

The cognitive costs and benefits of encoding and interpreting colour adjectives

Euro-XPrag Collaborative Research Project

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SCIENTIFIC REPORT FOR THE FIRST PROJECT MEETING

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The purpose of the first meeting was twofold:

First, we had planned to complete the set of production experiments that PRF had carried out in spring 2010 (Note that the results of the first production experiments were presented at the XPrag Workshop in Leuven last June).

Second, we had planned to design, set up and pilot an eye-tracking experiment that would investigate the comprehension of colour adjectives.

Both of these objectives were accomplished during PRF's visit to Princeton in November 2010. In fact, given the good response that we had from the participants in our student pool, we were able to not only pilot but also run the eye-tracking experiment that investigated the comprehension of colour adjectives.

The data from both the production and comprehension experiments still need to be analyzed and so it is early to comment on the results. However, during testing, I observed that when participants in the production experiments were encouraged to perform the task as quickly as possible, they rarely mentioned the colour of geometrical figures but continued to use colour redundantly when the materials included clothes. It seems therefore clear that colour is used differently depending on the type of entity that it refers to.

Also, I was able to observe during testing that when participants performed a non-communicative version of the comprehension task, they tended to disregard whether colour was used contrastively or redundantly. However, when a small manipulation was introduced in the task to make it more communicative, participants' eye-movements revealed that they were taking into account whether colour was used informatively or not.

In view of these preliminary results, we have agreed to meet again in Princeton in spring 2011 in order to run one more production study using pictures of fruits as materials. We hypothesize that because colour is such a central feature in our concepts of fruits, fruits won't elicit redundant uses of colour adjectives, unlike clothes. That is, given our world knowledge, referring to a banana as 'a yellow banana' would be perceived as more redundant than referring to a t-shirt as 'a blue t-shirt', even if colour wasn't informative in either case.

In our next meeting, we would also like to run one more eye-tracking study looking at the comprehension of colour adjectives by native speakers of English and Spanish. We hypothesize that the comprehension of noun phrases including a colour adjective might elicit different patterns of eye-movements in Spanish and English because of differences in word order (e.g. 'the red house' vs. 'la casa roja').