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First Central European Conference in Linguistics for postgraduate Students,
Piliscsaba, August 30-31, 2011

Lexical Positive Polarity Items in Romanian[1]

0. Aim and Claim:
(i) examine the lexicalization patterns of Positive Polarity Items (PPIs) in Romanian showing that PPIs qualify as scalar operators (denoting large or small quantities) that have an emphatic or attenuating effect (thus, intensifying or attenuating the rhetorical force of an utterance).
(ii) polarity sensitivity is a sensitivity to scalar reasoning, and the inferences relevant to polarity licensing do not depend on semantic entailment alone, but on a general ability for scalar reasoning.

1. The data

(1) a. Presa e subjugata marilor corporatii,
Media-the is-3rd.p,sg subdue-past.part great-pl.Dat. corporation-pl.
stirile sunt masulite, **tone de minciuni**
news-the,pl. are-3rd.p, pl. falsify-past.part ton-pl DE lie-pl
le sunt turnate zilnic in urechi.
CL-3rd.p, pl,Dat. are-3rd.p,sg pour-past.part daily in ear-pl.[2]
'The media is subdued to the influencial corporate companies, the news is corrupt and tons of lies are pourred into their ears every day'

b. Acum na- vă cîte un pai, scobiti-,
Now take2nd.p,sg-archaic CL-2nd.p,pl,Dat all a straw pick-2nd,p,pl
vă pintre dinti si vă clătiti
CL-2nd.p,pl,Acc through tooth-pl and CL-2nd.p,pl,Dat. rinse-2nd.p,pl
gura cîte c- **oleacă** de vin."
mouth-the all with a little DE wine.
'And now, here's a straw, pick your teeth and rinse your mouth with a little bit of wine.[3]

- 'tone' (□ tons), in (1), denotes a maximal scalar degree and qualifies as an emphatic PPI.
- 'oleaca' (□ a little), in (1) denotes a minimal scalar degree and qualifies as an attenuating PPI

2. Background:

Klima (1964) introduced the term 'affective', talking about the characteristic that all contexts that license NPIs should have.
- a negative polarity item yields a grammatical sentence if it is 'in construction with' an affective operator, defined as follows:

'A constituent X is in construction with another constituent Y if the former is dominated by (that is) occurs somewhere lower down the branch of the first branching node that dominates the latter. (Klima, 250-251)'.

- **Licensing**: How are polarity items licensed?
- **Sensitivity**: What makes polarity items sensitive to polarity? Are there features which all polarity items share and which might explain their sensitivities?
- **Diversity**: Why do different polarity items often exhibit different sensitivities?

In addition to overt negation, a number of other expressions license NPIs in English, some of which are exemplified below. The folowing examples were taken from Linebarger (1987).

(2) Adversative Predicates.
a. He refused ***to budge an inch***.
b. * He promised ***to budge an inch***.
c. She was surprised that there was ***any*** food left.
d. * She was sure that there was ***any*** food left.
e. I'm sorry that I ***ever*** met him.
f. * I'm glad that I ***ever*** met him.
g. I doubt he ***much*** likes Louise.

[1] I thank Alexandra Cornilescu for fruitful discussions on the topic. All remaining errors are mine. Earlier versions of this paper were presented at the ACED, June 2-4, Bucharest.
[2] http://webcache.googleusercontent.com/search?q=cache:46oOAKRBKHgJ:www.hotnews.ro/stiri-international-5255944-problema-legalizarii-marijuanei-prima-topul-intrebarilor-adresate-americani-lui-obama.htm+tone+de+minciuni&cd=10&hl=ro&ct=clnk&gl=ro
[3] Ion Creanga, Povestea lui Ionica cel prost

h. * I think he ***much*** likes Louise.

(3) Antecedent of Conditional

a. If you steal ***any*** food they'll arrest you.

b. * If you steal food, they'll ***ever*** arrest you.

(4) Comparatives:

a. He was taller than we ***ever*** thought that he would be.

b. * He was so tall that we ***ever*** thought he would bump his head.

(5) Relative clauses headed by a universal quantifier:

a. Everyone who knows ***a damn thing*** about English knows that it's an SVO language.

b. * Someone who knows ***a damn thing*** about English knows that it's an SVO language.

(6) Questions:

a. Have you ***ever*** met George?

b. * You have ***ever*** met George.

c. Who ***gives a damn*** about Bill?

d. * Bob ***gives a damn*** about Bill.

(7) FEW:

a. Few people have ***any*** interest in this.

b. * Some people have ***any*** interest in this.

(8) TOO:

a. John is too tired to ***give a damn***.

b. * John is tired enough ***to give a damn***.

(9) ONLY:

a. Only John has ***a hope in hell*** of passing.

b. * Even John has ***a hope in hell*** of passing.

Proposals for the licensing of NPIs may be examined from the following perspectives:

- **Whether the licensing principle is syntactic in nature**
- **Whether the licensing principle is semantic/ pragmatic in nature.**

2.1. Syntactic approaches:

Within syntactically oriented approaches two of the questions that emerged are formulated as follows:

- What kind of primitive notion or relation is employed to formulate the licensing principle?
- At what level of representation does the principle apply?

→ assume an overt negative form in a specific structural position as a primary licensing mechanism (Baker, 1970; Laka, 1990)

→ describe the relation between negation and polarity items in parametrized variants of the c-command relation (configurational approach).

Baker's (1970) analysis: NPI licensing is a two-stage process:

- the sentence containing the NPI must contain an overt negation c-commanding the NPI, or else
- the NPI must be licensed by entailment.

2.2. Semantic approaches:

→ negation = just one licensor among many

→ aimed at determining the character and members of the class of negative contexts (Fauconnier, 1975; Ladusaw, 1979).

- As defined by Ladusaw an expression X is in the scope of another expression Y (the c-command relation) if X denotes an argument to the function which Y denotes; any expression contained in X is also in the scope of Y. "Scope relations are relations between meanings in an interpretation; the scope of the meaning of α in interpretation Φ is the meaning which is its arguments in Φ." (p. 59-61)

→ Fauconnier (1975)

- the scalar logic to which polarity items are sensitive to, is pragmatic in nature
- polarity licensing does not depend on linguistic representations at all, but rather involves the interaction of linguistic and pragmatic knowledge in a process of meaning construction.

→ Ladusaw (1979)

- identified the set of environments licensing NPIs with the semantic notion of downward entailment, the property of licensing inferences from sets to subsets, from general to specific
- The prototypical trigger of NPIs, sentence negation is DE

(10) a. Beth didn't see a bird on the porch. →

b. Beth didn't see a penguin.

- Following Barwise and Cooper (1981) and Ton van der Wouden (1997)

(11) Definition: Monotone decreasing:
Let B and B* be two Boolean algebras. A function *f* from B to B* is monotone decreasing iff for arbitrary elements X, Y ε B: X ⊆ Y→ f(Y) ⊆ f(X)

- (12) = 'few' is downward monotonic and not upward monotonic.

(12) Few congressmen eat spinach.
[spinach] ⊆ [vegetables]

→ Few congressmen eat vegetables.

(13) Few congressmen eat vegetables.
[spinach] ⊆ [vegetables]

→ Few congressmen spinach.

The mirror image of downward monotonicity is called upward monotonicity.

(14) Definition: Monotone increasing:
Let B and B* be two Boolean algebras. A function *f* from B to B* is monotone increasing iff for arbitrary elements X, Y ε B: X ⊆ Y→ f(X) ⊆ f(Y)
The following example shows that 'many congressmen' is monotone increasing.

(15) Many congressmen eat spinach.
[spinach] ⊆ [vegetables]

Many congressmen eat vegetables.

- the relevant inferences are strictly logical, and the constraints on polarity items are thus taken to hold at a level of logical form representing a sentence's truth-conditional meaning.

→ problem: polarity items are also sensitive to pragmatic properties of sentences and thus the DE operator may not be sufficient or even necessary for licensing[4]

[4] There are the cases of NPIs which are acceptable despite the fact that they are not in the scope of a DE operator, and these cases include NPI licensing by adversative verbs, 'after', 'only' and 'exactly'.

2.3. Starting point of the analysis
= semantic scales (Horn, 1972)
= the Scalar Model of Polarity (Israel, 1996, 1998)

2.3.1. *Semantic scales*:

- scales = part of human reasoning
- scales of ordered sets of values interact in a meaningful way with negation.

- Items belonging to scalar categories may be ordered according to their strength along that semantic dimension.

(16) = members have been ordered from the strongest to the weakest.

(16) STRONG WEAK
1……2…….m…….m+1……n
< n…..n-1……4 3 2 1> the cardinal scale
< the first …..the second…….the n-th> the ordinal scale
< all ……many……some> the quantificational scale
< necessary……likely……possible>
< must ……should……..may> a deontic scale
< hot ……..warm……lukewarm>

→ Basically, stronger predicates entail weaker ones.

(17) a. It is cold. → It is cool.
b. He has three children. → He has two children.

Cardinal quantifiers form a typical scale:
(17) a. I have three children.
b. I have two children.

(1) a. She was amazed that there was any food left.
b. I was surprised that be budged an inch.
c. We were astounded that she lifted a finger to help, considering her reputation for laziness.
(2) a. Only John has ever been there.
b. Only the students who had ever read anything about phrenology attended the lectures.

c. I have one child.

(18) a. John has three children.
b. John doesn't have more than three children.
c. John has three children, in fact he has four.

(19) a. John doesn't have three children.
b. John has two children.

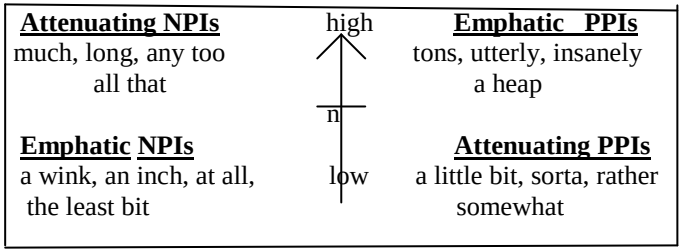
(20) a. Does John have three children?
b. Yes, in fact he has four. (ignoring the implicature)
c. No, he has four. (taking the implicature into account)

(21) a. John doesn't have three children, he has four. (negation is stressed)
b. John has three children and possibly even more.
and indeed he may have more/ *fewer
if not more/ * fewer.

2.3.2. *The Scalar Model of Polarity*

- a suitable account of polarity items entails the use of a scalar model (SM)
- SM = structured set of propositions ordered along one or more parameters in a way that support inferencing. The model consists of one propositional function with one or more open variables each ranging over a scale of possible values. The propositional function effectively defines a type of eventuality and the variables stand for the various ways the eventuality may be realized.
- SM→distributions of polarity items (PSIs) in terms of their lexical semantics.

(22)



- **Emphatic NPIs:** any, ever, at all, the least bit, in the slightest, give a damn, have a chance in hell, can possibly, can dream of.
- **Emphatic PPIs:** tons of N, scads of N, constantly, utterly, insanely, in a flash, within an inch of N, be bound to V, gotta V
- **Attenuating NPIs:** be all that, any too, overmuch, long, much, great shakes, be born yesterday, trouble to V, need
- **Attenuating PPIs:** some, somewhat, rather, sorta, a fair bit, a tad, a hint, a smidgen, would just as soon.

- PSIs like *lift a finger* and *be all that* = conventionally specified for two semantic features, **quantitative value and informative value**, and the interaction of these two features in a single lexical form→ the effect of polarity sensitivity.
- **Quantitative (Q)** = most PSIs encode a scalar semantics. For a form to encode a specific Q-value, it has to designate some relative or absolute position within an ordering. The high and low Q-value of polarity items is understood relative to the contextual norms associated with a given dimension.
- **Informative (I)** value = a pragmatic feature encoding a speaker's attitude to the content he/ she conveys. Thus, emphatic utterances express great involvement and commitment to what is said while understatements denote deference and a desire to mitigate face threatening acts.
- Polarity items are sensitive to the logical structure of the contexts in which they appear because the rhetorical attitudes they encode crucially depend on the kinds of inferences one might draw from their use.

(23) a. I really don't **give a hoot**. I just desperately want to win this trophy.[5]

- 'give a hoot' = expresses a minimal amount of interest/ concern and contrast with all expressions that denote a considerably high amount of interest/ concern.
- 'give a hoot' = emphatic NPI = contributes to a strong proposition.→ it can only be used in scale reversing contexts, where inferences run from minimal amounts of concern to maximal amounts of concern.

[5] Michael Ballack, http://www.stern.de/sport/fussball/michael-ballack-im-not-going-to-budge-one-inch-620376.html

- (23a) = grammatical because it licenses the inference that 'he doesn't care much'.

(23) b. * I give a hoot.

- (23b) cannot generate the inference 'he doesn't care much' and the reason for its failure is that such an expression expresses a weak proposition incompatible with its inherently emphatic nature.

(24) He's helluv (hell of) tall.[6]

- **'**helluv' = signals that the predicate holds to a very high degree
- = emphatic PPI→ it can only be used in scale preserving contexts, where inferences run from high scalar values to low scalar values.

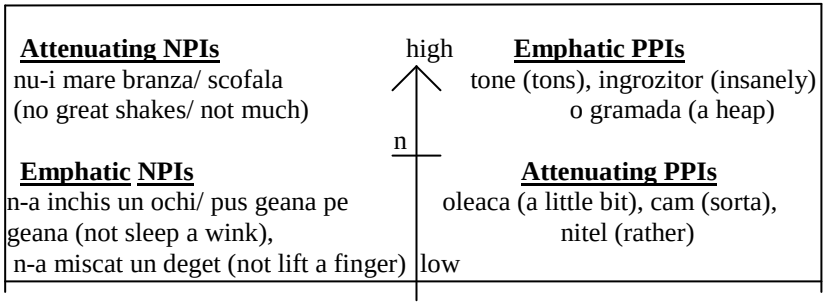
3. Analysis:

Claim: Polarity Sensitive Items (PSIs)

- scalar operators which must be interpreted with respect to an appropriately structured scalar model.
- forms whose lexical semantic-pragmatic content makes them sensitive to scalar inferences.

Polarity items tend to be associated with certain kinds of pragmatic affect, frequently serving either to intensify or to attenuate the rhetorical force of an utterance.

(25)



[6] Israel (1998)

! polarity items = specified for two scalar semantic features, **quantitative value** (reflects the fact that most PSIs encode a scalar semantics) and **informative value** (pragmatic feature encoding a speaker's attitude to the content he/ she conveys, property of sentences used in contexts)
→ **emphatic** sentences make a stronger claim than might have been expected
→ **understating** sentences make a weaker claim that might have been expected

- the interaction of these two features in a single lexical form is what creates the effect of polarity sensitivity.

3.1. Tests we can use to distinguish between emphatic PSIs and understating PSIs:

- Modification by the intensifying "literally", which emphatic PSIs allow but understating PSIs reject
- Occurrence after the introduction "you'll never believe it!", which is acceptable for emphatic PSIs but not for the understating PSIs
- Coordinating conjunctions like 'or at least', 'in fact' or 'and what's more' show that emphatic PSIs make stronger claims than understating PSIs

Emphatic polarity items allow modification by intensifying 'literally', but understating polarity items reject it.

(26) a. * Silvia literalmente a castigat olecuta de bani la ruleta.
* 'Sylvia literally won a little bit of money at the Blackjack tables.'
b. Literalmente, a fost ca dracu' de mitocan.
'He was literally rude as hell.'
c. Literalmente, o sa te ajut cand mi-oi vedea ceafa.
'I will help you literally when hell freezes over.'

Emphatic polarity items allow occurrence after the introduction 'You'll never believe it!', while understating polarity items reject it.

(27) a. ? N-o sa-ti vina sa crezi niciodata!
Silvia a castigat olecuta de bani la ruleta.
? 'You'll never believe it! Sylvia won a little bit of money at the Blackjack tables.'
b. N-o sa-ti vina sa crezi niciodata!
A fost ca dracu' de mitocan.
'You'll never believe it! He was rude as hell.'

Coordinating conjunctions like ‘or at least’ require that the first conjunct represents a stronger claim than the second conjunct.

(28) a. A fost ca dracu’ de mitocan sau macar un strop.
‘He was rude as hell or at least a little rude.
b. * A fost un strop mitocan sau macar ca dracu’ de mitocan.
‘* He was a little rude or at least rude as hell.’
c. A inceput treaba intr-o clipita sau macar curand.
‘He started working in a jiffy or at least in a little while.’
d. * A inceput treaba curand sau macar intr-o clipita.
‘* He started working in a little while or at least in a jiffy.’

Coordinating conjunctions like ‘in fact’ require that the second conjunct make a stronger claim than the first conjunct.

(29) a. A fost un strop mitocan, de fapt a fost ca dracu’ de mitocan.
‘He was a little rude, in fact he was rude as hell.’
b. * A fost ca dracu’ de mitocan, de fapt a fost un strop.
‘* He was rude as hell, in fact he was a little.’
c. A inceput treaba curand, de fapt cat ai zice peste.
‘He started working in a little while, in fact in a jiffy.
d. * A inceput treaba cat ai zice peste, de fapt curand.
‘* He started working in a jiffy, in fact in a little while.’

60 words or expressions were tested → 16 items = attenuating PPIs
→ 44 items = emphatic PPIs

(30) **Attenuating PPIs**: cam (sorta), putin/ un pic/ putintel/ oleaca/ olecuta/ nitel/ nitica/ un strop/ o farama/ un dram/ o umbra/ o picatura/ un graunte/ un crampei/ o frantura (a bit/ a little/ a little bit/ a tad/ a smidgen/ mite).

a. ***O farama:*** Poate printre toate răutățile, mai găsim și o
Maybe among all malice-pl still find-1st.p.pl also a
fărâmă de bunătate”.
crumb/shred DE kindness.
(www.princeradublog.ro/atitudini/o-farama-de-bunatate/)

b. ***Olecuta:*** Sînt olecuță tristă, e ultima zi și a
Am-1st.p,sg little sad is-3rd.p,sg. last day and have-3rd.p.sg.
inceput să plouă la Viena.
Start-past.part. SA rain in Vienna.
(http://webcache.googleusercontent.com/search?q=cache:4slrSpuM6sJ:danoaca.wordpress.com/2009/09/04/olecuta-si-gata/+olecuta&cd=16&hl=ro&ct=clnk&gl=ro)
‘I am a little sad, it is the last day and it started raining in Vienna.’

c. ***Nitica:*** Dani Coman: "George Copos sa mai aiba nitica rabdare!"
Dani Coman: “George Copos SA still have-3rd.p.sg. a bit patience!”
(www.9am.ro/.../dani-coman-george-copos-sa-mai-aiba-nitica-rabdare.html)
‘Dani Coman: “George Copos should have a little bit of patience.’

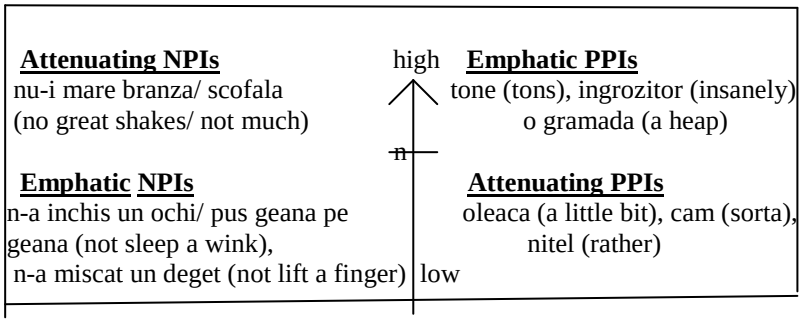
(31) **Emphatic PPIs**: tone (tons); o groaza/ o gramada/ o puzderie/ o sumedenie/ o droaie (lots/ oodles/ gobs/ jillions/ lashings/ loads); ca dracu’ (as hell/ as blazes); in doi timpi si trei miscari/ intr-o clipa/ intr-o clipita/ intr-o clipeala din ochi/ cat ai clipi/ cat ai zice mei/ cat ai zice peste/ cat ai scapara din ochi/ cat ai scapara dintr-un amnar/ cat te-ai sterge la ochi/ cat te-oi freca la ochi/ cat ai bate din palme/ cat ai da in cremene/ (in a jiffy/ in a New York minute/ in (half) a tick/ in a brace of shakes/ in the twinkling of an eye/ at the drop of a hat/ in two shakes of a lamb’s tail/ in a trice/ in two tows/ in the turn of a hand); la Pastele Cailor/ la Stafntu’ Asteapta/ la calendele grecesti/ la mosii cei verzi (at the Greek Calends/ At Latter Lammas); cand mi-oi vedea ceafa/ cand va face broasca par/ cand va face plopul pere si rachita micsunele/ cand o prinde mata peste/ cand va face spanul barba/ cand mi-o creste iarba-n barba si-ntre deste/ cand o sta oul in cui/ cand o da din piatra lapte/ cand or zbura bivolii/ cand o pica frunza de pe brad/ cand mi-o creste par in calcaie/ cand mi-o creste par in palma si-ntre deste/ cand o zbura porcul (when hell freezes over/ when pigs fly); fabulos de (incredibly), exagerat de (amazingly), nemaipomenit de (unbelievably), enorm (enormously), o armata (a legion), un card (lots).

a. ***Ca dracu’:*** E frig ca dracu’ aici in sufletu’ tau.
Is-3rd.p,sg. cold like hell her in in soul-the your.
(http://sayvanity.wordpress.com/category/23021166/fictiune-23021166/)
‘It’s cold as hell, here in your soul.’

b. ***Cand o pica frunza de pe brad:***
Vor castiga la LOTO cand o pica frunza de pe brad.
Will-3rd.p.pl. win at LOTO when will-arch.3rd.p.sg. fall leaf-the from firtree
'They'll win the lottery when hell freezes over.'

c. ***O gramada***: Bruma: "Am tinut **o gramada de** diete
Bruma: "Have-1st.p,sg keep-past.part a heap of diet-pl. aberante!"
anomalous
(http://webcache.googleusercontent.com/search?q=cache:vV8xfVDMXdsJ:www.newz.ro/stire/104901/bruma-am-tinut-o-gramada-de-diete-aberante.html+o+gramada+de&cd=11&hl=ro&ct=clnk&gl=ro)
'Bruma: I have been on/ tried tons of ludicrous diets.'

3.2. Quantitative value and Informative value



(32) a. Maria n- a inchis un ochi toata noaptea./
Maria not have-3rd.p,sg close-past.part. an eye all night./
Maria n- a pus geana pe geana toata noaptea.
Maria not have-3rd.p,sg put-past.part. eyelash on eyelash all night.
'Mary didn't sleep a wink all night.'
b. Maria n- a dormit mult.
Maria not have-3rd.p,sg sleep-past.part much.
'Mary didn't sleep much.'

The sentence under (a) makes a strong claim by denying that Mary slept even the smallest amount imaginable, and the sentence under (b) makes a weak claim by denying only that Mary slept for a long time. Thus, 'a wink' marks a low, in fact a minimal, quantitative value and produces an emphatic sentence, and 'much' marks a relatively high quantitative value and produces an understatement.
→So, 'un ochi' and 'geana pe geana' mark a low, minimal quantitative value and produce an emphatic sentence, and 'mult' marks a high quantitative value and produce an understatement.

(33) a. N- a miscat/ ridicat un deget ca sa
Not have-3rd.p,sg move/lift-past.part a finger CA SA
-l ajute.
CL-3rd.p,sg,Acc help
'She didn't lift a finger to help him.'
b. * A miscat/ ridicat un deget ca sa
Have-3rd.p,sg. move/lift-past.part a finger CA SA
-l ajute.
CL-3rd.p,sg,Acc help
'* She lifted a finger to help him.'

An expression like, 'a miscat/ ridicat un deget'='lift a finger', expresses a minimal effort and contrasts with all expressions which denote a great effort. Being an emphatic item it contributes to a strong proposition. Thus, this expression can only be used in scale reversing contexts, where inferences run from lesser to greater efforts.
The sentence under (a) is grammatical because it licenses the inference that 'she didn't try very hard'.
By contrast, the sentence under (b) cannot generate such an inference and the reason for its failure is that such an expression expresses a weak proposition incompatible with its inherently emphatic nature.
In the example presented before the emphatic NPIs denote low scalar values and the attenuating NPIs denote high scalar values.

(34) a. Belinda a castigat o gramada/ tone de
Belinda have-3rd.p,sg. win-past.part a heap/ tons of
bani la ruleta.
money-pl. at roulette-the.
'Belinda (*rarely) won scads of money at the Blackjack tables.'

b. Belinda a castigat olecuta/ niscaiva bani
Belinda have-3rd.p,sg. win-past.part a little bit money-pl.
la ruleta.
at roulette-the.
'Belinda (*rarely) won a little bit of money at the Black jack tables.'

The sentence under (a) in the previous example constitutes an emphatic assertion to the effect that Belinda won a very large quantity of money, while the example under (b) asserts only that Belinda won a small quantity of money. 'O gramada/ tone'='Scads' defines a very high quantity and produces an emphatic sentence, while 'olecuta/ niscaiva'='a little bit' defines a small quantity and produces an understatement.

3.3. Morpho-syntactic classification:

(35)

- **Degree Adverbs***: destul, enorm, mult, putin (putintel), oleaca (olecuta), nitel, cam*
- **QPs:** *extraordinar de, grozav de, teribil de, atat de, ingrozitor de, uimitor de, exagerat de, colosal de, fabulos de, imens de, infinit de, desavarsit de, anormal de, neverosimil de, nemaipomenit de tanar, nemaivazut de*. This class also includes terms like: *crunt de, cumplit de, fioros de, groaznic de, infernal de, jalnic de, monstrous de, oribil de.*
- **NPs, pseudo-partitive constructions:** *un strop, o farama, un dram, o umbra, o picatura, un graunte, un crampei, tone, o groaza (fig), o gramada, o puzderie, o sumedenie, o droaie, o armata, un card* .
- **PPs:** *intr-o clipa, intr-o clipita, intr-o clipeala din ochi , la Pastele Cailor, la Sfantu' Asteapta, la mosii cei verzi, la calendele grecesti, la mama dracului, la dracu-n praznic*
- **AdvPs** (these AdvPs/ expressions have a complex structure and function as a single syntactic unit - cf. Gramatica Academiei): *un pic, cat ai clipi, cat ai zice mei, cat ai zice peste, cat ai scapara din ochi, cat ai scapara dintr-un amnar, cat te-ai sterge la ochi, cat te-oi freca la ochi, cat ai bate din palme, cat ai da in cremene, unde si-a intarcat dracul copiii, unde si-a spart dracul opincile*
- **Verbal Idioms**: *cand mi-oi vedea ceafa, cand va face broasca par, cand va face plopul pere si rachita micsunele, cand o prinde mata peste, cand va face spanul barba, cand mi-o creste iarba-n barba si-ntre deste, cand o sta oul in cui, cand o da din piatra lapte, cand or zbura bivolii, cand o pica frunza de pe brad, cand mi-o creste par in calcaie, cand mi-o creste par in palma si-ntre deste, cand o zbura porcu, in doi timpi si trei miscari.*

3.4. PPIs – scale preserving

Claim: PPIs are scale preserving, allowing inferences from high values to low values.
Inferencing in a scalar model is defined relative to the propositional function on which it is built.

- For an affirmative function inferences run from high values to low values on the scale.
- With negative propositions the direction of entailments is reversed and inferences run from low values on the scale up to higher values.

A polarity sensitive item is a lexical form or a grammatical construction which specifies an expressed proposition p's location within a scalar model and which, by virtue of imposing a particular informative value on that proposition, further requires that p either entails or be entailed by a default context proposition q available within the model.

In the following examples, the uppercase forms under (a) are scale reversers, allowing inferences from 'easy problems' (= low scalar) to 'hard problems' (= high scalar). The examples under (b) are scale preserving, allowing inferences from 'hard problems' to 'easy problems'.

(36) a. FEW students can solve the easy problems. → Few students can solve the hard problems.
b. A few students can solve the hard problems. → A few students can solve the easy problems.
(37) a. I'd be SURPRISED if Dim could solve the easy problems. →I'd be amazed if Dim could solve the hard problems.
b. I expected that Dim could solve the hard problems. → I expected that Dim could solve the easy problems.
(38) a. IF Norm can solve the easy problems, he'll get some cake. → If Norm can solve the hard problems, he'll get some cake.
b. Norm can solve the hard problems and he'll get some cake. → Norm can solve the easy problems and he'll get some cake.

Central claim of this subsection = Romanian PPIs are scale preserving, allowing inferences from high scalar values to low scalar values.

(39) a. Ne spune o droaie/ sumedenie de minciuni. →
CL-1st.p,pl.Dat. say a lot DE lie-pl.
'He/ She tells us heaps of lies.'
→ Ne spune oarece/ putine minciuni.
CL-1st.p,pl.Dat. say some lie-pl.
'He/ She tells us some lies.'
b. Ne spune oarece/ putine minciuni. ⊣
CL-1st.p,pl.Dat. say some lie-pl.
'He/ She tells us some lies.'
⊢ Ne spune o droaie/ sumedenie de minciuni.
CL-1st.p,pl.Dat. say a lot DE lie-pl.
'He/ She tells us heaps of lies.'

(40) a. Este incredibil de proasta. →
Is-3rd.p,sg. incredibly DE stupid-fem.
'She is incredibly stupid.'
→ Este cam proasta.
Is-3rd.p,sg. sorta stupid-fem.
'She is sorta stupid.
b. Este cam proasta. ⊢
Is-3rd.p,sg. sorta stupid-fem.
'She is sorta stupid.
⊣ Este incredibil de proasta. →
Is-3rd.p,sg. incredibly DE stupid-fem.
'She is incredibly stupid.'

3.5. Experimental data

Experiment 1:

Preliminary aims: to verify if native speakers of Romanian recognize the items/ expressions we used as PPIs.

Design of the survey:

- 108 sentences, 54 assertive contexts and 54 negative contexts (all the items that were tested in assertive contexts, were also tested in negative contexts)
- 17 assertive sentences contained attenuating PPIs, 37 assertive sentences contained emphatic PPIs
- Randomized (order of sentences)
- Original sources (books or the internet) for all the 108 sentences

Group:

- 100 native speakers of Romanian – 50 students of English philology (Faculty of Foreign Languages and Literatures, University of Bucharest) and 50 other native speakers (friends, family)
- Age: 19-70 (mean age – 20 – the 50 students of English philology; mean age – 40 – the 50 other native speakers)
- Sex: male – female (ratio app. 50/ 50)

Procedure:

- Instructions provided on the questionnaire (Mark Yes or No, if the sentences seem correct or not in Romanian)

Examples:

(41)

a. ***Olecuta:*** Sînt olecuţă tristă, e ultima zi şi a
Am-1st.p,sg little sad is-3rd.p,sg. last day and have-3rd.p.sg.
inceput să plouă la Viena.
Start-past.part. SA rain in Vienna.
(http://webcache.googleusercontent.com/search?q=cache:4slrSpuM6sJ:danoaca.wordpress.com/2009/09/04/olecuta-si-gata/+olecuta&cd=16&hl=ro&ct=clnk&gl=ro)
'I am a little sad, it is the last day and it started raining in Vienna.'

b. ***Nitica:*** Dani Coman: "George Copos sa mai aiba nitica rabdare!"
Dani Coman: "George Copos SA still have-3rd.p.sg. a bit patience!"
(www.9am.ro/.../dani-coman-george-copos-sa-mai-aiba-nitica-rabdare.html)
'Dani Coman: "George Copos should have a little bit of patience.'

c. Sfatul meu este sa fii **putintel** mai atent si
Advice-the my-Dat. is-3rd.p.sg. SA be a bit more attentive and

sa nu te grabesti.
SA not CL-2nd.p,sg.Acc. hurry-2nd.p,sg.
(http://www.fotonud.ro/forum/showthread.php?tid=948)
'My advice is to be a bit more attentive and no to hurry.'

d. ***Cat ai clipi***: […]vreau sa dispari **cat**
want-1st.p.sg SA disappear how many/much
ai clipi […]
would-2nd.p,sg blink
(http://webcache.googleusercontent.com/search?q=cache:U54MTfpFhLsJ:www.versuri.ro/versuri/eeggkm_arssura%2Bdoar%2Bo%2Bzdreanta.html+cat+ai+clipi&cd=21&hl=ro&ct=clnk&gl=ro)
'I want you to disappear in a jiffy/ in the twinkling of an eye'

e. ***Cat te-oi freca la ochi:***
O sa te paraseasca cat te-
Will-3rd.p,sg. CL-2nd.p, sg, Acc. leave how much/many CL-2nd.p,sg.Acc
oi freca la ochi.
will-2nd.p,sg. rub at eye-pl.
'He will leave you in a flash.'

f. ***Cand mi-oi vedea ceafa***: O să faceți dumneavoastră turism
will-2nd.p.pl make you-politeness pron tourism
pe litoral **când mi- oi vedea ceafa**
on seaside-the when CL-1st.p.sg.Dat will-1st.p.sg see nape
fără oglindă...
without mirror
(http://74.125.93.132/search?q=cache:P7ewVI2tPdMJ:ceafa.dictionarweb.com/+cand+mi-oi+vedea+ceafa&cd=5&hl=ro&ct=clnk&gl=ro)
'You'll promote tourism at the seaside when hell freezes over.'

Results:

- 72% of the participants consider example (41a) grammatical and 28% judged it as ungrammatical. The same item, 'olecuta', was tested in the negative context: '***Nu*** intrerup ***olecuta*** seria anecdotelor (posibil autentice) pentru a relata o fraza citita in dimineata asta.', (I am **not** interrupting a little the series of possibly authentic jokes to tell you about a comment I read this morning.) and 91% of the participants consider this sentence ungrammatical and 9% judged it as grammatical.
- 74% of the participants consider example (41b) geammatical and 26% judged it as ungrammatical. The same item, 'nitica', was tested in the negative context: '***Nu*** iti trebuie ***nitica*** inteligenta pentru a coace o prajitura.' (You don't need a shred of intelligence to bake a cake), and 80% of the participants consider this sentence ungrammatical and 20% judged it as grammatical.
- (41c) was tested in its negative form: 'Sfatul meu este sa ***nu*** fii ***putintel*** mai atent si sa nu te grabesti.', and 97% of the participants consider this sentence ungrammatical and 3% judged it as grammatical. The same item, 'putintel', was tested in the following assertive context: 'Iata un fel … putintel mai scump […]' (This is a type of meal … a bit expensive […]), and 77% of the participants consider this sentence grammatical and 23% judged it as ungrammatical.
- The AdvP 'cat ai clipi' (in the twinkling of an eye) was tested in the following assertive context: 'Ma ajuta cat ai clipi' (He'll help me in the twinkling of an eye), and 80% of the participants consider the sentence grammatical and 20% judged it as ungrammatical. The same item was tested in the negative context: '***Nu*** ma ajuta ***cat ai clipi'*** (*He won't help me in a jiffy), and 83% of the participants consider this sentence grammatical and 17% judged it as ungrammatical.
- The AdvP 'cat te-oi freca la ochi' was tested in the following assertive context: 'Vei intelege problema cat te-oi freca la ochi' (You'll understand this problem in a jiffy), and 42% of the participants consider the sentence grammatical and 58% judged it as ungrammatical. The same item was tested in the negative context: '***Nu*** vei termina lucrarea ***cat te-oi freca la ochi***', (You won't finish the paper in a jiffy) and 73% of the participants consider this sentence ungrammatical and 27% judged it as grammatical.
- The idiomatic expression 'cand mi-oi vedea ceafa' in (41f) (when hell freezes over) was tested in the following assertive context: 'O sa te mai ajut cand mi-oi vedea ceafa' (I'll help you when hell freezes over), and 83% of the participants consider this sentence grammatical and 17% judged it as ungrammatical. The same expression was tested in the following negative context: '***Nu*** o sa te primesc inapoi ***cand mi-oi vedea ceafa'*** (*I won't allow you back in my life when hell freezes over), and 98% of the participants consider this sentence ungrammatical and 2% judged it as grammatical.

Prediction: Valid – native speakers of Romanian attested the fact that the expressions/ items used in the examples qualify as PPIs.

Problem: Some of the percentages obtained for examples similar to (38d, e) – where we tested the occurrence of items/ expressions similar to 'in a jiffy/ in the twinkling of an eye' – were lower than we would have liked them to be.
→ Possible explanation:

- Some PPIs can appear in the scope of clausemate negation if focused.
- Since expressions like 'in a jiffy/ before you can say Jack Robinson' denote minimal spans, but still produce an emphatic effect, some of our participants might have interpreted them as NPIs, which would be understandable since minimal quantity + emphatic effect looks like a diagnosis for NPIs.[7]

Experiment 2:

Preliminary aims: to verify if native speakers of Romanian confirm the hypothesis that PPIs are scale preserving, allowing inferences from high values to low values.

Design of the survey:

- 24 pairs of sentences, 12 pairs allowing inferences from high values to low values and 12 pairs not allowing inferences from low values to high values
- Randomized (order of sentences)

Group:

- 76 native speakers of Romanian – 30 students of English philology (Faculty of Foreign Languages and Literatures, University of Bucharest) and 46 other native speakers (friends, family)
- Age: 19-70 (mean age – 20 – the 50 students of English philology; mean age – 40 – the 50 other native speakers)
- Sex: male – female (ratio app. 50/ 50)

Procedure:

- Instructions provided on the questionnaire (Mark Yes or No, if the item/ expression used in the first sentence allows inferences to the second sentence)

Examples:
(42)

a. Are oleaca de/ nitica rabdare cu acesti copii. →
Has-3rd.p.sg. little DE/ little patience with these children.
'He/ She has a little bit of patience in dealing with these children.'
→ Are o gramada de rabdare cu acesti copii.
Has-3rd.p,sg. a pile/ heap of patience with these children.
'He/ She has lots/ tons of patience in dealing with these children.

b. Rezolva integrale cat ai clipi. →
Solve-3rd.p.sg integral-pl how many/ much
'She solves integrals in the twinkling of an eye.'
→ Rezolva integrale destul de repede.
Solve-3rd.p.sg integral-pl enough DE fast
'She solves integrals pretty fast.'

Results:

- For example (42a) 18% of the participants believe that it is possible to allow inferences from the low value 'oleaca/ nitica' (a bit) to the high value 'gramada' (lots/ tons) and 82% of the participants believe that it is not possible to allow such an inference.
- For example (42b) 84% of the participants believe that it is possible to allow inferences from the emphatic PPI 'cat ai clipi' (in the twinkling of an eye) to the low value 'destul' (pretty) and 16% of the participants believe that it is not possible to allow such an inference.

Problem: Some of the percentages obtained were lower than we would have liked them to be.
→ Possible explanation: Some of the participants might not have understood the task they were presented with, thus we have designed a new type of test which aims at verifying the same hypothesis, whether PPIs are scale preservers, allowing inferences from high value to low values and the new format presents participants

[7] Nevertheless, items/ expressions similar to 'in a jiffy/ in the twinkling of an eye/ before you can say Jack Robinson' qualify as emphatic PPIs, actually inverted PPIs and the role such forms play within the structure of a scalar model will be the subject of a future paper.

'If-type' vignettes with multiple choice interpretations of the vignette. So far, the results look more promising, but complete data and interpretation of these results will be presented in a future paper.

4. Conclusions:

- This paper argued that lexical PPIs in Romanian are scalar operators, specified for two scalar semantic features, quantitative value and informative value, whose lexical semantic-pragmatic content make them sensitive to scalar inferences.
- The inferences relevant to polarity licensing do not depend on semantic entailment alone; they seem to depend on a general ability for scalar reasoning.
- Polarity items are governed by the same sort of inferencing which determines the rhetoric of scalar emphasis and the interpretation of superlatives, and this inferencing is essentially pragmatic.
- The SM departs from the DE theory because it defines licensing environments in terms of the pragmatic interpretation of sentences in context, and not in terms of the truth-conditional semantics of scopal operators (cf. Ladusaw, 1979). The benefit of the Scalar Model of Polarity is that, by contrast with the DE account, it can account for:
  - Licensing in environments which are not, strictly speaking, downward entailing
  - Failure of licensing in environments which are incontrovertibly downward entailing.

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