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Authors

Dubois, Deaniele
Cance, Caroline

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Linguistic Resources and “Ontologies” across Sense Modalities A Comparison between Color, Odor, and Noise and Sound.

Dubois Danièle (daniele.dubois@inalf.cnrs.fr)
CNRS/LCPE, 44 rue de l'Amiral Mouchez, F-75014 Paris

&

Cance Caroline (caroline.cance@ivry.cnrs.fr)
Université de Paris 3 & LCPE, 44 rue de l'Amiral Mouchez, F-75014 Paris

After exploring categorization of color and other visual objects (Dubois, 1991; 1997), we have been recently investigating cognitive categories within other senses, such as olfaction and audition (Dubois, 1997b). We present here contrasted results concerning psychological representations of colors, odors, noises and sounds induced from their linguistic expression in (French) language.

Quantitative evaluations of occurrences, their morphological, syntactic and semantic properties were computed on a corpus of 108 definitions produced by native speakers, according to previous analyses theoretically based in Dubois (2000; Dubois & Grinevald, 1999). Only partial results and conclusions will be reported here.

Table 1: Number of nominal forms: Number of occurrences and number of single occurrences (Hapax) in the 4 corpora:

| | forms | Occ. | Hapax |
|-------|-------|------|-------|
| odor | 78 | 158 | 54 |
| color | 67 | 117 | 48 |
| sound | 20 | 32 | 14 |
| noise | 14 | 24 | 10 |

Among other indicators such as the number of verbs, relative clauses, adjectival forms (simple or deverbal ('pleasant') or denominal ('noisy') constructions), the nominal forms reveal that French linguistic resources vary across sense modalities : acoustic representations show less productivity and more agreement between subjects than colors and than odors.

Table 2: Linguistic marks of “objectivity” and personal involvement (Percentage of subjects producing the word “something” and personal pronouns in their definitions)

| | “something” | personal pronouns |
|-------|-------------|-------------------|
| odor | 24,3 | 43,9 |
| sound | 25,9 | 35,2 |
| noise | 20,4 | 33,3 |
| color | 14,8 | 21,4 |

The lack of commonly shared naming for odors and acoustic phenomena correlates with the uncertainty of their definitions, stated as “something” that affects the subject, as reflected in the greater personal involvement for odor than for sound and noise, and lesser for color definitions.

Conclusion

Colors as visual objects seem to be processed as stimuli “standing out there”, whereas odors are more likely to be structured as **effects** of the world on the subject, therefore less autonomous from the experiential context. Acoustics phenomena can be represented at different degrees of “subjectivity” (or objectivity), contrasting noises that are more subjective than sounds, these latter referring to a more expert, objective, technical and scientific knowledge.

If we always perceive “something”, through the diversity of senses, language diversely objectivizes and “stabilizes” our cognitive representations of the world into a large variety of linguistic forms. These forms may constrain the “ontology” given to the entities and lead to different distances between the “subject” and the “objects” of the world, from complex phrasing expressing the effects of the world on the subject, to simple “basic” names, which suggest the idea that things are “crying out to be named”.

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