

*Prices go up, surge, jump, spike,
skyrocket, go through the roof...*

Intensifier Collocations with Parametric Nouns of Type PRICE

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1. The Problem Stated

Description of intensification with **parametric nouns** such as PRICE, COST, FEE, RATE, etc., hereafter $\{N_{\text{PRICE}}\}$, within the Meaning-Text paradigm (e.g., Mel'čuk 2012-2013-2015).

An $N_{\text{PARAMETRIC}}$ corresponds to (at least) a two-place predicate

‘P of X is α ’,

where X = the thing being parameterized, and

α = the value of the parameter.

The price_p [of gas]_x is [\$1.85 per gallon] _{$\alpha$} .

The speed_p [of the vehicle]_x is [70 mph] _{α} .

The quantity_p [of oil]_x is [30 tons] _{α} .

The price of gas is high.

The speed of the vehicle is low.

The quantity of oil is huge.

(1) **STATIVE:** ‘[[P of X being α ,]] α is (very) big’

- a. *Post-paid service plans often charge **steep** <**astronomical, prohibitive**> overage FEES.*
- b. *California divorce COST is **high** <**whooping high, exorbitant**>.*

(2) **INCHOATIVE:** ‘[[P of X being α ,]] α begins to be bigger than α ’
by β (β being big)’

*Electricity COSTS **went up** <**rose sharply, surged, skyrocketed**> in August.*

(3) **CAUSATIVE:** ‘[[P of X being α ,]] α is caused to begin to be bigger ...’

- a. *Higher mortgage rates **spurred an increase** <**a jump, a surge**> in home SALES.*
- b. *If you’re running for office you don’t want to be known as the person who **increased** <**hiked up**> TAXES.*

Two questions:

1. Degrees of intensification expressed by {N_{PRICE}} collocates

high < steep << astronomical, exorbitant
go up < surge, skyrocket << go through the roof
a rise < a spike, a surge << explosion
raise < hike up, ramp up << send soaring

2. Synthetic vs. analytic expression of intensification in collocations headed by {N_{PRICE}}

[cost is] *exorbitant* <whooping high>
[costs] *skyrocket* <rise sharply>
hike up [prices] <cause a substantial rise [in prices]>

2. Framework and Data

“Intensifying” Lexical Functions:

Magn, PlusMagn, IncepPredPlus, CausPredPlus

COST_(N)

Magn: *high, significant < huge << astronomical
<< exorbitant*

IncepPredPlus: *go up, rise, increase1*

very quickly IncepPredPlus: << (sky)rocket

CausPredPlus: *drive up [ART ~], push [ART ~] up/higher*

INFLATION

Magn^{quant}: *widespread, rampant*

PlusMagn: *growing << galloping*

IncepPredPlus: *go up, rise, increase1*

impossible to control Magn: << runaway

SPENDING_(N)

Magn₂: *strong*

[AntiBon+Magn]: *lavish*

The LF Magn in an ECD collocational Data base

	Magn	Magn <	Magn <<
DANGER	<i>big, grave, great</i>		<i>mortal</i>
DIFFERENCE	<i>big, fundamental, significant, sharp, stark, striking, vast</i>	<i>crucial, enormous, huge, key</i>	
DIFFERENT	<i>basically, distinctly, dramatically, markedly, starkly, strikingly</i>		<i>completely, entirely, //poles apart, radically, totally</i>
EPIDEMIC _(N)	<i>major, vast</i>	<i>sweeping</i>	
EVIDENCE	^{quant} <i>ample, clear, cogent, compelling, convincing, dramatic,</i> ^{quant} <i>mountainous, strong, unambiguous</i>	<i>conclusive, incontrovertible, irrefutable</i>	
FACT	<i>true</i>	<i>well-established, well-known</i>	<i>irrefutable</i>
PAIN	<i>keen, ^{temp}nagging, searing, severe, sharp, ^{temp}unrelenting</i>	<i>killer-</i>	<i>excruciating, extreme, gut-wrenching</i>
SPEED _(N)	<i>high</i>	<i>brehtaking, lightning</i>	<i>breakneck</i>
TIRED	<i>//exhausted, to the bone, very, //washed out</i>	<i>completely, extremely</i>	
TOLL	<i>heavy</i>	<i>devastating</i>	

3. Intensification with {N_{PRICE}}

Some members of {N_{PRICE}}

<u>amount</u>	<i>deficit</i>	<i>interest</i>	<u>rate</u>
<i>budget</i>	<i>expense(s)</i>	<i>investment</i>	<i>sales</i>
<i>business</i>	<i>fare</i>	<u>level</u>	<i>spending</i>
<i>charge(s)</i>	<i>fee</i>	<i>mortgage</i>	<i>stock(s)</i>
<i>cost(s)</i>	<u>figure</u>	<u>number</u>	<i>tax(es)</i>
<i>debt</i>	<i>inflation</i>	<i>price(s)</i>	<i>wage(s)</i>

In bold: the core members of the set.

Underlined: combinable with some other members of the set;
easily undergo ellipsis.

The amount of sales increased. ~ The **sales** increased.
Inflation levels are high. ~ **Inflation** is high.

Intensifying collocates of {N_{PRICE}}

Magn ‘big’	
Degree I	Degree II/III
<i>high; steep</i>	<i>astronomical; exorbitant;</i> making Oper1 <i>impossible prohibitive;</i> impossible to control <i>runaway; staggering</i>

degree
adjectives

PI usMagn ‘to a greater extent’	
Degree I	Degree II/III
<i>growing</i>	<i>galloping</i>

I ncepPredPI us ‘become +’	
Degree I	Degree II/III
gradually <i>creep up; go up;</i> <i>grow; increase; rise</i>	to a very high level <i>go through the roof;</i> abruptly <i>jump, surge, shoot up, spike,</i> <i>zoom;</i> abruptly & quickly <i>balloon, escalate,</i> <i>explode;</i> quickly, to a high level <i>soar;</i> quickly, by a large amount <i>(sky)rocket</i>

inchoative
degree-verbs

CausPredPI us ‘cause to become +’	
Degree I	Degree II/III
<i>boost; drive up; increase;</i> <i>push up/higher; put up;</i> <i>raise; send up</i>	deliberately <i>hike up, ramp up; send sky-</i> <i>high/soaring, send through the roof</i>

causative
degree-verbs

S₀I ncepPredPI us	
Degree I	Degree II/III
<i>growth; increase_(N); rise_(N)</i>	<i>jump_(N); escalation; explosion; spike_(N);</i> <i>surge_(N)</i>

degree nouns

S₀CausPredPI us	
Degree I	Degree II/III
<i>raise_(N)</i>	<i>hike_(N); rump-up</i>

Cf.: Attenuating collocates of {N_{PRICE}}

AntiMagn ‘small’	
Degree I	Degree II/III
<i>low < modest</i>	<i>negligible</i>

degree
adjectives

MinusMagn ‘to a smaller extent’	
Degree I	Degree II/III
<i>falling</i>	<i>dwindling</i>

IncepPredMinus ‘become –’	
Degree I	Degree II/III
gradually <i>cool; decrease;</i> for a short time <i>dip; drop;</i> <i>fall; go down</i>	abruptly, to a very low level <i>crash;</i> gradually, to a very low level <i>dwindle;</i> abruptly, by a large amount <i>plummet, plunge, tumble</i>

inchoative
degree-verbs

CausPredMinus ‘cause to become –’	
Degree I	Degree II/III
<i>cut; drive down; push</i> <i>down/lower; reduce; send</i> <i>down</i>	<i>slash</i>

causative
degree-verbs

S₀IncepPredMinus	
Degree I	Degree II/III
<i>drop_(N); dip_(N)</i>	<i>crash_(N)</i>

degree nouns

S₀CausPredMinus	
Degree I	Degree II/III
<i>cut_(N); reduction</i>	

Intensifiers of {N_{PRICE}} Degree Collocates

Magn of Magn	
Degree I	Degree II/III
<i>very</i>	<i>extremely,</i> colloq. <i>whooping</i>
Magn of IncepPredPI us	
Degree I	Degree II/III
<i>a lot; considerably; markedly; significantly; sharply; steeply; substantially; colloq. way</i>	<i>abruptly, by a large amount</i> <i>dramatically</i>
Magn of S ₀ l ncepPredPI us	
Degree I	Degree II/III
<i>considerable; major; sharp; steep; substantial</i>	<i>abrupt, by a large amount</i> <i>dramatic</i>

4. Degrees of Intensification with {N_{PRICE}}

Linguistic evidence for the two-way distinction does exist, cf. :

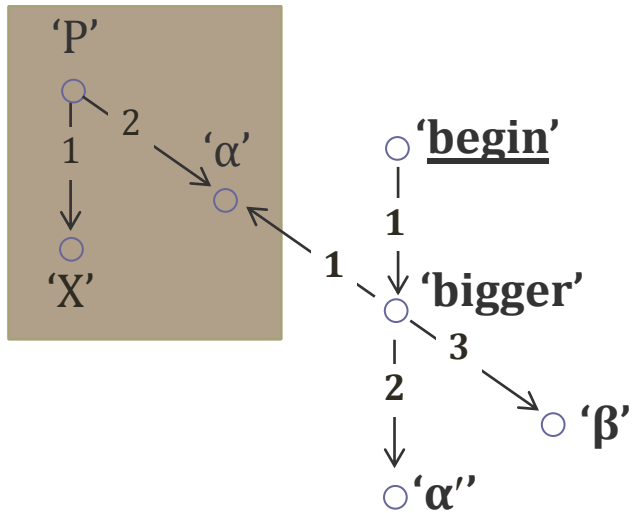
a *slight* increase vs. a *slight* *surge
costs rose *slightly* vs. costs *spiked *slightly*
very high ⟨steep⟩ vs. *very* *staggering

Not so for the three-way distinction.

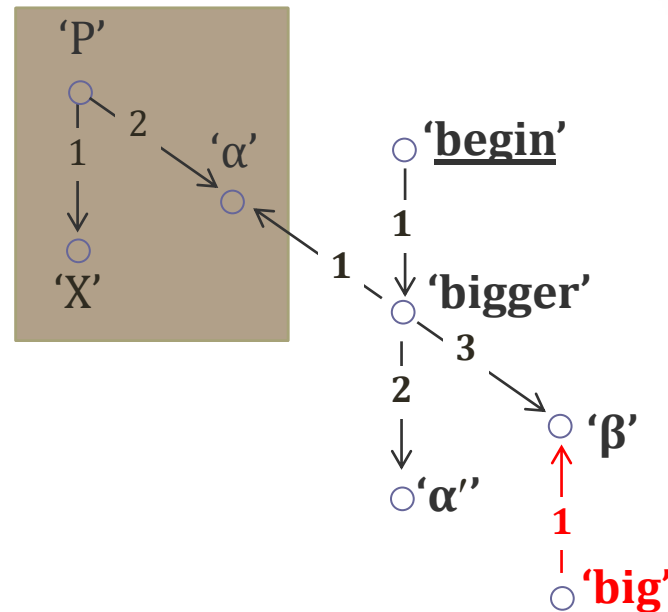
Two degrees of intensification: high and very high.

LF encoding: Magn^I vs. Magn^{II}, IncepPredPlus^I vs.
IncepPredPlus^{II}, CausPredPlus^I vs. CausPredPlus^{II}.

SemR of the LF
IncepPredPlus^I



SemR of the LF
IncepPredPlus^{II}



Prices go up

'prices [of something] are α ,
 α being bigger than α' [= α before the change] by β'

Prices of wheat are higher than prices of barley

'prices of wheat are α ,
 α being bigger than α' , prices of barley, by β' .

(4) a. *Between 1850 and 1854 prices_[P] of wheat_[X] jumped_{IncepPredPlus^{II}} by 60%_[β].*

b. *The prices_[P] of natural gas_[X] rose_{IncepPredPlus^I} above \$5 per mcf_[α].*

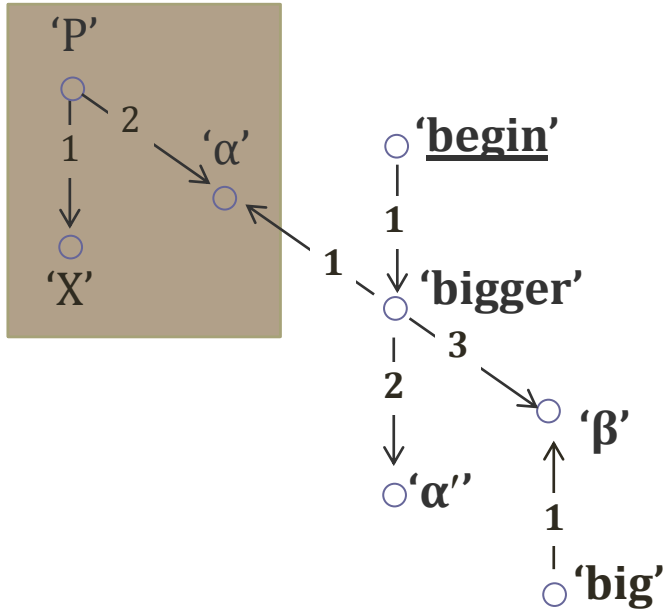
c. *Gasoline_[X] prices_[P] will increase_{IncepPredPlus^I} by 10%_[β] to 1.65 euros_[α] per liter.*

d. *Crude oil_[X] prices_[P] spiked_{IncepPredPlus^{II}} from \$13_[α'] to roughly \$34_[α] per barrel, i.e. by some 38%_[β].*

5. Synthetic vs. Analytic Expression of Intensification with $\{N_{PRICE}\}$

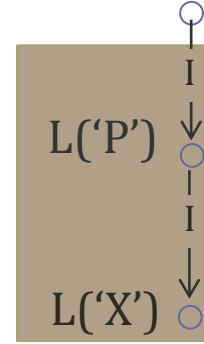
- (5) a. *Alberta crop crisis sent wheat PRICES through the roof*_{CausPredPlus^{II}}.
- b. *Alberta crop crisis caused*_{Caus} *wheat PRICES to shoot up*_{IncepPredPlus^{II}}.
- c. *Alberta crop crisis spurred*_{Caus} *a sharp*_{Magn^I} *increase*_{S0IncepPredPlus^I} *in wheat PRICES.*
- d. *Wheat PRICES spiked*_{IncepPredPlus^{II}}
<*rose*_{IncepPredPlus^I} *steeply*_{Magn^I},
*got*_{Incep} *much*_{Magn^I} *higher*_{MagnCOMPAR}>
[*in the wake*_{Adv2Caus} *of Alberta crop crisis.*

Lexicalization Rules for the LF IncepPredPlus^{II}



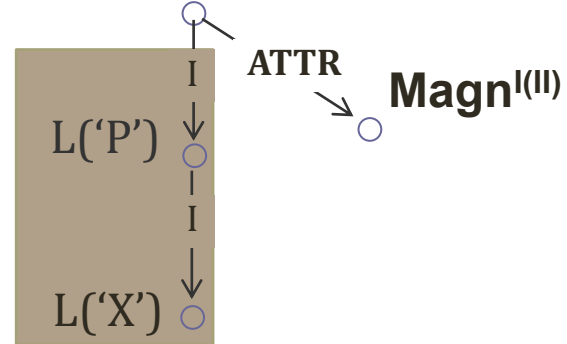
IncepPredPlus^{II}

[1] TM



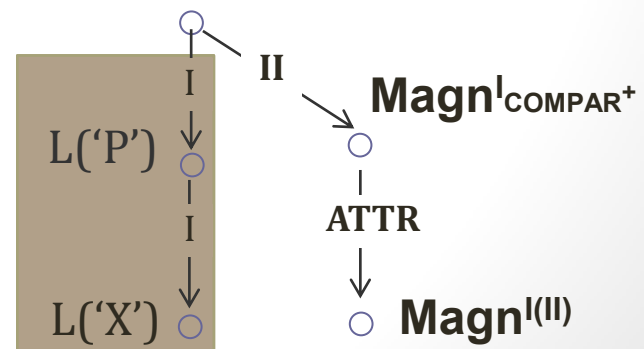
IncepPredPlus^I

[2] TM



IncepPred

[3] TM



6. Conclusions and Future Work

- All the nouns considered share to a considerable extent the co-occurrence with intensifiers—in particular Degree I intensifiers, but they also have their own, idiosyncratic, collocates. This is consistent with the collocation phenomenon in general.
- Two degrees of intensification—high and very high—seem to be corroborated by linguistic evidence.
- A cursory comparison with attenuators :
 - (1) attenuators are not as numerous as intensifiers;
 - (2) they are even less prone to a three-degree distinction of intensity.

- Are two degrees of intensification indeed enough to cover all the cases of intensification with $\{N_{\text{PRICE}}\}$? Is there convincing linguistic evidence that finer distinctions are necessary?
- What factors determine the choice of intensifier collocates of $\{N_{\text{PRICE}}\}$; e.g., how high a rise in prices should be in order for it be called *a spike*, etc.? (This question concerns the pre-linguistic, text-planning, phase of linguistic synthesis; it is relevant more for the financial jargon and language of the media than for ordinary usage.)
- What are preference rules for analytical vs. synthetic expression of intensification with $\{N_{\text{PRICE}}\}$?
- How do attenuators of with $\{N_{\text{PRICE}}\}$ behave in these respects; i.e., how similar/different are they compared to intensifiers?