HANDOUT – Meeting 03-09-2015

1. **MAXIMALITY and PHANTOM READINGS – Priming experiment**

Goal (If I understood OK): Prime phantom readings by presenting sentences where non-maximal readings (non-upper-bounded) are completely available.

How?

Prime trials (Trial N): Force non-upper bounded readings for certain collective predicates (i.e., “pure cardinality predicates”, states and achievements?).

Ex. Less than 10 dots form a circle around a square.

*A target image for this sentence would be one where besides a group of less than 10 dots forming a circle around a square, there is another group of more than 10 dots forming a circle around another square.*

Target trials (Trial N+1): Free choice between non-upper bounded (phantom) and maximal readings with distributive predicates (or collective predicates with distributive sub-entailments/downward inferences, such as “gather”).

Ex. Less than 10 dots are red.

*While in one of the pictures the number of red dots is smaller than 10, in the other one more than 10 dots are red (making true the non-maximal phantom reading).*

Questions/Doubts:

- Using different modified numerals (e.g., between N and M)?

- Doubt about definite plurals vs. modified/bare numerals: Inversion in the effect regarding maximality? (“The girls came” vs. “Between 2 and 5 girls came”)

- To which extent would be possible to focus on the relation between predicates that DOESN’T allow upper-bounded readings? Can the distributive component of certain collective predicates make them comparable to distributive predicates in priming or in parsing? (I need to think a little bit more on this, see Brisson)

1. Macintosh HD:Users:moramaldonado:Dropbox:Stage:M2:MT Online Experiment:Plots_Plurals:MT_general_data:Cumulative_all subjects.pdfMacintosh HD:Users:moramaldonado:Dropbox:Stage:M2:MT Online Experiment:Plots_Plurals:MT_general_data:Dist_all subjects.pdf**MOUSE-TRACKING and PLURALS**

Results: Maximal ratio suggests a difference between cumulative and distributive readings.

Potential confounds/problems:

* There are several trials with high deviation towards the alternative in both conditions (against: deviation strictly associated with distributive readings).

The difference found could mean only that dist. are noisier than cum. (probably because they are more difficult; also because they are less frequent- This is also a worry). >> We are not calculating whether maxRatio is significantly different than zero, but comparing between the two, and there is no reason to think that both should be deviated and one of them more.

- (Connected with above) Another concern is what does exactly “deviation” mean. Even if distributives had a higher deviation towards the alternative, this could be related with the difficulty and not with two-step derivation.

Some solutions? Follow-up?

1. Modeling: Can the degree of noise explain by itself the difference between conditions?
2. Speed-Accuracy trade-off: Dissociate deriving faster one reading than other from two-step derivation. (I’ve explored this a little bit when Emmanuel proposed it)
3. Priming/Images instead of options (partial replication of our priming experiment): A possibility to increase the number of distributive readings and be sure that the target reading underlies that particular trial. >> Also to explore what is the real influence of images.
4. **MOUSE-TRACKING and SCOPE**

Recap: Our results in English went in the opposite direction from what it was found in the literature (however, the task wasn’t exactly the same one).

* Can we explain this effect as a consequence only of the images? If yes, how we understand our pilots.

To-explore (Ewan- Alexis Wellwood, influence of images in semantic tasks)

* Exploit results in French. Using “tous” (all), we got the trend in pilots. Is it worthily to do a whole experiment in French? Maybe it’s interesting to explore the cross-linguistic differences + the potential differences between quantifiers and their scope properties.

1. **PRIMING SCOPAL REPRESENTATIONS between QUANTIFIERS**

March 2015: Pilot experiment (N=10) following the priming experiment by Chemla & Bott but testing the priming effect between quantifiers (i.e., 2-most, a-every and every-a). We also included different image types. In the results we observed a tendency of priming between representations for certain directions and we decided to do an experiment including only one type of image[[1]](#footnote-1).

I programmed that experiment in that moment[[2]](#footnote-2), including also fillers, but then we didn’t run it because we were with too many things (I think).

Note: Complement of MT?

Other ideas for the future (not very thought, only if there is time):

1. **Acquisition: Cumulativity, Distributivity and Collectivity**

Syrett and Musolino (2013): Distributive vs. Collective (In terms of preference, they don’t behave like adults). What about cumulativity? Why it could go in the opposite direction? How children deal with non-maximality issues?

1. **Preference by cumulative/distributive readings under negation (English vs Spanish)**

Context: There is a party and everyone is supposed to bring something to drink. Paul, Ann, Mary and John come.

Ex. (SP) Nadie trajo dos cervezas // (EN) No one brought two beers.

Different situations where the sentences would be true:

1. (Distributive TRUE and Cumulative TRUE) Ann brought one beer, and the others brought nothing.
2. (Distributive TRUE and Cumulative FALSE) Ann brought one beer, Mary brought one beer and John and Paul brought nothing.

Even though dissociating the readings is difficult, in Spanish the straightforward interpretation is (b) while in English apparently is (a) and (b) is difficult to get.

1. Exploring contextual and pragmatic influences in both priming and preference effects between distributive, cumulative and collective readings. For example, using big numbers can strengthen a cumulative interpretation (counting strategy for Distributive).

1. Interestingly, when I was looking again at the results of this pilot experiment, I can see in primes a “trend” as the one that we found in our MT experiment; i.e., Inverse > Surface [↑](#footnote-ref-1)
2. 192 trials, 144 experimental trials (72 primes+72 targets) and 48 fillers with sentences such as "There is a star in the middle" and "There is a square at the bottom" that reverse the responses expected for targets. [↑](#footnote-ref-2)