

# Independent Components Analysis

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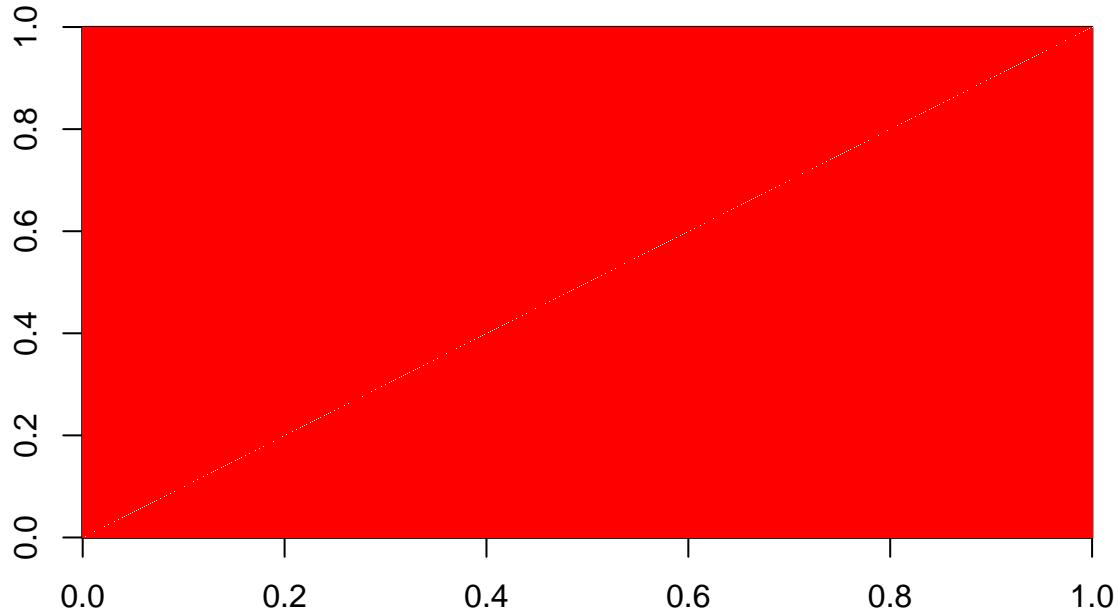
Evolutionary Components have been approximated by Principal components. In this analysis I will instead find independent components which may provide more satisfying components.

## Packages

## Data

## Orthogonal Components

First check that the principal components are indeed orthogonal.



Principal components are indeed orthogonal.

These orthogonal. This will be done by cubica algorithm.

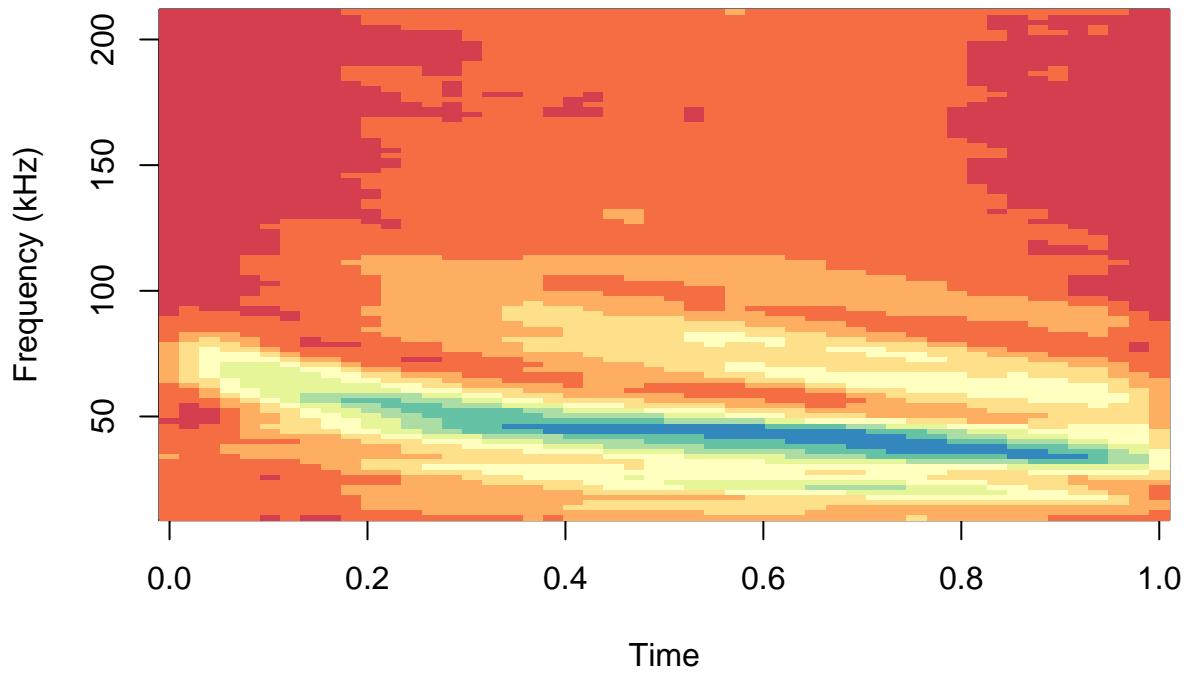
```
##          [,1]          [,2]          [,3]          [,4]          [,5]
## [1,] 5.000000e+03 -9.386880e-12 3.099909e-12 -7.468512e-12 -5.010437e-13
```

```
## [2,] -9.386880e-12 5.000000e+03 -6.898343e-12 8.266332e-12 2.056189e-12
## [3,] 3.099909e-12 -6.898343e-12 5.000000e+03 -1.941607e-12 1.550871e-12
## [4,] -7.468512e-12 8.266332e-12 -1.941607e-12 5.000000e+03 -2.756441e-12
## [5,] -5.010437e-13 2.056189e-12 1.550871e-12 -2.756441e-12 5.000000e+03
## [6,] 1.282030e-12 -8.475443e-13 1.200290e-12 -1.886165e-12 3.622963e-12
##          [,6]
## [1,] 1.282030e-12
## [2,] -8.475443e-13
## [3,] 1.200290e-12
## [4,] -1.886165e-12
## [5,] 3.622963e-12
## [6,] 5.000000e+03
```

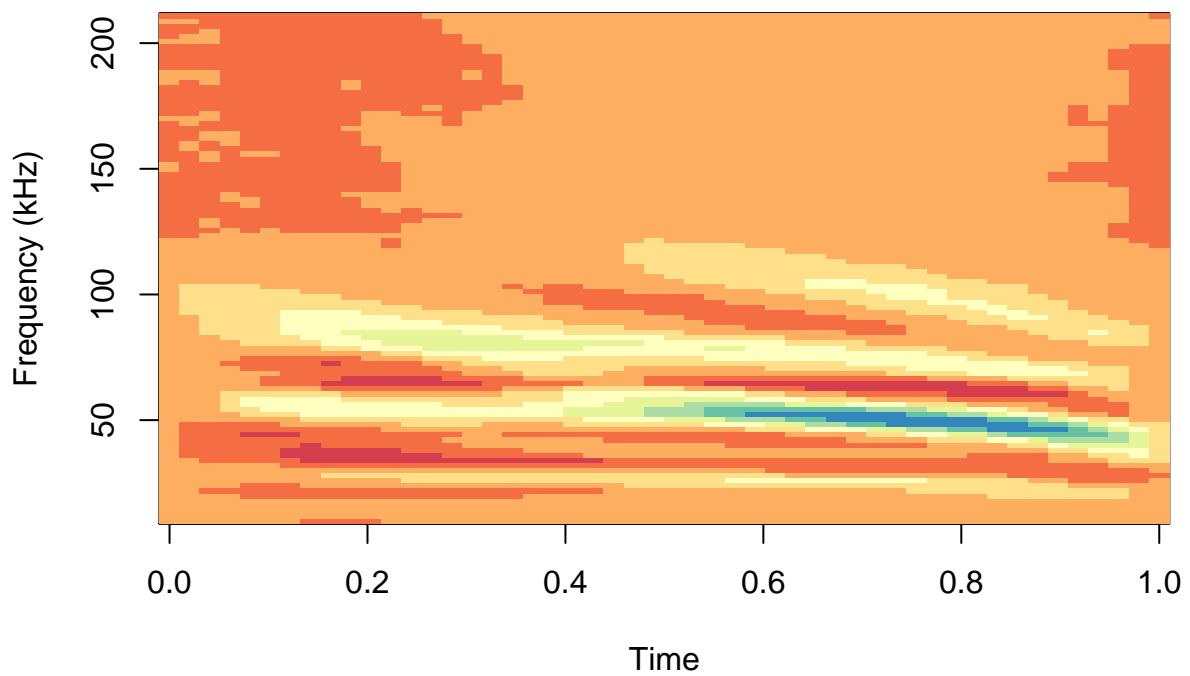
## Visual Inspection

Components in this case will need to be sense checked visually.

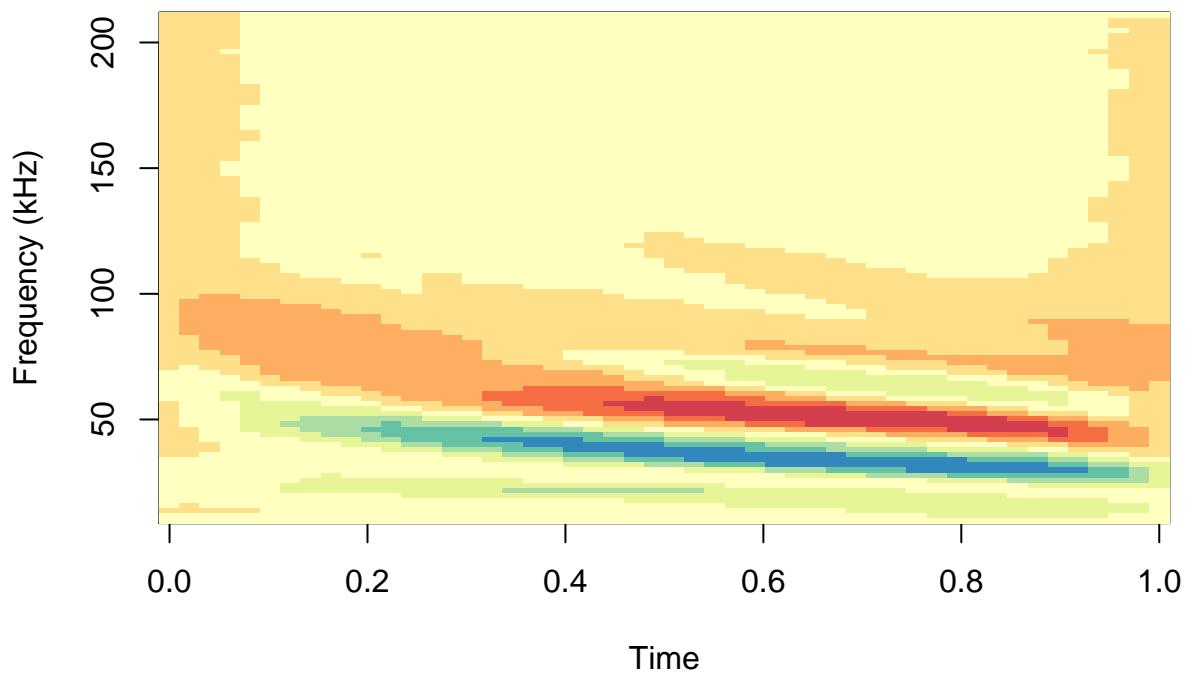
**Principal Component 1**



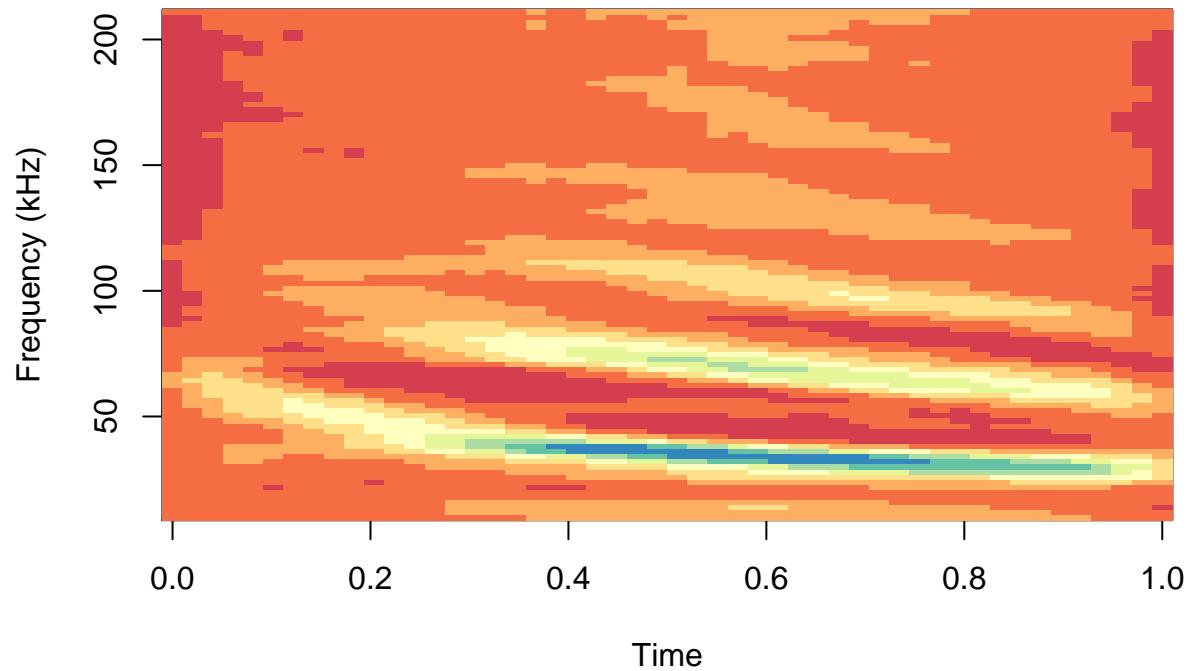
**Independent Component 1**



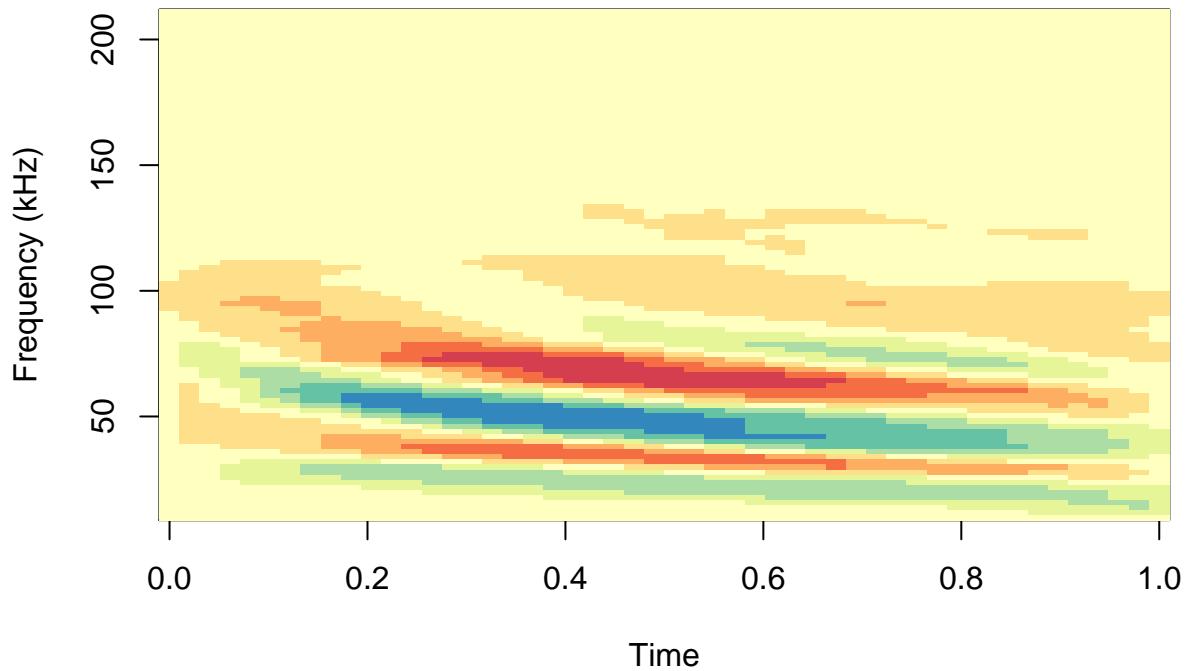
## Principal Component 2



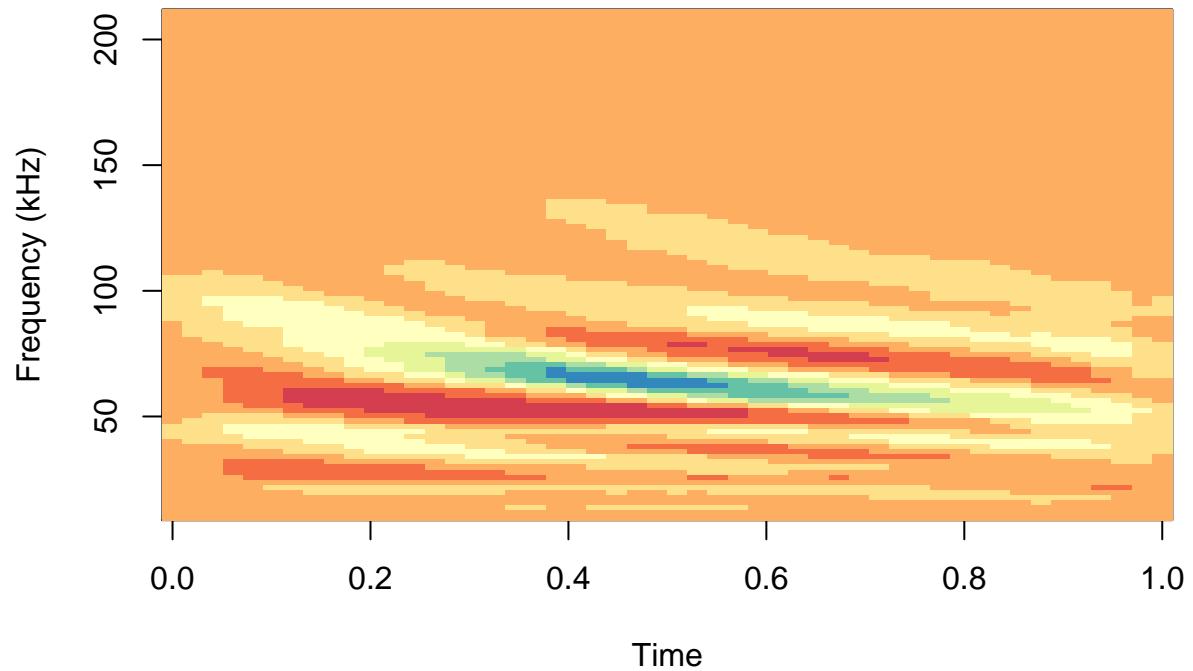
## Independent Component 2



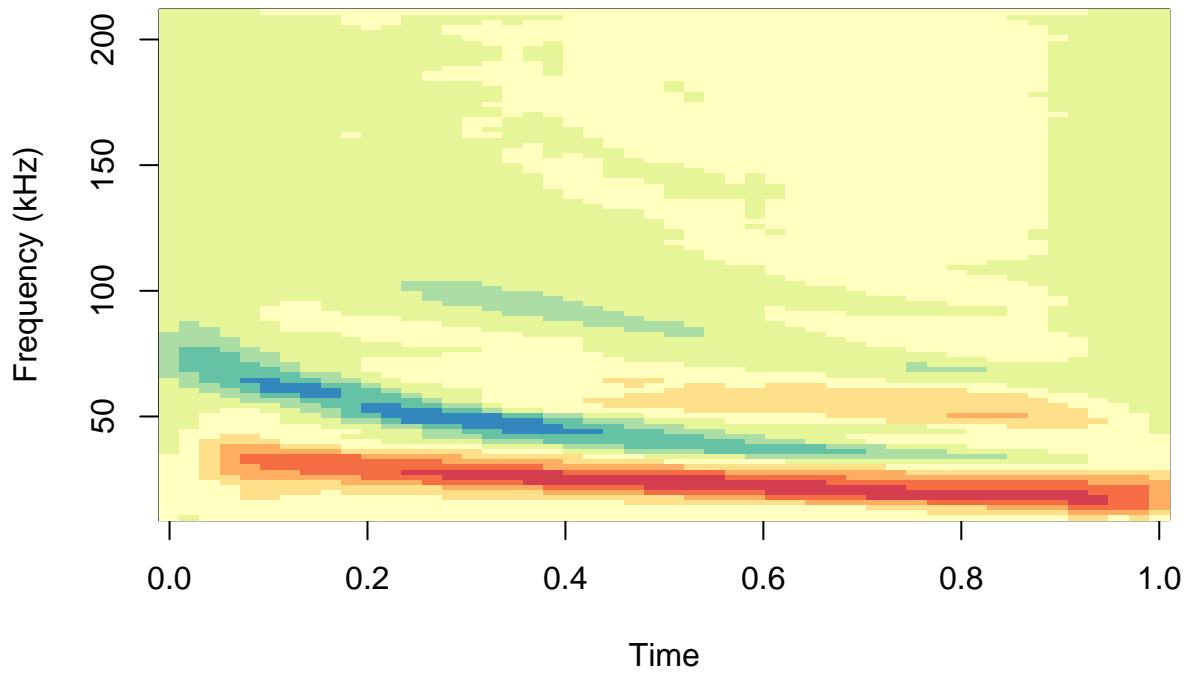
### Principal Component 3



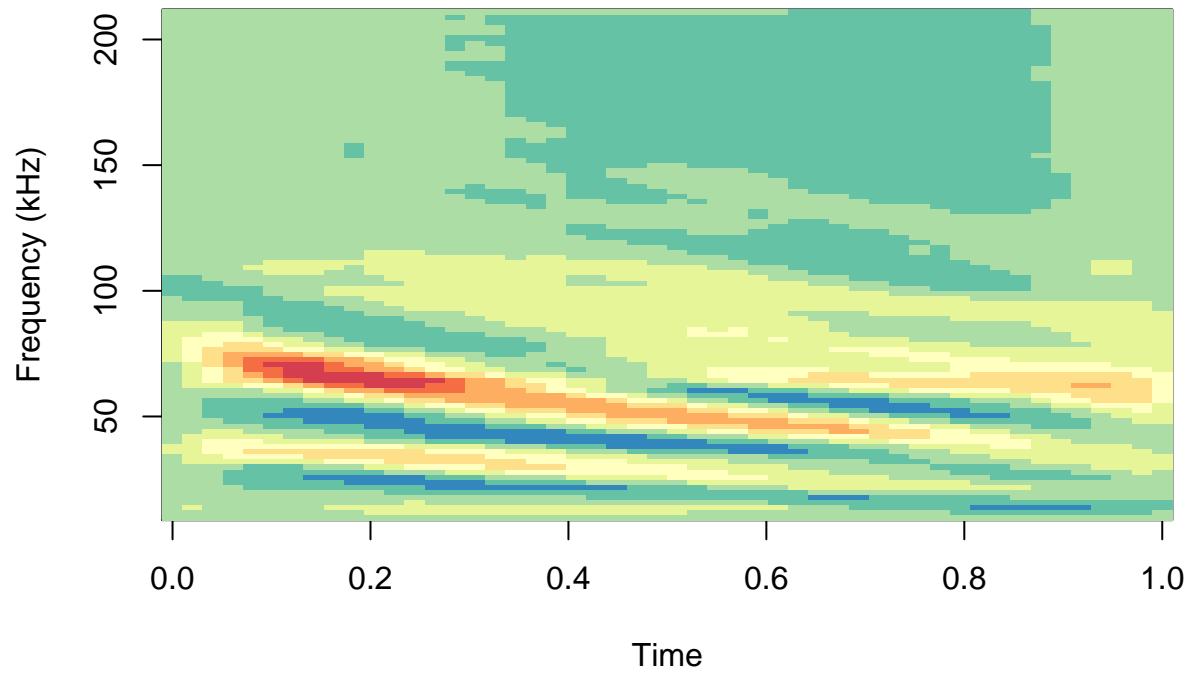
### Independent Component 3



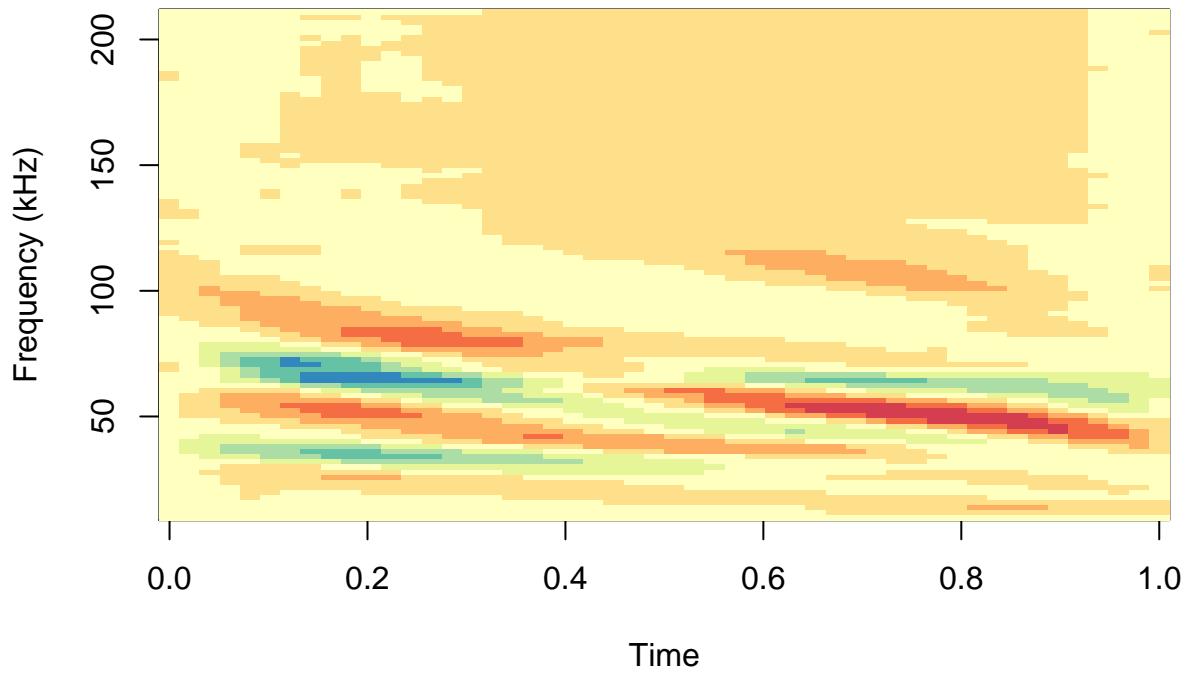
## Principal Component 4



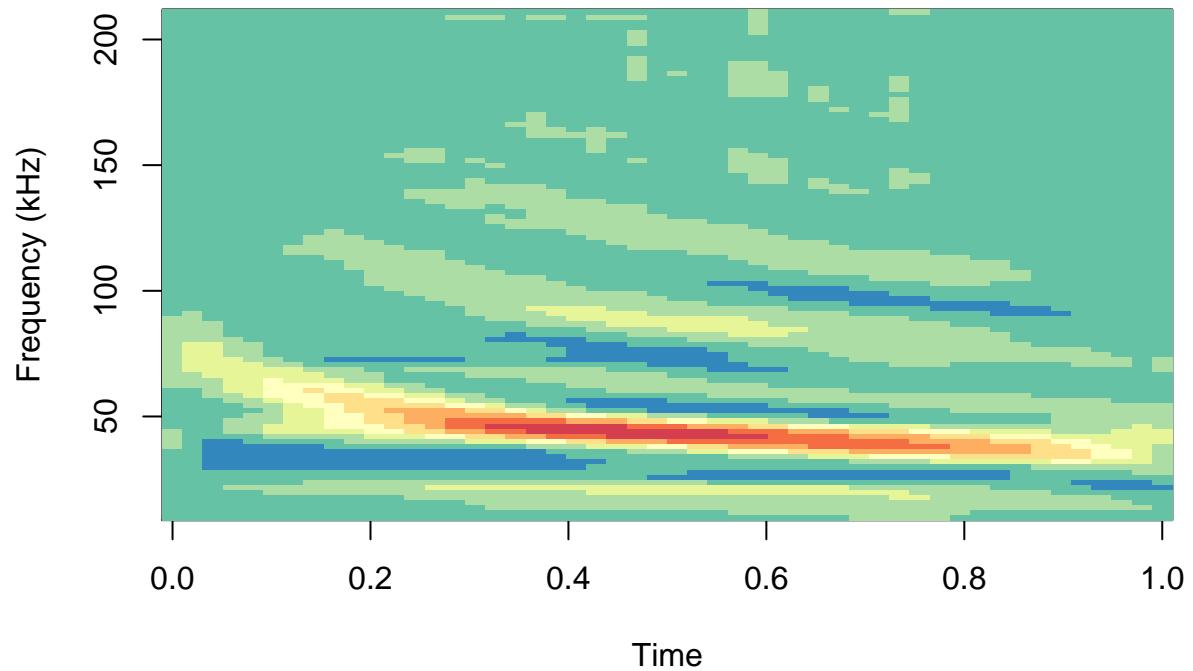
## Independent Component 4



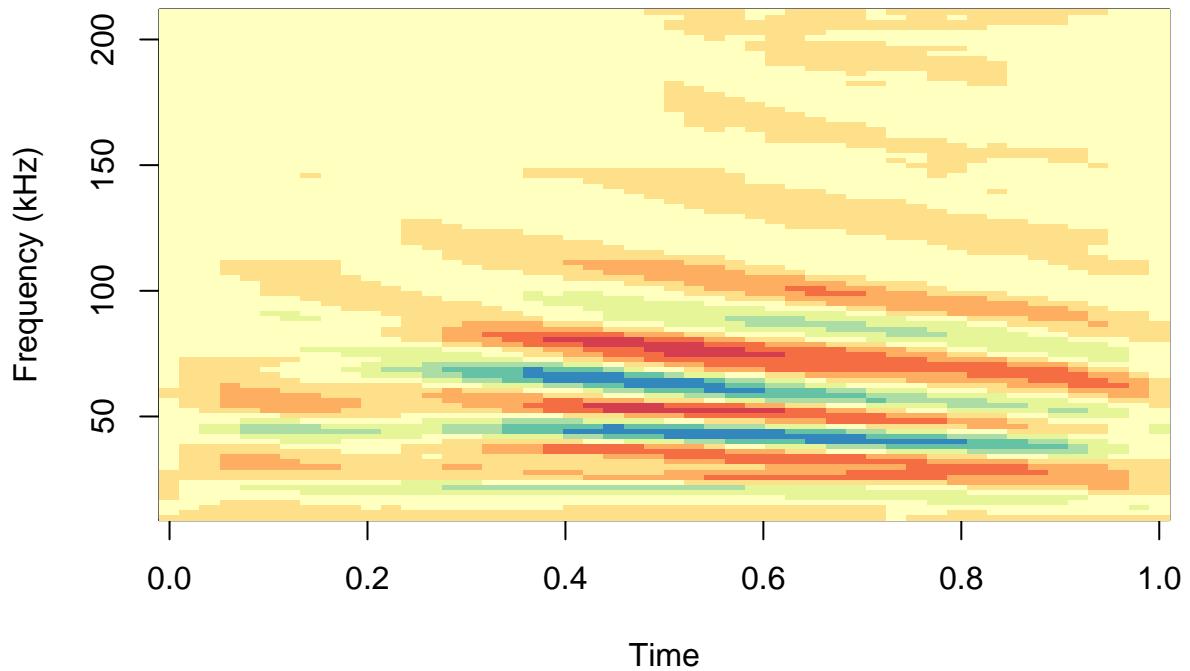
## Principal Component 5



## Independent Component 5



## Principal Component 6



## Independent Component 6

