

Fowler & Housum (1987)

(1) Main points (based on 5 experiments)

- a) 'Old' words are shortened in monologues
- b) Old words are more difficult to identify than new words in isolation, but not in context
- c) Reduction can be caused by repetition and by contextual support, when it does not sacrifice communicative efficacy

(2) Literature review

- a) Acoustic saliency
 - i) negatively related to inferable information: more salient words are less predictable from the context (Lieberman, Bolinger)
 - ii) may include increased duration but also the contrast between high and low pitch where high pitch is more salient
- b) Main hypothesis: do speakers vary acoustic saliency actively?
 - i) *SB: the contrast is not very clear, what they mean by choosing less articulatory effort (top of p. 2)?*

(3) Experiments, Methodology, Results

- a) Ex#1: production of new and given words
 - i) Material
 - 1st and 2nd occurrence of a word spontaneous speech
 - 35 pairs from prepared but spontaneous monologue of >18 minutes
 - 5 times 9 pairs from broadcast interviews
 - Advantage of spontaneous data: more natural
 - Disadvantage: duration, pitch, loudness used for purposes other than given-new. Also, context might not be always the same. *SB: speakers intentions might not be verified*
 - Given word: defined as already produced before, however back.
 - *SB: potentially problematic assumption of no re-set of discourse material*
 - ii) Measurements
 - word duration, mean pitch and loudness of the stressed vowel
 - check of objectivity
 - subset of the tokens measured by a naïve researcher and correlations were calculated. *SB: Why??*
 - iii) Results
 - Duration > loudness > pitch in cuing given-new distinction
 - *SB: do we need to go over the stats?*
 - Table, p. 6
 - About 1/3 of the pairs had a reverse pattern in duration
 - Longer words shorten more
 - The distance between the new and old words did not affect the shortening

- Topicality of the word: words important to the topic of the monologue were shortened less than less important words. This is not predicted by the main hypothesis!
 - *Angelica's question*
- b) Ex#2: perception of new and given words out of context
 - i) Material
 - 35 pairs of the 1st and 2nd occurrence of a word in the monologue
 - randomized, presented in 2 blocks
 - ii) Measurements
 - Accuracy
 - Identification task: write the word. Both raw accuracy as well as phonemes correct count gave the same results
 - Plus confidence rating on 1-5 scale
 - iii) Results
 - Old words receive lower accuracy
 - Table, p. 7
 - Ceiling effect: subject were very good even in the worst condition (old words in 1st Block)
 - The effect of practice was not confirmed within a single block
 - Errors that subjects made correlated with duration differences
- c) Ex#3: effect of context on the perception of new and given words (no sound)
 - i) Material
 - 2 versions of the monologue
 - presented as running text, asking to guess the target word/phrase
 - ii) Measurements
 - Accuracy
 - iii) Results
 - Old words receive higher accuracy
 - Significant only by subjects (13 of 14 had this effect) but not on items (due to floor effect: wrong guesses on more than 1/3 of items)
- d) Ex#4: can people hear the difference between old and new?
 - i) Material
 - Same as for Ex #2
 - But now identification of given/new w/o context
 - SB: Subject were told about acoustic attenuation of the old words, this makes it an acoustic discrimination task
 - ii) Measurements
 - Accuracy of given/new variable
 - iii) Results
 - Subject performed above the chance despite reporting great difficulty of the task
- e) Ex#5: is acoustic reduction of old words useful?
 - i) Material

- 14 critical trials of prime-target pairs, in 7 trials the prime was a new word, in 7 it was an old word. The targets was always a word in the vicinity of the 1st mention of the prime
- ii) Measurements
- Reaction time after the prime and the targets appeared, how long it takes them to find out if the word was mentioned before or not
 - Accuracy of the response
- iii) Results
- RT old words is faster than RT to new words (both primes and targets)
 - This shows that recall of discourse items is facilitated by acoustic attenuation of the old words

(4) Discussion

- a) Grammaticalization of shortening
- i) There are independent reasons for it, but it develops to be systematic and used by the hearer. This could be similar to F0 declination that might have developed to signal major syntactic boundaries.
- ii) *SB: I am not convinced that these two cases are parallel, in other words, that old-words shortening has physiological explanations like declination has...*
- iii) Bard et al (1991): the unintelligibility of words is translated into their power to reactivate related material.
- iv) Bortfelt & Morgan (ms.) found a 'w' pattern in infant-directed speech: accenting on 1st, 3rd, 5th repetition and de-accenting on 2nd and 4th.
Traditionally: new is accented and given is de-accented.

(5) Bard & Aylett

- a) Shortening of given words relates to their de-accenting. However, de-accenting is not universal, it seems to be facilitated by similarity of structures in which the words appear. B&A: is this structural similarity present in spontaneous speech?