

Towards a cross-linguistic study of meaning alternation

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INTRODUCTION

Meaning alternation

We investigate the regularity of two types of meaning alternation: polysemy (1-2-3) and lexical facets (4):

METAPHORIC POLYSEMY

- (1) a. The cat eats the mouse. [ANIMAL]
b. I bought a mouse for my computer. [COMPUTER ACCESSORY]

METONYMIC POLYSEMY

Action/result type

- (2) a. John died during the building of his house.
b. This building looks nice.

Material/product type

- (3) a. Glass was shattered everywhere.
b. I cleaned my glass.

LEXICAL FACETS

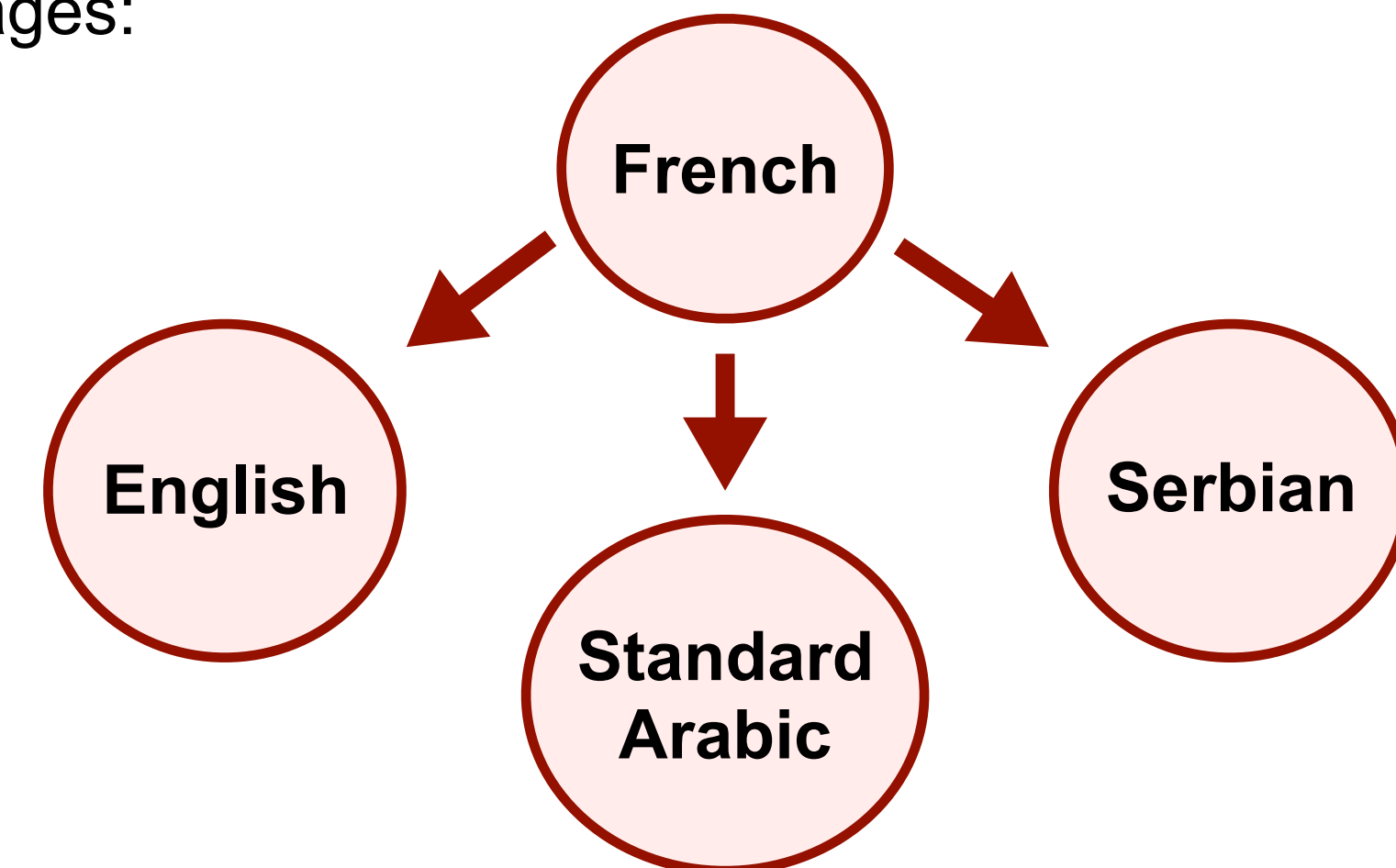
- (4) a. This book is very interesting. [TEXT]
b. This book is red. [TOME]

Metaphor (1) and metonymy (2-3) are two main sources of polysemy. Lexical facets (4) are observed when the alternative meanings of an ambiguous word “appear to behave independently in some contexts, but jointly in others” (Cruse 2004: 74).

Hypothesis

The alternation in the case of lexical facets should be highly systematic from one language to another, whereas the cases of polysemy should be more prone to arbitrariness through cultures (see Stosic & Fagard 2012). If this is the case, the creative power of metaphor and metonymy should be much more important than that of lexical facets.

To test this hypothesis, we used French as the source language to which we compared three other languages:



1. OBJECTIVES

We investigate whether or not there is a mutual dependence between a type of sense variation and the ontological nature of referents, as well as the possible implications of this for human cognition (Paradis 2004).

We use a systematic cross-linguistic approach of sense alternation in order to reveal:

- the way cultural differences are actualised in metaphoric and metonymic expressions (Langacker 1997 : 241)
- the very nature of these two crucial mechanisms of polysemy as opposed to that of lexical facets

2. METHODOLOGY

The experimental approach is based on a set of 32 sentences in French with metaphoric, metonymic, lexical facets expressions, and 8 sentences for control and distraction. These are to be translated by native speakers of either English, Standard Arabic or Serbian.

All 40 sentences were specifically created for this study in order to avoid any context ambiguity, which is highly probable to occur in parallel corpora approaches.

16 words under study

Metaphor	Metonymy		Facets
	A/R type	M/P type	
<i>montagne</i> 'mountain'	<i>traduction</i> 'translation'	<i>carton</i> 'cardboard'	<i>livre</i> 'book'
<i>reine</i> 'queen'	<i>construction</i> 'construction'	<i>cuivre</i> 'copper'	<i>roman</i> 'novel'
<i>feu</i> 'fire'	<i>maquillage</i> 'make-up'	<i>verre</i> 'glass'	<i>tableau</i> 'painting'
<i>glace</i> 'ice'	<i>rédaction</i> 'writing'	<i>papier</i> 'paper'	<i>lettre</i> 'letter'

Each polysemic word is featured in two sentences:

- one highlighting its primary meaning
- the other highlighting its derived meaning

Facets are also featured in two sentences, each pointing out to either the content facet, or the material facet.

The collection of data takes place in a controlled setting. Each participant completes a translation survey during a one-to-one meeting with the researcher. This protocol is designed to be completed by 30 participants for each language. For this pilot study we collected a first set of data with 10 participants for each language.

3. RESULTS

The collected data are statistically processed in order to test cross-linguistic differences (if any) of sense realisation.

Firstly, we extracted the translations produced by the participants for each word under study in the 32 sentences. This allowed us to test the variation of the different meaning alternations with a (two-way) analysis of variance.

Example of variation in English

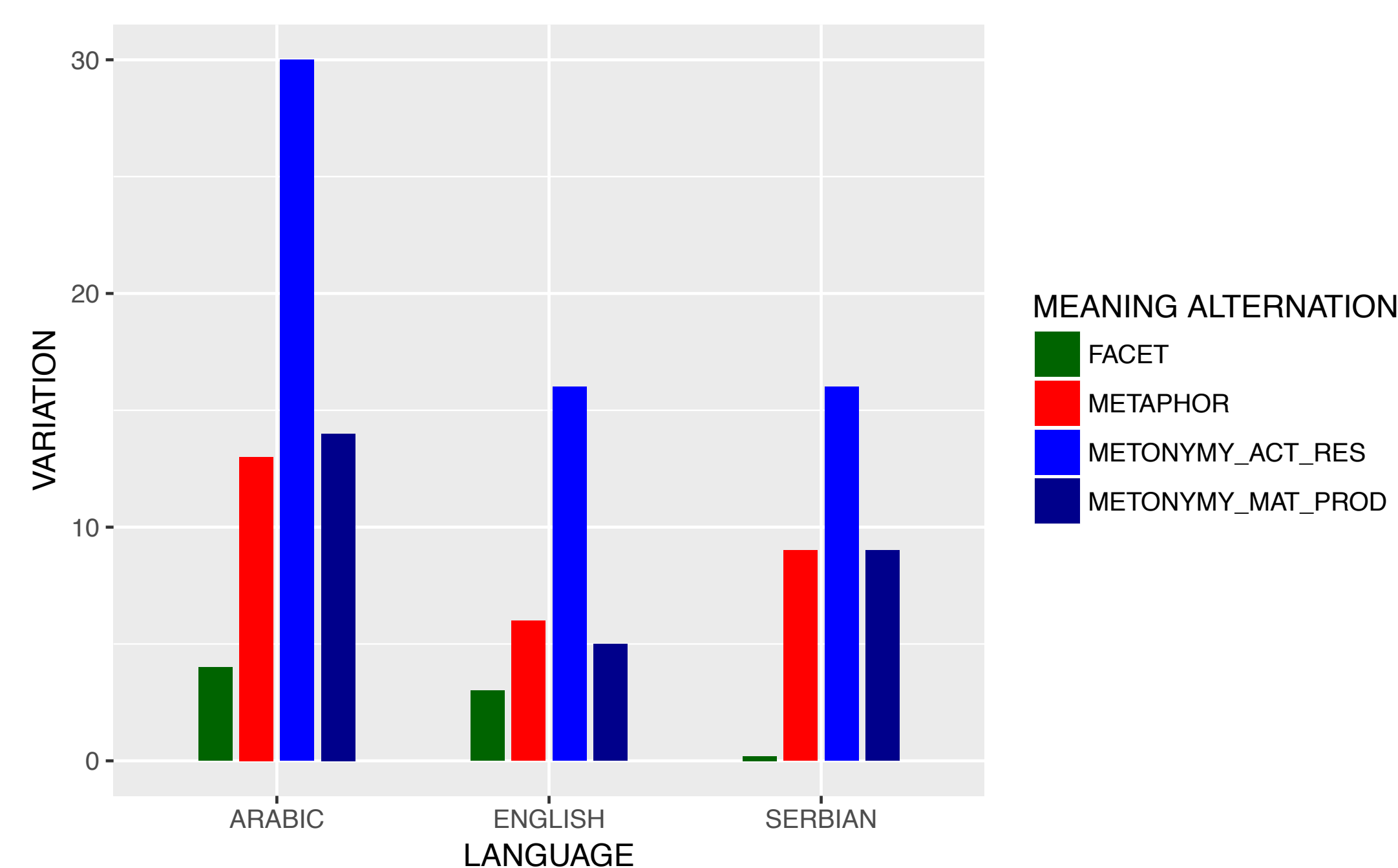
French word	Language	Meaning alternation	Translation	Frequency
<i>glace</i>	English	metaphor	<i>ice</i>	9
<i>glace</i>	English	metaphor	<i>to freeze</i>	1
<i>glace</i>	English	metaphor	<i>mirror</i>	10

Example of regularity in English

French word	Language	Meaning alternation	Translation	Frequency
<i>lettre</i>	English	facets	<i>letter</i>	10
<i>lettre</i>	English	facets	<i>letter</i>	10

For this first analysis, we tested the global variation as shown in the graph below but we did not take into account the frequencies of each translation.

We can see that **facets** show the lowest variation across the three languages compared to the other conditions. We also notice that Serbian displays the strongest stability for facets as all participants used a single word to translate both facets of each word.



Overall, **metaphors** show more variation than facets, and less than metonymy across languages. As for their cross-linguistic actualisation, metaphors display different degrees of variation. For example, we notice a greater variation of metaphors in Arabic than in English.

Metonymy, on the other hand, displays the highest variation between meaning alternations under study. Moreover, our results stress the need for separating the different types of metonymy in cross-linguistic studies as the variation in the case of the A/R type is clearly much stronger than in the case of the M/P type.

CONCLUSION

Those first results are in line with our hypothesis and show that **facets are more systematic** across languages than polysemy. They clearly suggest a greater creative power of metaphor and metonymy through languages and cultures.

In order to further support our hypothesis, we need to collect more data for the languages currently under study. Moreover, this protocol will be expanded to other languages. These two ways of continuing our research will allow us both to conduct a finer-grained qualitative cross-linguistic study, and to provide more precise statistical analysis of data by taking into account the frequencies of each translation.

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