

Examples of Experiments

Stress and flapping in American English

Some researchers say flaps occur syllable finally, others syllable initially

Hypothesis: flaps don't consistently appear in a particular syllable position

Test hypothesis: look for syllabification of words with medial /t/

BYU syllabification survey:

photon

___ FOW / TAHN

___ FOWT / AHN

___ I'm not sure

Possible influencing factors:

1 Allophone: The pronunciation of /t/ ([t^h], [ʔ], or [ɾ]).

2 Vowel Quality: Whether the vowel preceding /t/ is tense or lax.

3 Geminate: Whether /t/ is spelled with a geminate consonant or not.

4 Morpheme Boundary: If the word is monomorphemic, or if not, whether a morpheme boundary precedes or follows /t/.

5 Stress: Whether primary stress falls on the first syllable or not.

interaction factors by combining factors 1 and 2, 1 and 5, and 2 and 5

Logistic regression analysis

	VC.V	V.CV
Morpheme Boundary (x)		
VxCV (retake)	.438	.562
monomorphemic (attack)	.455	.545
VCxV (beaten)	.621	.379
Vowel Quality by Allophone		
tense + [t ^h]	.161	.839
lax + [t ^h]	.192	.808
tense + [ɾ]	.426	.574
tense + [ʔ]	.480	.520
lax + [ɾ]	.621	.379
lax + [ʔ]	.639	.361
Allophone	n.s.	n.s.
Vowel Quality	n.s.	n.s.
Stress	n.s.	n.s.
Geminate	n.s.	n.s.

Instructions for second experiment:

I'm going to say a word and I want you to repeat back to me what sounds to you like the first part of the word. For example, if I say *without* you might say *with*. If I say *redo* you might say *re*. So, for practice what is the first part of *heavy*? How about *attack*? There really is no correct or incorrect answer, just whatever sounds best to you. There are 63 words so it won't take long. Let's start.

Both first and last part of word elicited.

Vowel Quality by Consonant Type	VC.V	V.CV	Ambisyllabic	Neither Syllable
Lax + Obstruent	.726	.341	.678	.557
Lax + Sonorant	.877	.209	.737	.490
Lax + [r]	.664	.358	.550	.645
Tense + Obstruent	.094	.629	.428	.483
Tense + Sonorant	.410	.530	.533	.510
Tense + [t ^h]	.000*	.769	.245	.359
Tense + [r]	.311	.638	.364	.463