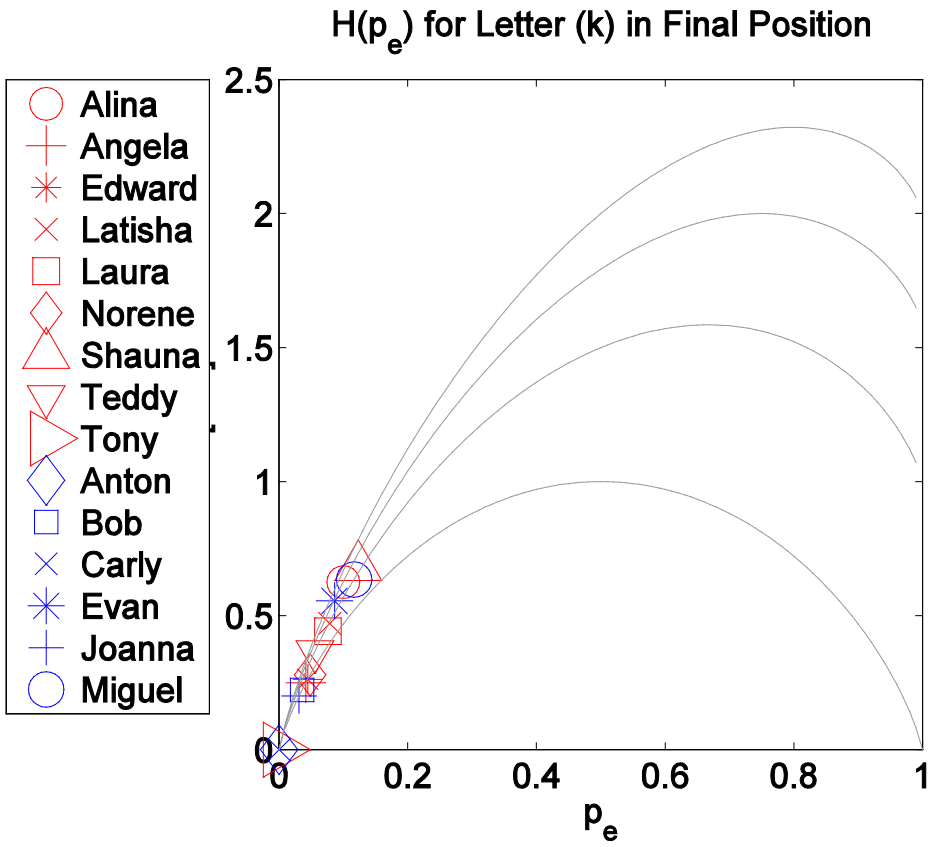
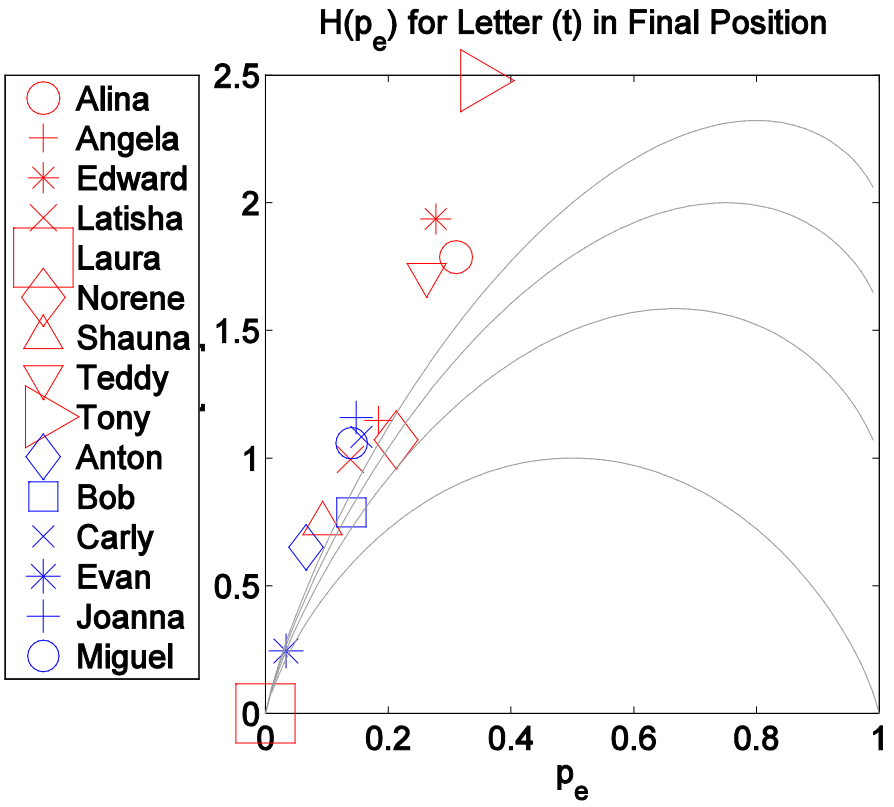
Jonathan Buie
Data Visualization of Confusion Matrices
All of the visuals will be made available to the group.  Currently focusing on the Consonants.
**STOPS Final Positon**

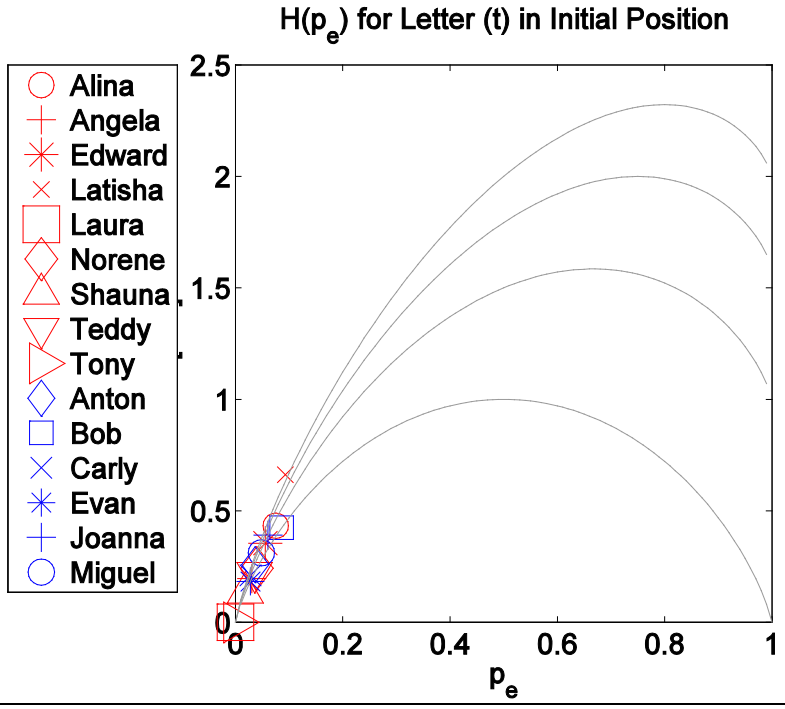



For the stops in final position we have many of the consonants with not much separation between groups….however,

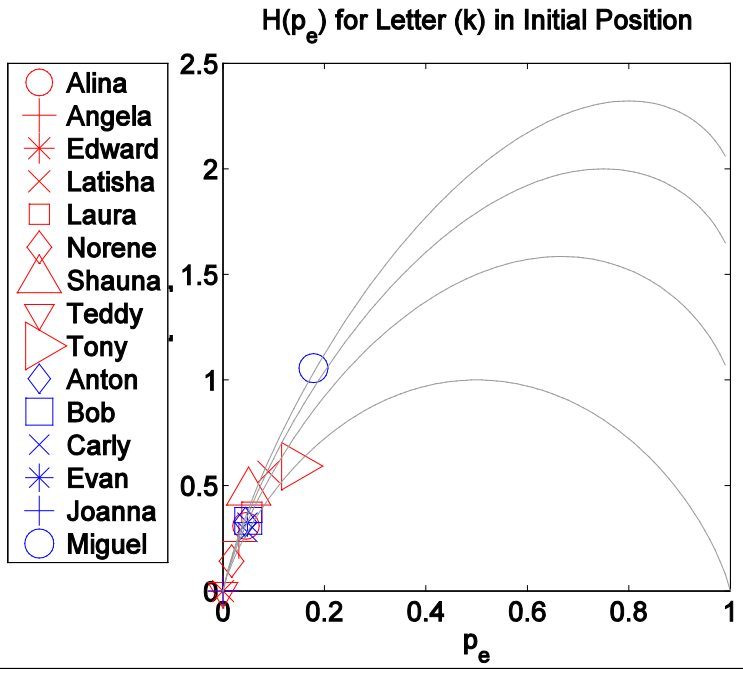



For 't' in final position there may be some information to gain from this. Very high entropy.

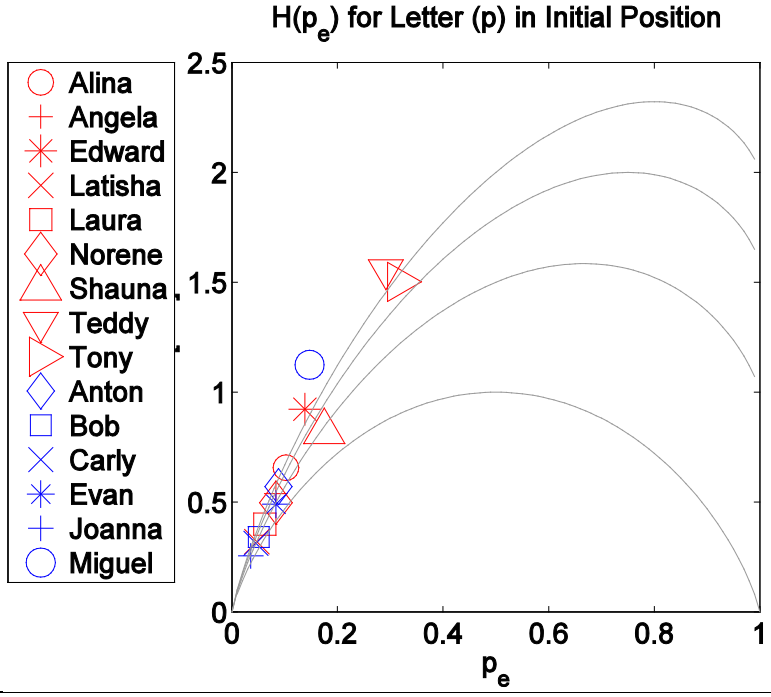
**Stops Initial Position**




In comparison, t in initial position has hardly any separation

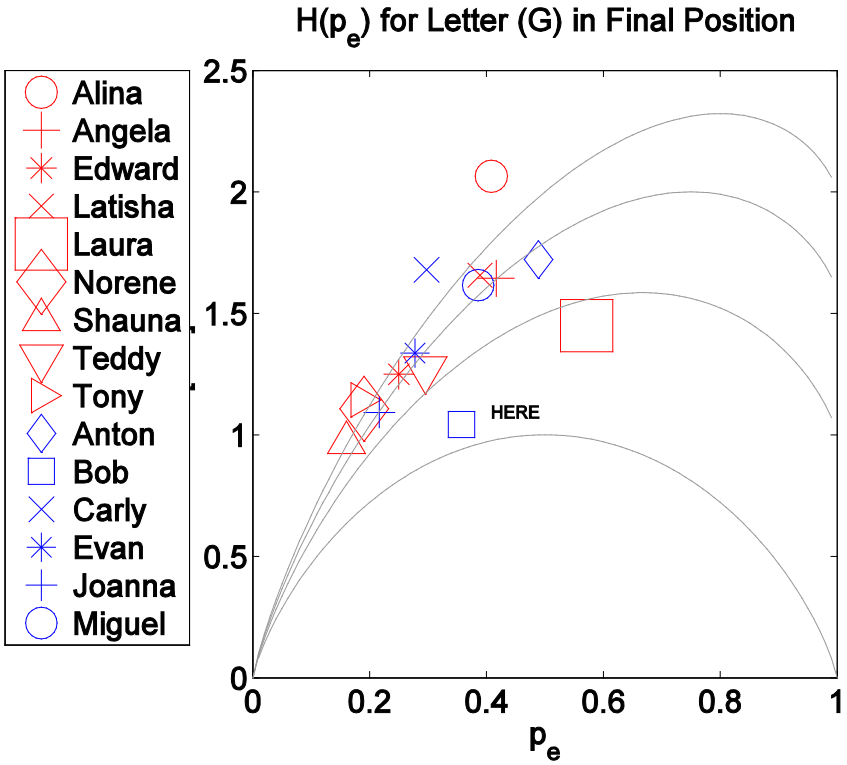



K has a similar result in initial and final positions

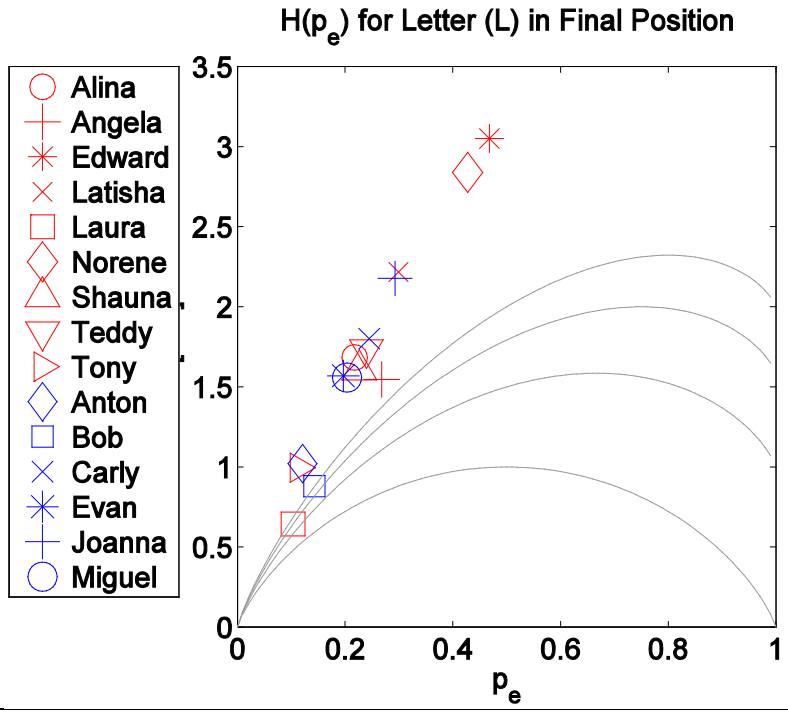


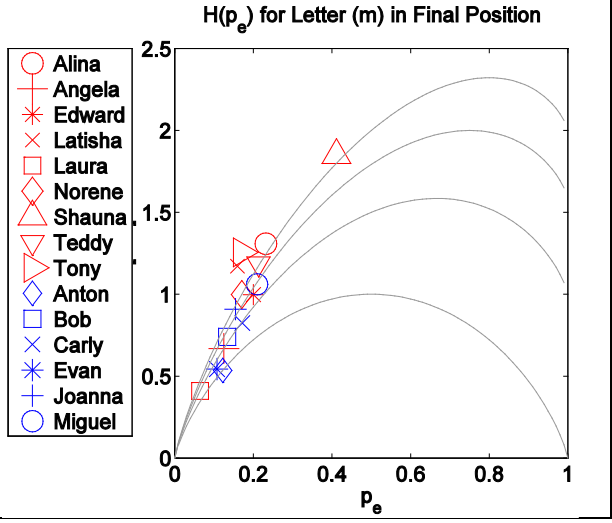

P in initial Position has some separation but still high entropy.

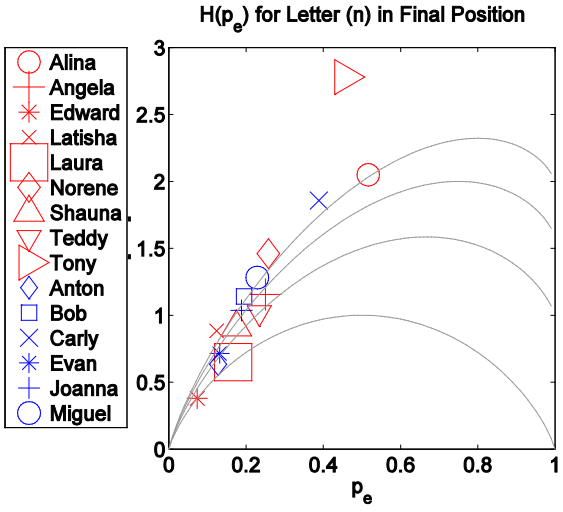
**Nasals Final Position**



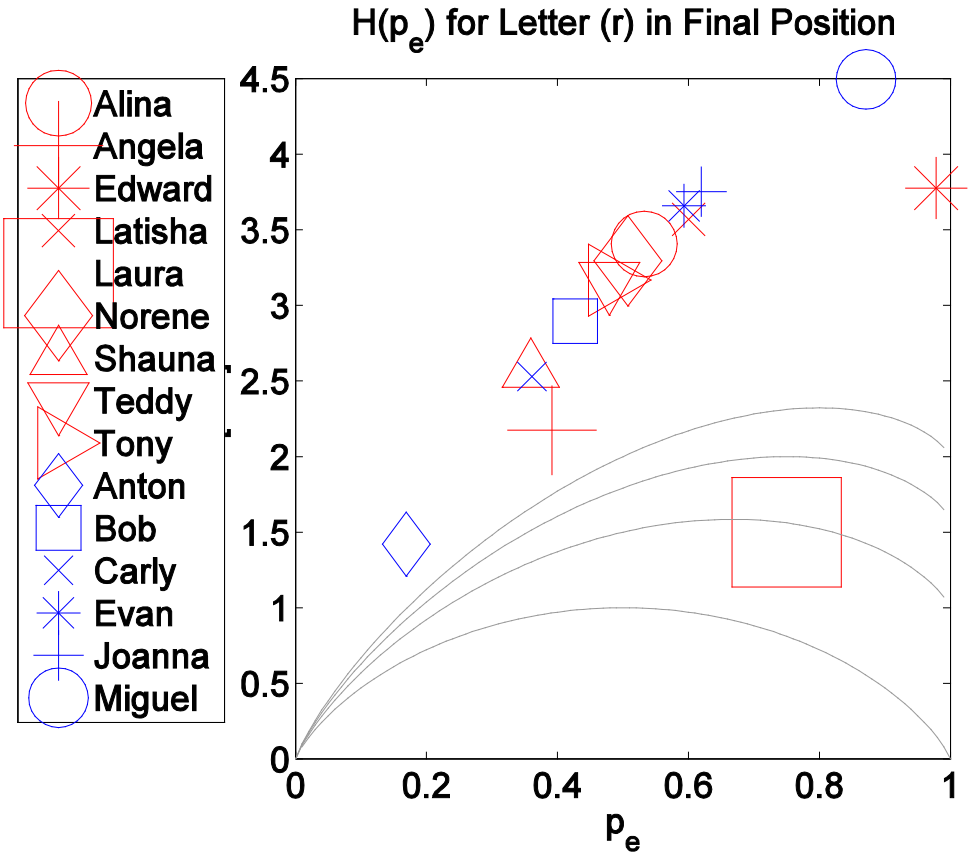

What can be made of results like this? And similarly





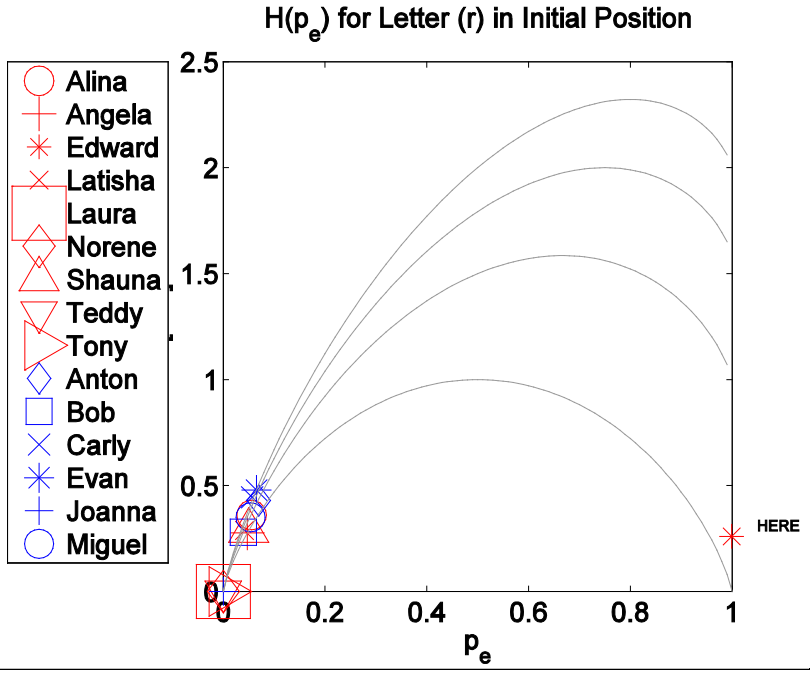




This stood out to me because I feel we should see a lower entropy for 'm' and 'n' since they are commonly mistaken for each other

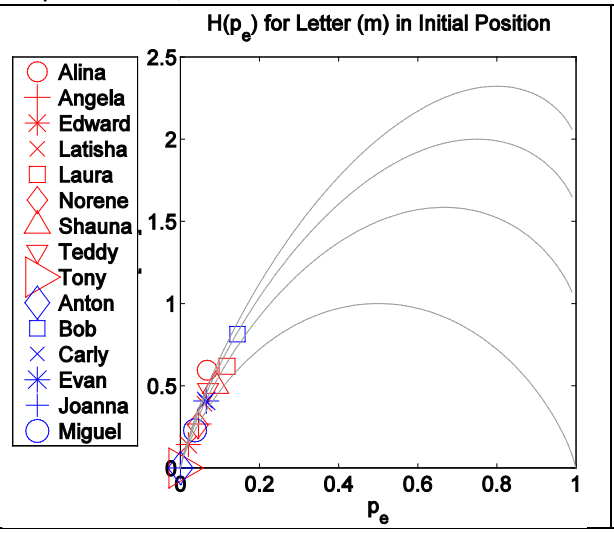


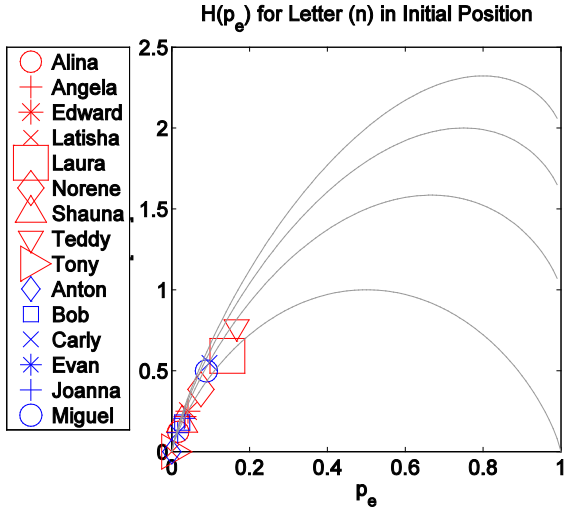

These results stood out as some of the worst. Even when trying to decode the listeners this letter was most commonly reported multiple times

**Nasals Initial Position**

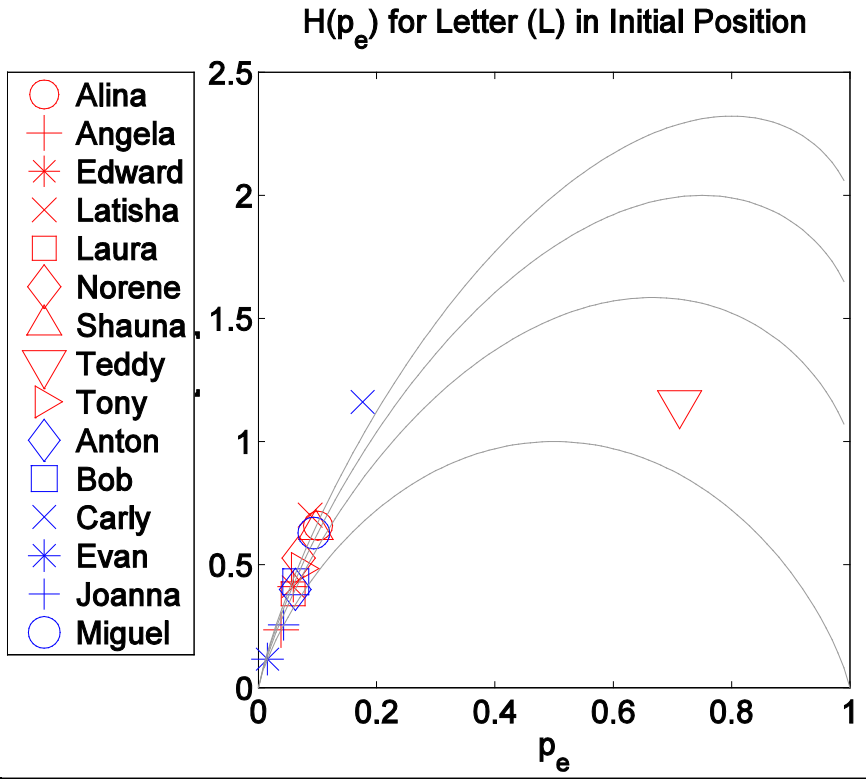



Much different results for 'r' in initial position. NOTE: It appears that for most kids 'r' was presented very few times, how reliable is this as a result?



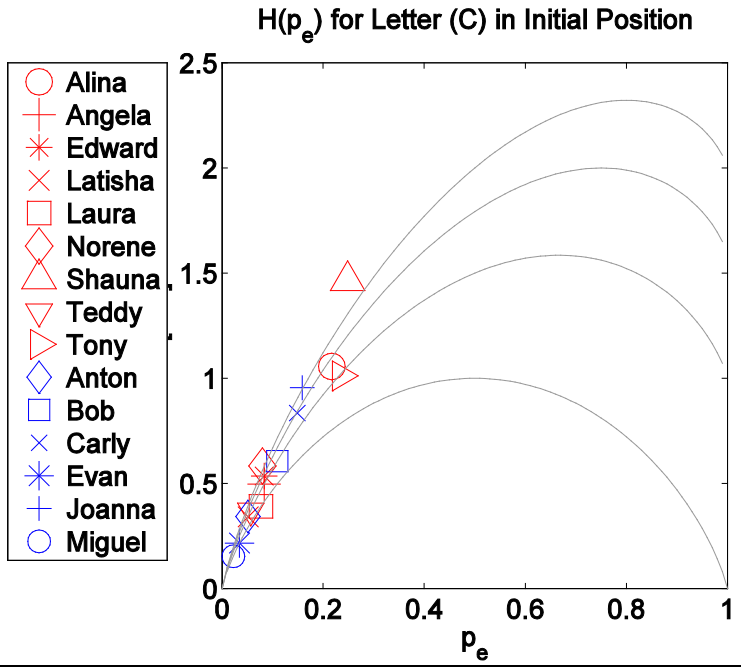



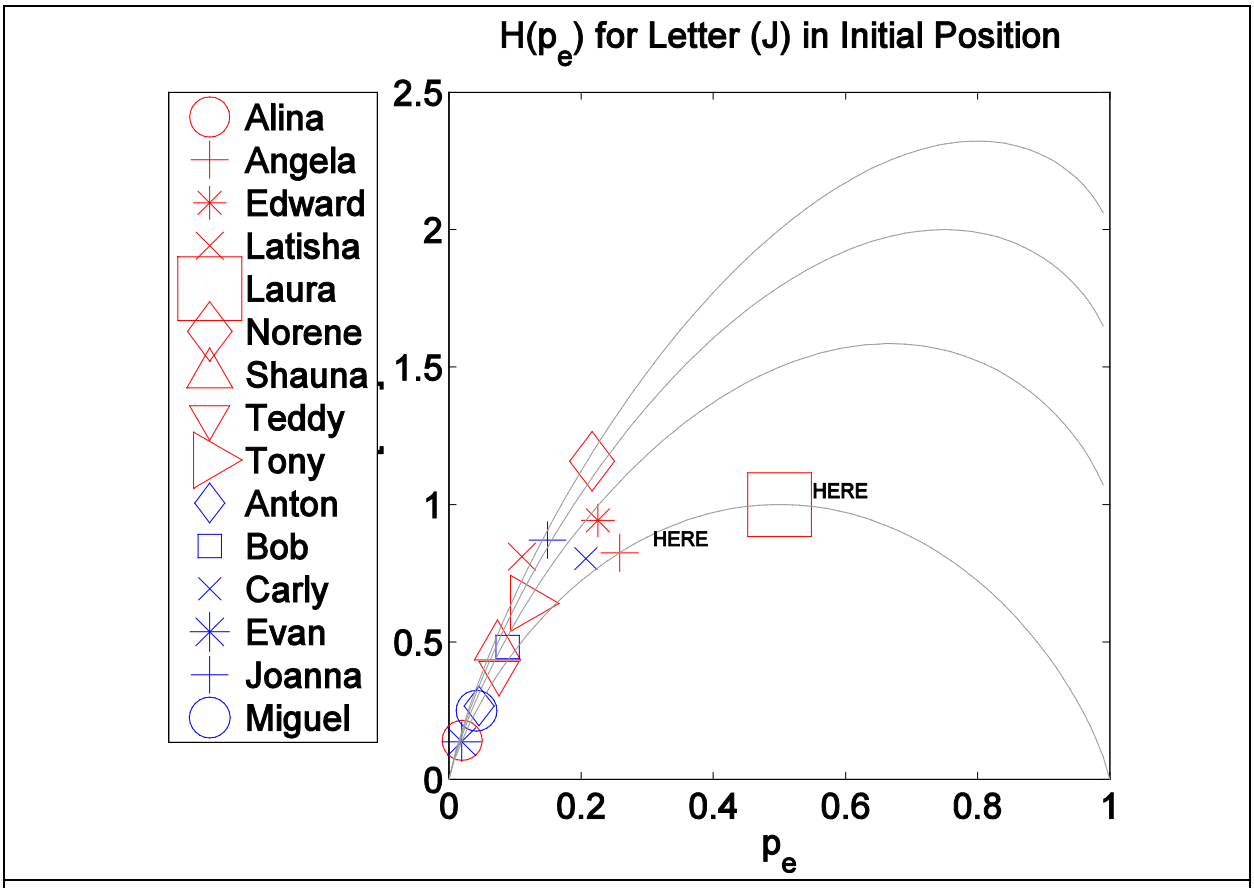

Once again 'm' and 'n'

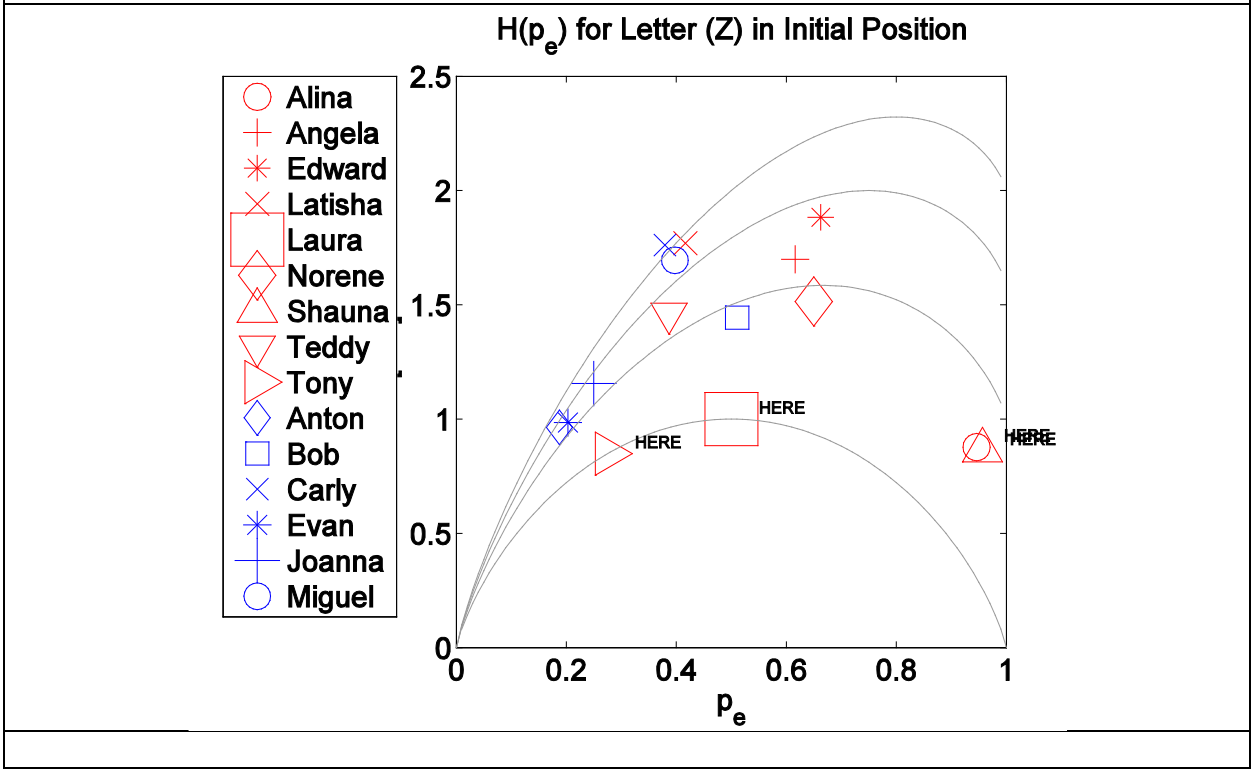


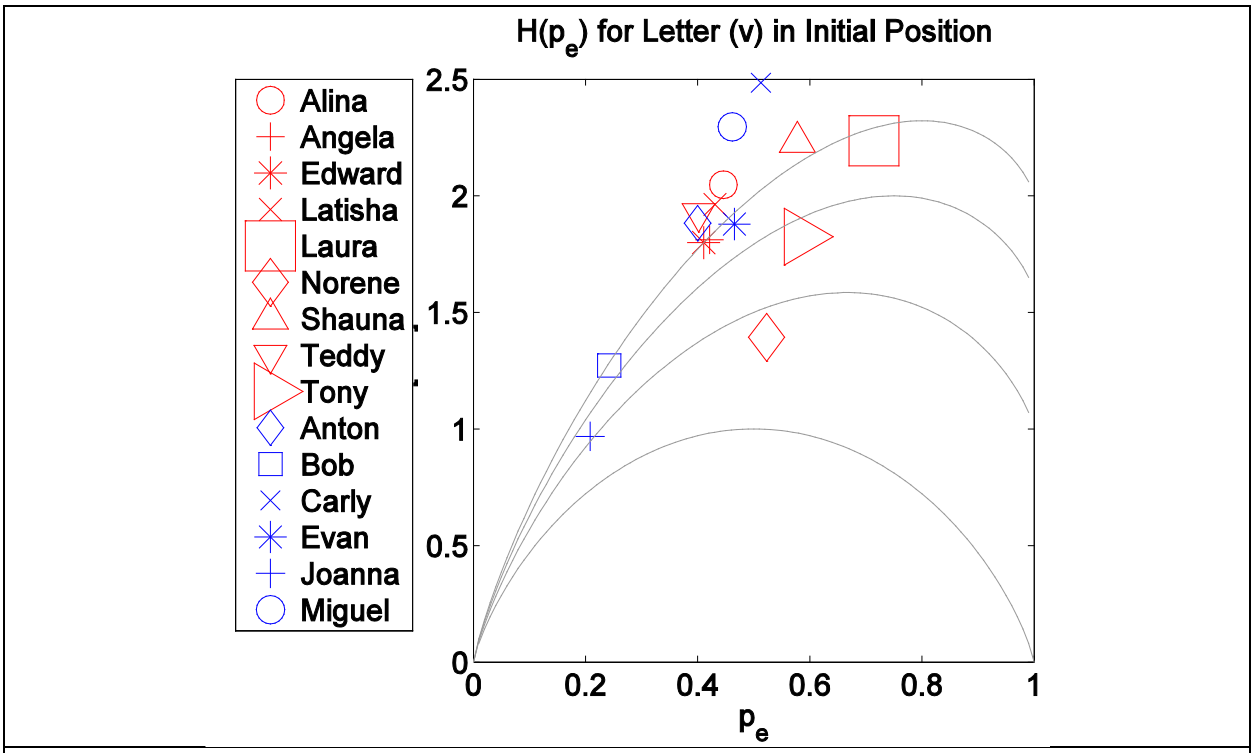

'L' in initial position

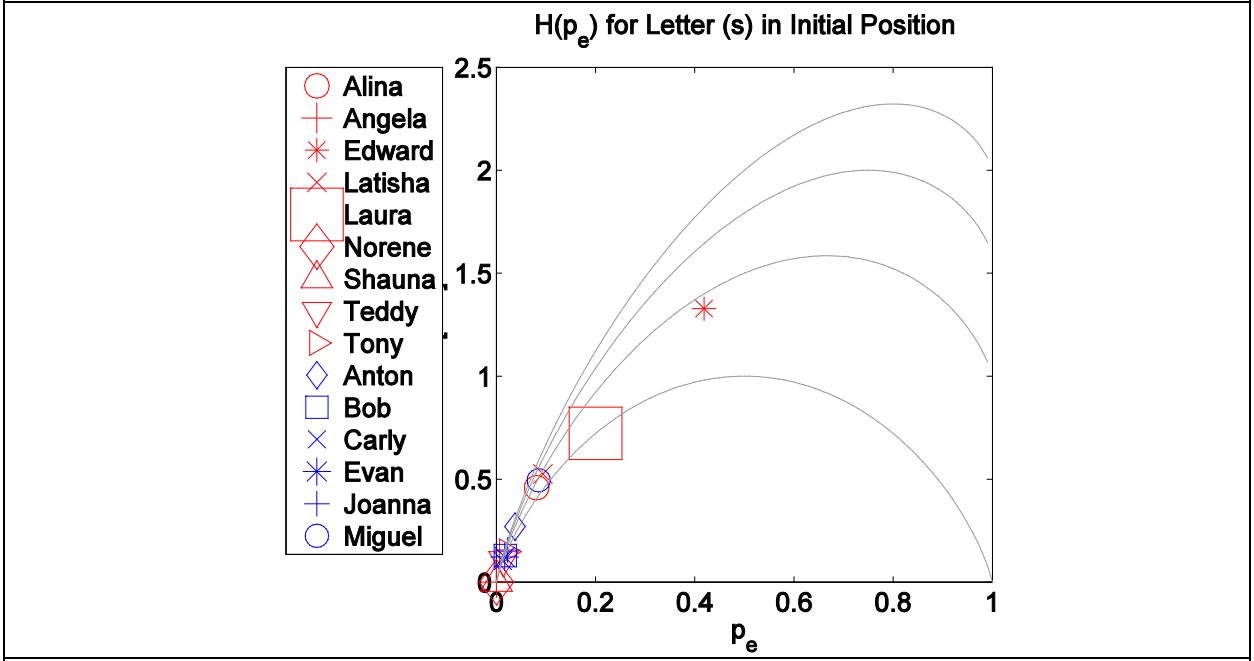
**Fricatives Initial Position**



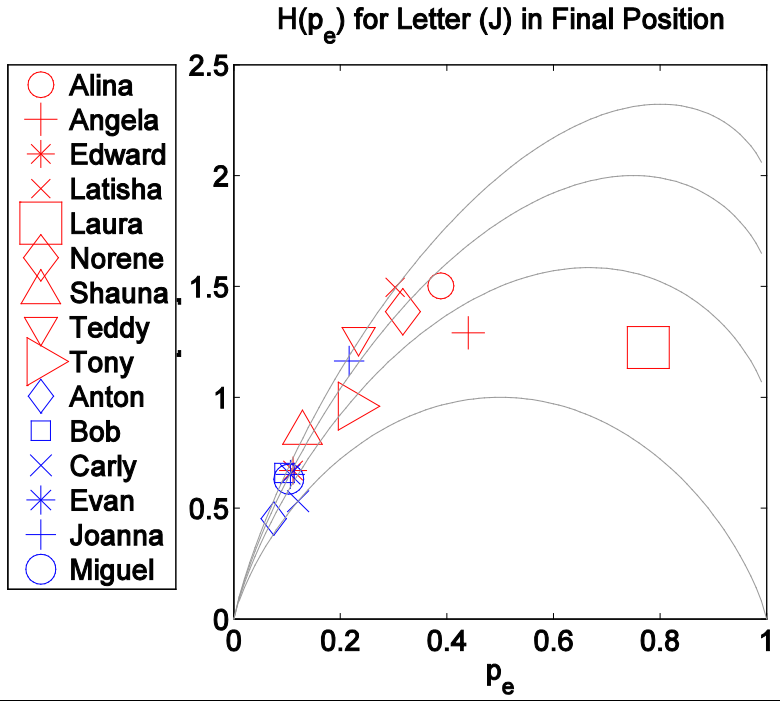

H(p_e) for Letter (J) in Initial Position
Alina
Angela
Edward
Latisha
Laura
Norene
Shauna
Teddy
Tony
Anton
Bob
Carly
Evan
Joanna
Miguel
HERE
HERE
0
0.5
1
1.5
2
2.5
0
0.2
0.4
0.6
0.8
1
p_e

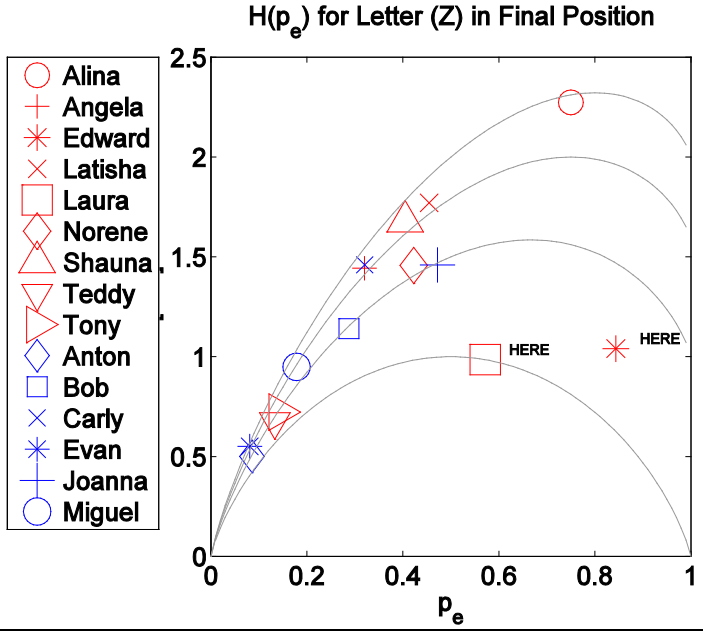

H(p_e) for Letter (Z) in Initial Position
Alina
Angela
Edward
Latisha
Laura
Norene
Shauna
Teddy
Tony
Anton
Bob
Carly
Evan
Joanna
Miguel
HERE
HERE
HERE
0
0.5
1
1.5
2
2.5
0
0.2
0.4
0.6
0.8
1
p_e



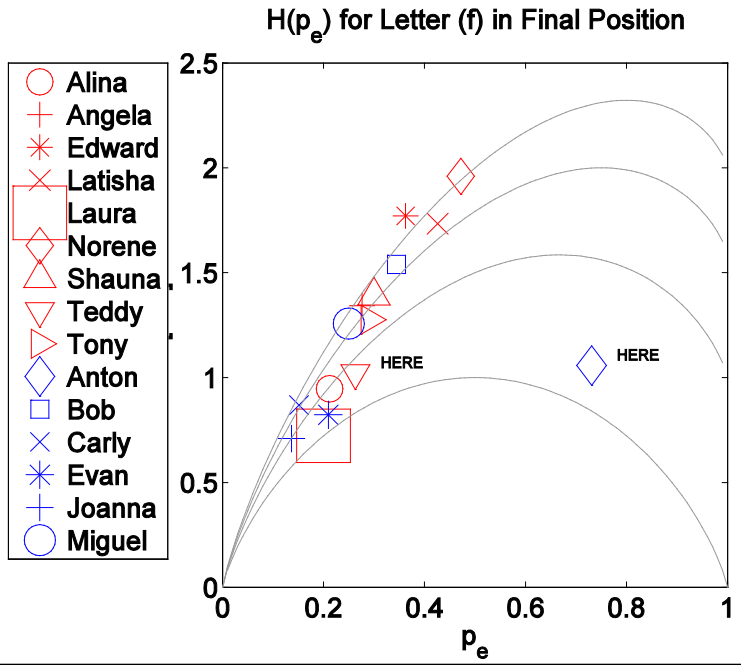




**Fricative Final Position**

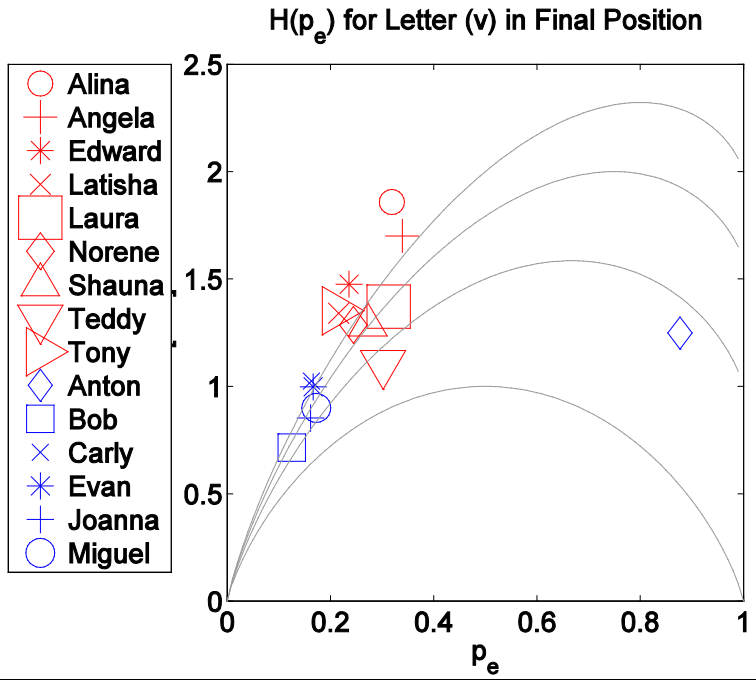


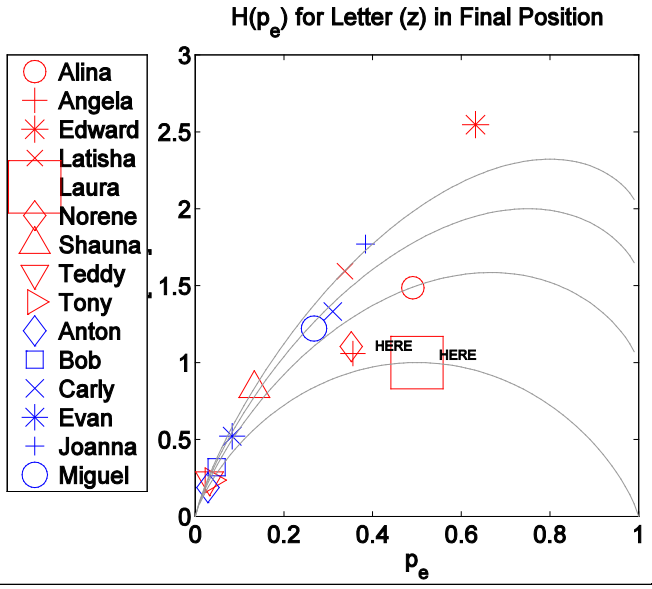

Lots of errors for RD group and lower entropy, want to investigate what errors are being made




More separation then most other cases.




Very good separation between groups. But we see Anton is an outlier here.




Similar to the 'Z' cased