both. At the same time, we have started to design the Spanish experiment for my PhD project. So, we have some future papers that we should development in the next visit to Murcia.

Confirmation by the host institute of the successful execution of the mission

I confirm that the mission was extremely productive. It lets us to develop detailed experiments for future collaborations (reflected in joint papers) between the two research teams. I can be contacted at jms@um.es if further details are required.

Other comments (if any)