Hidden Markov Entropy		Hidden Markov Entropy	
State	$H_1(X)$	State	$H_1(Y\|X)$
1	.298	1	1.841
2	2.134	2	1.416
3	1.845	3	2.699
4	2.136	4	1.388
5	1.733	5	1.930
6	1.858	6	3.890
7	2.529	7	2.754
8	1.282	8	.281
9	2.098	9	2.538
10	2.177	10	1.722
11	1.921	11	.053
12	1.089	12	2.129
Weighted Average	1.842 = H(X)	Weighted Average	1.855 = H(Y|X)

TABLE V

Entropy of Monographic English 4.10

Entropy of Forward Digraphic English 3.36

A	3.73	P	3.23
B	2.96	Q	0.00
C	3.25	R	3.53
D	2.43	S	2.94
E	3.43	T	3.09
F	2.71	U	3.58
G	3.07	V	1.66
H	2.27	W	2.93
I	3.56	X	2.64
J	1.93	Y	1.39
K	2.56	Z	1.72
L	3.34	#	4.10
M	3.03		
N	3.38		
O	3.69		

Entropy of Backward Digraphic English 3.36

A	3.814	P	2.760
B	1.826	Q	2.155
C	2.836	R	3.263
D	2.873	S	3.466
E	4.030	T	3.1070
F	2.306	U	3.697
G	2.728	V	2.953
H	2.021	W	1.517
I	3.974	X	1.381
J	1.305	Y	3.413
K	3.2027	Z	.927
L	3.538	#	3.624
M	3.170		
N	2.774		
O	3.911		

This is also reflected in the high entropy for the initial letter state in the Hidden Markov models.

On the other hand, from the backward entropy figures we see that final letters have somewhat lower entropy, and this again is seen in the Hidden Markov model.

One may attempt, using these ideas, to analyze how the information in English is distributed. This is not so interesting in the case of digraph models, for in that case we must confine ourselves to statements about the information in letters following or preceding some specific letter, e.g., letters following e carry more information (resolve more uncertainty) than the letters following the letter v. On the other hand, the Hidden Markov models allow very different and broader sorts of statements. We may examine the trend in uncertainty in the letter produced as the number of states increases. We may track the source of the uncertainty in the letters produced. We may assert for example that while the vowel states have low entropy insofar as the letters produced, they have relatively high entropy insofar as the successor state is concerned. Further, in the 12 state model, for example, there is a post-vowel state with low entropy, thus the high uncertainty in letters following vowels (as seen