

The background of the slide is a repeating pattern of green dollar bills falling from the top. The bills are stylized with a white dollar sign in the center and are shown in various orientations, some fully visible and others partially cut off by the edges of the frame.

A lexicogrammatical approach to participant role alternations in the French *Spending* frame

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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.*

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.”

LexicoGrammar

Construction Grammar/Frame Semantics

- Constructions = form-meaning pairings
- “Lexicon” = specific forms – specific meanings
- “Grammar” = schematic forms – schematic meanings

Lexically specific patterns:

- *Janet broke the cup. ~ The cup broke. ~ These cups break easily.*
- *Janet cut the meat. ~ *The meat cut. ~ This meat cuts easily.*

How do participant role alternations vary lexically?

How do participant role alternations change over time, in connection with lexical change?

French FrameNet

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FR_Spending

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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] The situation that causes the **Spender** spending some **Money**.
Semantic Type: State_of_affairs FR-EX: **L'avantage fiscal accordé COÛTERA** 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.*

(Goods)

`The **cost of materials** is enormous.'

- *Le coût de l'opération est énorme.*

(Purpose)

`The **cost of the operation** is enormous.'

- *Le coût de la main-d'œuvre est énorme.*

(Seller)

`The **cost of labor (workers)** is enormous.'

- *Le coût des retards est énorme.*

(Cause of Expense)

`The **cost of the delays** is enormous.'

Lexical items (28)

Nouns

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

Adjectives

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

Verbs

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

Corpus

- Frantext + MCVF (> 155M words)
- Fiction, theater, essays, scientific and historical texts, correspondence
- 12th – 20th 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 **la robe** **COUSTERA** **.L . ou .LX . escuz d' or** **.INI**
'and in these circumstances **the dress** **will cost** **50 or 60 gold coins.**'

coustera 'will cost' = Frame-evoking lexical item

la robe 'the dress' = Goods

.L. ou .LX. escuz d'or '50 or 60 gold coins' = Money

INI ('indefinite null instantiation') = Spender

Lexical variation

je suis en train de
calculer que j' ai DÉBOURSÉ quatre cent trente mille francs
pour faire décorer Jenkins .

'I'm in the process of calculating that [Spender I] **spent** [Money four hundred and thirty thousand francs] [Purpose to have Jenkins decorated].'

Et il en vint à citer des chiffres , à calculer ce que
COÛTERAIENT la cérémonie et les fêtes .DNI

'And he started citing numbers, calculating [Money what]
[Goods the ceremony and the parties] would **cost**.'

Lexical variation

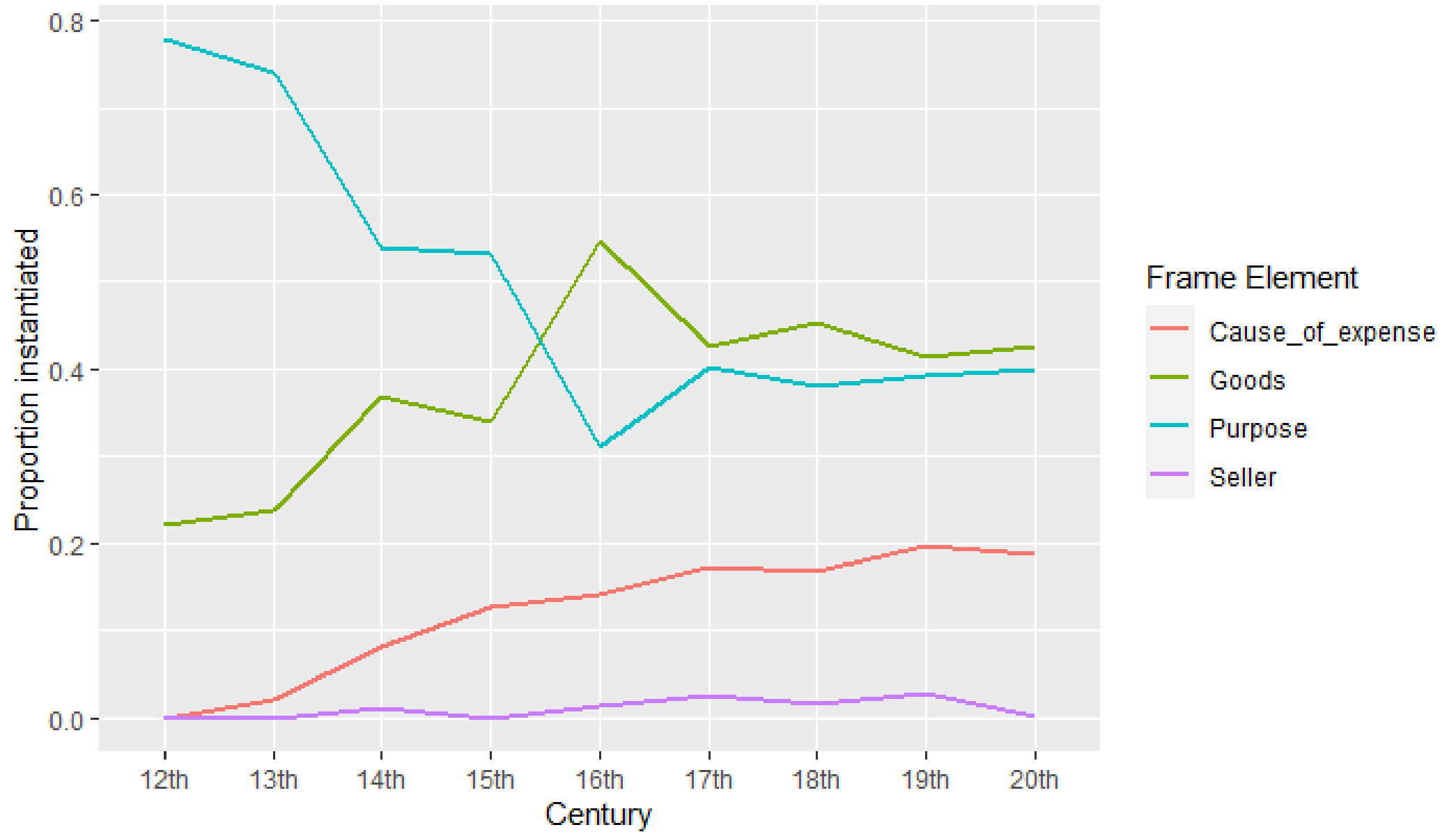
Chaque convive avait DÉBOURSÉ six francs pour un couvert en ruolz .

‘[Spender Each guest] had spent [Money six francs] [Goods for a silver plated table setting].’

par ainsi , je ne plains point ce que m’ a COUSTÉ à les bancqueter .

‘Therefore, I don’t bemoan at all [Money what] it **cost** [Spender me] [Purpose to celebrate them].’

Instantiation of Spending frame elements over time



Logistic regressions

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-7 ***
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 R² = 0.018

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

Goods instantiation: model is not predictive

McFadden R² = 0.006

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

Logistic regression for Cause of Expense instantiation

Instantiation Type	Coefficient	Std. err.	Wald (z)	p-value
(Intercept)	-2.85465	0.60120	-4.748	2.05e-6 ***
Date	0.51599	0.09765	5.284	1.26e-7 ***
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 R² = 0.035

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

Seller instantiation: model is not predictive

McFadden R² = 0.017

$\chi^2_{(6, N=1629)} = 4.00$
 $p = 0.68$

Grammatical category

le pain est CHER .

‘[_{Goods} Bread] is **expensive**.’

Est - il étrange que s’ agissant d’ acquérir un si grand trésor 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 **li pons fust fais**, **quoique** 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],

17 [_{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 .**INI**

'So, since then, she canceled the [Money **costly**] [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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References

- *ARTFL-Frantext corpus*. 2019. ATILF - CNRS & Université de Lorraine. <http://www.frantext.fr>.
- Candito, Marie, Pascal Amsili, Lucie Barque, Farah Benamara, Chalendar de Gael, Marianne Djemaa, Pauline Haas, et al. 2014. Developing a French FrameNet: Methodology and First results. In *Proceedings of the 9th Edition of the Language, Resources and Evaluation Conference (LREC 2014)*, 1372–1379. Reykjavik, Iceland.
- Fillmore, Charles J. 1988. The mechanisms of “construction grammar.” In *Annual Meeting of the Berkeley Linguistics Society*, vol. 14, 35–55.
- Law, James. 2019. Diachronic frame analysis: The Purpose frame in French. *Constructions and Frames* 11(1). 42–77.
- Levin, Beth. 1993. *English verb classes and alternations : a preliminary investigation*. Chicago: University of Chicago Press.
- Martineau, France, Rodica Diaconescu & Paul Hirschbühler. 2007. Le Corpus Voies du français: de l’élaboration à l’annotation. In P Kunstmann & A Stein (eds.), *Le Nouveau Corpus d’Amsterdam*, 121–142. Stuttgart: Steiner.
- Martineau, France. 2008. Un Corpus pour l’analyse de la variation et du changement linguistique. *Corpus* 7(1). 135–155.