



PAC Workshop 2012
The Phonology of Contemporary English: Variation and Change
Toulouse, France, March 2012

Multicategorical Prefixed Words Stress Behaviour: Variation and Frequency

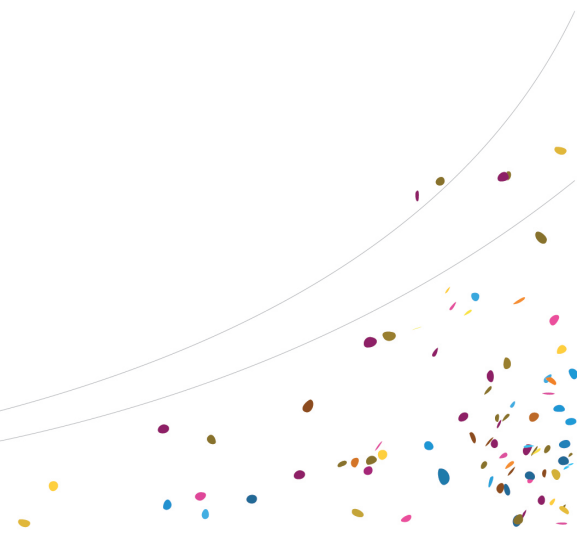
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(UMR 7270)



Outline

- 1- From PAC 2010 to PAC 2012
- 2- Establishing our corpus of disyllabic verb/noun prefixed pairs
- 3- Data reliability: the COCAE
- 4- Variation
- 5- The frequency of use hypothesis





1.1 – PAC 2010 - the *LLL* DDB project: the ‘category’ hypothesis disproved

Stress in disyllabic verbs: 2549 words

	UK				US				AU	
	EPD		LPD		EPD		LPD		MCQ	
/1-1/	1 187	46,57%	1 193	46,80%	1 236	48,49%	1 226	48,10%	1 212	47,55%
/-1/	1 362	53,43%	1 356	53,20%	1 313	51,51%	1 323	51,90%	1 337	52,45%



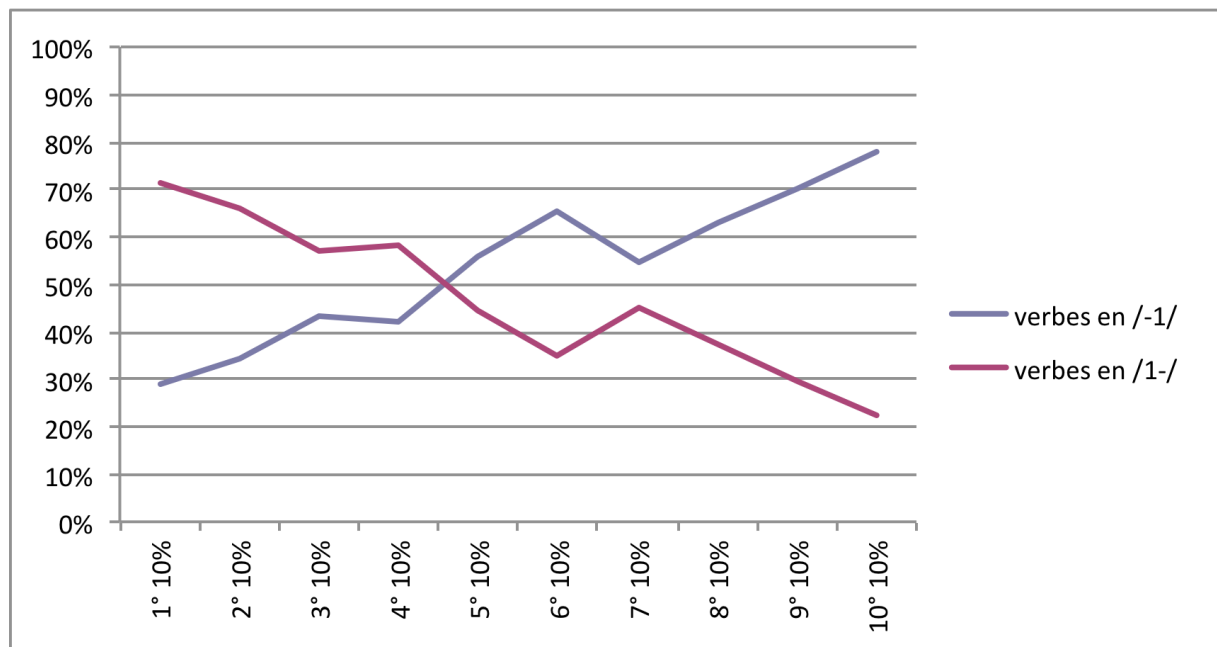
1.2 – The ‘morphology’ hypothesis

	/1-/		/-1/		Total
	nbr	%	nbr	%	
Suffixed	177	73,75%	63	26,25%	240
<i>derivatives</i>	79	95,18%	4	4,82%	83
<i>not derived</i>	98	62,42%	59	37,58%	157
Compounds	245	84,78%	44	15,22%	289
Prefixed	92	7,29%	1170	92,71%	1262
Bases	673	88,79%	85	11,21%	758
Total	1187	46,57%	1362	53,43%	2549

1.3 – Stress patterns and COCAE frequency



Freq.	/-1/	/1-/	total	/-1/	/1-/	COCA min	COCA max
1° 10%	73	181	254	29%	71%	0	0
2° 10%	87	168	255	34%	66%	0	3
3° 10%	110	145	255	43%	57%	3	35
4° 10%	107	148	255	42%	58%	35	133
5° 10%	142	113	255	56%	44%	134	345
6° 10%	166	89	255	65%	35%	346	700
7° 10%	140	115	255	55%	45%	701	1 357
8° 10%	160	95	255	63%	37%	1 358	2 921
9° 10%	179	76	255	70%	30%	2 928	9 557
10° 10%	198	57	255	78%	22%	9 563	269 749





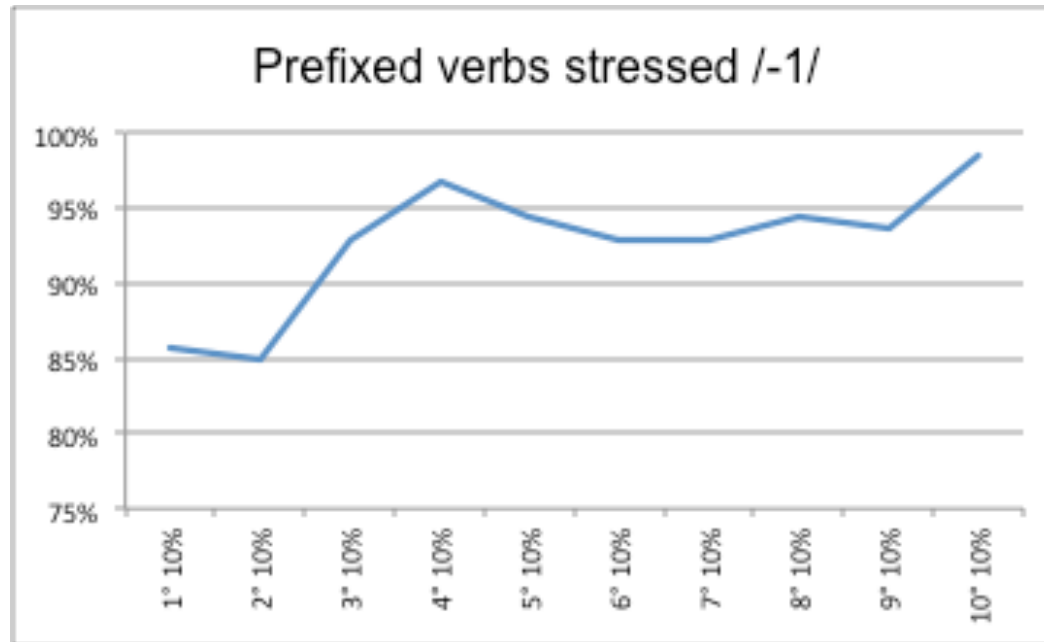
1.4 – Prefixation and COCAE frequency

Freq.	pref.	non-pref.	total	pref.	non-pref.	COCA min	COCA max
1° 10%	46	208	254	18%	82%	0	0
2° 10%	67	188	255	26%	74%	0	3
3° 10%	104	151	255	41%	59%	3	35
4° 10%	90	165	255	35%	65%	35	133
5° 10%	129	126	255	51%	49%	134	345
6° 10%	147	108	255	58%	42%	346	700
7° 10%	140	115	255	55%	45%	701	1 357
8° 10%	156	99	255	61%	39%	1 358	2 921
9° 10%	180	75	255	71%	29%	2 928	9 557
10° 10%	203	52	255	80%	20%	9 563	269 749





1.5 – Prefixed verbs stress and frequency





1.6 – PAC 2012

1- Prefixed Verb/Noun pairs

- A characteristic not taken into account in PAC 2010
 - An intriguing stress behaviour — three types:
 - Verbal: V /01/ and N /01/ e.g. *control* ± 60 %
 - Alternating: V /01/ and N /10/ e.g. *record* ± 30 %
 - Nominal: V /10/ and N /10/ e.g. *access* ± 10 %
- no definite account of their distribution

- ### 2- Variation: :
- LPD and EPD
 - interdialectal (BrE, USE, AusE)
 - intradialectal

- ### 3- Does relative frequency of use affect stress type?



2.1 – Corpus

First extraction < *LLL* database (PAC 2010): 1262 prefixed disyllabic verbs

→ Data cleaning:

- ✓ Errors in the original corpus: *debit* and *equal* not (historically) prefixed
- ✓ V or N obsolete: 2 words (*attire* (V), *exhale* (V))
- ✓ Semantic discrepancy between V and N: 15 cases
console, defect, desert, entrance, exhaust, exploit, forward, incense, intern, object, relay, resolve, resort, restrain, resume

→ Methodology choices:

- ✓ COCAE frequency of V or N inferior to 0.5 per 1 million : 1019 cases
- ✓ Mixed frequencies : 10 cases
(V) *abstract, compact, contract, discount, express*; (N) *content, present, second*

⇒ Final corpus : 216 disyllabic prefixed verb/noun pairs



2.2 – COCAE limits



1– Linguistic validity of COCAE frequencies?

2– Tagging errors: first 25 occurrences of *exhale* tagged as a noun...

responsible option. CHILD: I do not think he likes **the (INAUDIBLE) exhale**. CHILD: Sometimes we just wait until they just die of old age. CHILD
the nearby physician's lightning-quick evaluation of his outrageous lung capacity, Malone proceeded to **exhale** directly into the teeth of the wind. The hurricane that was blowing down the
Julia feels sane. Safe. She can finally breathe, can finally let herself **exhale** without fear that the ax is going to fall and destroy what's left of
you couldn't scratch?" He heard Thorne suck in a deep breath then **exhale** like he'd been breathing water. " Sure. Every night of my life
workouts become more effective when lifting weights. When picking up a weight, always **exhale**. Use fear What keeps me on track is the fear of being laughed at
FOUR SEASONS SPA, Lorna Cordoza. 561-533-3715, **25;8709;TOOLONG. New Face Facial, \$180 **EXHALE SPA AT THE OMPHOY OCEAN RESORT**, JoLynn Richie. 561-585-8116, exhalespa.com. Lift Facial
room and the day's stress just melts away: They call it **the " exhale " moment**. If only you could feel the same way in your own bedroom
clutter will certainly mean less cleaning. So follow these tips -- and prepare to **exhale**. DESIGNER DO'S 1 Hold Up Sconces (\$110, Lamps Plus) save
and Don Pietro covers the eyes of Pina's son. The German machine guns **exhale**, dropping Pina in the middle of the road. The audience senses that something
n't entirely his idea because of the drug's influence. I watched Barbara calmly **exhale** acrid smoke. " Did you love your father? " She crushed her cigarette
first summer at sleepaway camp. Ruby croons, one high strangled note with **each exhale**. When she was younger, I worried that she had asthma. She sleeps
minute or so, he opened his eyes, took a deep breath and **long exhale**. He felt good again, back in the moment. Robles raised the middle
but you can control the way that you breathe. Inhale on a four-count and **exhale** on a four-count. Match the rate for both. Control can save your life
Silvko was glad the weather was dry. He could collapse in the grass, **exhale**, and calmly close his eyes, roll about a bit. Why was that
trying to act nonchalant. Finally, after a long pause, I heard Jill **exhale** quickly in a halfhearted attempt at laughter, but it came out awkwardly and sounded
my time dropped by fifteen seconds in six weeks. Plus, I liked to **exhale** loudly while doing the exercises, like I was actually doing some lat pull-downs.
back. Bring your shoulder blades closer together as you slide your head back. **Exhale**, round your back, bring your chin to your chest, and let your
the air, parallel to the ground, and take five to 10 breaths. **Exhale**, straighten your legs (keeping your knees slightly bent), and fold at
a toll on ancient floors, and the water vapor and carbon dioxide the visitors **exhale** may hasten the paintings' decay. Two years ago, an Indian photographer,
the Hortons finally sold their Atlanta residence, making Charleston their home. " We **exhale** when we walk inside the house, " says Ozey. " It's my
. It even travels through plants. Here's a surprise: Every time you **exhale**, you send water into the air. Water's endless journey from Earth to
... kick off your heels, lay down the cares of your day, and **exhale** -- even if that's only for one solitary, shoeless moment. Dear GH
rise about an inch each time you inhale and fall about an inch when you **exhale**. MULTISYSTEM Close your eyes. Imagine that each inhale washes relaxation into your body
Close your eyes. Imagine that each inhale washes relaxation into your body and **each exhale** carries tension away. To reinforce the effect, as you inhale say (to
(to yourself), " Breathing in peace and calm " and as you **exhale** say, " Breathing out tension and anxiety. " FACE OF GH Martha Stewart

2.3 – Prefixed verb/noun pairs: final corpus



abuse	avail	converse	disdain	exchange	misuse	recall	replay	support
accent	award	convert	disguise	excise	offend	recap	reply	surface
access	believe	convict	disgust	excuse	offer	receive	report	surprise
acclaim	bypass	debate	dislike	exile	outfit	recharge	reprint	surround
accord	co-star	decay	dismay	exit	outlaw	recoil	reprise	survey
account	collapse	deceive	dispatch	expand	outline	record	reproach	suspect
addict	combat	decline	display	expend	output	recount	request	suspend
address	combine	decrease	dispute	export	outreach	recruit	rerun	transfer
advance	comfort	decreed	dissent	extend	permit	redress	rescue	transplant
advise	command	default	distance	extract	portend	refill	research	transport
affect	comment	defeat	distress	forecast	preface	reform	reserve	traverse
alarm	complain	defend	distrust	foresee	preheat	refrain	resource	trespass
alert	compost	delay	divide	impact	premise	refund	respect	update
ally	compound	delight	divorce	implant	preserve	refuse	respond	upgrade
annex	concern	deluge	download	import	preview	regard	result	uplift
appeal	conduct	demand	eclipse	incline	process	regret	retort	upset
applaud	confine	descend	effect	increase	produce	reject	retreat	
approach	conflict	design	elect	index	profile	relapse	return	
array	consent	desire	embrace	input	progress	release	reverse	
arrest	constrain	despair	envy	insert	project	relieve	review	
ascend	construct	detail	escape	insult	protest	remain	revolt	
assault	contact	devise	escort	intend	purchase	remake	reward	
assist	contest	digest	esteem	intrigue	rebel	remark	subject	
attack	contrast	discard	exceed	mistake	rebound	repeal	summon	
attempt	control	discharge	excerpt	mistrust	rebuke	repeat	supply	

2.4 – Stress types distribution



		Verb	Alt.	Noun
EPD	GB	54,17%	31,48%	14,35%
	US	51,85%	32,41%	15,74%
LPD	GB	54,17%	30,56%	15,28%
	US	53,24%	30,56%	16,20%
MCQ		55,09%	29,17%	15,74%

3.1 – Variation between EPD and LPD: British English



	EPD GB	EPD GB Var	LPD GB	LPD GB Var
Verbs				
co-star	01		10	
premise	01	10	10	01

→ No differences for the stress pattern of nouns.

3.1 – Variation between EPD and LPD: British English



Secondary stress

	EPD GB and US	EPD GB and US Var	LPD GB and US	LPD GB and US Var
	Verbs			
rebound?	(2)1		01	
upset?	(2)1		01	

3.1 – Variation between EPD and LPD: American English



	EPD US	EPD US Var	LPD US	LPD US Var
Verb				
accent	01		10	01
rebound	10	(2)1	01	
Nouns				
address	10	01	01	10
recall	10		01	10
redress	10		01	10
research	10	01	01	10
resource	10	01	01	

	EPD US	EPD US Var	LPD US	LPD US Var	EPD US	EPD US Var	LPD US	LPD US Var
Verb					Noun			
detail	01	10	10	01	01	10	10	01

3.1 – Variation between EPD and LPD: American English



Secondary stress

	EPD GB and US	EPD GB and US Var	LPD GB and US	LPD GB and US Var
	Verbs			
transplant	01		21	
upset?	(2)1		01	

3.2 – Variation between varieties: GB = AUS ≠ US



	British English				American English				Australian English	
	EPD GB	EPD GB Var	LPD GB	LPD GB Var	EPD US	EPD US Var	LPD US	LPD US Var	MCQ	MCQ Var
	Verbs									
resource	01	10	01	10	10	01	10		01	10
download	21	10	21	10	10		10		01	
combat	10	01	10	(2)1	01	10	01	10	10	01

3.2 – Variation between varieties: GB = US ≠ AUS



	British English				American English				Australian English	
	EPD GB	EPD GB Var	LPD GB	LPD GB Var	EPD US	EPD US Var	LPD US	LPD US Var	MCQ	MCQ Var
	Verb									
annex	01		01		01		01		10	01
	Nouns									
intrigue	10	21	10	01	10	21	10	01	01	10
recoil	10	01	10	01	10	01	10	01	01	10
recharge	10		10		10		10		01	
traverse	10	01	10	01	10	01	10	01	01	10

3.2 – Variation between varieties: GB ≠ US = AUS



	British English				American English				Australian English	
	EPD GB	EPD GB Var	LPD GB	LPD GB Var	EPD US	EPD US Var	LPD US	LPD US Var	MCQ	MCQ Var
	Noun									
download	21	10	21	10	10		10		10	

3.3 – Variation within varieties



Dictionary		Total
EPD	GB	20,83%
	US	17,12%
LPD	GB	30,09%
	US	25,11%
MCQ		11,41%

3.3 – Variation within varieties: verbal type



		Total	Variant for the verb	Variant for the noun	Variant for both	Variation
EPD	GB	117	0	7 (5,98%)	2 (1,71%)	9 (7,69%)
	US	112	0	2 (1,79%)	2 (1,79%)	4 (3,57%)
LPD	GB	117	0	8 (6,84%)	3 (2,56%)	11 (9,40%)
	US	115	0	8 (6,96%)	1 (0,87%)	9 (7,83%)
MCQ		119	0	7 (5,88%)	3 (2,52%)	10 (8,40%)

3.3 – Variation within varieties: nominal type



		Total	Variant for the verb	Variant for the noun	Variant for both	Variation
EPD	GB	31	5 (16,13%)	0	1 (3,33%)	6 (19,35%)
	US	34	1 (2,94%)	0	1 (2,94%)	2 (5,88%)
LPD	GB	33	6 (18,18%)	0	2 (6,06%)	8 (24,24%)
	US	35	4 (11,43%)	0	2 (5,71%)	6 (17,14%)
MCQ		34	3 (8,82%)	0	0	3 (8,82%)

3.3 – Variation within varieties: alternating type



		Total	Variant for the verb	Variant for the noun	Variant for both	Variation
EPD	GB	68	8 (11,76%)	9 (13,24%)	5 (7,35%)	22 (32,35%)
	US	70	13 (18,57%)	7 (10,00%)	4 (5,71%)	24 (34,29%)
LPD	GB	66	15 (22,73%)	10 (15,15%)	8 (12,12%)	33 (50,00%)
	US	66	16 (24,24%)	11 (16,67%)	5 (7,58%)	32 (48,48%)
MCQ		62	5 (8,06%)	4 (6,45%)	0	9 (14,52%)

3.3 – Variation within varieties: summary

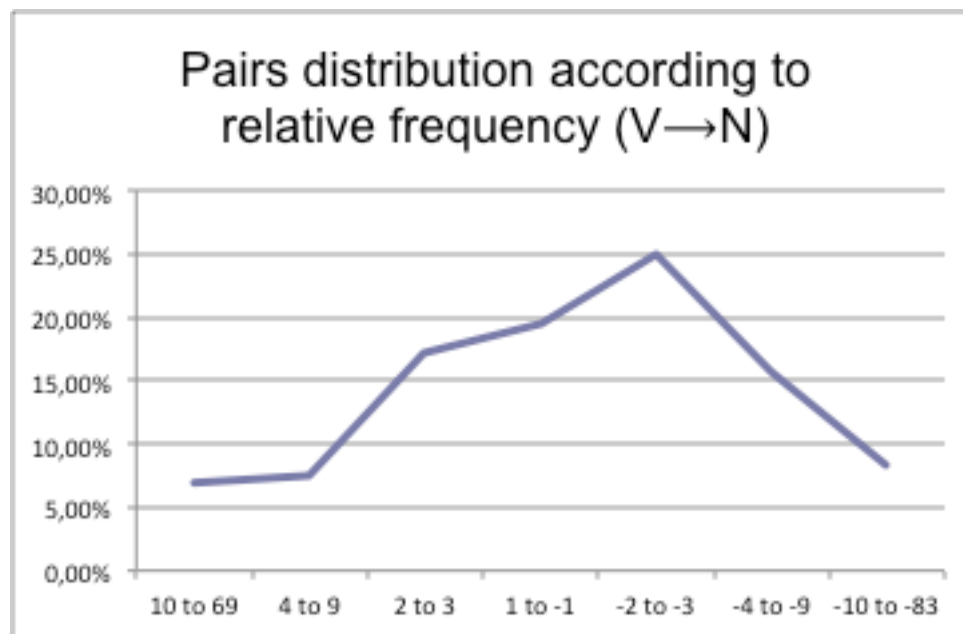


		Verb	Noun	Alt
EPD	GB	7,69%	19,35%	32,35%
	US	3,57%	5,88%	34,29%
LPD	GB	9,40%	24,24%	50,00%
	US	7,83%	17,14%	48,48%
MCQ		8,40%	8,82%	14,52%

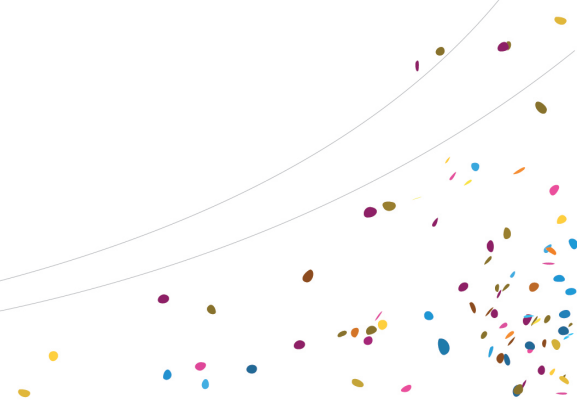
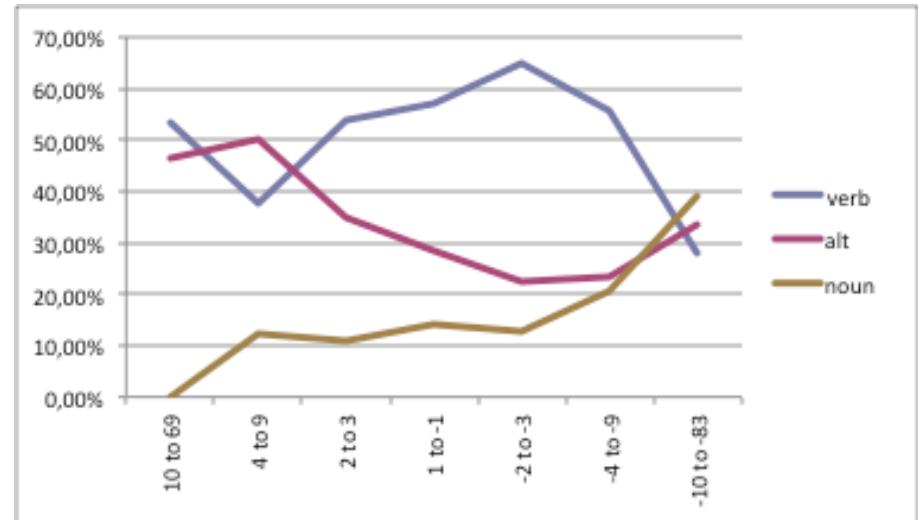
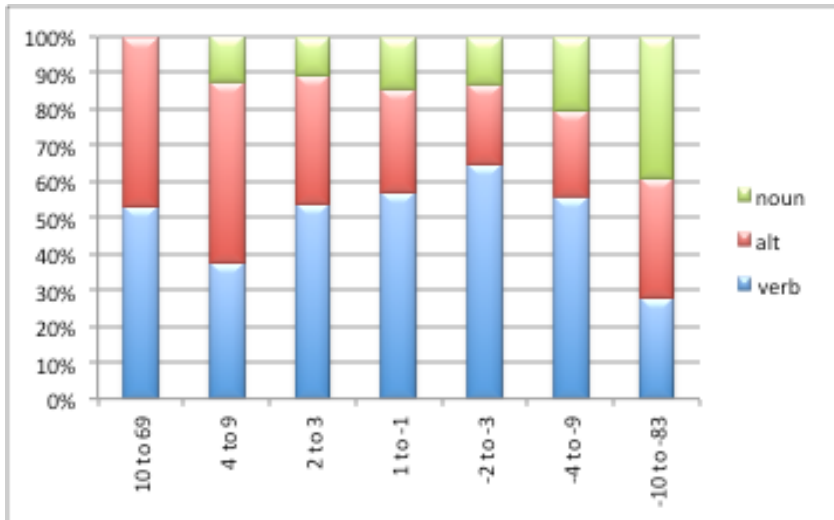


4.1 – The frequency hypothesis

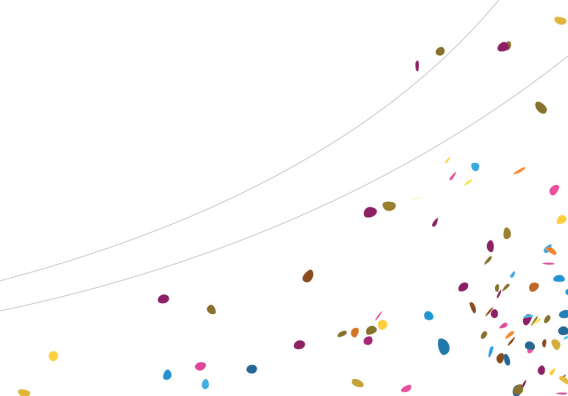
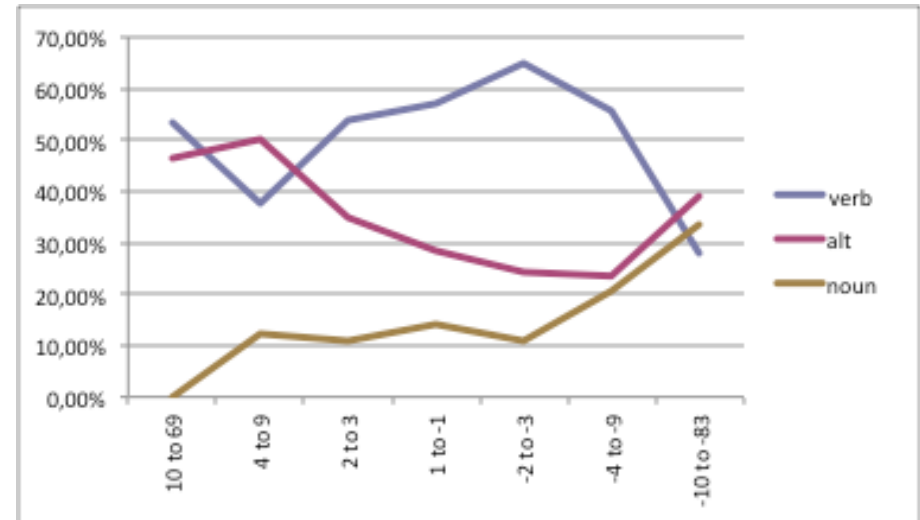
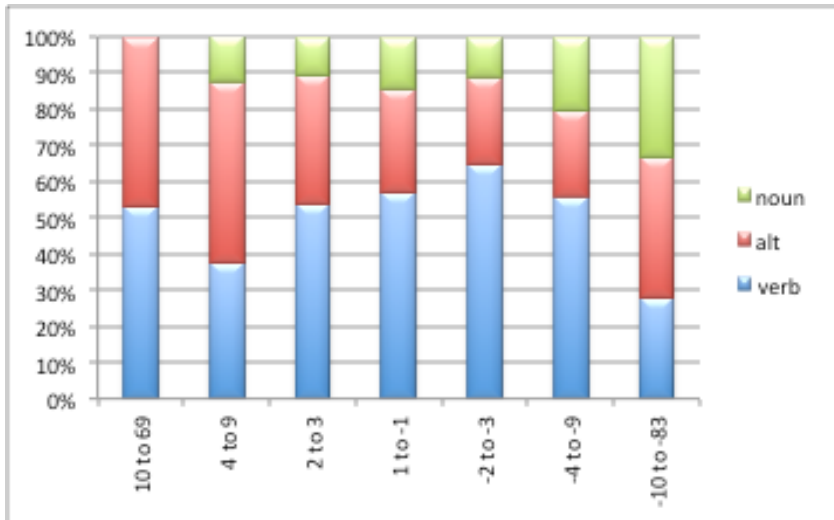
Hypothesis: Verb to Noun relative frequency affects stress type



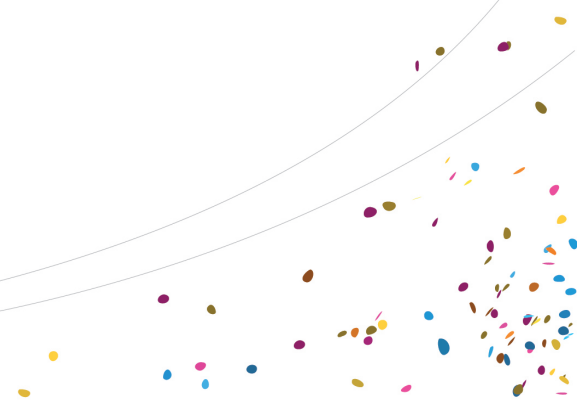
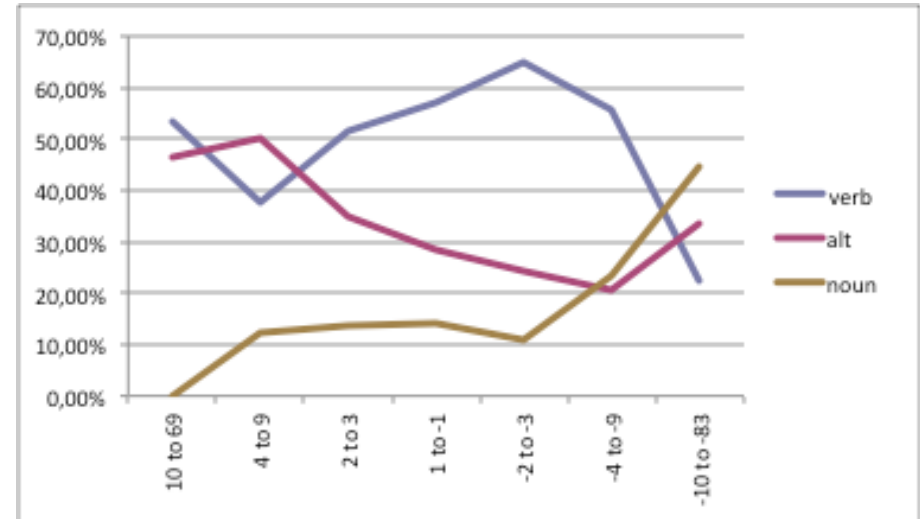
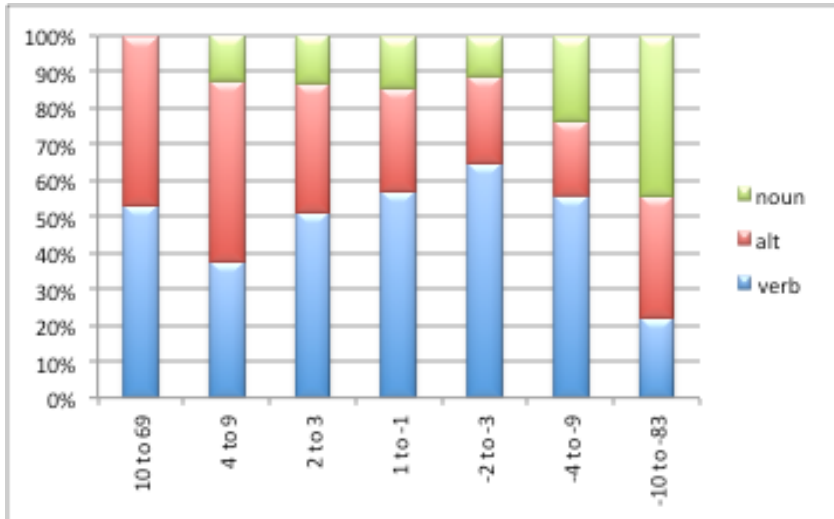
4.2 – Types & frequency: LPD GB



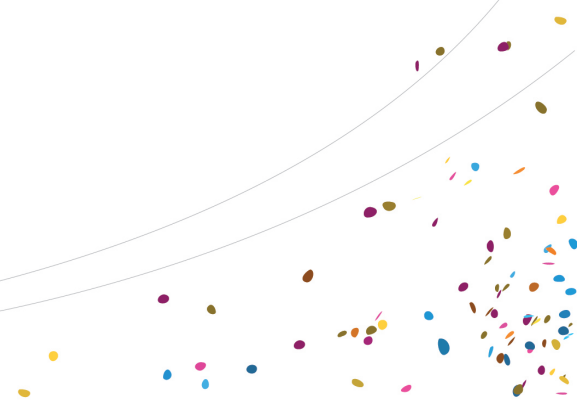
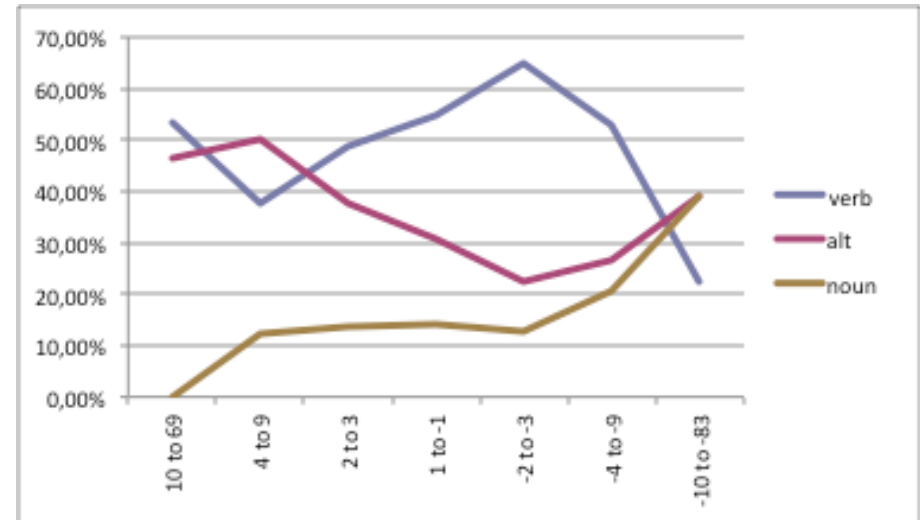
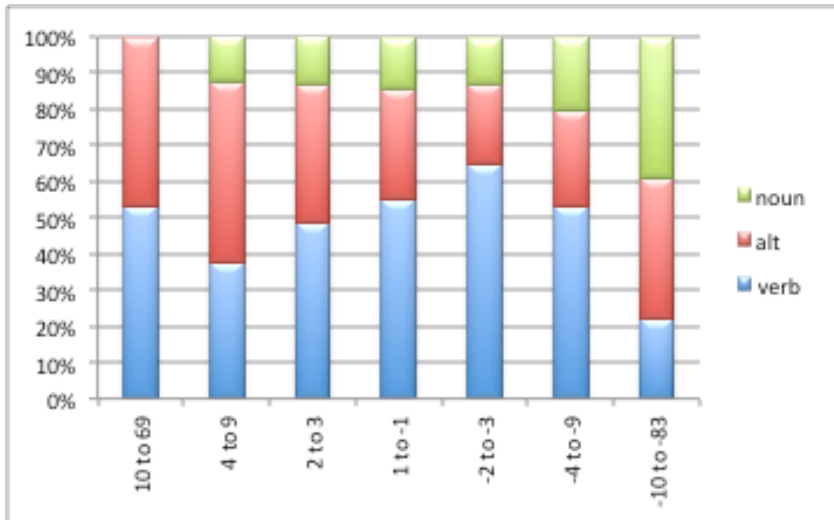
4.3 – Types & frequency: EPD GB



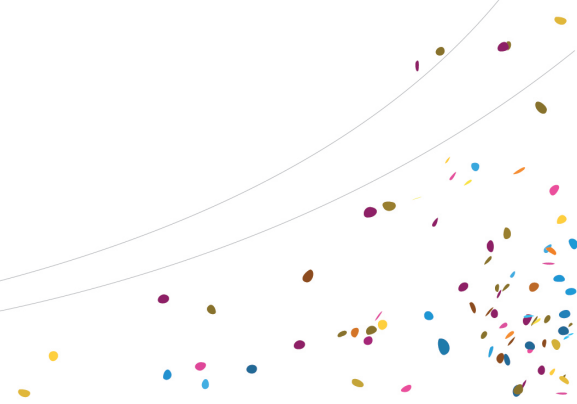
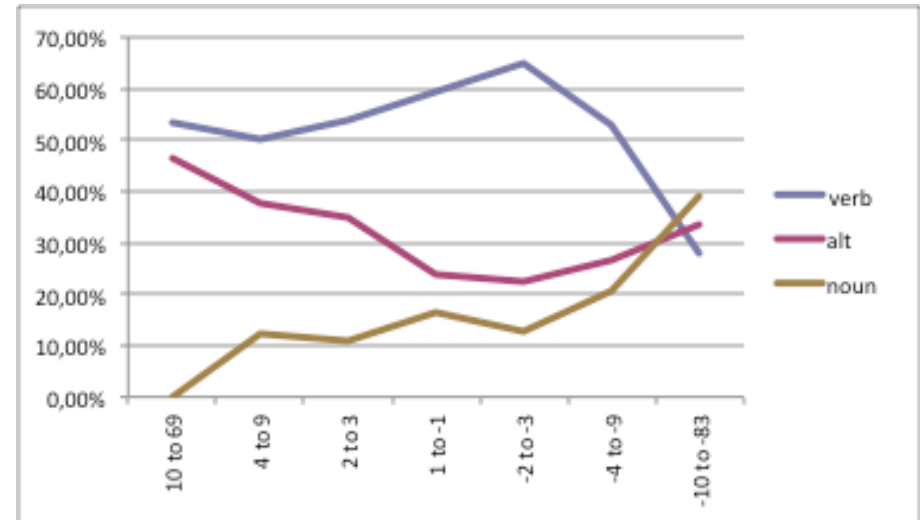
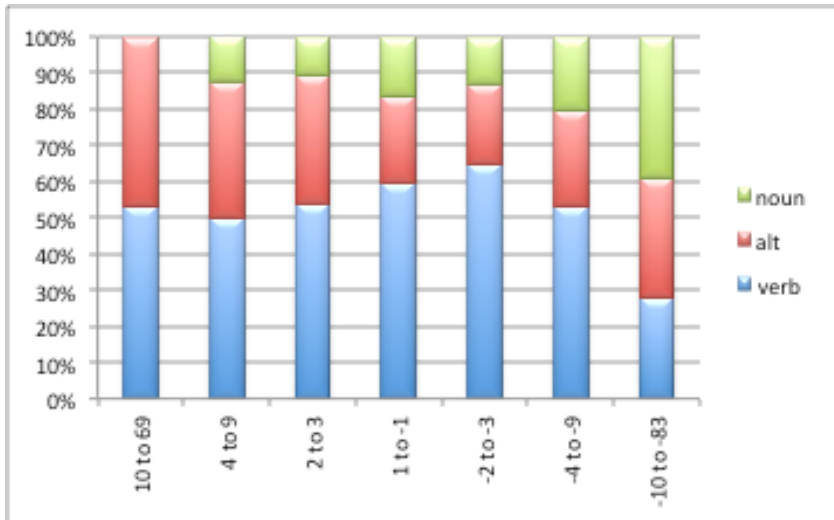
4.4 – Types & frequency: LPD US



4.5 – Types & frequency: EPD US



4.6 – Types & frequency: MCQ AUS

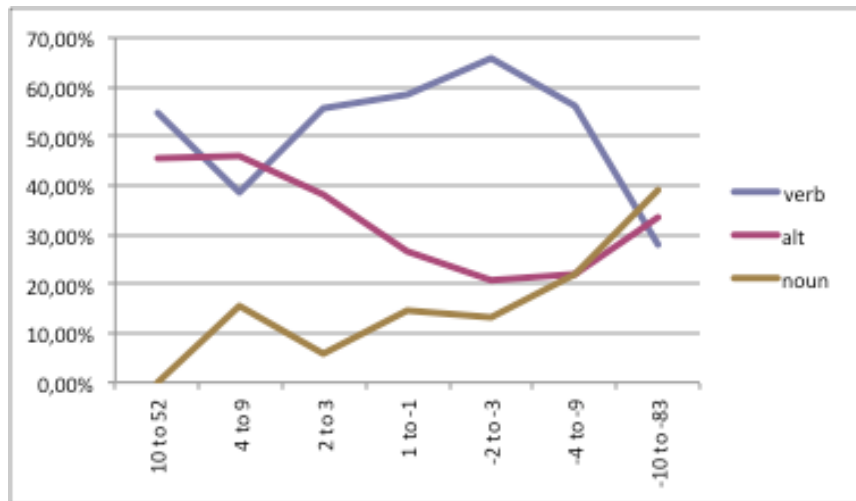




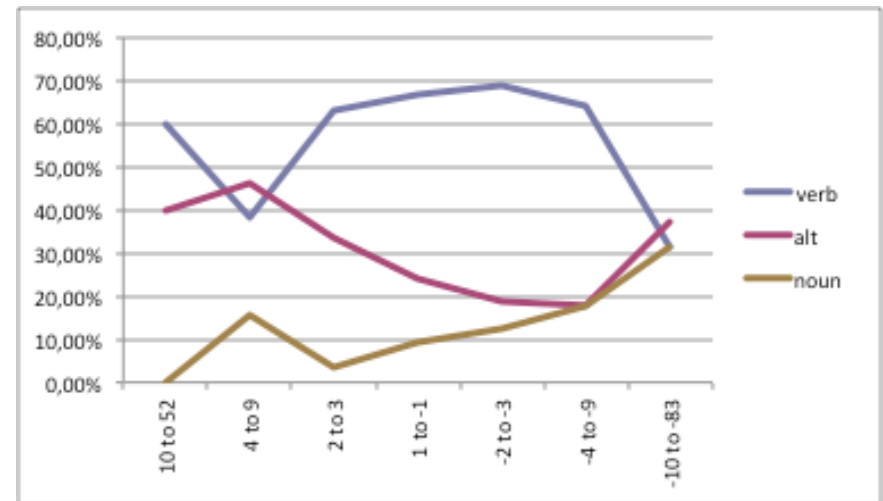
4.7 – Specific structures bias?

- 14 Adv/pref: *bypass, download, forecast, foresee, input, outfit, outlaw, outline, output, outreach, update, upgrade, uplift, upset*
- 16 separable: *co-star, discharge, dislike, distrust, mistrust, misuse, preheat, preview, recharge, recount, refill, refund, remake, replay, reprint, rerun*

LPD GB: original corpus



LPD GB: cleared corpus



4.8 – Stress types distribution revised



		Verb	Alt.	Noun
LPD GB	original	54,17%	30,56%	15,28%
	cleared	59,68%	27,42%	12,90%

Conclusion



- 1- Once cleared, our corpus confirms the distribution between types
- 2- EPD and LPD are rarely contradictory
- 3- **Interdialectal** stress variation is marginal
(confirmed: PAC 2010, M. Martin 2011)
- 4- **Intradialectal** variation is:
 - highest with the alternating type → suggests it is not stable
 - lowest with the verb type → confirms its strength
 - (MCQ differs: AUS particularity or MCQ 'limits'?)
- 5a- The frequency hypothesis is *not* confirmed, at least not as such
- 5b- The unexpected behaviour of the alternating type might be linked to its instability



Thank You

