

# Blue banana – the linguistic phenomenon and not the discontinuous corridor of urbanisation in Western Europe

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## Abstract

What we want to find out: Are the typicality values fix in our semantic knowledge, or are they constantly updated by our world knowledge? Therefore, does an exposure of a new frequency of an objects color influence how we produce overinformative expressions?

If typicality values are taken from world knowledge, we have 0 and 1 valued semantics that are then multiplied with knowledge from the real world. If the typicality is in the semantics, we already have truth conditional values between 0 and 1. (Important when thinking about how to construct the model.)

**Keywords:** keywords

## Experiment: color reference game

### Methods

**Participants and materials** We recruited 60 self-reported native speakers of English over Mechanical Turk. The experiment was a single-player reference game with a varying initial exposure to differently colored fruit types .

The stimuli were selected from 12 items: two different colors for each out of six fruit types. One of the two was a color that is typically associated with the fruit, and the other one a highly or at least mid-atypical color, e.g., a red and a blue apple, or a green and an orange pear.

Each presented context consisted of three images, one being the target (the item that had to be referred to), and two being distractors. For each fruit type, there were four context conditions. First, we have a typically colored target and two distractor items that are not from the same fruit type as the target (Fig. 2a). For an unambiguous identification of the required fruit item, naming the color is unnecessary, and therefore, if mentioned, used overinformatively. The second condition varies in the sense that one of the distractors is of the same fruit type as the target (Fig. 2b). In this case, naming the color in the utterance is necessary for an unambiguous identification of the target object, and it's use therefore informative. The last two conditions are en pendant to the previous two, and only differ in the target object being of an atypical color (Fig. 2c, Fig. 2d). If the fruit type or color is not further specified by the condition, the distractors are selected randomly from the item pool.

Therefore, participants are presented with 24 trials, four for each of the six fruit types. The trial order is randomized.

**Procedure** The experiment was embedded into a story about an alien on his planet to make people open their minds for the existence of atypically colored fruits.

The first block in the experiment was the exposure phase in

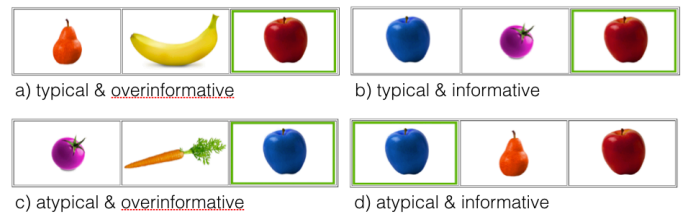


Figure 1: The four context conditions, exemplified by the *apple* domain. The target is outlined in green; the types of distractors differ with each condition (see text).

which each participant was familiarized with a certain distribution of colored fruits. The distributions were the following: Two fruit types were presented only in their typical color, two fruit types only in their atypical color, and the last two 50% in one and 50% in the other. The exposure was done by presenting 10 instances of each fruit type and have the participants sort them into baskets.

In the production, participants were told to communicate certain items to the alien (Fig. 2), the green marked one always being the needed ingredient for a recipe. It was made clear beforehand that the alien is not able to understand location vocabulary such as "middle" to enforce the usage of object descriptions. Having the participant "communicating" the utterance to an alien instead of a human being enables us to exclude side effects that might come with trying to be cooperative and assuming a common world knowledge of fruit colors.

### Annotation

### Typicality norms

## Results

### Modeling level of reference

### Discussion and conclusion

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