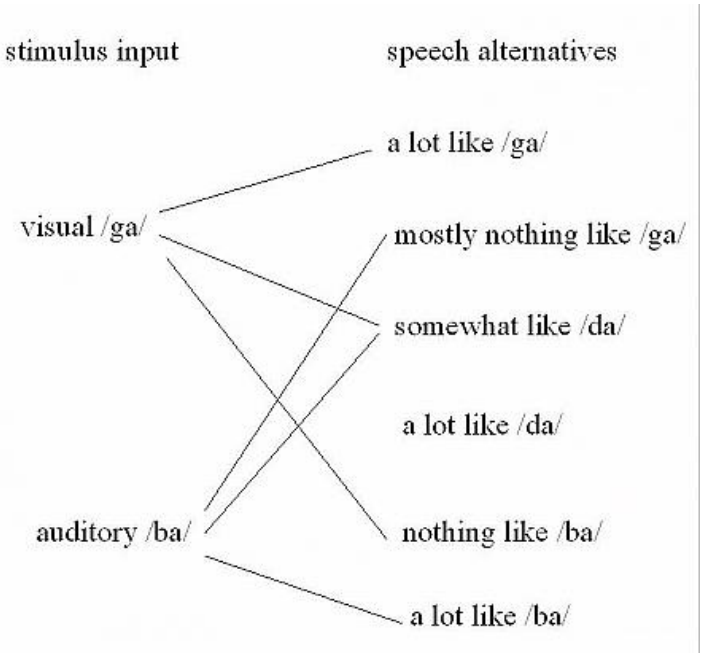

BA+GA=DA

The classic example of the McGurk effect is that an auditory /ba/ paired with a visual /ga/ often produces the percept /da/. There have been many different explanations of this finding, beginning with McGurk and MacDonald's original belief that visible speech determines the perception of place of articulation and audible speech determines the perception of voicing. A second and more popular but ambiguous explanation is that somehow the two modalities are magically fused to produce the observed outcome. We prefer an explanation within the context of a pattern recognition framework in terms of support from the two modalities for viable alternatives. As can be seen in the accompanying diagram, BOTH modalities support /da/ to some degree, which can carry the day for this alternative--even though one of the modalities supports another alternative to a greater degree.

Using fuzzy degrees of support, assume that
nothing like = .1
mostly nothing like = .3
somewhat like = .7
a lot like = .9.

Using multiplicative integration of the FLMP,
support for /ga/ = .9 x .3 = .27
support for /ba/ = .1 x .9 = .09
then support for /da/ = .7 x .7 = .49.

As can be seen in this example, /da/ gets almost twice as much support as any other alternative.

This analyis can be extended to include other alternatives such as /va/ and /tha/, which are viable alternatives for English speakers.

Click here for a demo