

### Constructional alternations

#### **Dative alternation**

Bill sold a car to Tom. ~ Bill sold Tom a car.

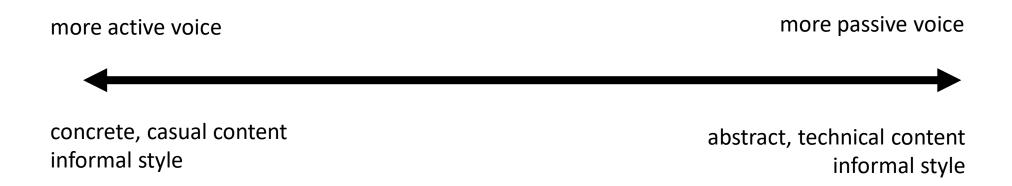
#### Passive alternation

Bill sold a car. ~ A car was sold (by Bill).

### Causative/Inchoative alternation

• Janet broke the cup. ~ The cup broke.

### Constructional alternations



### Constructional change

#### **NCI** construction:

X (be) said/believed/seen to be...

(compare ACI: Y say/believe/see X to be...)

The NCI in News, Science, and Medical Texts vs. other Genres in the British Component of the ARCHER

	18th C	19th C	20th C	TOTAL
news + science + medicine	27	60	76	163
other	10	16	9	35
TOTAL	37	76	85	198

### Participant role alternations

**The president's** goal is to stimulate the economy. (Agent)

The **goal** of the tax cut is to stimulate the economy. (Means)

The **goal** of the bill is to stimulate the economy. (Medium)

"The president's goal in supporting the tax cut proposed in the bill is to stimulate the economy."

What grammatical and textual factors condition participant role alternations?

Has this variation contributed to constructional change over time?

# French FrameNet

#### Domain Index

Causality
Cognitive positions
Verbal communication
Commercial transactions

#### Frame Index

ABCDEFGHIJKL MNOPQRSTUV WXYZ

Adducing
Appointing
Be in agreement on active Be in agreement on asse Bragging
Carry goods
Categorization
Causation
Coming to believe
Commerce buy
Commerce collect

Commerce\_goods-

#### FR\_Spending

All annotations of this frame Lexical Unit Index

Domains: Commercial\_transactions

#### **Definition:**

This frame involves a Spender paying Money, possibly either in order to accomplish a Purpose, get some Goods, or because of a certain Cause of expense. For some LUs, the origin of the expense is expressed as the worker providing labor instead of the goods (FR: frais de vétérinaire), hence the Seller FE.

Distinctions with other frames:

# FR\_Giving\_money : in the FR\_Spending, the Recipient cannot be locally expressed.

Relation to fndata-1.5 New in ASFALDA.

#### Core FEs:

Cause of expense [Causex] T Semantic Type: State of affairs

The situation that causes the Spender spending some Money.

FR-EX: L'avantage fiscal accordé COUTERA 3 milliards.

Goods [Gds]

The FE Goods is anything (including labor or time, for example) which is exchanged for Money in a transaction.

FR-EX: Le gouvernement a **DÉPENSÉ** près de 3 milliards de dollars en

infrastructures rurales

Money [Mny]

Money is what is spent, potentially in order to accomplish the Purpose or acquire

### The French Spending frame

- Le coût des matériaux est énorme.

  `The cost of materials is enormous.'
- Le coût de l'opération est énorme.

  The cost of the operation is enormous.'
- Le **coût** <u>de la main-d'œuvre</u> est énorme. `The **cost** <u>of labor (workers)</u> is enormous.'
- Le coût des retards est énorme.

  The cost of the delays is enormous.'

(Goods)

(Purpose)

(Seller)

(Cause of Expense)

### Lexical items (28)

#### Nouns

argent déboursé	'money spent'
coustage	'cost'
coustance	'cost'
coustement	'cost'
coût	'cost'
déboursement	'disbursement'
déboursé	'spent amount'
dépens	'expense'
dépense	'expense'
emploi de son bien	'use of one's property'
frais	'cost, fee'
fuer	'price'
prix	'price'

#### Adjectives

cher	'expensive'
coustageux	'costly'
coûteux	'costly'
dispendieux	'expensive'
onéreux	'pricey'
qui coûte beaucoup	'which costs a lot'
qui est de grand prix	'which is of high price'

#### Verbs

coûter	'cost'
débourser	'spend'
dépenser	'spend'
employer son bien	'use one's property'
en coûter	'cost'
faire de la dépense	'make expenditures'
faire des frais	'spend a lot'
tirer de sa bourse	'pull from one's purse'

### Corpus

- > Frantext + MCVF (> 155M words)
- Fiction, theater, essays, scientific and historical texts, correspondence
- ► 12<sup>th</sup> 20<sup>th</sup> centuries
- ≥1,629 tokens of 28 lexical items
- ➤ Max 20 randomly selected tokens per century of each lexical item

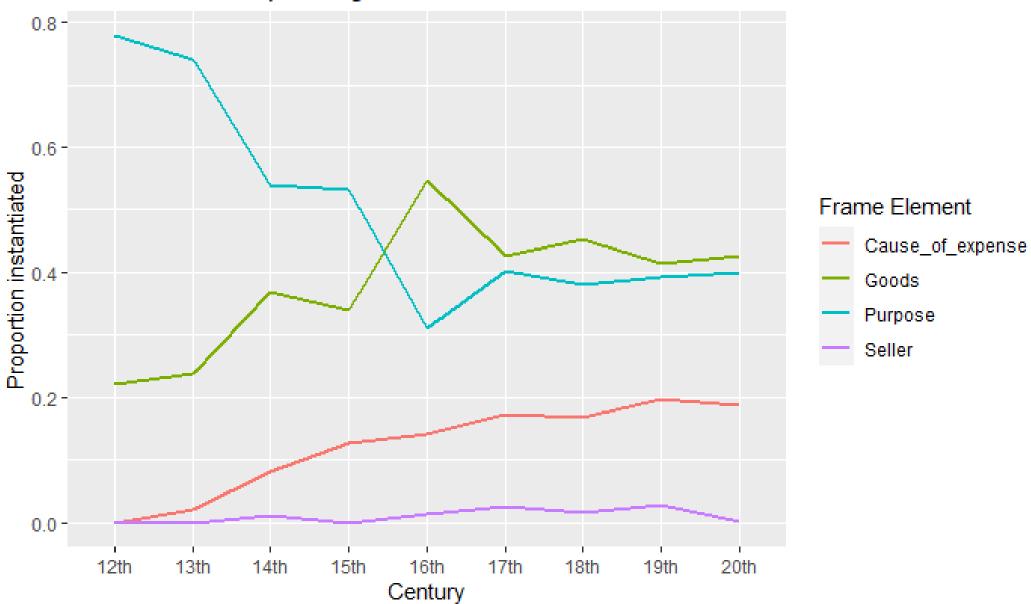
ATILF – CNRS & Université de Lorraine, Martineau, Diaconescu & Hirschbühler (2007), Martineau (2008)

### **Annotation**

et a l'aventure <mark>la roube COUSTERA L. ou .LX . escuz d'or .INI sond in these circumstances the dress will cost 50 or 60 gold coins</mark>.

```
coustera
'will cost' = Frame-evoking lexical item
la roube
'the dress' = Goods
.L. ou .LX. escuz d'or
'50 or 60 gold coins' = Money
INI ('indefinite null instantiation') = Spender
```

### Instantiation of Spending frame elements over time



### Statistical results

#### Logistic regression for Purpose instantiation

Instantiation Type	Coefficient	Std. err.	Wald (z)	p-value	
(Intercept)	0.10316	0.51263	0.201	0.8405	
Date	-0.35331	0.07065	-5.001	5.72e <sup>-7</sup>	***
Rhetorical	0.39666	0.26984	1.470	0.1416	
Narrative	0.19874	0.27149	0.732	0.4641	
Documentary	0.28698	0.26652	1.077	0.2816	
Noun	-0.25778	0.60592	-0.425	0.6705	
Adjective	-1.53852	0.69253	-2.222	0.0263	*

Notes: 'Poetic' is the base Genre Group and 'Verb' is the base Grammatical Category. Date is scaled to facilitate model convergence. Signif. codes: \* 0.05 \*\* 0.01 \*\*\* 0.001

McFadden  $R^2 = 0.018$   $\chi^2_{(6, N=1629)} = 33.20$  $p = 9.62e^{-6} ***$ 

#### Goods instantiation: model is not predictive

McFadden 
$$R^2 = 0.006$$
  
 $\chi^2_{(6, N=1629)} = 9.63$   
 $p = 0.14$ 

#### Logistic regression for Cause of Expense instantiation

Instantiation	Coefficient	Std. err.	Wald (z)	p-value	
Туре					
(Intercept)	-2.85465	0.60120	-4.748	2.05e <sup>-6</sup>	***
Date	0.51599	0.09765	5.284	1.26e <sup>-7</sup>	***
Rhetorical	0.09819	0.39586	0.248	0.804	
Narrative	0.19145	0.39912	0.480	0.631	
Documentary	-0.17660	0.39783	-0.444	0.657	
Noun	1.03111	0.63924	1.613	0.107	
Adjective	0.65679	0.71960	0.913	0.361	

Notes: 'Poetic' is the base Genre Group and 'Verb' is the base Grammatical Category. Date is scaled to facilitate model convergence. Signif. codes: \* 0.05 \*\* 0.01 \*\*\* 0.001

McFadden  $R^2 = 0.035$   $\chi^2_{(6, N=1629)} = 41.78$  $p = 2.04e^{-7} ***$ 

#### Seller instantiation: model is not predictive

$$\begin{array}{l} \text{McFadden} \ R^2 = 0.017 \\ \chi^2_{(6, \ N=1629)} = 4.00 \\ p = 0.68 \end{array}$$

### Grammatical category

le pain est CHER.

'[Goods Bread] is **expensive**.'

Est - il étrange que s' agissant d' acquerir un si grand tresor il semble d' abord nous devoir coûter bien CHER?

'Is it strange that when it comes to [ $_{Purpose}$  acquiring such a great treasure] it seems at first to necessarily cost [ $_{Spender}$  us] **very dearly**?'

### Purpose (decrease over time)

### 1243:

Al prin diémence d'aoust, a grant baudorie et grant COUST, vinrent et i et autre à Rains. DNI

'The first Sunday of August, at great speed and [ $_{Money}$  great cost], they both [ $_{Purpose}$  came to Reims].'

#### 1864:

Et afin qu' il en ignore, je lui ai, en parlant comme ci - dessus, laissé la présente copie, dont le COÛT est de cinq francs, quatre - vingt - dix centimes. INI

'And so he may be unaware, I have, in speaking as above, left him [ $_{Goods}$  the present copy, of which] the **cost** is [ $_{Money}$  five francs, ninety cents].'

### Purpose (decrease over time)

### 1399:

Qant li signeur et li grant baron de France, qui en la compagnie dou duc de Normendie estoient, furent venu devant Agillon, il regarderent premierement et comsiderent que il ne pooient parvenir a la forterece, se il ne passoient la riviere, qui est large, longe et parfonde, et lor convenoit faire un pont pour le passer.

Si ordonna et conmanda li dus que <mark>li pons fust fais</mark>, <mark>qoique</mark> il COUSTAST. DNI

'When the lord and the grand baron of France, who were in the company of the duke of Normandy, had come before Aguillon, they looked first and reckoned that they could not reach the fortress without crossing the river, which is wide, long and deep, and they needed to make a bridge to cross it. So the duke ordered and commanded that [Purpose the bridge be built], [Money whatever] it **cost**.'

### Cause of expense (increase over time)

## Mon dieu, que d'argent DÉPENSÉ par l'infidélité ou la négligence des valets!DNI

'My god, nothing but [ $_{Money}$  money] **spent** [ $_{Cause\ of\ expense}$  by the infidelity or the negligence of servants]!'

Je dis, par intérêt pour les coffres de l'Etat, que ses naissances périodiques grèveraient d'un DÉBOURSÉ annuel trop considérable.

'I say, out of interest for [ $_{Spender}$  the State]'s coffers, that [ $_{Cause\ of\ expense}$  her periodic births] would cause a strain of [ $_{Money}$  an overly large annual **expenditure**].'

### Cause of expense (increase over time)

Il s' emparait de la palette, s' amusant à voir rangés en rond dessus les petits entortillements de pâte, qu' il touchait du doigt avec respect (sachant que la couleur est CHÈRE). INI

'He took hold of the palette, enjoying seeing the little swirls of paint, that he touched with his finger respectfully (knowing that  $[_{Goods}$  paint] is  $[_{Money}$  **expensive**]).'

Ainsi, depuis, elle supprima l'impôt ONÉREUX sur le tabac; et ces deux denrées, le tabac et le sel, devinrent un objet de commerce.

'So, since then, she canceled the [Money] costly [Money] cause of expense tax on tobacco; and these two commodities, tobacco and salt, became an object of commerce.'

### Summary

• Participant role alternations (e.g. Spending frame alternation) vs other argument alternations (e.g. passive, dative alternations)

 Factors in lexical variation: grammatical category, constructional change, sentiment

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