



A contrastive study of colour terms in French and German causal constructions

Sabine De Knop

deknop@fusl.ac.be



1. Introduction

Cognitive Linguistics postulates
link between language and cognition

(Dirven and Ruiz de Mendoza Ibanez 2010)

- Need to analyze language **in relation with speakers** and **cognitive processes** when using language
- Pertains to **conceptualization of colour terms**
- Interest of linguists and psycholinguists:
See long reference list in Caivania and Becerra (2007)



- General studies: Mollard-Desfour (1998), (2000), (2002), Pastoureau (1992), (2002), Plümacher/Holz (2007), Van Leeuwen (2010)
- Comparative studies of colour expressions in different languages: Adams/Osgood (1973), Bochnakowa (1990), Glanemann (2003), and Williams et al. (1970)
- Universality vs. Linguistic relativity hypothesis: Berlin/Kay (1969), Glanemann (2003), Lucy (1992) and (1997), Osgood et al. (1975), Roberson et al. (2005), and Rosch (1972)



Universality vs relativity hypothesis:

Berlin/Kay (1969): 11 universal basic colour categories in different speech communities

Wierzbicka (1990): contrastive study of colour terms in English, Russian, Polish and Hungarian

- rejects the universality principle;
- Berlin/Kay fail to investigate 'meaning' and 'boundaries' of colour terms;
- linguistic relativity hypothesis



Present study **in line with relativity hypothesis**;

Answer to Lucy's critique (1992: 186):

the pragmatic use of colour terms in context hardly been investigated.

- Exploration of colour terms
- in different speech communities (French and German)
- realized in causal construction
[être 'to be' + colour adjective + de 'of/from' + noun]



- **Examples:**

(1) *Je suis rouge de colère*

lit. 'I am red of rage'

= 'I am red with rage'

(2) *Il est bleu de linguistique*

lit. 'He is blue of linguistics'

= 'He is crazy about/loves linguistics'

(3) *Er ist gelb vor Neid*

lit. 'He is yellow of jealousy'

= 'He is yellow with jealousy'.



Structure of talk:

1. Introduction

2. Description of the causal construction with colour terms

- *Corpora*: Sketchengine for French + DWDS for German
- *Framework*: Construction Grammar (Goldberg 1995 and 2006);
Studies about metonymy + metaphor
(Danesi 2008; Niemeier 1998 and 2007;
Sweetser 1990)



3. Associations related to colour terms in the construction:

(Danesi 2008)

Fr. (2) *Il est bleu de linguistique*

lit. 'He is blue of linguistics'

= 'He is crazy about/loves linguistics'

→ positive association

D. (4) *Er ist blau vor Kälte*

lit. 'He is blue of the cold'

→ negative association



Empirical study

conducted with French and German natives
to show:

- different colour terms in same construction in different speech communities
- different associations related to colour terms
- associations emerge from the causal construction in specific language



2. The causal construction with a colour adjective

French:	[être + colour adjective + de + noun]
German:	[sein + colour adjective + vor/von + noun]
English:	[to be + colour adjective + of/from + noun]

(i) **Copula V**: *to be, to remain, to become*

(ii) **Figure**: mostly animate, but non-animate also possible:

(5) *Dehors sous le ciel gris de rage contenue,...*(957627)

Lit. 'Outside under the sky, grey of contained rage,...'

(iii) **Colour Adj.**: basic colour (Berlin/Kay 1969)

«*Concepts anchored in certain 'universals of human experience' »*

as « we project them onto something in our shared environment »

(Wierzbicka 1990: 99): *fire/the sun/the sky/...*



(3) *Er ist gelb vor Neid*

Lit. 'He is yellow of envy'

Colour adjective in causal construction:

- colour of a **body-part** (face) as spot for emotion expression: *shame, rage, anger, jealousy, envy, ...*
- colour term = **metonymical expression** of physical state caused by strong feeling (depicted in the following nominal group) (Niemeier 1998)
- Metonymy:

COLOUR OF THE FACE for PHYSICAL STATE



→ Negative association of colour adjective triggered by the nominal group following the colour adjective (Bochnakowa 1990)

(7) *Die Sportler sind rot, die Blaser blau vor Kälte.* (Die Zeit, 4.2.1983, 6)
Lit. 'The sportsmen are red, the brass players blue of (the) cold'

→ Examples characterized by non-compositionality:
Negative meaning of colour term linked to the specific construction.

(iv) *Nominal group*

- Introduced by preposition *de* (French), *von/vor/aus* (German);
- Noun after prep. expresses the cause for physical change:

strong emotion, e.g.

(1) *Je suis rouge de colère*

or temperature, e.g.

(7) *Die Sportler sind rot, die Blaser blau vor Kälte.*

→ excessive cause to trigger change of state in the figure.



Particular example

(2) *Il est bleu de linguistique*

Lit. 'He is blue of linguistics'

= 'He is crazy about/loves linguistics'

- does not refer to face colour;
- 'linguistics' = cause for the physical change;
- metaphor for a state of passion: 'TO BE CRAZY/
PASSIONATE ABOUT SOMETHING IS TO BE
BLUE';
- close to related causal constructions with a non-
colour adjective, e.g. *fou d'amour* 'crazy about love',
mort de soif 'dead of thirst',...



3. Contrastive study of causal constructions in French and German

Starting point:

Observation of differences in meaning and use of colour terms in the causal construction in different languages.

3.1. Frequency

Comparison of the corpora of the Sketch Engine (<http://the.sketchengine.co.uk>):

- French corpus frWaC (1,628,667,738 tokens)
- German corpus deTenTen (2,844,839,761 tokens)



Table 1: Frequency of colour terms in French and German corpora

Colour term	Number of hits in German corpus	Frequency per million	Number of hits in French corpus	Frequency per million
white	901 683	317.0	251 230	154.3
black	301 424	106.0	222 122	136.4
red	294 935	103.7	172 734	106.1
green	219 397	77.1	179 844	110.4
blue	143 606	50.5	120 977	74.3
yellow	87 928	30.9	65 648	40.3

→ More examples of colour terms altogether in the French corpus than in the German one (except for 'white').

Table 2: Frequency of colour terms in causal construction

Colour term	Number of hits in German corpus	Number of hits in French corpus
white	5	11
black	10	67
red	8	14
green	3	19
blue	0	0
yellow	0	3

- number of hits low => frequency per million is 0.0.
- French uses colour terms more frequently than German in the causal construction.



3.2. Difference in meaning and use

Survey to explore associations of colour terms

3.2.1. Participants + test design

- 26 French native students from Belgium
- 26 German native students from Germany

1. **Associative study**: tell what speakers associate with a basic colour

2. **Cloze test**: in causal construction add a colour term next to emotion/feeling, e.g.

Peter/Petra ist ... vor Freude

Pierre/Marie est ... de joie



3.2.2. Results

→ In causal construction some colours are more dominant in specific language

<i>Colours</i>	German	French
white	9.0 %	5.8 %
black	9.0 %	9.3 %
red	33.2 %	28.8 %
blue	6.7 %	8.9 %
yellow	10.0 %	6.7 %
green	6.9 %	19.5 %
mauve	4.9 %	3.1 %
orange	2.8 %	2.2 %
brown	4.9 %	3.1 %
grey	5.9 %	4.7 %
pink	6.7 %	8.0 %



→ More differentiated picture:
relation colour/emotion in specific language

Colour	Emotion	French	German
Red	Love	46.7 %	60.0 %
	Anger	67.9 %	69.2 %
	Schame	63.3 %	65.2 %
	Embarrassment	44.8 %	62.5 %
	Happiness	17.2 %	28.0 %
	Hate	37.0 %	32.3 %
	Pain	36.7 %	33.3 %
	Frustration	20.7 %	18.5 %
	Envy	20.7 %	5.9 %
Green	Jealousy	63.0 %	21.4 %
	Rage	39.4 %	3.8 %
	Fear	35.3 %	0 %
	Disgust	31.0 %	19.3 %
Yellow	Envy	17.2 %	58.8 %
	Jealousy	7.4 %	28.6 %
	Joy	24.0 %	25.0 %
	Happiness	13.8 %	16 %



French

German

Pink	Joy	24.0 %	3.6 %
	Happiness	31.0 %	12.0 %
	Love	25.7 %	30.0 %
	Embarrassment	13.8 %	25.0 %
	Shame	6.7 %	21.7 %
Blue	Fright	20.0 %	12.0 %
	Fear	29.4 %	7.4 %
White	Fear	20.6 %	52.0 %
	Fright	20.0 %	36.0 %
Black	Hate	47.0 %	37.0 %
	Pain	16.7 %	7.4 %
	Trouble	17.9 %	30.8 %



Statistical significance of survey results

checked with chi-square test (with $df = 14$)

Colours	P-value
white	$p > .05$
black	$p > .05$
red	$p > .05$
blue	$p < .05$
yellow	$p > .05$
green	$p < .001$
mauve	$p > .05$
orange	$p > .05$
brown	$p > .05$
grey	$p > .05$
pink	$p > .05$



3.3. General associations and associations in causal construction

Hypothesis:

- Colour adjective gets its associative value from the construction;
 - This value may differ from the value associated with the adjective in general
- Could indeed be observed with comparison of 2 survey parts:



Example 'white' (in D + F)

- *General use*: positive association,
e.g. purity, cleanliness, wellness, peace,...
- *In causal constr.*: negative association,
e.g. fear, fright.

Example 'green' (in F)

- *General use*: positive association,
e.g. freedom, hope, freshness, peace, joy, optimism,...
- *In causal constr.*: negative association,
e.g. jealousy, anger, fear, disgust.



4. Conclusions and perspectives

→ Need to study colour terms in larger frame:

- Consider speech community,
e.g. 'red' = dominant colour in both communities,
but 'green' and 'blue' = favoured in French community
- Negative or positive associations in a speech community for specific emotions,
e.g. in French: + 'pink', 'blue' and 'red',
- 'green', 'red'
in German: + 'red'
- 'red', 'white', 'yellow'

→ Sustains linguistic relativity hypothesis



→ Linguistic frame: Construction Grammar

Colour adjective gets its associative value in causal construction

→ Linguistic knowledge linked to language use

→ Answer to Lucy's critique

→ Perspectives:

- Contrastive study with other languages
- At larger scale, with more participants

Thank you !

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