Words floating on the surface of sound change

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The Neogrammarian viewpoint

Every sound change, inasmuch as it occurs mechanically, takes place according to laws that admit no exception.
--Ostoff and Brugmann 1878

Sound-change is merely a change in the speakers' manner of producing phonemes and accordingly, affects a phoneme at every occurrence, regardless of the nature of any particular linguistic form in which the phoneme happens to occur. . . The whole assumption can be briefly put into the words: *phonemes change*. --Bloomfield 1933:353-4

Lexical diffusion

We hold that words change their pronunciations by discrete, perceptual increments (i.e., phonetically abrupt) but severally at a time (i.e., lexically gradual) --Wang and Chen 1977:150.

The lexically gradual view of sound change is incompatible, in principle, with the structuralist way of looking at sound change. --Chen and Wang 1957:257.

The resolution proposed in 1981

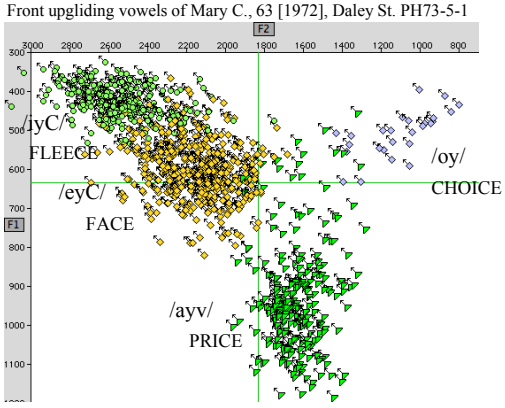
Regular sound change is the result of a gradual transformation of a single phonetic feature of a phoneme in a continuous phonetic space.

Lexical diffusion is the result of the abrupt substitution of one phoneme for another in words that contain that phoneme.

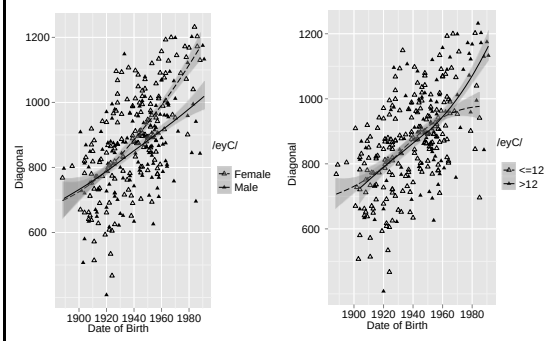
The combined effects of lexical diffusion and regular sound change

Regular sound change in Philadelphia

Front upgliding vowels of Mary C., 63 [1972], Daley St. PH73-5-1



Increasing height of /eyC/ in *made, pain,* etc. by Date of birth and by Sex and by Higher Education



Regression analysis of raising of /eyC/ along the front diagonal for Philadelphia Neighborhood Corpus [N=28,026]

PHONETIC	Coeff	prob
Fricative coda	-56	0.0001
Nasal coda	-129	0.0001
Velar cpda	-110	0.0001
Labial onset	70	0.0001
Nasal onset	-21	0.0054
Apica onsetl	89	0.0001
Pallatal onse	202	0.0001
Velar onset	334	0.0001
C/Liq onset	-90	0.0001
No onset	236	0.0001
Multisyllabic	19	0.0001
Coda cluster	39	0.0001

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SOCIAL	Coeff	prob
Date of birth	4	0.0001
Higher Ed	16	0.0001
Black	-21	0.0004
Female	29	0.0001
Italian	51	0.0001
Irish	40	0.0001

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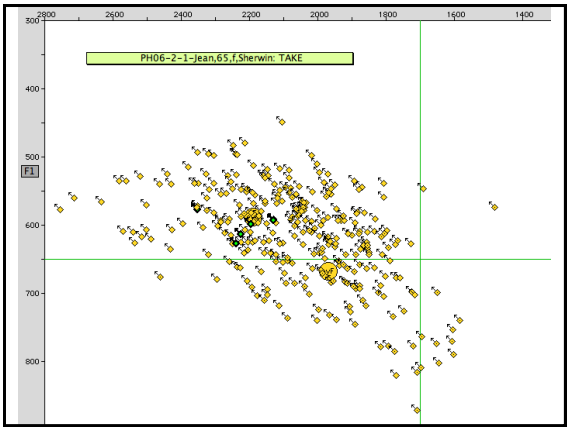
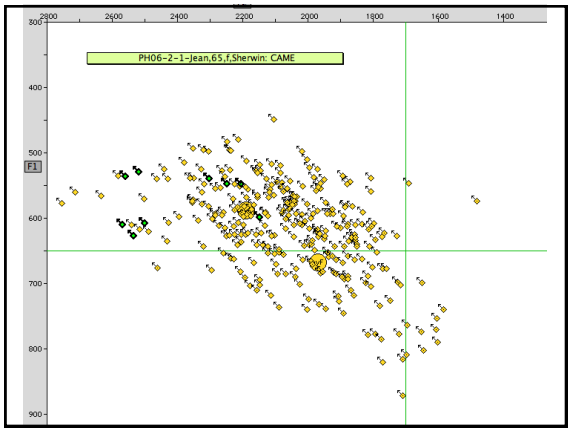
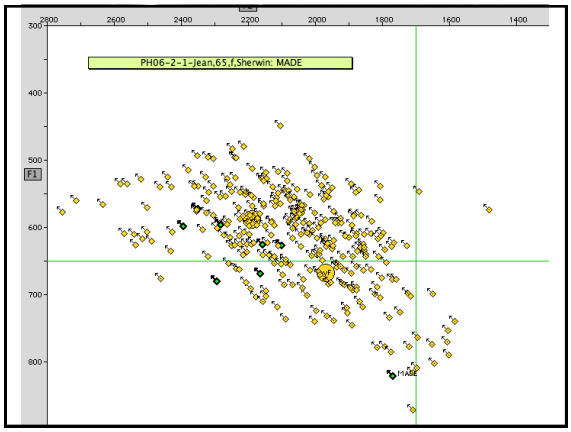
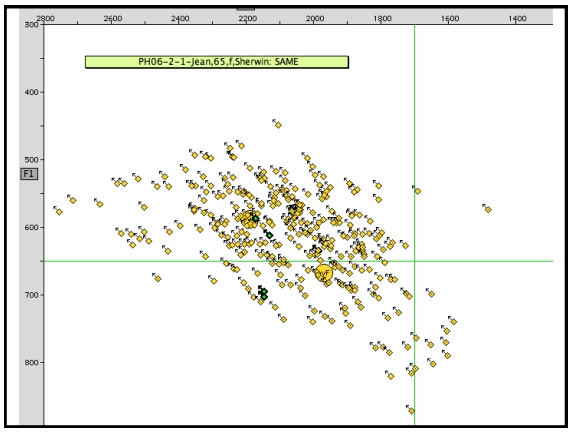
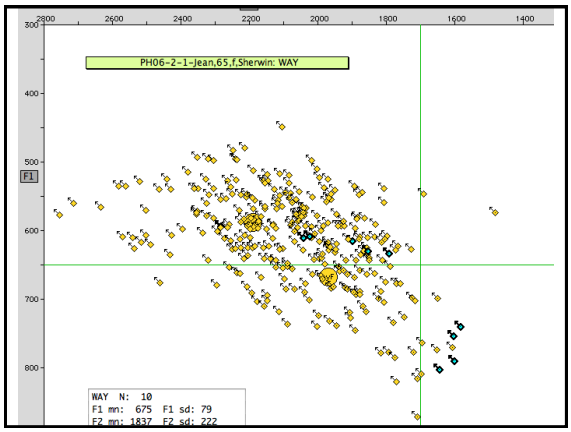
LEXICAL	Coeff	prob	N
Frequency	0.0003	0.7453	
DAY	68	0.0001	481
NAME	50	0.0002	825
TAKE	50	0.0001	1476
CAME	27	0.0149	1272
MAKE	15	0.2473	1311
STAY	11	0.5513	294
MAYBE	-18	0.1246	856
WAY	-42	0.1788	81
NBRHD	-67	0.0001	1069
SAME	-96	0.0001	929
PLAY	-128	0.0001	573





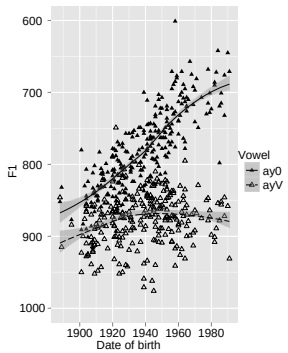






Lexical diffusion in Philadelphia

Raising of F1 of /ay0/ in *like, right, pipe,* etc. vs. stability of /ayV/ in *ride, mile my,* etc. by Date of Birth for white adults [N-298]



Lexical diffusion as the result of the developed opacity of Canadian raising

write [rɐɪt] ride [raɪd]
__[-voi] __ [+voi]
writer [rɐɪɾɚ] rider [raɪɾɚ]
__[+voi] __ [+voi]

⇓

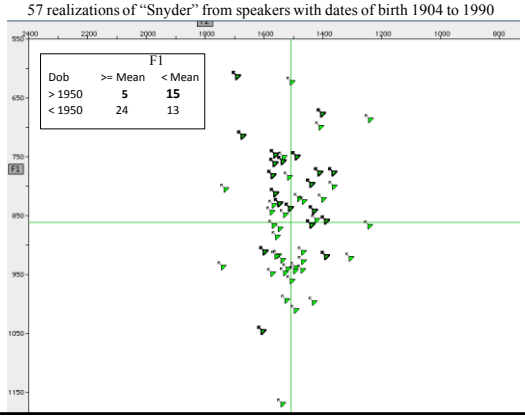
spider [spɐɪɾɚ]
Snyder [snɐɪɾɚ]
tiger [tɐɪgɚ]
tiny [tɐɪni]
. . . .

Regression analysis of /ay0/ in Philadelphia Neighborhood Corpus [N=74,215]

Variable	Coefficient	prob
Frequency	0.00	0.0001
Date of Birth	-0.32	0.0001
Black	26.21	0.0001
Hispanic	28.63	² 0.0001
Higher Ed	-10.63	² 0.0001
Female	3.49	² 0.0001
Coda		
Stop	-13.07	² 0.0001
Fric	-6.81	0.0009
Nasal	-17.57	² 0.0001
Labial	10.17	0.0008
Apical	8.65	² 0.0001

	Coefficient	prob
Onset		
Labial	-32.74	² 0.0001
Nasal	46.51	² 0.0001
Apical	-27.06	² 0.0001
Velar	13.50	² 0.0001
/w/	-14.13	² 0.0001
/y/	-79.31	² 0.0001
CVC(C)VC	13.53	² 0.0001
SPIDER [N=10]	-127.24	0.0001
SNYDER [N=15] (Dob > 1970)	-56.21	0.0404

57 realizations of "Snyder" from speakers with dates of birth 1904 to 1990

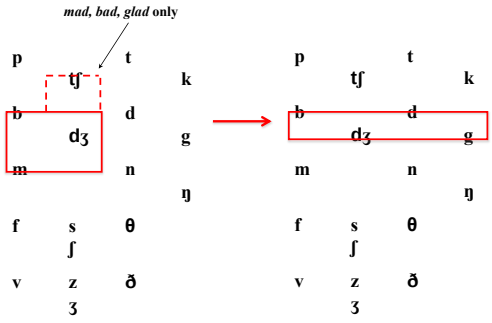


Some properties of a neogrammarian change: raising of tense /æh/ and the lexical rule of short-*a* tensing

	(æh)	**short-*a* tensing**
a) lexical diffusion found	no	yes
b) discrete	no	yes
c) phonetic differentiation	single feature	many features
d) phonetic conditioning	precise	rough
e) grammatical conditioning	no	yes
f) social affect	yes	no
g) categorically perceived	no	yes
h) learnable	yes	no

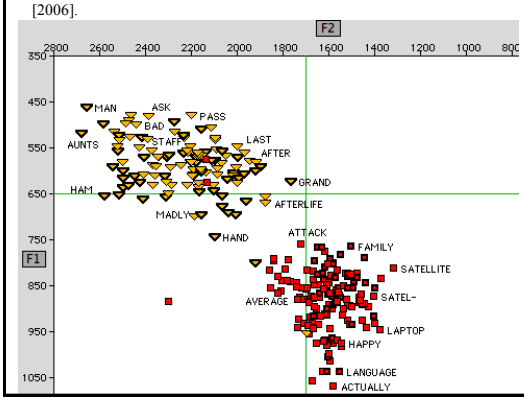
Social correction of Philadelphia phonology: from the split system to the nasal system

Following segments with tensing of short-a in Philadelphia

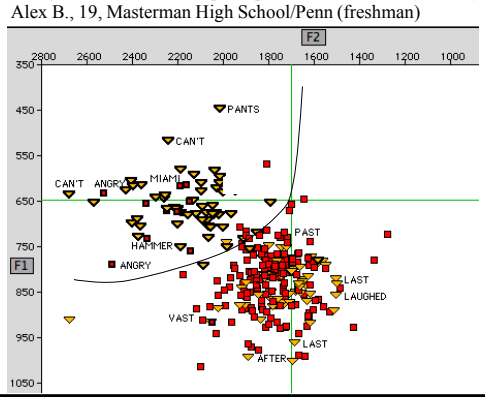


Some further conditions on the tensing of short-*a* in Philadelphia

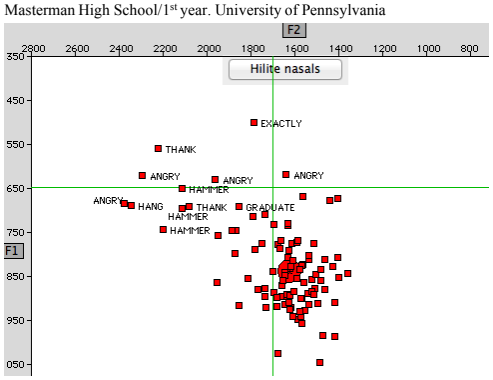
Tense/lax split of short-a in Philadelphia: system of Jean A., 60, Lock St. [2006].



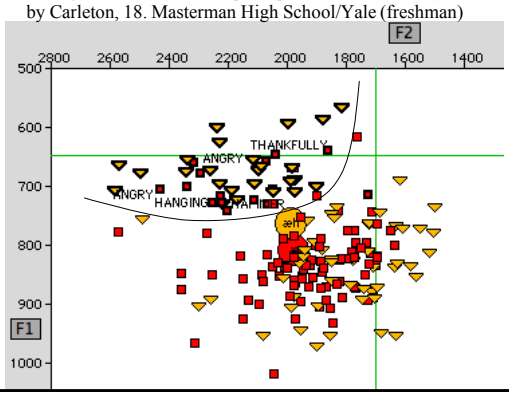
Reorganization of Philadelphia split short-a as nasal system by Alex B., 19, Masterman High School/Penn (freshman)



Tensing of short-a before velar nasals and intervocalic nasals by MacKenzie, Masterman High School/1st year. University of Pennsylvania



Re-organization of Philadelphia split short-a as nasal system by Carleton, 18. Masterman High School/Yale (freshman)



At the current stage of linguistics, we are likely to make more progress by broadening our data base and following the method of strong inference than by deduction from a ruling hypothesis (John R. Platt *Science* 146:347-353, 1964).

In order to discover when sound change is governed by regular phonological conditions and when by lexical selection we must take into account the significant findings that support both points of view.

Most recent findings show that speech communities can superimpose lexical effects on regular phonetic change or convert a lexically determined split into a regular allophonic opposition.