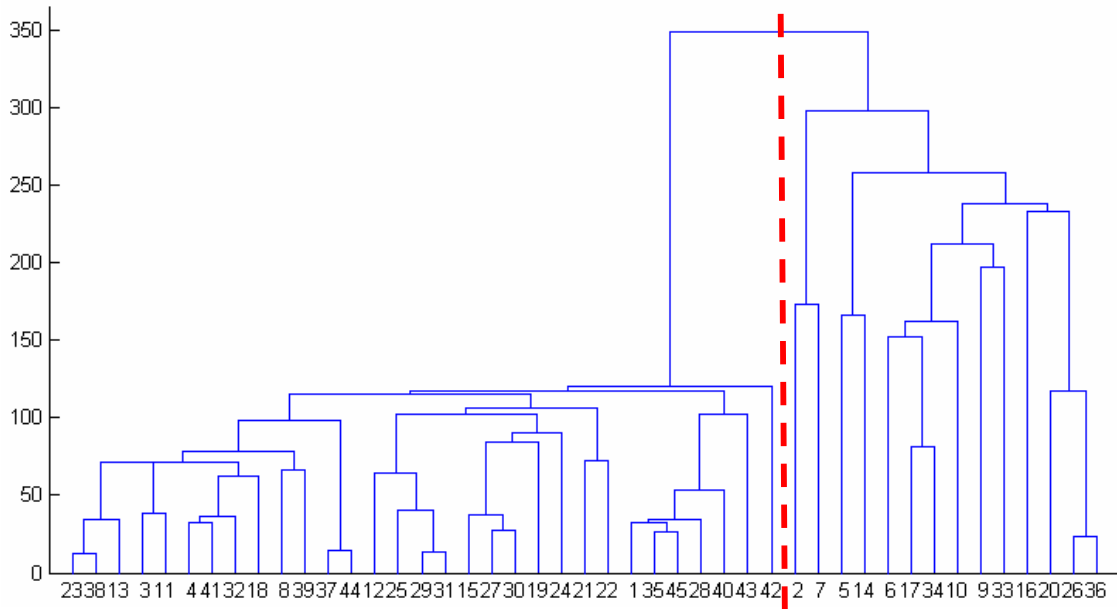


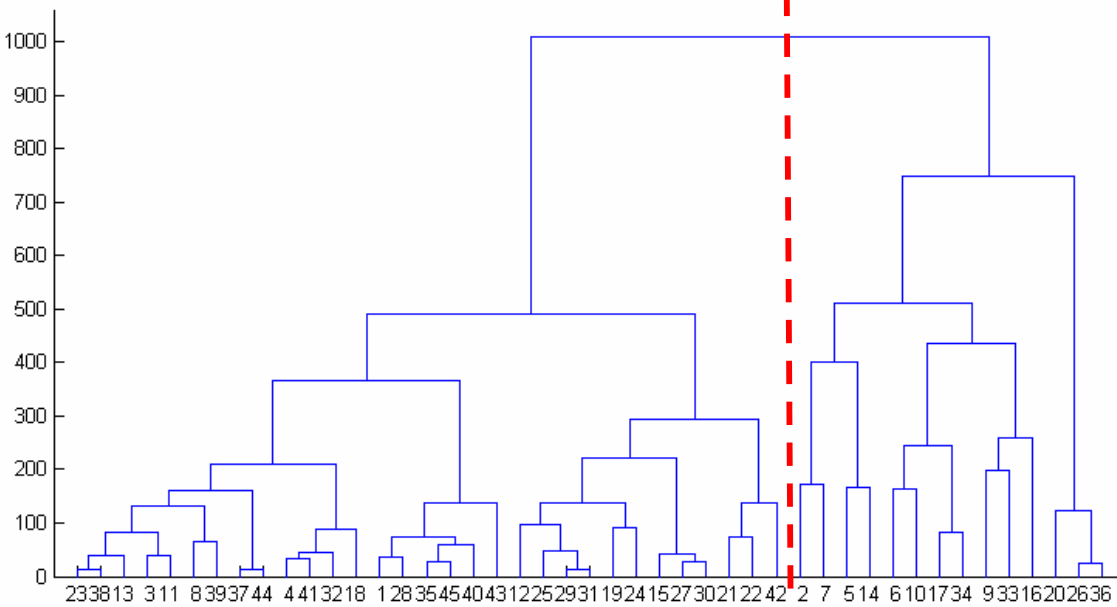
# Hierarchical clustering of the /v/ classes

Male speakers: F0=-10

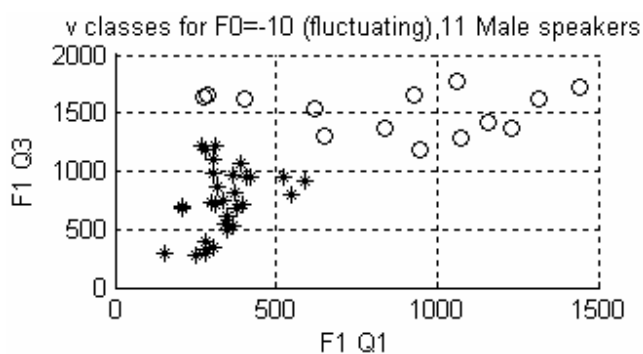
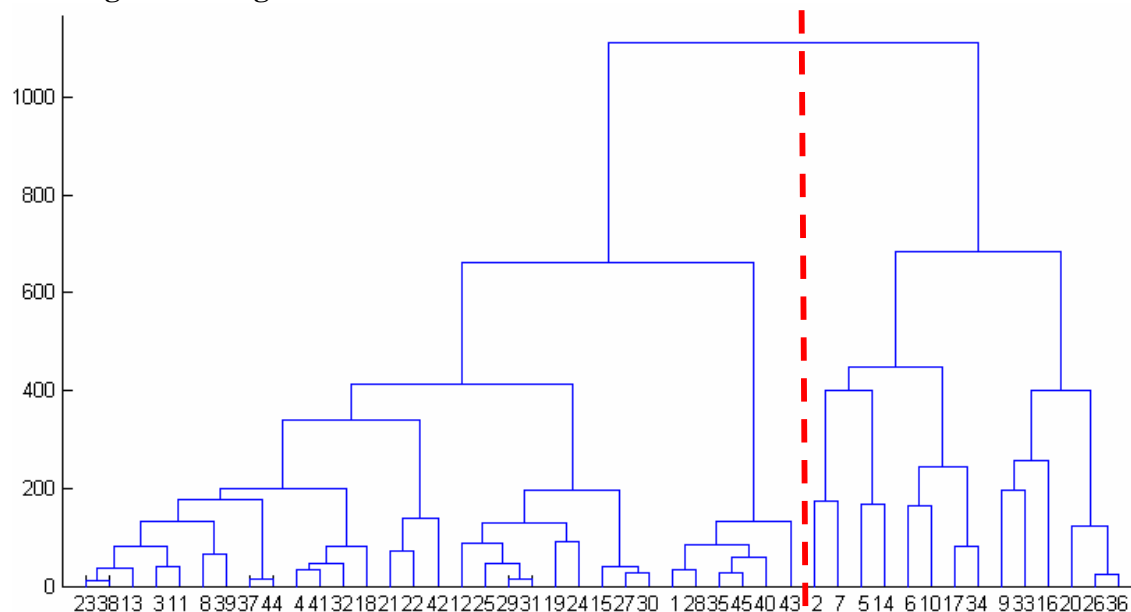
## 1. single linkage



## 2. average linkage

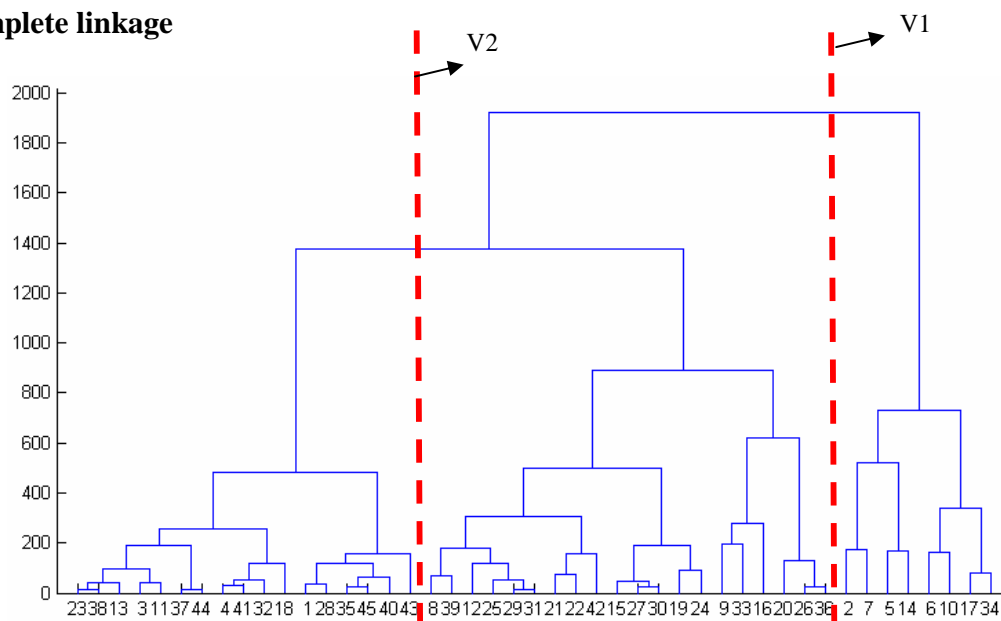


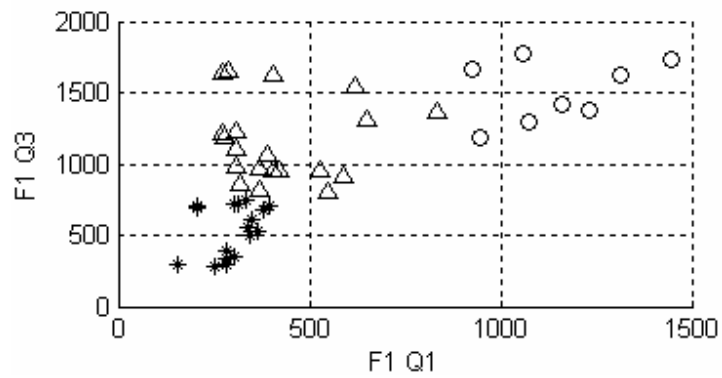
### 3. weighted linkage



Graphical representation of the obtained /v/ classes taking into account the main dendrogram branch, single, average and weighted linkage

### 4. complete linkage

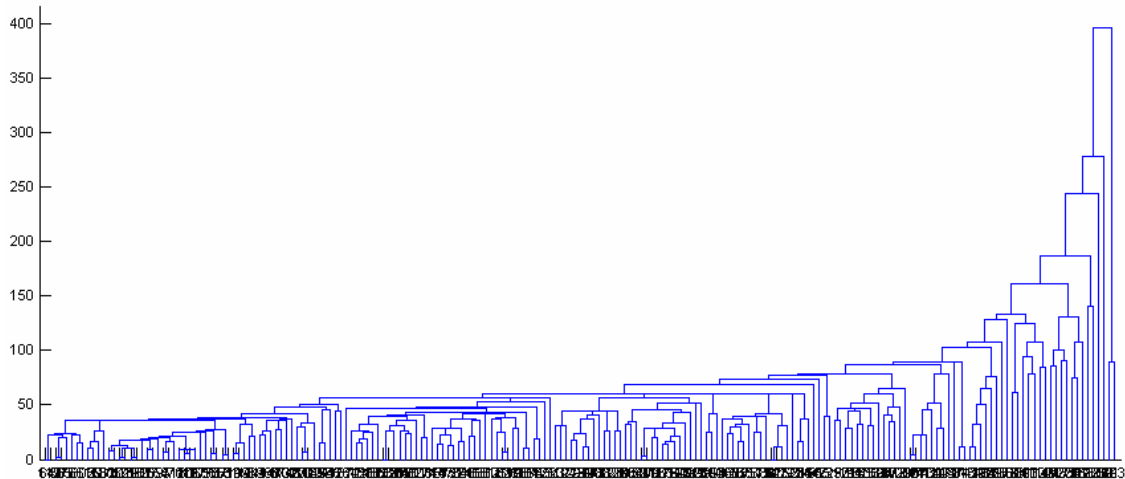




Graphical representation of the /v/ classes taking into account the separation by the main branch and the second left branch of the main branch

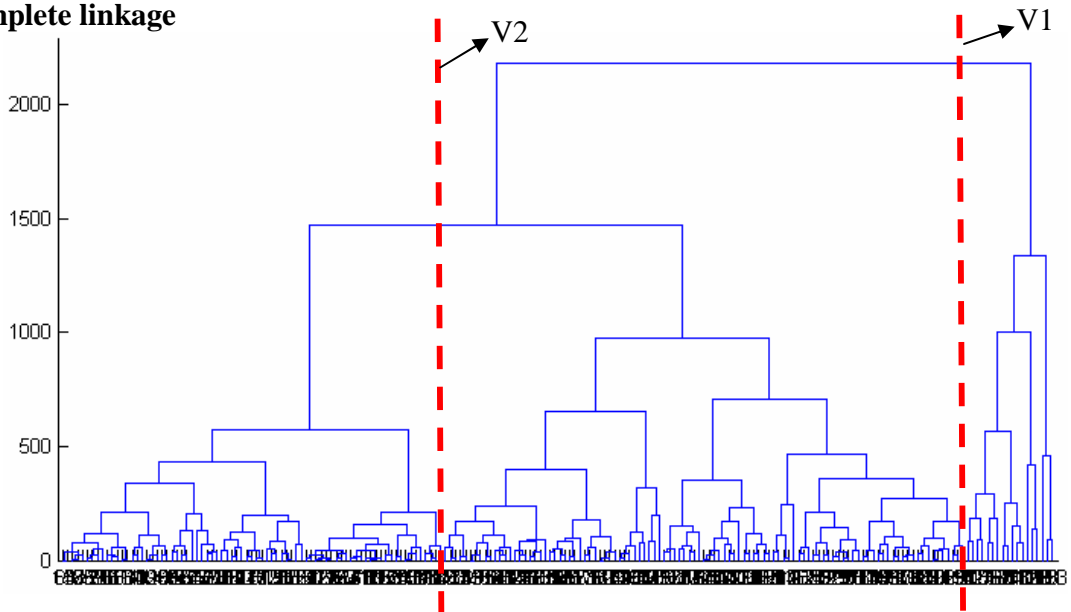
Male speakers: F0=10

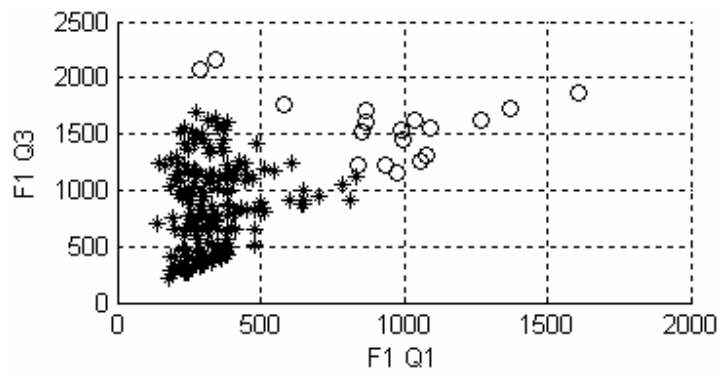
**1. single linkage**



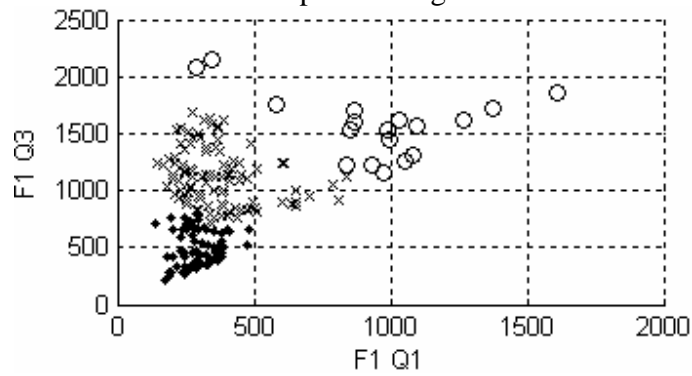
A single class and isolated elements (on the right side of the dendrogram)

**2. complete linkage**



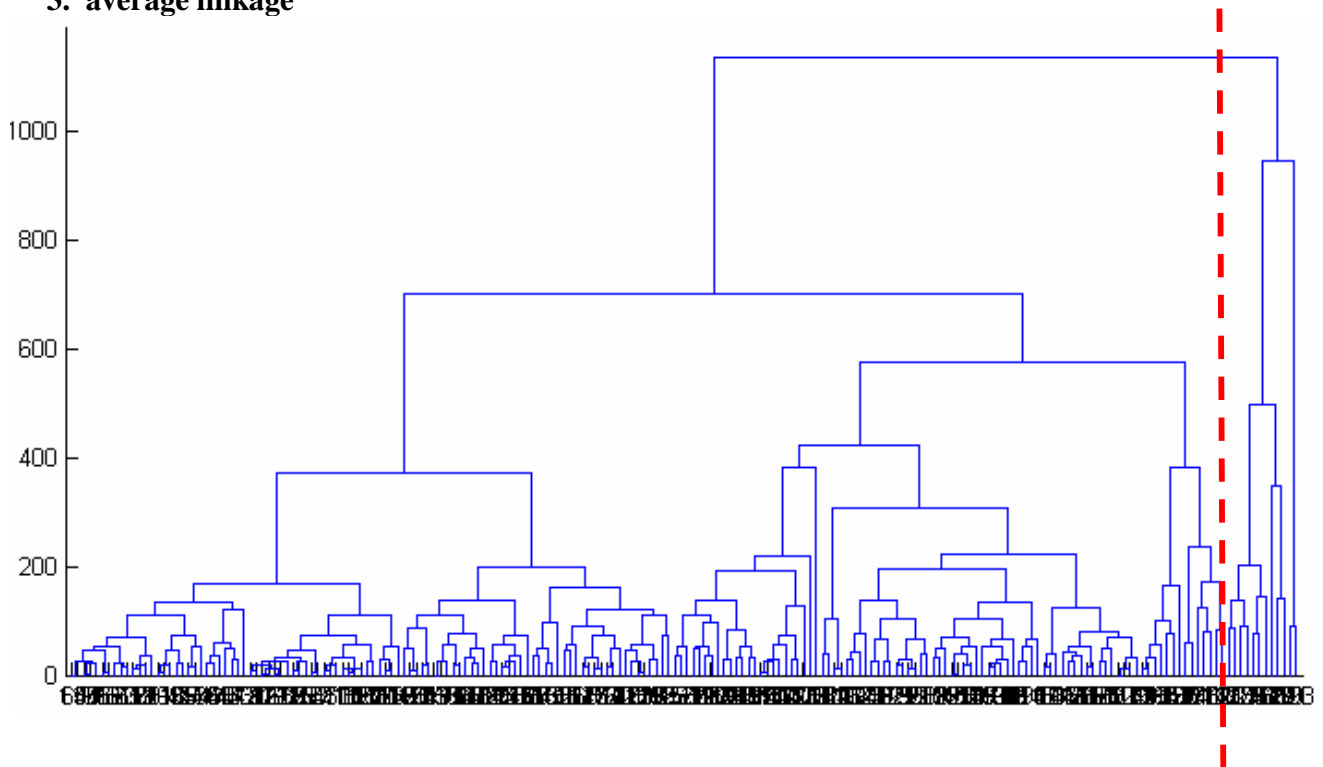


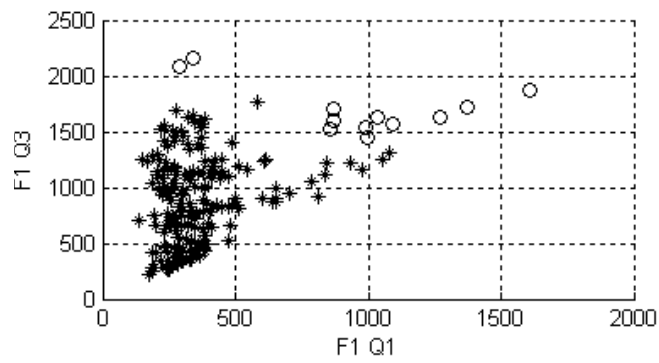
Graphical representation of the obtained /v/ classes taking into account the main dendrogram branch, complete linkage



Graphical representation of the obtained /v/ classes taking into account the secondary dendrogram branches, complete linkage

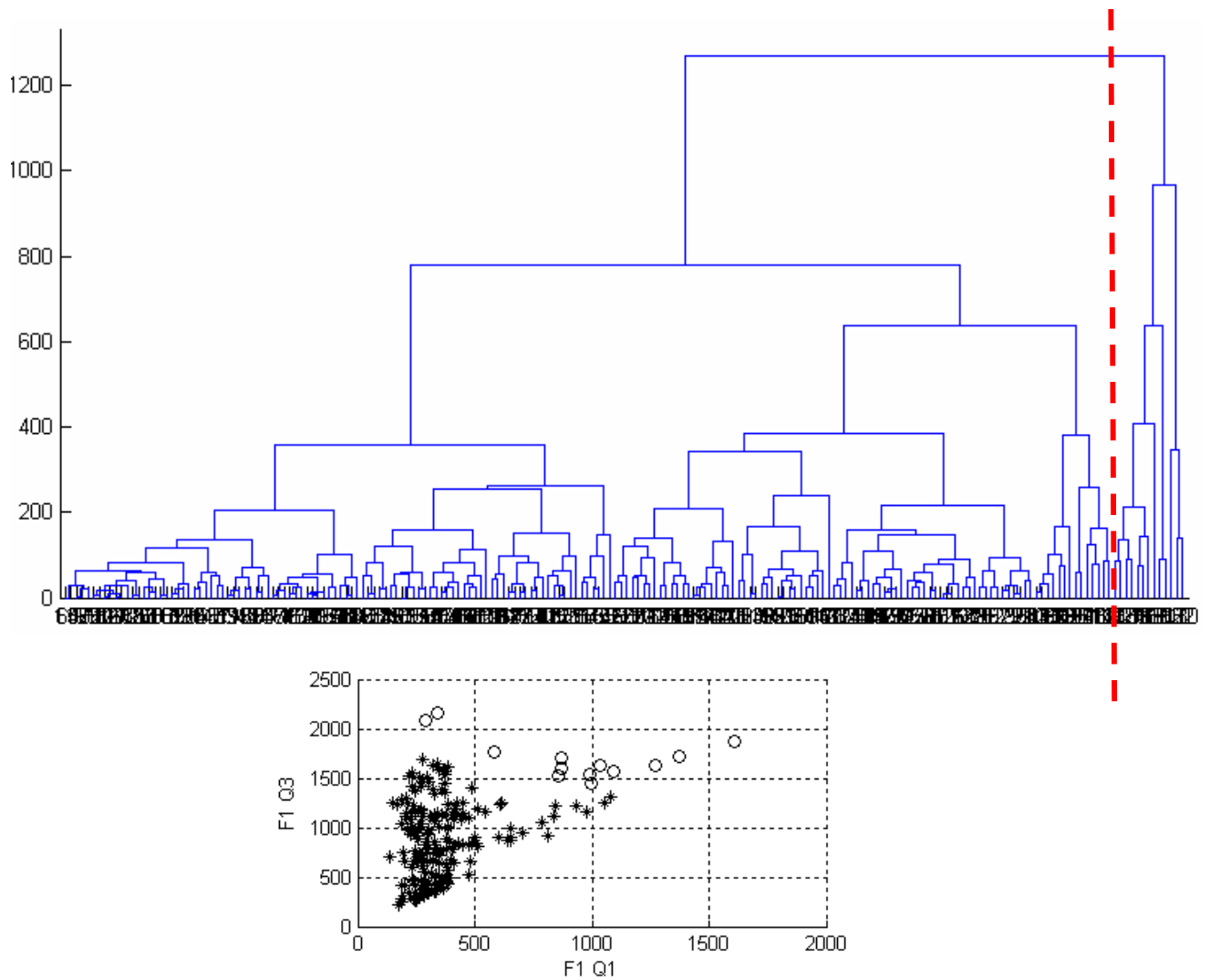
### 3. average linkage





Graphical representation of the obtained /v/ classes taking into account the main dendrogram branch, average linkage

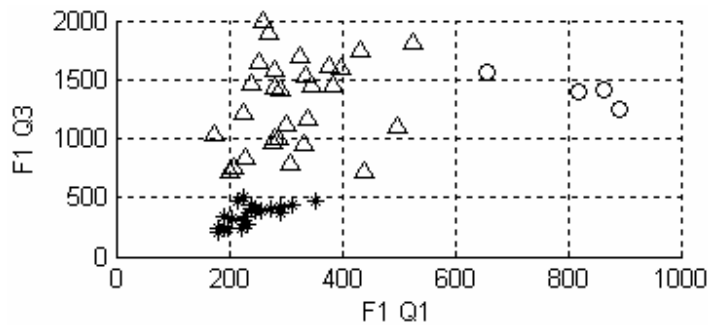
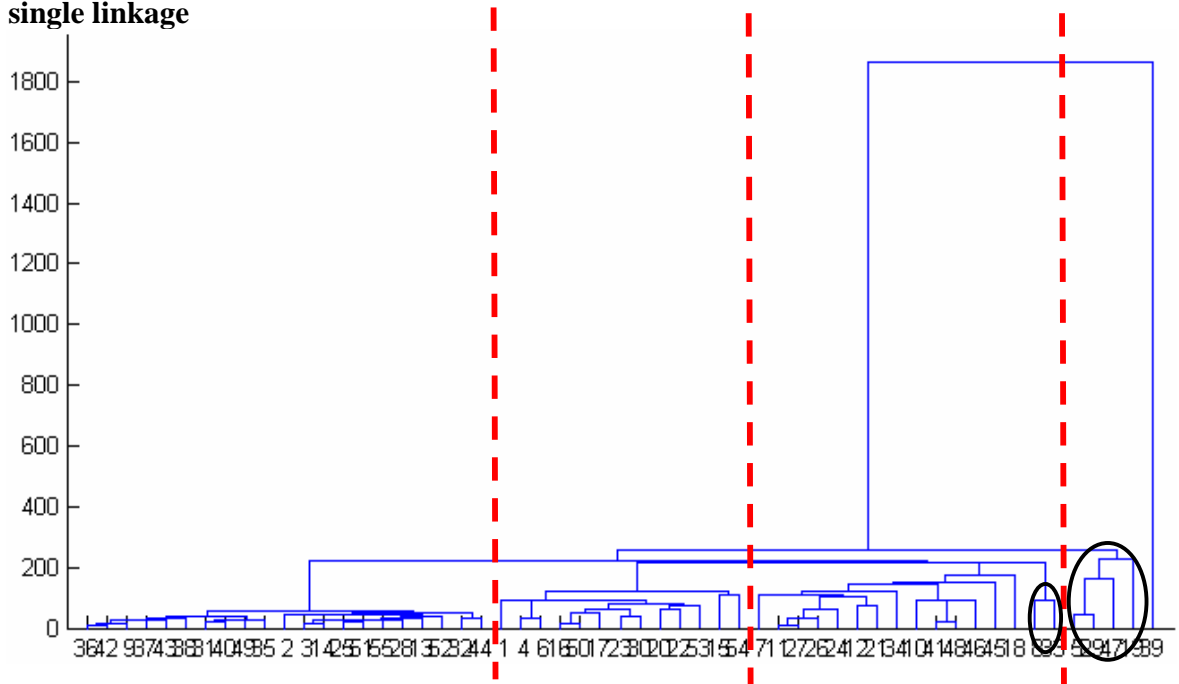
#### 4. weighted linkage



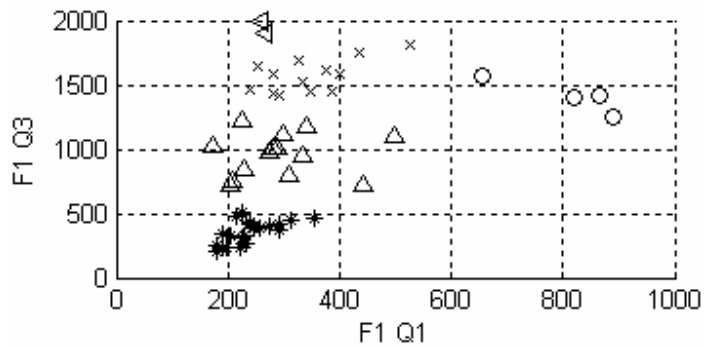
Graphical representation of the obtained /v/ classes taking into account the main dendrogram branch, weighted linkage

**Female speakers: F0=-10, after eliminating the isolated element (node 39)**

**1. single linkage**

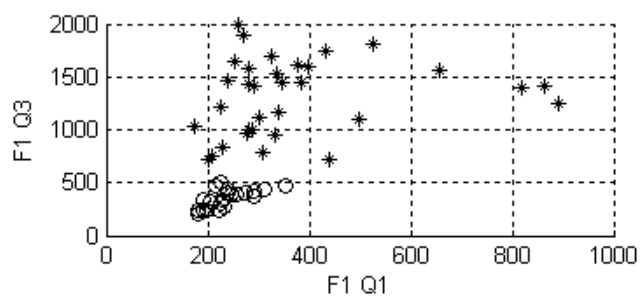
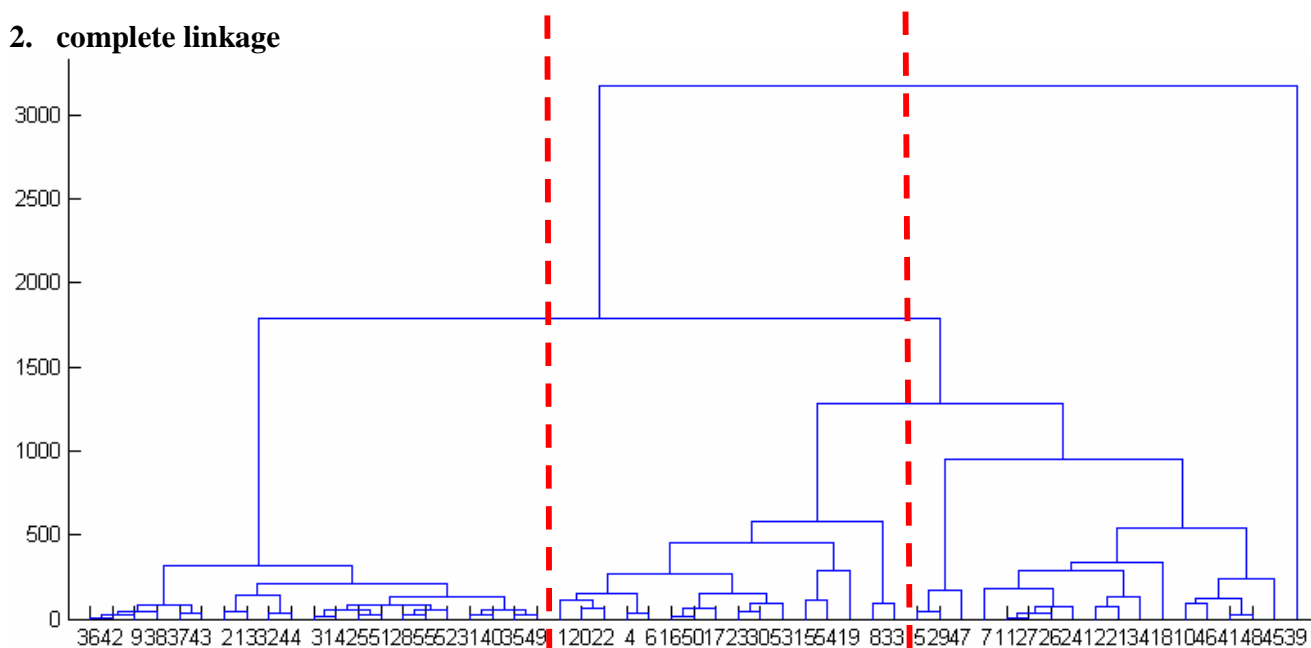


Graphical representation of the obtained /v/ classes taking into account the main dendrogram branch, after eliminating the isolated element (node 39), single linkage

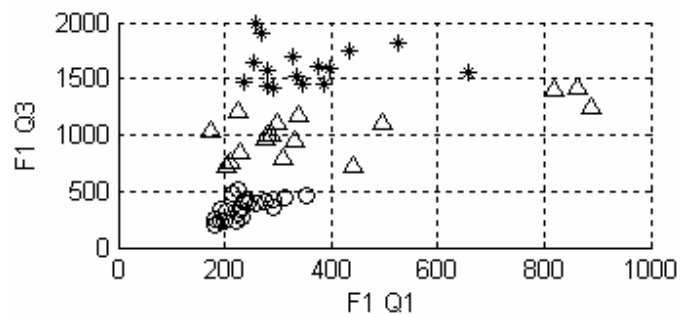


Graphical representation of the obtained /v/ classes taking into account the secondary dendrogram branches, after eliminating the isolated element (node 39), single linkage

## 2. complete linkage

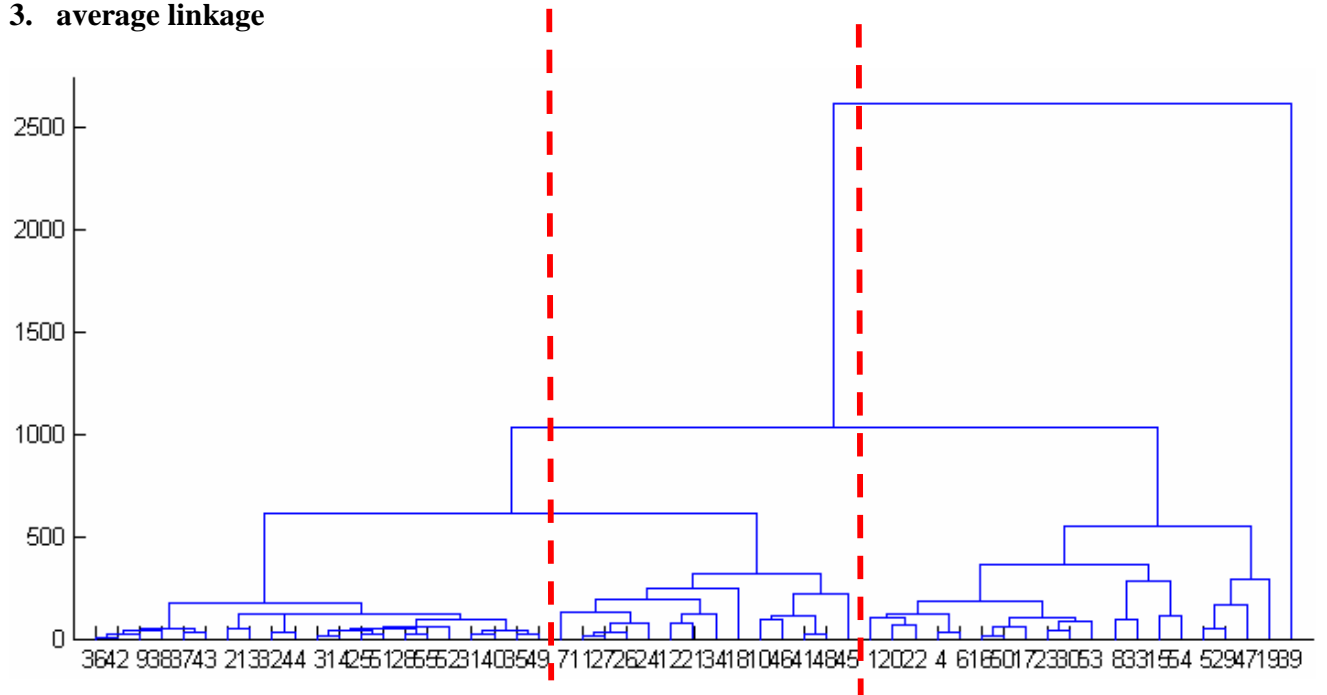


Graphical representation of the obtained /v/ classes taking into account the main dendrogram branch, after eliminating the isolated element (node 39), complete linkage

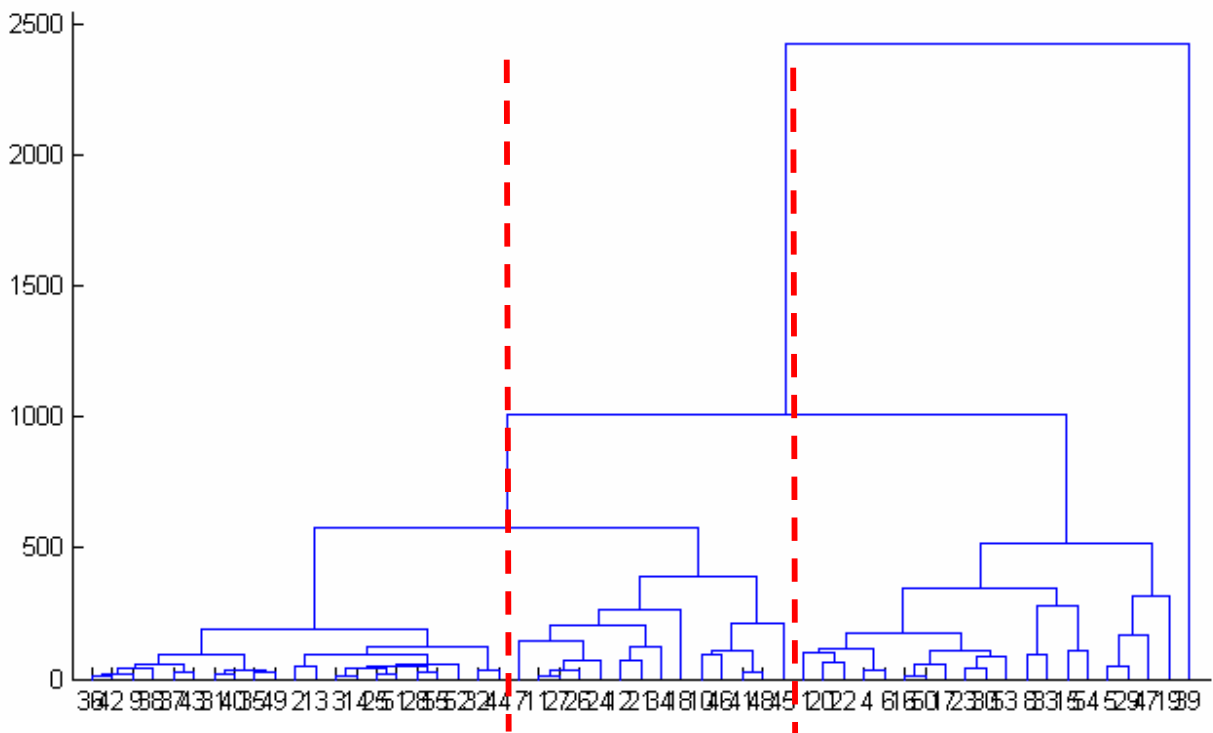


Graphical representation of the obtained /v/ classes taking into account the secondary dendrogram branches, after eliminating the isolated element (node 39), complete linkage

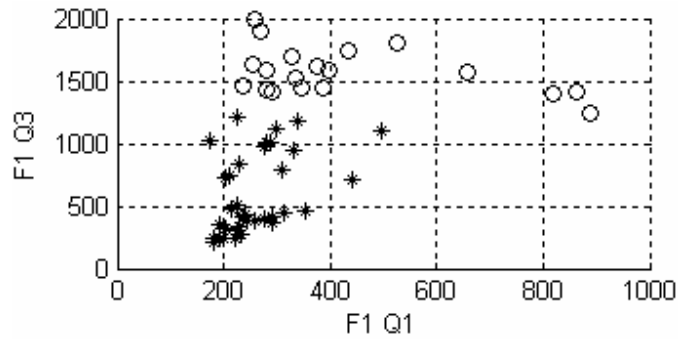
### 3. average linkage



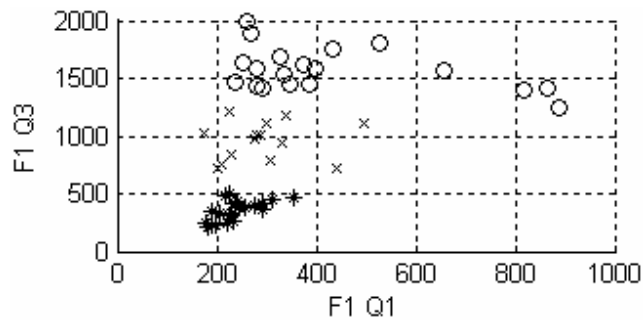
### 4. weighted linkage







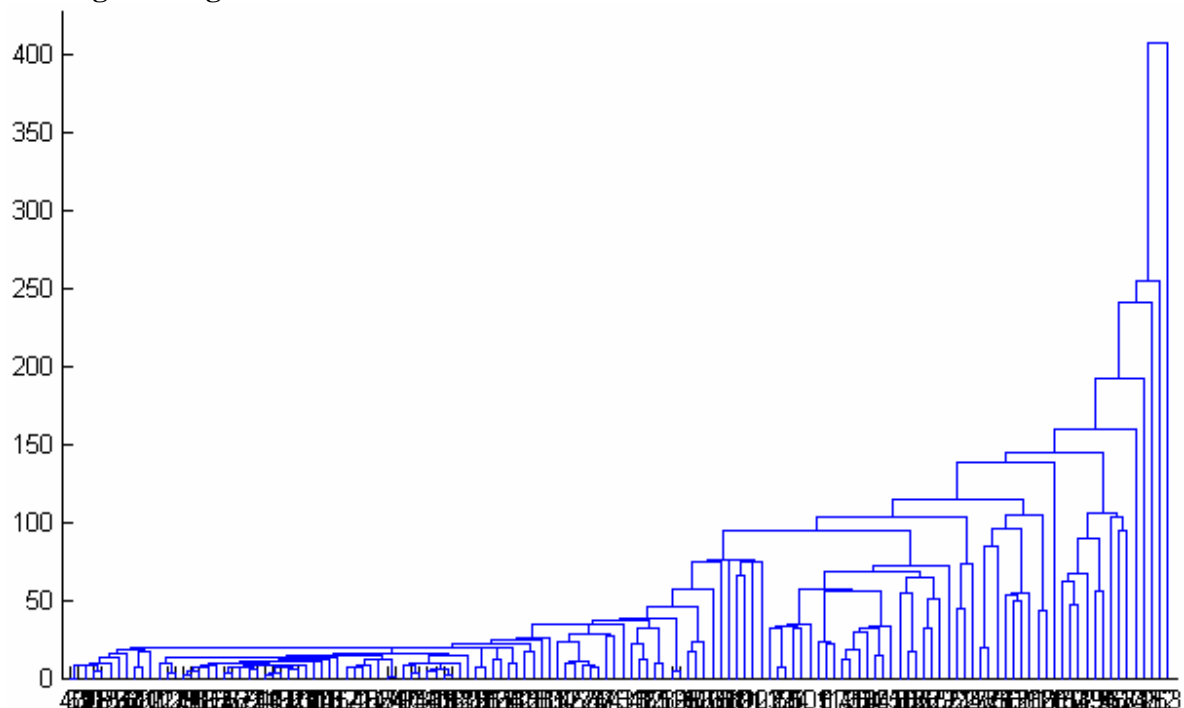
Graphical representation of the obtained /v/ classes taking into account the main dendrogram branch, after eliminating the isolated element (node 39), average and weighted linkage



Graphical representation of the obtained /v/ classes taking into account the secondary dendrogram branches, after eliminating the isolated element (node 39), average and weighted linkage

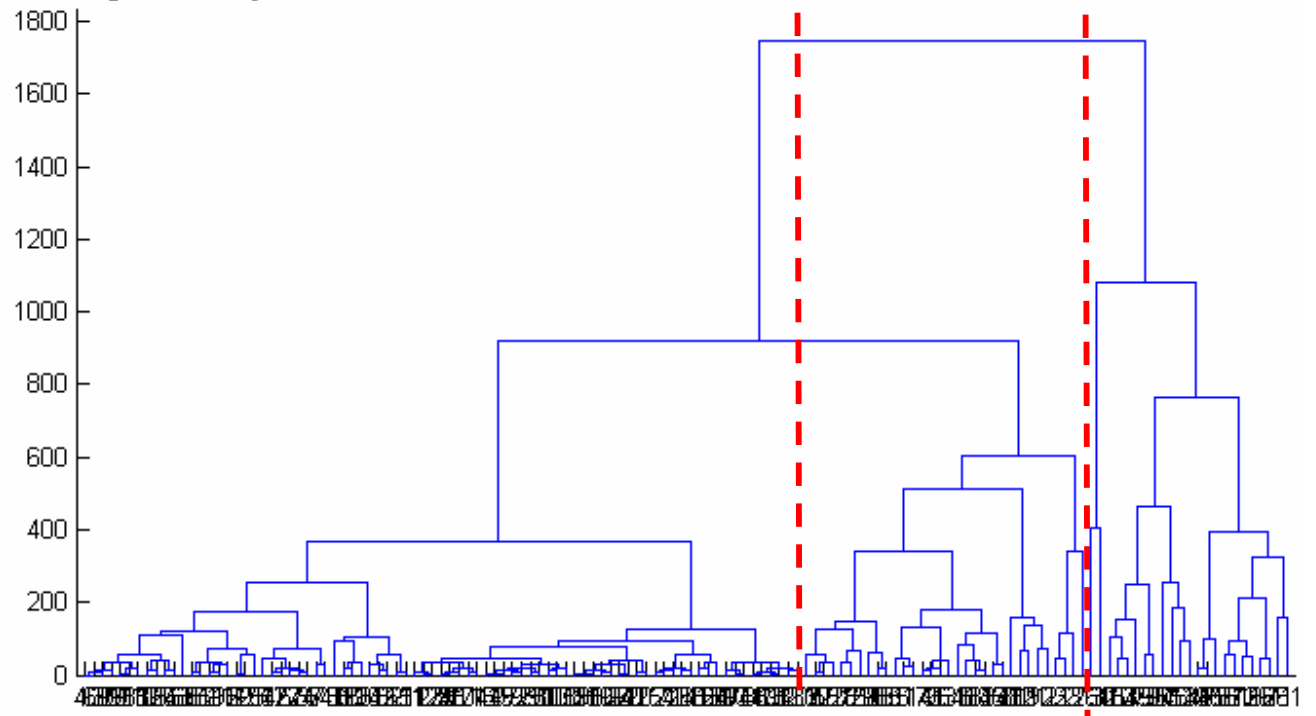
**Female speakers: F0=10**

**1. single linkage**

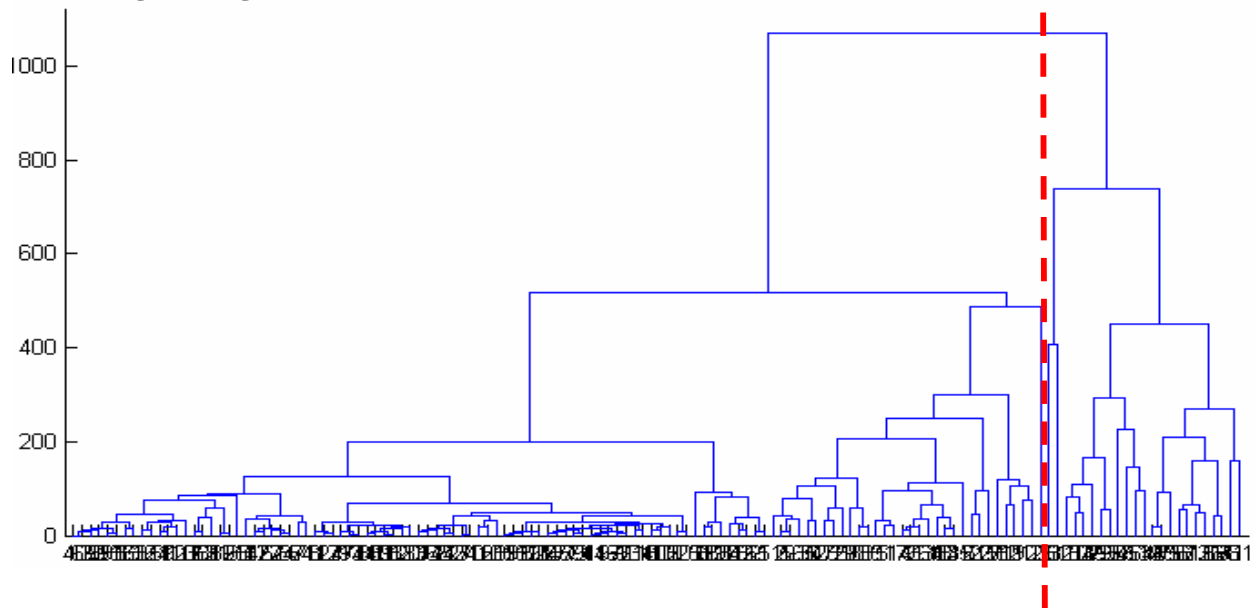


A single class and isolated elements (on the right side of the dendrogram)

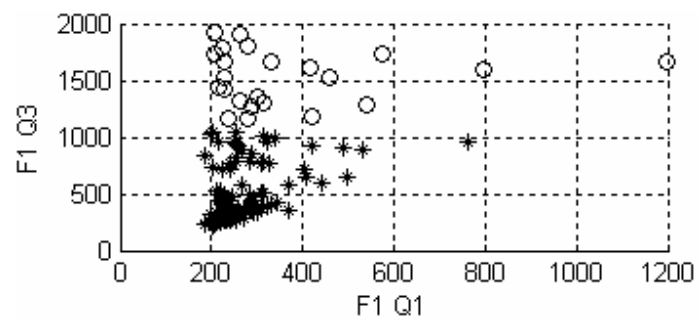
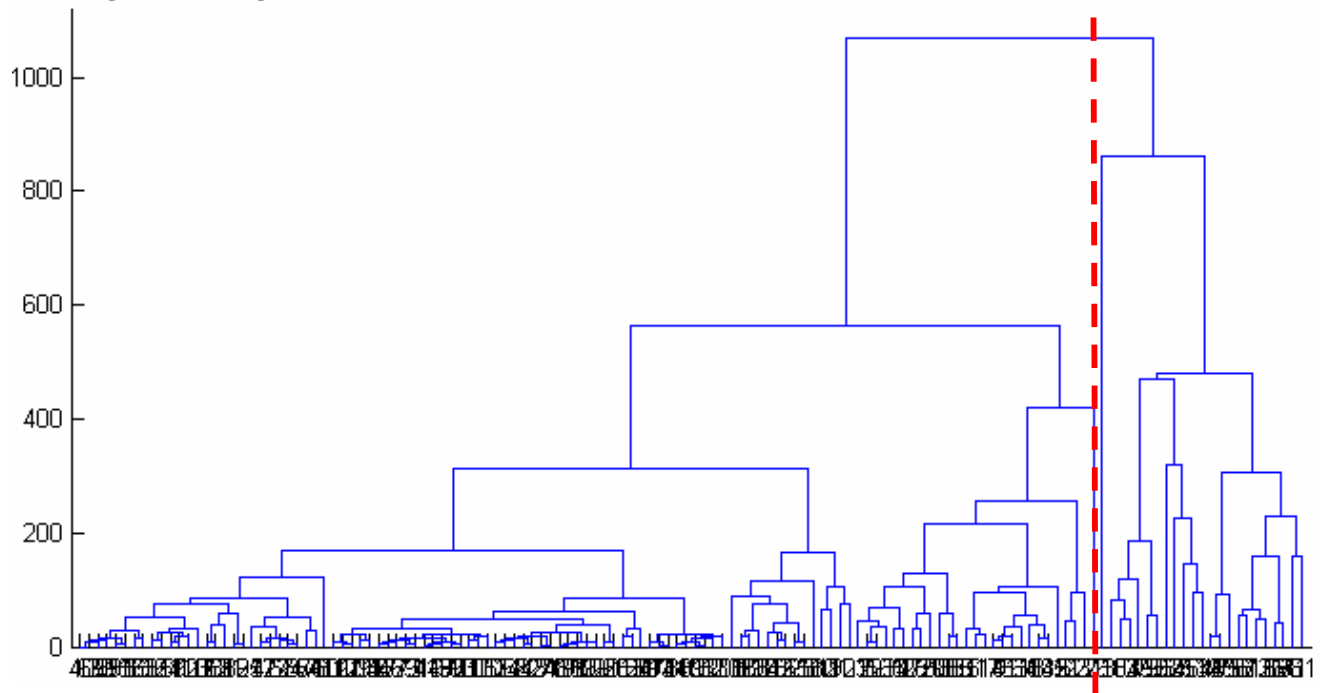
## 2. complete linkage



## 3. average linkage



#### 4. weighted linkage



Graphical representation of the obtained /v/ classes taking into account the main dendrogram branch, complete, average, weighted linkage