20th Manchester Phonology Meeting

Stress in Prefixed Disyllabic Verb/Noun Pairs

V. Abasq, Q. Dabouis, E. Descloux, J.-M. Fournier, P. Fournier, I. Girard, M. Martin, S. Vanhoutte

Laboratoire Ligérien de Linguistique (UMR 7270), Université de Tours

Aims

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 %

but no definite account of their distribution.

The aim of this poster is to test out the role of frequency and vowel quality (full *versus* reduced).

Context / previous study: verbs stress behaviour

	/1–/		/–1/		Total
	nbr	%	nbr	%	
Suffixed	177	74%	63	26%	**240**
Compounds	245	85%	44	15%	**289**
Prefixed	92	7%	1170	93%	**1262**
Roots	673	89%	85	11%	**758**
Total	**1187**	**47%**	**1362**	**53%**	**2549**

- prefixed verbs are mainly in /-1/ (93%)
- non prefixed verbs are mainly in /1-/ (85%)

Morphological structure is indeed the key factor of stress assignment

Source corpus: LLL Database

LLL Database of the pronunciation of lexical units in Southern British English, General American English and Australian English, based on three reference dictionaries:

- *Longman Pronunciation Dictionary*
- *Cambridge English Pronouncing Dictionary*
- *Macquarie Dictionary*

For each entry, it contains its spelling, its pronunciations and stress patterns in the three varieties (including variants), its category/ies, its morphology, its meaning, its lexical status, and etymology information.

Verb/Noun pairs corpus

✓ Historically prefixed pairs
✓ COCAE frequency of Verb and Noun superior to 0.5 per 1 million
✓ Removal of unclear and/or heterogeneous cases:
  ✓ Mixed frequencies (homonyms): *abstract, second…*
  ✓ Semantically separable structures: *dislike, reprint…*
  ✓ Mixed category status of the first element: *bypass, download…*

⇒ Final corpus : 186 disyllabic prefixed verb/noun pairs

Variation

		Verbal	Alternating	Nominal
EPD	GB	60 %	28 %	12 %
	US	58 %	30 %	13 %
LPD	GB	60 %	27 %	13 %
	US	59 %	27 %	13 %
MCQ	AUS	61 %	26 %	13 %

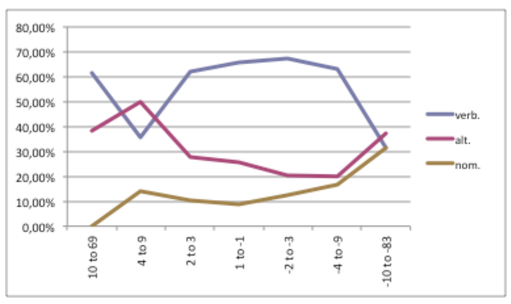
EPD and LPD consistency:
- GB: 1 difference only, *premise* v. (reversed variants)
- US: 3 verbs, *accent, detail, rebound*
  6 nouns, *address, detail, recall, redress, research, resource*
  (mostly reversed variants)

Intervariety uniformity:
- 2 verbs specific to US: *combat, resource*
- 1 verb, *annex,* and 3 nouns, *intrigue, recoil, traverse,* specific to AUS

Frequency

Hypothesis: does stress type depend on relative frequency?

- The relative share of the nominal type increases as relative noun frequency increases, which seems to confirm the hypothesis
- However, the verbal type distribution contradicts this first impression: except when noun relative frequency is high, the share of the verbal type does not vary according to verb relative frequency
- The alternating type curve does not confirm the hypothesis either, but is also quite intriguing: why would nouns, failing to force their pattern onto relatively more frequent verbs, would at the same time develop a growing resistance to stress shift? We have no suggestion so far.

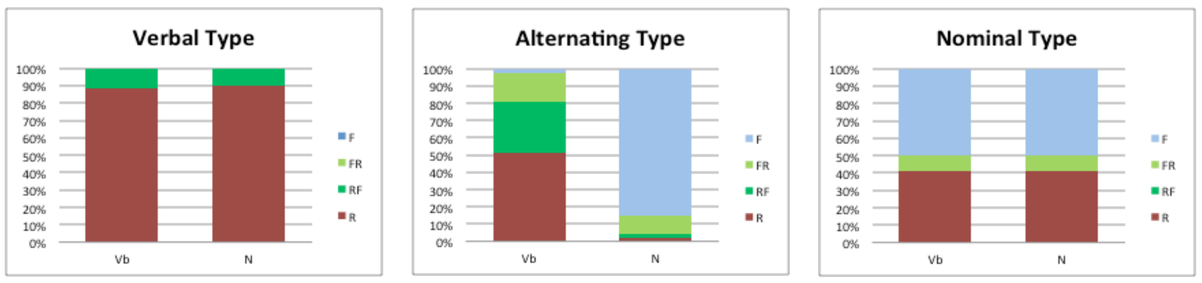


Distribution of stress types according to relative frequency (verb to noun)

Vowel quality and stress assignment

Vowel quality and stress type

Hypothesis: does a full vowel in the unstressed syllable imply an alternating type?



F: full vowel only – FR: full vowel, reduced variant – RF: reduced vowel, full variant – R: reduced vowel only

- Alternating Type: the nouns seem to confirm the hypothesis; close to 100% have a full vowel in their unstressed syllable (85% with a full vowel only + 11% with a full vowel as first pronunciation).
- BUT the verbs disprove the hypothesis: only 50% have a full vowel, of which 30% as a secondary variant only
- This is confirmed by the nominal type: although 50% of the words have a full vowel only, this does not entail an alternating type.

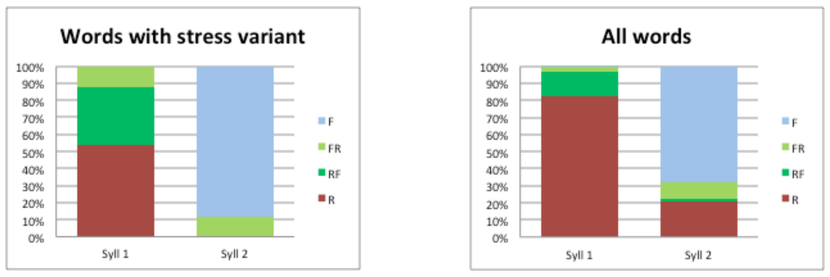
Then, is the difference of full vowels proportion due to the difference of category: nouns would favour full unstressed vowels, and verbs reduced unstressed vowels?
The answer is no again: when both the noun and the verb have the same stress pattern (verbal and nominal stress types), their behaviour is strictly identical.

What the graphs show is actually a difference between the first and the second syllable: indeed the verbal type and verbs in the alternating type are stressed on their second syllable, while the nominal type and nouns in the alternating type are stressed on their first syllable. It seems to us that this difference is probably due to the morphological opposition between prefixes and roots.

** For both these studies, words where [ɪ] can stand either for a full or a reduced vowel have been neutralized: 24 verbs and 19 nouns*

Vowel quality and stress variants

Hypothesis: does a full vowel in the unstressed syllable imply the existence of a stress variant?



Here again, while the second syllable seems to support the idea, the first syllable disproves it: 87% of the words with a stress variant in /10/ have a reduced vowel as main pronunciation, more than 50% of which as only pronunciation.
The difference between 1st and 2nd syllable has nothing to do with stress variants as confirms the "All words" graph, but with the difference between prefixes and roots, as observed above.

Further observations

If the quality of the vowel does not determine stress behaviour in both these cases, we observe a similarity that calls for an explanation: the proportion of full vowels, whether as only pronunciation or as a variant, is higher in the alternating type than in the nominal and verbal types, and is also higher when there exists a stress variant than in the whole corpus.

It seems to us that, if the quality of the vowels is not a determining factor for stress, the reverse effect is what accounts for the phenomenon: the existence of a stressed counterpart favours the preservation of a full vowel in unstressed position.

LLL work on verbs stress

(2010) 'The Case of Word Stress Assignment in Disyllabic Verbs', PAC Workshop: *Structure, Variation, Usage and Corpora*, Université Paul Valéry – Montpellier III.

(2010) 'Lexical stress variation : Key Disyllable Classes in Australian English', *The Annual Conference of Australian Linguistic Society,* Université du Queensland, Brisbane.

(2011) 'A Dictionary Database of Contemporary English: When the Tool Meets the Needs, the Particular Case of Word Stress Assignment in Disyllabic Verbs', 19th Manchester Phonology Meeting.

(2012) 'Multicategorial Prefixed Words Stress Behaviour: Variation and Frequency', PAC Workshop: *The Phonology of Contemporary English: Variation and Change*, Université Toulouse – Le Mirail.

References

Jones, D., (2006), *Cambridge English Pronouncing Dictionary*, 17th edition, edited by P. Roach, J. Setter & J. Hartman, Cambridge: CUP.

Macquarie Dictionary, (2005), 4th edition, Sydney: Macquarie Dictionary Publishers Pty Ltd.

Wells, J.C., (2008), *Pronunciation Dictionary*, 3rd edition, London: Longman.

Corpus Of Contemporary American English, Mark Davies: http://www.americancorpus.org.