

[illegible]

The (possibly unknown) relationship between entities resulting from an evolutionary tree

Information on the relationships of the languages

the rate at which the language changes

The number of languages in a sample

The expected number of evolutionary events that occurred between two languages

Times of branch events

Constructed by combining the word segment information for the languages of interest with information on the homology of the segments

Information on the homology of the segments

Linguistic segment

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Appendix 1 - Prior Segment Frequencies

H	Homology map The map describing the alignment of the segments
Q	Rate Matrix
β	Rate matrix scaling factor Scales the rate matrix such that the average rate of segmental substitution is one
P	Probability The probability the process ends in certain state
P	Marginal Likelihood
π	Equilibrium distribution
λ	Rate of segment insertion
μ	Rate of segment deletion
n	Word length Number of segments in a word
r	Rate parameter
ϑ	Rate parameters Parameters associated with the rate matrix
ϑ'	Proposal New value proposal
q	Proposal probability Probability of new proposal
u	Random number
R	Acceptance probability Probability of accepting a proposed value
M	Model Mathematical model for linguistic parameters
BF	Bayes Factor A numerical factor related to the quality of the model fit
X	Unknown

Appendix 1 - Prior Segment Frequencies

```
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(Friulian,Italian))))";
  "NumberOfStates": 90,
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      {"Taxon": "Italian", "Segments": [7, -1, -1, 6]},
      {"Taxon": "PortugueseBrazil", "Segments": [-1, 0, -1, 8]},
      {"Taxon": "Portuguese", "Segments": [-1, 0, -1, 8]},
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      {"Taxon": "Romanian", "Segments": [12, 0, -1, 8]}
    ]},
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      {"Taxon": "French", "Segments": [13, 15, -1, -1, -1]},
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      {"Taxon": "Italian", "Segments": [13, 2, 7, -1, -1]},
      {"Taxon": "PortugueseBrazil", "Segments": [13, 9, 12, -1, 14]},
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      {"Taxon": "Walloon", "Segments": [13, 6, -1, -1, -1]},
      {"Taxon": "Friulian", "Segments": [13, 2, -1, -1, -1]},
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      {"Taxon": "Italian", "Segments": [18, 2, 7, -1]},
      {"Taxon": "PortugueseBrazil", "Segments": [18, 9, 12, 14]},
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      {"Taxon": "Friulian", "Segments": [18, 2, -1, -1]},
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}
```

Appendix 1 - Prior Segment Frequencies

```
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  {"Taxon": "Friulian", "Segments": [20, 15]},
  {"Taxon": "Romanian", "Segments": [20, 15]}
]},
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  {"Taxon": "PortugueseBrazil", "Segments": [18, 6, 14, -1, 0, -1]},
  {"Taxon": "Portuguese", "Segments": [18, 9, 14, -1, 0, -1]},
  {"Taxon": "Catalan", "Segments": [18, 6, 14, 20, 0, -1]}
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  {"Taxon": "Spanish", "Segments": [-1, 0, -1, 26, -1, 19, 28, -1, 27]},
  {"Taxon": "Italian", "Segments": [24, 0, 26, 26, 7, -1, 13, -1, 27]},
  {"Taxon": "PortugueseBrazil", "Segments": [24, 0, -1, 26, 0, -1, -1, -1, 29]},
  {"Taxon": "Portuguese", "Segments": [24, 0, -1, 26, 12, -1, -1, -1, 29]},
  {"Taxon": "Catalan", "Segments": [24, 0, -1, 26, -1, 19, 28, -1, 27]},
  {"Taxon": "Walloon", "Segments": [24, 30, -1, 26, -1, -1, -1, -1, -1]},
  {"Taxon": "Friulian", "Segments": [24, 31, -1, 26, 7, -1, 13, -1, 31]},
  {"Taxon": "Romanian", "Segments": [24, 0, -1, 26, 0, -1, -1, 12, 0]}
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  {"Taxon": "Spanish", "Segments": [26, 15, 34, -1, 0, 28, -1, -1]},
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  {"Taxon": "Catalan", "Segments": [26, 15, 35, -1, 0, -1, -1, -1]},
  {"Taxon": "Friulian", "Segments": [26, 15, -1, -1, 37, 33, -1, -1]},
  {"Taxon": "Romanian", "Segments": [26, 15, -1, 12, 0, 33, 0, -1]}
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  {"Taxon": "Italian", "Segments": [23, 9, 13, -1, 13, 27]},
  {"Taxon": "PortugueseBrazil", "Segments": [23, 6, -1, -1, 13, 29]},
  {"Taxon": "Portuguese", "Segments": [23, 6, -1, -1, 13, 29]},
  {"Taxon": "Catalan", "Segments": [23, 9, -1, -1, 13, 4]},
  {"Taxon": "Walloon", "Segments": [23, 30, 26, -1, -1, -1]},
  {"Taxon": "Friulian", "Segments": [23, 9, -1, -1, 13, 0]},
  {"Taxon": "Romanian", "Segments": [23, 39, 26, -1, 13, 4]}
]},
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```

Appendix 1 - Prior Segment Frequencies

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  "Taxon": "Catalan", "Segments": [-1, 9, 26, 4, -1, -1, -1, -1]},
  "Taxon": "Walloon", "Segments": [-1, 9, 26, -1, -1, -1, -1, -1]},
  "Taxon": "Friulian", "Segments": [-1, 9, 26, -1, -1, -1, -1, -1]},
  "Taxon": "Romanian", "Segments": [-1, 6, 26, -1, -1, -1, -1, -1]}
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    {"Taxon": "Portuguese", "Segments": [44, -1, 24, 45, -1, 20, 47, -1]},
    {"Taxon": "Walloon", "Segments": [31, -1, 24, 48, -1, -1, -1, -1]}
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    {"Taxon": "Friulian", "Segments": [26, 15, -1, 37, 33, -1, -1]},
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    {"Taxon": "Portuguese", "Segments": [26, 29, 28, 7, 51, 15, -1]}
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}
```

Appendix 1 - Prior Segment Frequencies

```
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  {"Taxon": "Portuguese", "Segments": [47, 16, 49, 6, -1, 50, 15, -1]},
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  {"Taxon": "Spanish", "Segments": [26, 27, 51, 28, 0, -1]},
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}],
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  {"Taxon": "Catalan", "Segments": [27, 8, -1, -1]}
}],
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  {"Taxon": "Italian", "Segments": [-1, -1, 15, -1, 20, 46, -1, 31, 32, 32, 6, -1]},
  {"Taxon": "Catalan", "Segments": [-1, -1, 15, -1, -1, 14, -1, 0, -1, 35, -1, -1]},
```

Appendix 1 - Prior Segment Frequencies

```
{
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}],
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  {"Taxon": "Italian", "Segments": [49, 27, 14, 14, 0, 33, 6, -1]},
  {"Taxon": "PortugueseBrazil", "Segments": [49, 27, -1, 14, 29, 28, 15, -1]},
  {"Taxon": "Portuguese", "Segments": [49, 27, -1, 14, 29, 28, 15, -1]},
  {"Taxon": "Romanian", "Segments": [49, 27, -1, 14, 4, 28, 0, -1]}
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  {"Taxon": "Italian", "Segments": [24, 33, 15, -1, 20, 20, 6, -1]},
  {"Taxon": "PortugueseBrazil", "Segments": [24, 28, 15, -1, -1, 20, 29, -1]},
  {"Taxon": "Portuguese", "Segments": [24, 28, 15, -1, -1, 20, 29, -1]},
  {"Taxon": "Catalan", "Segments": [24, 28, 15, 12, -1, 20, -1, -1]},
  {"Taxon": "Walloon", "Segments": [24, 56, 22, -1, -1, -1, -1, -1]},
  {"Taxon": "Friulian", "Segments": [24, 33, 15, -1, -1, 20, -1, -1]},
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  {"Taxon": "Walloon", "Segments": [24, 32, 64, 36, -1, -1]},
  {"Taxon": "Friulian", "Segments": [24, 32, 2, 33, -1, -1]},
  {"Taxon": "Romanian", "Segments": [24, 32, 39, 28, 0, -1]}
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  {"Taxon": "Italian", "Segments": [13, 54, 14, 6, -1]},
  {"Taxon": "Catalan", "Segments": [13, 27, 14, -1, -1]},
  {"Taxon": "Walloon", "Segments": [13, 0, -1, -1, -1]},
  {"Taxon": "Friulian", "Segments": [13, 54, 14, -1, -1]},
  {"Taxon": "Romanian", "Segments": [13, 27, 14, -1, -1]}
]},
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  {"Taxon": "Italian", "Segments": [13, 27, 33, 7, 46, 0]},
  {"Taxon": "PortugueseBrazil", "Segments": [13, 27, 28, 7, 14, -1]},
  {"Taxon": "Portuguese", "Segments": [13, 29, 28, 7, 16, -1]},
  {"Taxon": "Catalan", "Segments": [13, 54, 33, 11, 14, -1]}
]},
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```

Appendix 1 - Prior Segment Frequencies

```
{
  "Taxon": "PortugueseBrazil", "Segments": [14, 9, 8, -1, -1]},
  "Taxon": "Portuguese", "Segments": [14, 9, 65, -1, -1]},
  "Taxon": "Catalan", "Segments": [14, 9, 32, -1, -1]},
  "Taxon": "Walloon", "Segments": [14, 9, 32, 9, -1]},
  "Taxon": "Romanian", "Segments": [14, 39, 28, 0, -1]}
}],
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  {"Taxon": "Latin", "Segments": [14, 6, 32, 7, 66, 15, 32, 15, 14]},
  {"Taxon": "French", "Segments": [14, 9, 32, 67, -1, -1, -1, -1, -1]},
  {"Taxon": "Friulian", "Segments": [14, 6, 33, 0, -1, -1, 32, 7, -1]}
]},
{"Name": "Moon", "Data": [
  {"Taxon": "Latin", "Segments": [32, 21, 13, 27]},
  {"Taxon": "French", "Segments": [32, 22, 13, -1]},
  {"Taxon": "Spanish", "Segments": [32, 15, 13, 27]},
  {"Taxon": "Italian", "Segments": [32, 15, 13, 27]},
  {"Taxon": "PortugueseBrazil", "Segments": [32, 15, -1, 29]},
  {"Taxon": "Portuguese", "Segments": [32, 15, -1, 29]},
  {"Taxon": "Catalan", "Segments": [35, 15, 13, 4]},
  {"Taxon": "Walloon", "Segments": [32, 68, 13, -1]},
  {"Taxon": "Friulian", "Segments": [32, 15, 13, 0]},
  {"Taxon": "Romanian", "Segments": [32, 15, 13, 4]}
]},
{"Name": "Star", "Data": [
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  {"Taxon": "French", "Segments": [0, -1, 20, 8, 27, -1, 32, -1]},
  {"Taxon": "Spanish", "Segments": [0, 14, 20, 28, 0, -1, 5, 27]},
  {"Taxon": "Italian", "Segments": [-1, 14, 20, -1, 0, 32, 32, 27]},
  {"Taxon": "PortugueseBrazil", "Segments": [7, 14, 20, 28, 0, -1, 32, 29]},
  {"Taxon": "Portuguese", "Segments": [47, 16, 20, 28, 0, -1, 32, 29]},
  {"Taxon": "Catalan", "Segments": [4, 14, 20, -1, 31, -1, 32, -1]},
  {"Taxon": "Walloon", "Segments": [-1, 14, 20, -1, 64, -1, 32, -1]},
  {"Taxon": "Friulian", "Segments": [-1, 14, 20, -1, 31, -1, 32, 0]},
  {"Taxon": "Romanian", "Segments": [-1, 14, 20, -1, 69, -1, -1, -1]}
]},
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  {"Taxon": "French", "Segments": [6, -1, -1, -1, -1]},
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  {"Taxon": "Italian", "Segments": [27, 52, 52, 8, 27]},
  {"Taxon": "PortugueseBrazil", "Segments": [27, -1, 1, 8, 29]},
  {"Taxon": "Portuguese", "Segments": [27, -1, 1, 8, 29]},
  {"Taxon": "Catalan", "Segments": [72, -1, 71, 8, 4]},
  {"Taxon": "Walloon", "Segments": [62, -1, -1, 8, -1]},
  {"Taxon": "Friulian", "Segments": [27, -1, 73, -1, 0]},
  {"Taxon": "Romanian", "Segments": [27, -1, 49, -1, 4]}
]},
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  {"Taxon": "French", "Segments": [49, 32, 63, -1, -1, 7, -1]},
  {"Taxon": "Spanish", "Segments": [5, -1, 15, -1, 19, 12, 27]},
  {"Taxon": "Italian", "Segments": [49, 12, 6, 23, 10, -1, 27]},
  {"Taxon": "PortugueseBrazil", "Segments": [16, -1, 15, -1, 18, -1, 29]},
  {"Taxon": "Portuguese", "Segments": [16, -1, 15, -1, 18, -1, 29]},
  {"Taxon": "Catalan", "Segments": [49, 32, 15, -1, 3, -1, 4]},
  {"Taxon": "Walloon", "Segments": [49, 32, 21, -1, 36, -1, -1]},
```


Appendix 1 - Prior Segment Frequencies

```
{
  "Taxon": "Friulian", "Segments": [49, 32, 6, -1, -1, 12, 0]},
  "Taxon": "Romanian", "Segments": [49, 32, 39, -1, -1, 12, 0]}
}],
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  {"Taxon": "French", "Segments": [32, 27, 52, -1, -1]},
  {"Taxon": "Spanish", "Segments": [32, 27, 73, 6, -1]},
  {"Taxon": "Italian", "Segments": [32, 27, 1, 6, -1]},
  {"Taxon": "PortugueseBrazil", "Segments": [32, 27, 1, 15, -1]},
  {"Taxon": "Portuguese", "Segments": [32, 27, 71, 15, -1]},
  {"Taxon": "Catalan", "Segments": [35, 27, 52, -1, -1]},
  {"Taxon": "Walloon", "Segments": [32, 27, 52, -1, -1]},
  {"Taxon": "Friulian", "Segments": [32, 54, 20, -1, -1]},
  {"Taxon": "Romanian", "Segments": [32, 27, 52, -1, -1]}
}],
{"Name": "Sea", "Data": [
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  {"Taxon": "French", "Segments": [26, 31, 36, -1]},
  {"Taxon": "Spanish", "Segments": [26, 27, 28, -1]},
  {"Taxon": "Italian", "Segments": [26, 27, 33, 0]},
  {"Taxon": "PortugueseBrazil", "Segments": [26, 27, 36, -1]},
  {"Taxon": "Portuguese", "Segments": [26, 27, 28, -1]},
  {"Taxon": "Catalan", "Segments": [26, 27, 33, -1]},
  {"Taxon": "Walloon", "Segments": [26, 0, 36, -1]},
  {"Taxon": "Friulian", "Segments": [26, 54, 33, -1]},
  {"Taxon": "Romanian", "Segments": [26, 27, 33, 0]}
}],
{"Name": "Salt", "Data": [
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  {"Taxon": "French", "Segments": [14, 31, 32, -1, -1]},
  {"Taxon": "Spanish", "Segments": [14, 27, 32, -1, -1]},
  {"Taxon": "Italian", "Segments": [14, 27, 32, 0, -1]},
  {"Taxon": "PortugueseBrazil", "Segments": [14, 27, 8, -1, -1]},
  {"Taxon": "Portuguese", "Segments": [14, 27, 32, -1, -1]},
  {"Taxon": "Catalan", "Segments": [14, 27, 32, -1, -1]},
  {"Taxon": "Walloon", "Segments": [14, 0, -1, -1, -1]},
  {"Taxon": "Friulian", "Segments": [14, 54, 32, -1, -1]},
  {"Taxon": "Romanian", "Segments": [14, 27, 33, 0, -1]}
}],
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  {"Taxon": "French", "Segments": [20, -1, 0, -1, 36, -1]},
  {"Taxon": "Spanish", "Segments": [20, 12, 0, -1, 33, 27]},
  {"Taxon": "Italian", "Segments": [20, -1, 31, 33, 33, 27]},
  {"Taxon": "PortugueseBrazil", "Segments": [20, -1, 0, -1, 36, 29]},
  {"Taxon": "Portuguese", "Segments": [20, -1, 31, -1, 36, 29]},
  {"Taxon": "Catalan", "Segments": [20, -1, 31, -1, 33, 4]},
  {"Taxon": "Walloon", "Segments": [20, -1, 62, -1, 36, -1]},
  {"Taxon": "Friulian", "Segments": [20, 12, 31, -1, 33, 0]},
  {"Taxon": "Romanian", "Segments": [53, -1, 27, -1, 33, 4]}
}],
{"Name": "Fog", "Data": [
  {"Taxon": "Latin", "Segments": [52, 54, 32, 37, 1, 7, 13, 0, 26]},
  {"Taxon": "Spanish", "Segments": [52, 27, 32, 7, -1, -1, 13, 27, -1]},
  {"Taxon": "Italian", "Segments": [52, 27, 32, 7, 10, 7, 13, 0, -1]},
  {"Taxon": "PortugueseBrazil", "Segments": [52, 27, 32, 7, 3, 41, -1, -1, -1]},
```

Appendix 1 - Prior Segment Frequencies

```
{ "Taxon": "Portuguese", "Segments": [52, 29, 32, 7, 3, 55, -1, -1, -1]}
}},
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  { "Taxon": "French", "Segments": [13, 12, 9, -1, -1, -1, 32, 22]},
  { "Taxon": "Spanish", "Segments": [13, 12, 0, -1, 19, -1, 32, 27]},
  { "Taxon": "Italian", "Segments": [13, -1, 0, 19, 19, -1, 12, 27]},
  { "Taxon": "PortugueseBrazil", "Segments": [13, -1, 31, -1, 18, 8, -1, 29]},
  { "Taxon": "Portuguese", "Segments": [13, -1, 31, -1, 18, 8, -1, 29]},
  { "Taxon": "Catalan", "Segments": [13, -1, 0, -1, -1, 8, 32, 4]},
  { "Taxon": "Romanian", "Segments": [13, 0, 1, 15, 33, 4, -1, -1]}
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  { "Taxon": "Italian", "Segments": [20, 62, 13, 0, 19, 33, 0]}
}},
{ "Name": "Fog-Tenebras", "Data": [
  { "Taxon": "Latin", "Segments": [20, -1, 0, 13, -1, 25, 19, 33, 54, 14]},
  { "Taxon": "French", "Segments": [20, -1, 0, 13, -1, 31, 19, 36, -1, -1]},
  { "Taxon": "Spanish", "Segments": [20, -1, 7, 13, 12, 0, 19, 32, 27, 14]},
  { "Taxon": "Italian", "Segments": [20, -1, 62, 13, -1, 0, 19, 33, 0, -1]},
  { "Taxon": "Portuguese", "Segments": [20, 28, -1, -1, -1, 31, 18, -1, 29, 16]},
  { "Taxon": "Catalan", "Segments": [20, -1, 4, 13, -1, 0, 19, 28, 4, 14]}
}},
{ "Name": "Fog-Fumata", "Data": [
  { "Taxon": "Latin", "Segments": [24, 21, 26, 54, 20, 27]},
  { "Taxon": "French", "Segments": [24, 22, 26, 0, -1, -1]},
  { "Taxon": "Spanish", "Segments": [24, 15, 26, 27, 20, 27]},
  { "Taxon": "Italian", "Segments": [24, 15, 26, 54, 20, 27]},
  { "Taxon": "PortugueseBrazil", "Segments": [24, 15, 26, 27, 14, 29]},
  { "Taxon": "Portuguese", "Segments": [24, 15, 26, 27, 14, 29]},
  { "Taxon": "Friulian", "Segments": [24, 15, 26, 27, 20, 0]}
}},
{ "Name": "Fog-Caecia", "Data": [
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  { "Taxon": "Romanian", "Segments": [46, 69, 46, -1, 4]}
}},
{ "Name": "Sky", "Data": [
  { "Taxon": "Latin", "Segments": [52, -1, 72, 32, 15, 26]},
  { "Taxon": "French", "Segments": [14, 12, 31, 32, -1, -1]},
  { "Taxon": "Spanish", "Segments": [58, 12, 0, 32, 6, -1]},
  { "Taxon": "Italian", "Segments": [46, -1, 31, 32, 6, -1]},
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  { "Taxon": "Portuguese", "Segments": [14, -1, 31, 8, -1, -1]},
  { "Taxon": "Catalan", "Segments": [14, -1, 31, 32, -1, -1]},
  { "Taxon": "Walloon", "Segments": [14, -1, 37, 36, -1, -1]},
  { "Taxon": "Friulian", "Segments": [46, -1, 37, 32, -1, -1]},
  { "Taxon": "Romanian", "Segments": [46, -1, 0, 28, -1, -1]}
}},
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  { "Taxon": "Latin", "Segments": [8, -1, 0, 13, 20, 15, 26]},
  { "Taxon": "French", "Segments": [18, -1, 43, -1, -1, -1, -1]},
  { "Taxon": "Spanish", "Segments": [19, 12, 0, 13, 20, 6, -1]},
  { "Taxon": "Italian", "Segments": [18, -1, 31, 13, 20, 6, -1]},
  { "Taxon": "PortugueseBrazil", "Segments": [18, -1, 74, -1, 20, 15, -1]},
  { "Taxon": "Portuguese", "Segments": [18, -1, 74, -1, 20, 15, -1]},
```

Appendix 1 - Prior Segment Frequencies

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  "Taxon": "Catalan", "Segments": [19, -1, 0, 13, -1, -1, -1]},
  "Taxon": "Walloon", "Segments": [18, -1, 74, -1, -1, -1, -1]},
  "Taxon": "Friulian", "Segments": [18, -1, 7, 13, 20, -1, -1]},
  "Taxon": "Romanian", "Segments": [18, -1, 47, 13, 20, -1, -1]}
}],
{
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    {"Taxon": "French", "Segments": [24, -1, 68, -1, -1, -1]},
    {"Taxon": "Spanish", "Segments": [24, 8, 0, 1, 6, -1]},
    {"Taxon": "Italian", "Segments": [24, 8, 9, 52, 6, -1]},
    {"Taxon": "PortugueseBrazil", "Segments": [24, -1, 6, 1, 15, -1]},
    {"Taxon": "Portuguese", "Segments": [24, -1, 6, 71, 15, -1]},
    {"Taxon": "Catalan", "Segments": [24, -1, 9, 52, -1, -1]},
    {"Taxon": "Walloon", "Segments": [24, -1, 64, -1, -1, -1]},
    {"Taxon": "Friulian", "Segments": [24, -1, 21, 52, -1, -1]},
    {"Taxon": "Romanian", "Segments": [24, -1, 6, 52, -1, -1]}
  ]
},
{
  "Name": "Year", "Data": [
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    {"Taxon": "French", "Segments": [43, -1, -1, -1, -1]},
    {"Taxon": "Spanish", "Segments": [27, -1, 38, 6, -1]},
    {"Taxon": "Italian", "Segments": [27, 13, 13, 6, -1]},
    {"Taxon": "PortugueseBrazil", "Segments": [29, -1, 13, 15, -1]},
    {"Taxon": "Portuguese", "Segments": [29, -1, 13, 15, -1]},
    {"Taxon": "Catalan", "Segments": [27, -1, 38, -1, -1]},
    {"Taxon": "Walloon", "Segments": [48, -1, -1, -1, -1]},
    {"Taxon": "Friulian", "Segments": [27, -1, 75, -1, -1]},
    {"Taxon": "Romanian", "Segments": [27, 13, -1, -1, -1]}
  ]
},
{
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    {"Taxon": "French", "Segments": [13, 42, -1, -1, -1]},
    {"Taxon": "Italian", "Segments": [13, 2, 26, 0, -1]},
    {"Taxon": "PortugueseBrazil", "Segments": [13, 6, 26, 7, -1]},
    {"Taxon": "Portuguese", "Segments": [13, 6, 26, 47, -1]},
    {"Taxon": "Catalan", "Segments": [13, 9, 26, -1, -1]},
    {"Taxon": "Walloon", "Segments": [13, 61, -1, -1, -1]},
    {"Taxon": "Friulian", "Segments": [13, 9, 75, -1, -1]},
    {"Taxon": "Romanian", "Segments": [13, 15, 26, 0, -1]}
  ]
},
{
  "Name": "Name-Nominem", "Data": [
    {"Taxon": "Latin", "Segments": [13, 2, 26, 7, 13, -1, 0, 26]},
    {"Taxon": "Spanish", "Segments": [13, 6, 26, -1, 19, 28, 0, -1]}
  ]
},
{
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    {"Taxon": "Latin", "Segments": [32, 7, 13, 76, -1, 27]},
    {"Taxon": "French", "Segments": [32, 43, -1, 1, -1, -1]},
    {"Taxon": "Spanish", "Segments": [32, 0, 75, 1, 8, 27]},
    {"Taxon": "Italian", "Segments": [32, 7, 13, 1, 8, 27]},
    {"Taxon": "PortugueseBrazil", "Segments": [32, 44, -1, 1, 8, 29]},
    {"Taxon": "Portuguese", "Segments": [32, 44, -1, 1, 8, 29]},
    {"Taxon": "Walloon", "Segments": [32, 77, -1, -1, -1, -1]},
    {"Taxon": "Friulian", "Segments": [32, 31, 13, 73, -1, 31]},
    {"Taxon": "Romanian", "Segments": [32, 7, 26, 19, -1, 4]}
  ]
},
{
  "Name": "ToDrink", "Data": [
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Appendix 1 - Prior Segment Frequencies

```
{
  "Taxon": "Latin", "Segments": [19, 7, 19, -1, 0, 33, 0]},
  "Taxon": "French", "Segments": [19, -1, -1, 8, 78, 36, -1]},
  "Taxon": "Spanish", "Segments": [19, 0, 19, -1, 0, 28, -1]},
  "Taxon": "Italian", "Segments": [19, 0, -1, -1, -1, 28, 0]},
  "Taxon": "PortugueseBrazil", "Segments": [19, 0, 19, -1, 0, 36, -1]},
  "Taxon": "Portuguese", "Segments": [19, 47, 79, -1, 0, 28, -1]},
  "Taxon": "Catalan", "Segments": [19, 31, 8, -1, -1, 28, 4]},
  "Taxon": "Walloon", "Segments": [19, -1, -1, -1, 64, 36, -1]},
  "Taxon": "Friulian", "Segments": [19, 0, 18, 7, -1, -1, -1]},
  "Taxon": "Romanian", "Segments": [19, -1, -1, -1, 69, -1, -1]}
}],
{
  "Name": "ToEat", "Data": [
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      "Taxon": "Spanish", "Segments": [52, 6, 26, 0, -1, -1, 28, -1]},
      "Taxon": "PortugueseBrazil", "Segments": [52, 6, 26, 0, -1, -1, -1, -1]},
      "Taxon": "Portuguese", "Segments": [52, 15, 26, -1, -1, 0, 28, -1]}
    ]
  },
{
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      "Taxon": "French", "Segments": [26, 43, -1, 3, -1, -1, 0, -1, -1]},
      "Taxon": "Spanish", "Segments": [26, 27, 13, 23, 15, 52, 27, 28, -1]},
      "Taxon": "Italian", "Segments": [26, 27, 13, 10, -1, -1, 27, 28, 0]},
      "Taxon": "PortugueseBrazil", "Segments": [26, 45, -1, 3, -1, -1, 27, 36, -1]},
      "Taxon": "Portuguese", "Segments": [26, 45, -1, 3, -1, -1, 27, 28, -1]},
      "Taxon": "Catalan", "Segments": [26, 4, 38, 3, -1, -1, 27, -1, -1]},
      "Taxon": "Walloon", "Segments": [26, 27, 38, -1, -1, -1, 37, -1, -1]},
      "Taxon": "Friulian", "Segments": [26, 27, 75, 80, -1, -1, 54, -1, -1]},
      "Taxon": "Romanian", "Segments": [26, 47, 13, -1, -1, 52, 27, -1, -1]}
    ]
  },
{
  "Name": "ToBite", "Data": [
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      "Taxon": "French", "Segments": [26, -1, 6, 36, 23, -1, 36, -1]},
      "Taxon": "Spanish", "Segments": [26, -1, 6, 28, 51, 0, 28, -1]},
      "Taxon": "Italian", "Segments": [26, -1, 9, 33, 23, 0, 33, 0]},
      "Taxon": "PortugueseBrazil", "Segments": [26, -1, 6, 36, 23, 0, 36, -1]},
      "Taxon": "Portuguese", "Segments": [26, -1, 15, 28, 51, 0, 28, -1]},
      "Taxon": "Friulian", "Segments": [26, 8, 27, 33, 23, 7, -1, -1]}
    ]
  },
{
  "Name": "ToBite-Morsicare", "Data": [
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      "Taxon": "Spanish", "Segments": [26, 6, -1, 14, -1, 52, 27, 28, -1]},
      "Taxon": "Italian", "Segments": [26, 6, 33, 14, 7, 52, 27, 28, 0]},
      "Taxon": "PortugueseBrazil", "Segments": [26, 15, -1, 14, 4, 1, 27, -1, -1]},
      "Taxon": "Portuguese", "Segments": [26, 15, -1, 14, 4, 1, 27, 33, -1]},
      "Taxon": "Catalan", "Segments": [26, 15, -1, 14, 4, 71, 27, -1, -1]},
      "Taxon": "Romanian", "Segments": [26, 15, 33, 14, 0, 52, 27, -1, -1]}
    ]
  },
{
  "Name": "ToSuck", "Data": [
    {
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      "Taxon": "French", "Segments": [14, 22, 14, 0, -1, -1]},
      "Taxon": "PortugueseBrazil", "Segments": [14, 15, 1, 27, 36, -1]},
      "Taxon": "Portuguese", "Segments": [14, 15, 1, 27, 28, -1]},
      "Taxon": "Walloon", "Segments": [14, 22, 14, 37, -1, -1]},
      "Taxon": "Friulian", "Segments": [66, 15, 66, 54, -1, -1]},
      "Taxon": "Romanian", "Segments": [14, 15, 10, 0, -1, -1]}
    ]
  },
}
```

Appendix 1 - Prior Segment Frequencies

```
{
  "Name": "ToSpit", "Data": [
    { "Taxon": "Latin", "Segments": [52, 6, 13, 14, 49, 15, 0, 33, 0] },
    { "Taxon": "French", "Segments": [52, 42, -1, 14, 49, 22, 0, -1, -1] },
    { "Taxon": "PortugueseBrazil", "Segments": [52, 15, -1, 14, 49, 7, 36, -1, -1] },
    { "Taxon": "Portuguese", "Segments": [52, 15, -1, 16, 49, 7, 28, -1, -1] }
  ],
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    { "Taxon": "Catalan", "Segments": [4, 14, 52, 15, -1, 49, 7, -1] },
    { "Taxon": "Romanian", "Segments": [-1, 14, 52, 15, 12, 49, 27, -1] }
  ],
  "Name": "ToSpit-Sputare", "Data": [
    { "Taxon": "Latin", "Segments": [-1, 14, 49, 15, 20, 0, 33, 0] },
    { "Taxon": "Spanish", "Segments": [0, 14, 49, 15, 20, 27, 28, -1] },
    { "Taxon": "Italian", "Segments": [-1, 14, 49, 15, 20, 27, 28, 0] },
    { "Taxon": "Friulian", "Segments": [14, 49, 15, 23, 54, -1, -1, -1] }
  ],
  "Name": "ToKnow", "Data": [
    { "Taxon": "Latin", "Segments": [14, 52, 37, 33, 0] },
    { "Taxon": "Romanian", "Segments": [16, 20, 7, -1, -1] }
  ],
  "Name": "ToKnow-Sapere", "Data": [
    { "Taxon": "Latin", "Segments": [14, 27, 49, -1, 0, 33, 0] },
    { "Taxon": "French", "Segments": [14, 27, 18, 8, 27, 36, -1] },
    { "Taxon": "Spanish", "Segments": [14, 27, 19, -1, 0, 28, -1] },
    { "Taxon": "Italian", "Segments": [14, 27, 49, -1, 0, 33, 0] },
    { "Taxon": "PortugueseBrazil", "Segments": [14, 27, 19, -1, 0, 36, -1] },
    { "Taxon": "Portuguese", "Segments": [14, 29, 19, -1, 0, 28, -1] },
    { "Taxon": "Catalan", "Segments": [14, 4, 79, -1, 31, -1, -1] },
    { "Taxon": "Walloon", "Segments": [14, 27, 18, -1, 64, 56, -1] },
    { "Taxon": "Friulian", "Segments": [14, 27, 18, -1, 25, -1, -1] }
  ],
  "Name": "ToKnow-Cognoscere", "Data": [
    { "Taxon": "Latin", "Segments": [52, 6, 1, 13, 2, 14, 52, 0, 33, 0] },
    { "Taxon": "French", "Segments": [52, 9, -1, 13, 31, -1, 20, 36, -1, -1] },
    { "Taxon": "Spanish", "Segments": [52, 6, -1, 13, 6, 58, 0, 28, -1, -1] },
    { "Taxon": "Italian", "Segments": [52, 6, -1, 13, 6, 16, 16, 0, 33, 0] },
    { "Taxon": "PortugueseBrazil", "Segments": [52, 6, -1, 38, 0, 14, -1, 0, 36, -1] },
    { "Taxon": "Portuguese", "Segments": [52, 15, -1, 38, 47, 14, -1, 0, 28, -1] },
    { "Taxon": "Catalan", "Segments": [52, 15, -1, 13, 31, 16, -1, 4, -1, -1] },
    { "Taxon": "Walloon", "Segments": [52, 7, -1, 13, 9, 40, -1, -1, -1, -1] },
    { "Taxon": "Friulian", "Segments": [52, 6, -1, 38, 6, 14, -1, 7, -1, -1] },
    { "Taxon": "Romanian", "Segments": [52, 15, -1, 13, 39, 16, 20, 0, -1, -1] }
  ],
  "Name": "ToThink", "Data": [
    { "Taxon": "Latin", "Segments": [52, -1, 2, 1, 7, 20, 54, 33, 0] },
    { "Taxon": "French", "Segments": [52, 63, -1, -1, 7, 23, 0, -1, -1] },
    { "Taxon": "Spanish", "Segments": [52, 8, -1, -1, 7, 23, 27, 28, -1] },
    { "Taxon": "Italian", "Segments": [52, -1, 6, 10, 7, 20, 27, 33, 0] },
    { "Taxon": "PortugueseBrazil", "Segments": [52, -1, 15, 3, 7, 20, 27, 36, -1] },
    { "Taxon": "Portuguese", "Segments": [52, -1, 15, 3, 7, 20, 27, 28, -1] },
    { "Taxon": "Catalan", "Segments": [52, -1, 15, -1, 12, 23, 27, -1, -1] },
    { "Taxon": "Romanian", "Segments": [52, -1, 15, 10, 0, 20, 27, -1, -1] }
  ],
  "Name": "ToThink-Pensare", "Data": [
    { "Taxon": "Latin", "Segments": [49, 25, 13, 14, 54, 33, 0] },
  ]
}
```

Appendix 1 - Prior Segment Frequencies

```
{
  "Taxon": "French", "Segments": [49, 43, -1, 14, 0, -1, -1]},
  "Taxon": "Spanish", "Segments": [49, 0, 13, 14, 27, 28, -1]},
  "Taxon": "Italian", "Segments": [49, 0, 13, 14, 27, 28, 0]},
  "Taxon": "PortugueseBrazil", "Segments": [49, 74, -1, 14, 27, 36, -1]},
  "Taxon": "Portuguese", "Segments": [49, 74, -1, 14, 27, 28, -1]},
  "Taxon": "Catalan", "Segments": [49, 4, 13, 14, 27, -1, -1]},
  "Taxon": "Walloon", "Segments": [49, 81, -1, 14, 0, -1, -1]},
  "Taxon": "Friulian", "Segments": [49, 0, 75, 14, 54, -1, -1]},
  "Taxon": "Romanian", "Segments": [49, 4, -1, 14, 27, -1, -1]}
}],
{
  "Name": "ToFear", "Data": [
    {"Taxon": "Latin", "Segments": [20, 7, 26, 25, 33, 0]},
    {"Taxon": "Spanish", "Segments": [20, 0, 26, 0, 28, -1]},
    {"Taxon": "Italian", "Segments": [20, 0, 26, 0, 33, 0]},
    {"Taxon": "PortugueseBrazil", "Segments": [20, 0, 26, 0, 36, -1]},
    {"Taxon": "Portuguese", "Segments": [20, 47, 26, 0, 28, -1]},
    {"Taxon": "Catalan", "Segments": [20, 0, 26, 4, -1, -1]},
    {"Taxon": "Friulian", "Segments": [20, 0, 26, 7, -1, -1]},
    {"Taxon": "Romanian", "Segments": [20, 0, 26, 0, -1, -1]}
  ]
},
{
  "Name": "ToFear-Tremere", "Data": [
    {"Taxon": "Latin", "Segments": [20, 33, 0, 26, -1, 0, 33, 0]},
    {"Taxon": "French", "Segments": [52, 36, 74, -1, 23, -1, 36, -1]},
    {"Taxon": "Spanish", "Segments": [20, 28, 0, 26, -1, 0, 28, -1]},
    {"Taxon": "Italian", "Segments": [20, 33, 0, 26, -1, 27, 33, 0]},
    {"Taxon": "PortugueseBrazil", "Segments": [20, 28, 0, 26, -1, 0, 36, -1]},
    {"Taxon": "Portuguese", "Segments": [20, 28, 47, 26, -1, 0, 28, -1]},
    {"Taxon": "Friulian", "Segments": [20, 33, 7, 26, -1, 54, -1, -1]}
  ]
},
{
  "Name": "ToSleep", "Data": [
    {"Taxon": "Latin", "Segments": [23, -1, 6, 33, 26, 37, 33, 0]},
    {"Taxon": "French", "Segments": [23, -1, 9, 36, 26, 7, 36, -1]},
    {"Taxon": "Spanish", "Segments": [23, -1, 6, 28, 26, 7, 28, -1]},
    {"Taxon": "Italian", "Segments": [23, -1, 6, 33, 26, 7, 33, 0]},
    {"Taxon": "PortugueseBrazil", "Segments": [23, -1, 6, 36, 26, 7, 36, -1]},
    {"Taxon": "Portuguese", "Segments": [23, -1, 15, 28, 26, 7, 28, -1]},
    {"Taxon": "Catalan", "Segments": [23, -1, 15, 33, 26, 7, -1, -1]},
    {"Taxon": "Walloon", "Segments": [23, 8, 27, 36, 26, 7, -1, -1]},
    {"Taxon": "Friulian", "Segments": [23, -1, 15, 33, 26, 37, -1, -1]},
    {"Taxon": "Romanian", "Segments": [23, -1, 6, 33, 26, 7, -1, -1]}
  ]
},
{
  "Name": "ToLive", "Data": [
    {"Taxon": "Latin", "Segments": [8, 37, 8, 0, 33, 0]},
    {"Taxon": "French", "Segments": [18, 7, 18, -1, 36, -1]},
    {"Taxon": "Spanish", "Segments": [19, 7, 19, 7, 28, -1]},
    {"Taxon": "Italian", "Segments": [18, 7, 18, 0, 33, 0]},
    {"Taxon": "PortugueseBrazil", "Segments": [18, 7, 18, 0, 36, -1]},
    {"Taxon": "Portuguese", "Segments": [18, 7, 18, 0, 28, -1]},
    {"Taxon": "Catalan", "Segments": [19, 7, 8, -1, 28, 4]},
    {"Taxon": "Friulian", "Segments": [18, 7, 18, 7, -1, -1]},
    {"Taxon": "Romanian", "Segments": [18, 7, -1, 27, -1, -1]}
  ]
},
{
  "Name": "ToDie", "Data": [
    {"Taxon": "French", "Segments": [26, 15, 36, 7, 36, -1]},
    {"Taxon": "Spanish", "Segments": [26, 6, 28, 7, 28, -1]},
    {"Taxon": "Italian", "Segments": [26, 6, 33, 7, 33, 0]},
  ]
}
```


Appendix 1 - Prior Segment Frequencies

```
{
  "Taxon": "PortugueseBrazil", "Segments": [26, 6, 36, 0, 36, -1]},
  "Taxon": "Portuguese", "Segments": [26, 15, 36, 0, 28, -1]},
  "Taxon": "Catalan", "Segments": [26, 15, 28, 7, -1, -1]},
  "Taxon": "Walloon", "Segments": [26, 9, 56, 7, -1, -1]},
  "Taxon": "Friulian", "Segments": [26, 15, 33, 37, -1, -1]},
  "Taxon": "Romanian", "Segments": [26, 15, 33, 7, -1, -1]}
}],
{"Name": "ToKill", "Data": [
  {"Taxon": "Latin", "Segments": [13, -1, 0, 52, 54, 33, 0]},
  {"Taxon": "French", "Segments": [13, 8, 72, 0, -1, -1, -1]},
  {"Taxon": "Catalan", "Segments": [13, -1, 4, 1, 27, -1, -1]},
  {"Taxon": "Romanian", "Segments": [13, -1, 0, 52, 27, -1, -1]}
]},
{"Name": "ToKill-Adnecare", "Data": [
  {"Taxon": "Spanish", "Segments": [27, -1, 13, 0, 1, 27, 28, -1]},
  {"Taxon": "Italian", "Segments": [27, 13, 13, 0, 1, 27, 33, 0]}
]},
{"Name": "ToKill-Tutari", "Data": [
  {"Taxon": "Latin", "Segments": [20, 21, -1, 20, 54, 33, 7]},
  {"Taxon": "French", "Segments": [20, -1, 63, -1, 0, -1, -1]},
  {"Taxon": "Walloon", "Segments": [20, 15, 8, -1, 0, -1, -1]}
]},
{"Name": "ToKill-Mactare", "Data": [
  {"Taxon": "Latin", "Segments": [26, 27, 66, 20, 54, 33, 0]},
  {"Taxon": "French", "Segments": [26, 27, -1, 20, 0, -1, -1]},
  {"Taxon": "Spanish", "Segments": [26, 27, -1, 20, 27, 28, -1]},
  {"Taxon": "PortugueseBrazil", "Segments": [26, 27, -1, 20, 27, 36, -1]},
  {"Taxon": "Portuguese", "Segments": [26, 29, -1, 20, 27, 28, -1]},
  {"Taxon": "Catalan", "Segments": [26, 4, -1, 20, 27, -1, -1]},
  {"Taxon": "Friulian", "Segments": [26, 27, 82, -1, 54, -1, -1]}
]},
{"Name": "ToKill-Occidere", "Data": [
  {"Taxon": "Latin", "Segments": [6, 52, 52, 37, 23, 0, 33, 0]},
  {"Taxon": "French", "Segments": [9, 52, 14, 7, -1, -1, 36, -1]},
  {"Taxon": "Italian", "Segments": [15, 20, 46, 7, 23, 0, 28, 0]},
  {"Taxon": "Catalan", "Segments": [15, 52, 14, 7, -1, -1, -1, -1]},
  {"Taxon": "Romanian", "Segments": [15, -1, 46, 7, 23, 0, -1, -1]}
]},
{"Name": "ToFight", "Data": [
  {"Taxon": "Latin", "Segments": [49, 15, 73, 13, 54, 33, 0]},
  {"Taxon": "Spanish", "Segments": [49, 15, -1, 38, 27, 28, -1]},
  {"Taxon": "Italian", "Segments": [49, 15, 38, 38, 27, 33, 0]},
  {"Taxon": "Catalan", "Segments": [49, 15, -1, 38, 27, -1, -1]}
]},
{"Name": "ToFight-Battuere", "Data": [
  {"Taxon": "Latin", "Segments": [19, 27, 20, 20, 15, 0, 33, 0]},
  {"Taxon": "French", "Segments": [19, 27, 20, -1, -1, 36, -1, -1]},
  {"Taxon": "Spanish", "Segments": [19, 27, -1, 20, -1, 7, 28, -1]},
  {"Taxon": "Italian", "Segments": [19, 27, 20, 20, -1, 0, 33, 0]},
  {"Taxon": "PortugueseBrazil", "Segments": [19, 27, -1, 20, -1, 0, 36, -1]},
  {"Taxon": "Portuguese", "Segments": [19, 29, -1, 20, -1, 0, 28, -1]},
  {"Taxon": "Catalan", "Segments": [19, 27, -1, 20, -1, -1, 28, 4]},
  {"Taxon": "Walloon", "Segments": [19, 27, 20, -1, 0, -1, -1, -1]},
  {"Taxon": "Friulian", "Segments": [19, 27, 20, -1, 7, -1, -1, -1]},
  {"Taxon": "Romanian", "Segments": [19, 27, 20, -1, 0, -1, -1, -1]}
]}
```

Appendix 1 - Prior Segment Frequencies

```
{
  "Name": "ToHunt-Captiare", "Data": [
    {"Taxon": "Latin", "Segments": [52, 27, 49, 20, 7, 54, 33, 0]},
    {"Taxon": "French", "Segments": [16, 27, -1, 14, -1, 0, -1, -1]},
    {"Taxon": "Spanish", "Segments": [52, 27, -1, 58, -1, 27, 28, -1]},
    {"Taxon": "Italian", "Segments": [52, 27, 20, 46, -1, 27, 33, 0]},
    {"Taxon": "PortugueseBrazil", "Segments": [52, 27, -1, 14, -1, 27, 36, -1]},
    {"Taxon": "Portuguese", "Segments": [52, 29, -1, 14, -1, 27, 28, -1]},
    {"Taxon": "Catalan", "Segments": [52, 4, -1, 14, -1, 27, -1, -1]},
    {"Taxon": "Walloon", "Segments": [46, 31, -1, 14, -1, 37, -1, -1]},
    {"Taxon": "Friulian", "Segments": [66, 27, -1, 46, -1, 54, -1, -1]}
  ]
},
{
  "Name": "ToHit", "Data": [
    {"Taxon": "Latin", "Segments": [49, 15, 32, 14, 54, 33, 0]},
    {"Taxon": "French", "Segments": [49, 15, -1, 14, 0, -1, -1]},
    {"Taxon": "Spanish", "Segments": [49, 15, -1, 34, 27, 28, -1]},
    {"Taxon": "Italian", "Segments": [49, 15, 32, 14, 27, 33, 0]},
    {"Taxon": "PortugueseBrazil", "Segments": [49, 15, -1, 16, 27, 36, -1]},
    {"Taxon": "Portuguese", "Segments": [49, 15, -1, 16, 27, 28, -1]},
    {"Taxon": "Friulian", "Segments": [49, 15, 32, 14, 54, -1, -1]},
    {"Taxon": "Romanian", "Segments": [49, 15, 32, 14, 27, -1, -1]}
  ]
},
{
  "Name": "ToScratch", "Data": [
    {"Taxon": "Latin", "Segments": [33, 54, 23, 0, 33, 0]},
    {"Taxon": "Spanish", "Segments": [33, 27, -1, 0, 28, -1]},
    {"Taxon": "Italian", "Segments": [33, 27, 23, 0, 33, 0]},
    {"Taxon": "PortugueseBrazil", "Segments": [36, 27, -1, 0, 36, -1]},
    {"Taxon": "Portuguese", "Segments": [36, 29, -1, 0, 28, -1]},
    {"Taxon": "Catalan", "Segments": [33, 27, 8, -1, 28, 4]},
    {"Taxon": "Friulian", "Segments": [33, 27, 23, 54, -1, -1]},
    {"Taxon": "Romanian", "Segments": [33, 27, 23, 0, -1, -1]}
  ]
},
{
  "Name": "ToScratch-Rasare", "Data": [
    {"Taxon": "French", "Segments": [36, 78, 50, 0, -1, -1]},
    {"Taxon": "Spanish", "Segments": [33, 27, 14, 27, 28, -1]},
    {"Taxon": "Italian", "Segments": [33, 27, 14, 27, 33, 0]},
    {"Taxon": "PortugueseBrazil", "Segments": [36, 27, 50, 27, 36, -1]},
    {"Taxon": "Portuguese", "Segments": [36, 29, 50, 27, 28, -1]},
    {"Taxon": "Catalan", "Segments": [33, 4, 50, 27, -1, -1]},
    {"Taxon": "Friulian", "Segments": [33, 27, 14, 54, -1, -1]}
  ]
},
{
  "Name": "ToScratch-Rasicare", "Data": [
    {"Taxon": "Spanish", "Segments": [33, 27, 14, 52, 27, 28]},
    {"Taxon": "PortugueseBrazil", "Segments": [36, 27, 16, 52, 27, 36]},
    {"Taxon": "Portuguese", "Segments": [36, 29, 16, 52, 27, 28]},
    {"Taxon": "Catalan", "Segments": [33, 4, 14, 52, 27, -1]}
  ]
},
{
  "Name": "ToScratch-Coctiare", "Data": [
    {"Taxon": "PortugueseBrazil", "Segments": [52, 6, 14, 27, 83]},
    {"Taxon": "Portuguese", "Segments": [52, 15, 14, 27, 28]}
  ]
},
{
  "Name": "ToSwim", "Data": [
    {"Taxon": "Latin", "Segments": [13, -1, 27, 20, 54, 33, 0]},
    {"Taxon": "Spanish", "Segments": [13, -1, 27, 23, 27, 28, -1]},
    {"Taxon": "Italian", "Segments": [13, 8, 6, 20, 27, 28, 0]},
    {"Taxon": "PortugueseBrazil", "Segments": [13, -1, 27, 23, 27, 36, -1]},
    {"Taxon": "Portuguese", "Segments": [13, -1, 29, 51, 27, 28, -1]}
  ]
}
```


Appendix 1 - Prior Segment Frequencies

```
{
  "Taxon": "Catalan", "Segments": [13, -1, 4, 23, 27, -1, -1]},
  "Taxon": "Friulian", "Segments": [13, -1, 27, 23, 54, -1, -1]}
}],
{"Name": "ToSwim-Navigare", "Data": [
  {"Taxon": "Latin", "Segments": [13, 27, 18, 7, 73, 54, 33, 0]},
  {"Taxon": "French", "Segments": [13, 27, -1, -1, 3, 0, -1, -1]},
  {"Taxon": "Spanish", "Segments": [13, 27, 19, 0, 1, 27, 28, -1]},
  {"Taxon": "Italian", "Segments": [13, 27, 18, 7, 1, 27, 33, 0]},
  {"Taxon": "PortugueseBrazil", "Segments": [13, 27, 18, 47, 71, 27, 36, -1]},
  {"Taxon": "Portuguese", "Segments": [13, 29, 18, 47, 71, 27, 28, -1]},
  {"Taxon": "Catalan", "Segments": [13, 4, 19, 4, 1, 27, -1, -1]},
  {"Taxon": "Walloon", "Segments": [13, 31, -1, -1, 10, 37, -1, -1]},
  {"Taxon": "Friulian", "Segments": [13, 27, 18, 7, 73, 54, -1, -1]},
  {"Taxon": "Romanian", "Segments": [13, 27, 18, 7, 1, 27, -1, -1]}
}],
{"Name": "ToFly", "Data": [
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  {"Taxon": "French", "Segments": [18, 6, 32, 0, -1, -1]},
  {"Taxon": "Spanish", "Segments": [19, 6, 32, 27, 28, -1]},
  {"Taxon": "Italian", "Segments": [18, 6, 32, 27, 28, 0]},
  {"Taxon": "PortugueseBrazil", "Segments": [18, 6, -1, 27, 36, -1]},
  {"Taxon": "Portuguese", "Segments": [18, 8, -1, 27, 28, -1]},
  {"Taxon": "Catalan", "Segments": [19, 15, 32, 27, -1, -1]},
  {"Taxon": "Walloon", "Segments": [18, 9, 32, 0, -1, -1]}
}],
{"Name": "ToFly-Exvolare", "Data": [
  {"Taxon": "Italian", "Segments": [50, 18, 6, 32, 27, 28, 0]},
  {"Taxon": "Friulian", "Segments": [50, 18, 6, 32, 54, -1, -1]},
  {"Taxon": "Romanian", "Segments": [50, 19, 15, 28, 27, -1, -1]}
}],
{"Name": "ToWalk", "Data": [
  {"Taxon": "French", "Segments": [16, 4, 26, 7, 13, 0, -1, -1, -1]},
  {"Taxon": "Spanish", "Segments": [52, 27, 26, 7, 13, 27, 28, -1, -1]},
  {"Taxon": "Italian", "Segments": [52, 27, 26, 7, 13, 27, 28, 0]},
  {"Taxon": "PortugueseBrazil", "Segments": [52, 29, 26, 7, 38, 27, 36, -1, -1]},
  {"Taxon": "Portuguese", "Segments": [52, 29, 26, 7, 38, 27, 28, -1, -1]},
  {"Taxon": "Catalan", "Segments": [52, 4, 26, 7, 13, 27, -1, -1, -1]},
  {"Taxon": "Walloon", "Segments": [46, 7, 26, 7, 13, 0, -1, -1, -1]},
  {"Taxon": "Friulian", "Segments": [46, 12, 27, 26, 7, 13, 27, -1, -1]}
}],
{"Name": "ToWalk-Marcher", "Data": [
  {"Taxon": "French", "Segments": [26, 27, 36, 16, 0]},
  {"Taxon": "Walloon", "Segments": [26, 54, 56, 46, 37]}
}],
{"Name": "ToWalk-Mergere", "Data": [
  {"Taxon": "Latin", "Segments": [26, 0, 33, 73, 0, 33, 0]},
  {"Taxon": "Italian", "Segments": [26, 31, 33, 10, 0, 33, 0]},
  {"Taxon": "Romanian", "Segments": [26, 0, 33, 10, 0, -1, -1]}
}],
{"Name": "ToWalk-Ambitare", "Data": [
  {"Taxon": "Latin", "Segments": [27, 26, 19, 7, 20, 54, 33, 0]},
  {"Taxon": "Spanish", "Segments": [27, 13, 23, -1, -1, 27, 28, -1]},
  {"Taxon": "Italian", "Segments": [27, 13, 23, -1, -1, 27, 33, 0]},
  {"Taxon": "PortugueseBrazil", "Segments": [45, -1, 23, -1, -1, 27, 36, -1]},
  {"Taxon": "Portuguese", "Segments": [45, -1, 23, -1, -1, 27, 28, -1]}
]}
```

Appendix 1 - Prior Segment Frequencies

```
{
  "Name": "ToCome", "Data": [
    {"Taxon": "Latin", "Segments": [8, 0, 13, 37, 33, 0]},
    {"Taxon": "French", "Segments": [18, 4, 13, 7, 36, -1]},
    {"Taxon": "Spanish", "Segments": [19, 0, 13, 7, 28, -1]},
    {"Taxon": "Italian", "Segments": [18, 0, 13, 7, 28, 0]},
    {"Taxon": "PortugueseBrazil", "Segments": [18, -1, -1, 7, 36, -1]},
    {"Taxon": "Portuguese", "Segments": [18, -1, -1, 7, 28, -1]},
    {"Taxon": "Catalan", "Segments": [19, 4, 13, 7, -1, -1]},
    {"Taxon": "Walloon", "Segments": [18, 7, 13, 7, -1, -1]},
    {"Taxon": "Friulian", "Segments": [18, 7, 38, 37, -1, -1]},
    {"Taxon": "Romanian", "Segments": [18, 0, 13, 7, -1, -1]}
  ]
},
{
  "Name": "ToLieAsInABed", "Data": [
    {"Taxon": "Latin", "Segments": [0, 52, 14, 20, 0, 13, 23, 0, 33, 0]},
    {"Taxon": "French", "Segments": [0, -1, 20, 43, -1, 23, -1, 36, -1, -1]},
    {"Taxon": "Spanish", "Segments": [0, 52, 14, 20, 0, 13, 23, 0, 28, -1]},
    {"Taxon": "Italian", "Segments": [0, -1, 14, 20, 31, 13, 23, 0, 33, 0]},
    {"Taxon": "PortugueseBrazil", "Segments": [7, 14, 20, 74, -1, 23, 0, 36, -1, -1]},
    {"Taxon": "Portuguese", "Segments": [7, 16, 20, 74, -1, 23, 0, 28, -1, -1]},
    {"Taxon": "Catalan", "Segments": [4, -1, 14, 20, 0, 13, 23, -1, 28, 4]},
    {"Taxon": "Romanian", "Segments": [0, 52, 14, 20, 7, 13, 23, 0, -1, -1]}
  ]
},
{
  "Name": "ToLieAsInABed-Iacere", "Data": [
    {"Taxon": "Latin", "Segments": [12, 27, -1, 52, 25, 33, 0]},
    {"Taxon": "French", "Segments": [3, 0, -1, 50, 7, 36, -1]},
    {"Taxon": "Spanish", "Segments": [5, 27, -1, 58, 0, 28, -1]},
    {"Taxon": "Italian", "Segments": [10, 27, -1, 46, 25, 28, 0]},
    {"Taxon": "PortugueseBrazil", "Segments": [3, 29, -1, 50, 0, 36, -1]},
    {"Taxon": "Portuguese", "Segments": [3, 29, -1, 50, 0, 28, -1]},
    {"Taxon": "Catalan", "Segments": [3, 27, 8, -1, -1, 28, 4]},
    {"Taxon": "Walloon", "Segments": [10, 0, -1, -1, 33, 0, -1]},
    {"Taxon": "Friulian", "Segments": [12, 0, -1, 14, 7, -1, -1]},
    {"Taxon": "Romanian", "Segments": [50, 4, -1, 46, 69, -1, -1]}
  ]
},
{
  "Name": "ToSit", "Data": [
    {"Taxon": "Latin", "Segments": [14, -1, 0, 23, 25, 33, 0]},
    {"Taxon": "French", "Segments": [14, 8, 27, -1, -1, 36, -1]},
    {"Taxon": "Spanish", "Segments": [14, -1, 0, -1, -1, 28, -1]},
    {"Taxon": "Italian", "Segments": [14, -1, 0, 23, 0, 33, 0]},
    {"Taxon": "PortugueseBrazil", "Segments": [14, -1, 0, -1, -1, 36, -1]},
    {"Taxon": "Portuguese", "Segments": [14, -1, 0, -1, -1, 28, -1]},
    {"Taxon": "Romanian", "Segments": [16, -1, 0, 23, 69, -1, -1]}
  ]
},
{
  "Name": "ToSit-Sedentare", "Data": [
    {"Taxon": "Latin", "Segments": [14, 0, 23, 0, 13, 20, 54, 33, 0]},
    {"Taxon": "Spanish", "Segments": [14, 0, -1, -1, 13, 20, 27, 28, -1]},
    {"Taxon": "PortugueseBrazil", "Segments": [14, 74, -1, -1, -1, 20, 27, 28, -1]},
    {"Taxon": "Portuguese", "Segments": [14, 74, -1, -1, -1, 20, 27, 28, -1]},
    {"Taxon": "Friulian", "Segments": [14, 0, -1, -1, 13, 20, 54, -1, -1]}
  ]
},
{
  "Name": "ToStand", "Data": [
    {"Taxon": "Latin", "Segments": [-1, 14, 20, 54, 33, 0]},
    {"Taxon": "French", "Segments": [31, -1, 20, -1, 36, -1]},
    {"Taxon": "Spanish", "Segments": [0, 14, 20, 27, 28, -1]},
    {"Taxon": "Italian", "Segments": [-1, 14, 20, 27, 33, 0]},
    {"Taxon": "PortugueseBrazil", "Segments": [47, 16, 20, 27, 28, -1]},
  ]
}
```

Appendix 1 - Prior Segment Frequencies

```
{
  "Taxon": "Portuguese", "Segments": [47, 16, 20, 27, 28, -1]},
  "Taxon": "Catalan", "Segments": [4, 14, 20, 27, -1, -1]},
  "Taxon": "Walloon", "Segments": [31, 14, -1, -1, -1, -1]},
  "Taxon": "Friulian", "Segments": [-1, 14, 20, 54, -1, -1]},
  "Taxon": "Romanian", "Segments": [-1, 14, 20, 27, -1, -1]}
}],
{
  "Name": "ToStand-Levare", "Data": [
    {"Taxon": "Latin", "Segments": [32, 0, 18, 54, 33, 0]},
    {"Taxon": "French", "Segments": [32, 4, 18, 0, -1, -1]},
    {"Taxon": "Spanish", "Segments": [5, 0, 19, 27, 28, -1]},
    {"Taxon": "Italian", "Segments": [32, 0, 18, 27, 33, 0]},
    {"Taxon": "PortugueseBrazil", "Segments": [32, 0, 18, 27, 36, -1]},
    {"Taxon": "Portuguese", "Segments": [32, 47, 18, 27, 28, -1]},
    {"Taxon": "Catalan", "Segments": [35, 4, 19, 27, -1, -1]},
    {"Taxon": "Walloon", "Segments": [32, 4, 18, 0, -1, -1]},
    {"Taxon": "Friulian", "Segments": [32, 0, 18, 54, -1, -1]},
    {"Taxon": "Romanian", "Segments": [32, -1, 15, 27, -1, -1]}
  ]
},
{
  "Name": "ToStand-Altiare", "Data": [
    {"Taxon": "Latin", "Segments": [-1, 27, 32, 20, 7, 54, 33, 0]},
    {"Taxon": "French", "Segments": [-1, 6, -1, 14, -1, 0, -1, -1]},
    {"Taxon": "Spanish", "Segments": [-1, 27, 32, 58, -1, 27, 28, -1]},
    {"Taxon": "Italian", "Segments": [-1, 27, 32, 53, 27, 33, 0, -1]},
    {"Taxon": "PortugueseBrazil", "Segments": [-1, 27, 65, 14, -1, 27, -1, -1]},
    {"Taxon": "Portuguese", "Segments": [-1, 27, 65, 14, -1, 27, 28, -1]},
    {"Taxon": "Catalan", "Segments": [-1, 4, 32, 14, -1, 27, -1, -1]},
    {"Taxon": "Walloon", "Segments": [40, 84, -1, 14, -1, 37, -1, -1]},
    {"Taxon": "Friulian", "Segments": [-1, 27, 32, 20, 16, -1, 54, -1]}
  ]
},
{
  "Name": "ToTurnIntransitive", "Data": [
    {"Taxon": "Latin", "Segments": [20, 6, 33, 13, 54, 33, 0]},
    {"Taxon": "French", "Segments": [20, 15, 36, 13, 0, -1, -1]},
    {"Taxon": "Spanish", "Segments": [20, 6, 28, 13, 27, 28, -1]},
    {"Taxon": "Italian", "Segments": [20, 6, 33, 13, 27, 33, 0]},
    {"Taxon": "PortugueseBrazil", "Segments": [20, 6, 36, 13, 27, 36, -1]},
    {"Taxon": "Portuguese", "Segments": [20, 15, 28, 13, 27, 28, -1]},
    {"Taxon": "Catalan", "Segments": [20, 15, 33, 13, 27, -1, -1]},
    {"Taxon": "Walloon", "Segments": [20, 21, 33, 13, 0, -1, -1]},
    {"Taxon": "Friulian", "Segments": [20, 6, 33, 13, 54, -1, -1]},
    {"Taxon": "Romanian", "Segments": [20, 15, 33, 13, 27, -1, -1]}
  ]
},
{
  "Name": "ToTurnIntransitive-Gyrare", "Data": [
    {"Taxon": "Latin", "Segments": [73, 22, 33, 54, 33, 0]},
    {"Taxon": "French", "Segments": [3, 7, 36, 0, -1, -1]},
    {"Taxon": "Spanish", "Segments": [34, 7, 28, 27, 28, -1]},
    {"Taxon": "Italian", "Segments": [10, 7, 33, 27, 28, 0]},
    {"Taxon": "PortugueseBrazil", "Segments": [3, 7, 28, 27, 28, -1]},
    {"Taxon": "Portuguese", "Segments": [3, 7, 28, 27, 28, -1]},
    {"Taxon": "Catalan", "Segments": [3, 7, 28, 27, -1, -1]},
    {"Taxon": "Friulian", "Segments": [10, 7, 33, 54, -1, -1]}
  ]
},
{
  "Name": "ToTurnIntransitive-AncestralClass3", "Data": [
    {"Taxon": "French", "Segments": [18, 7, 36, 0, -1, -1]},
    {"Taxon": "Spanish", "Segments": [19, 7, 28, 27, 28, -1]},
    {"Taxon": "Italian", "Segments": [18, 7, 33, 27, 28, 0]},
    {"Taxon": "PortugueseBrazil", "Segments": [18, 7, 28, 27, 28, -1]},
  ]
}
```

Appendix 1 - Prior Segment Frequencies

```
{
  "Taxon": "Portuguese", "Segments": [3, 7, 28, 27, 28, -1]},
  "Taxon": "Catalan", "Segments": [19, 7, 28, 27, -1, -1]},
  "Taxon": "Walloon", "Segments": [18, 7, 36, 0, -1, -1]},
  "Taxon": "Friulian", "Segments": [10, 7, 33, 54, -1, -1]}
}],
{
  "Name": "ToTurnIntransitive-Torquere", "Data": [
    {"Taxon": "Latin", "Segments": [20, 6, 33, 70, 25, 33, 0]},
    {"Taxon": "French", "Segments": [20, 9, 36, 23, -1, 36, -1]},
    {"Taxon": "Spanish", "Segments": [20, 6, 28, 58, 0, 28, -1]},
    {"Taxon": "Italian", "Segments": [20, 9, 33, 46, 0, 33, 0]},
    {"Taxon": "PortugueseBrazil", "Segments": [20, 15, 33, 14, 0, 33, -1]},
    {"Taxon": "Portuguese", "Segments": [20, 15, 33, 14, 0, 33, -1]},
    {"Taxon": "Catalan", "Segments": [20, 9, 33, 14, 4, -1, -1]},
    {"Taxon": "Romanian", "Segments": [20, 39, 33, 46, 0, -1, -1]}
  ]
},
{
  "Name": "ToFall", "Data": [
    {"Taxon": "Latin", "Segments": [52, -1, 27, 23, 0, 33, 0]},
    {"Taxon": "French", "Segments": [16, 8, 27, -1, -1, 36, -1]},
    {"Taxon": "Spanish", "Segments": [52, -1, 27, -1, 0, 28, -1]},
    {"Taxon": "Italian", "Segments": [52, -1, 27, 23, 0, 28, 0]},
    {"Taxon": "PortugueseBrazil", "Segments": [52, -1, 29, -1, 7, 28, -1]},
    {"Taxon": "Portuguese", "Segments": [52, -1, 29, -1, 7, 28, -1]},
    {"Taxon": "Catalan", "Segments": [52, -1, 27, 8, -1, 33, 4]},
    {"Taxon": "Walloon", "Segments": [46, -1, 62, -1, -1, 56, -1]},
    {"Taxon": "Friulian", "Segments": [46, 12, 27, 23, 0, -1, -1]},
    {"Taxon": "Romanian", "Segments": [52, 4, 23, 69, -1, -1, -1]}
  ]
},
{
  "Name": "ToFall-Tumbare", "Data": [
    {"Taxon": "French", "Segments": [20, 61, -1, 19, 0, -1]},
    {"Taxon": "Spanish", "Segments": [20, 15, 26, 19, 27, 28]},
    {"Taxon": "PortugueseBrazil", "Segments": [20, 61, -1, 19, 27, 36]},
    {"Taxon": "Portuguese", "Segments": [20, 61, -1, 19, 27, 28]},
    {"Taxon": "Catalan", "Segments": [20, 15, 26, 19, 27, -1]},
    {"Taxon": "Walloon", "Segments": [20, 15, 26, -1, 0, -1]},
    {"Taxon": "Romanian", "Segments": [20, 15, 26, 19, 27, -1]}
  ]
},
{
  "Name": "ToHold", "Data": [
    {"Taxon": "Latin", "Segments": [20, 0, 13, -1, 25, 33, 0]},
    {"Taxon": "French", "Segments": [20, 4, 13, -1, 7, 36, -1]},
    {"Taxon": "Spanish", "Segments": [20, 0, 13, -1, 0, 28, -1]},
    {"Taxon": "Italian", "Segments": [20, 0, 13, -1, 0, 28, 0]},
    {"Taxon": "PortugueseBrazil", "Segments": [20, 0, -1, -1, -1, 36, -1]},
    {"Taxon": "Portuguese", "Segments": [20, 0, -1, -1, -1, 28, -1]},
    {"Taxon": "Catalan", "Segments": [20, 4, 13, -1, 7, -1, -1]},
    {"Taxon": "Walloon", "Segments": [20, 7, 13, -1, 7, -1, -1]},
    {"Taxon": "Friulian", "Segments": [20, 7, 13, 12, 7, -1, -1]},
    {"Taxon": "Romanian", "Segments": [53, 7, 13, -1, 0, -1, -1]}
  ]
},
{
  "Name": "ToHold-Segurar", "Data": [
    {"Taxon": "Spanish", "Segments": [14, 0, 1, 15, 28, 27, 28]},
    {"Taxon": "PortugueseBrazil", "Segments": [14, 47, 1, 15, 28, 27, 36]},
    {"Taxon": "Portuguese", "Segments": [14, 47, 71, 15, 28, 27, 28]}
  ]
},
{
  "Name": "ToSqueeze", "Data": [
    {"Taxon": "Latin", "Segments": [0, 52, 14, 49, 33, 7, 26, -1, 0, 33, 0]},
    {"Taxon": "French", "Segments": [0, -1, -1, 49, 36, 81, -1, 23, -1, 36, -1]},
  ]
}
```

Appendix 1 - Prior Segment Frequencies

```
{
  "Taxon": "Spanish", "Segments": [0, 52, 14, 49, 28, 0, 26, -1, 7, 28, -1]},
  "Taxon": "Italian", "Segments": [-1, -1, 14, 49, 33, 31, 26, -1, 0, 33, 0]},
  "Taxon": "PortugueseBrazil", "Segments": [7, -1, 16, 49, 33, 4, 26, -1, 0, 36, -1]},
  "Taxon": "Portuguese", "Segments": [7, -1, 16, 49, 33, 4, 26, -1, 0, 33, -1]},
  "Taxon": "Catalan", "Segments": [4, -1, 14, 49, 28, 0, 26, -1, 4, -1, -1]},
  "Taxon": "Friulian", "Segments": [0, -1, 14, 49, 33, 7, 26, -1, 7, -1, -1]},
  "Taxon": "Romanian", "Segments": [-1, 14, 52, -1, 33, 0, 26, 0, -1, -1, -1]}
}],
{
  "Name": "ToSqueeze-Serrere", "Data": [
    {"Taxon": "Latin", "Segments": [14, 0, 33, 33, 0, 33, 0]},
    {"Taxon": "Spanish", "Segments": [14, 0, -1, 33, 27, 28, -1]},
    {"Taxon": "PortugueseBrazil", "Segments": [14, 0, -1, 36, 27, -1, -1]},
    {"Taxon": "Portuguese", "Segments": [14, 4, -1, 56, 27, 28, -1]},
    {"Taxon": "Catalan", "Segments": [14, 4, -1, 33, 27, -1, -1]}
  ]
},
{
  "Name": "ToSqueeze-Serare", "Data": [
    {"Taxon": "Latin", "Segments": [14, 0, -1, 33, 27, 33, 0]},
    {"Taxon": "French", "Segments": [14, 0, -1, 36, 0, -1, -1]},
    {"Taxon": "Spanish", "Segments": [58, 0, -1, 33, 27, 28, -1]},
    {"Taxon": "Italian", "Segments": [14, 0, 33, 33, 27, 33, 0]},
    {"Taxon": "PortugueseBrazil", "Segments": [14, 47, -1, 36, 27, 28, -1]},
    {"Taxon": "Portuguese", "Segments": [14, 47, -1, 36, 27, 28, -1]},
    {"Taxon": "Walloon", "Segments": [14, 31, -1, 56, 0, -1, -1]}
  ]
},
{
  "Name": "ToSqueeze-Appectorare", "Data": [
    {"Taxon": "Latin", "Segments": [27, 49, 49, 0, 52, 20, 6, 33, 54, 33, 0]},
    {"Taxon": "Spanish", "Segments": [27, -1, 49, -1, -1, 28, 0, 20, 27, 28, -1]},
    {"Taxon": "PortugueseBrazil", "Segments": [29, -1, 49, 47, -1, 28, -1, 20, 27, 28, -1]},
    {"Taxon": "Portuguese", "Segments": [29, -1, 49, 47, -1, 28, -1, 20, 27, 28, -1]}
  ]
},
{
  "Name": "ToSqueeze-Stringere", "Data": [
    {"Taxon": "Latin", "Segments": [-1, 14, 20, 33, 7, 13, 73, 0, 33, 0]},
    {"Taxon": "French", "Segments": [0, -1, 20, 36, 81, -1, 23, -1, 36, -1]},
    {"Taxon": "Spanish", "Segments": [0, 14, 20, 28, 0, 38, -1, 7, 28, -1]},
    {"Taxon": "Italian", "Segments": [-1, 14, 20, 33, 7, 13, 10, 0, 33, 0]},
    {"Taxon": "PortugueseBrazil", "Segments": [4, 16, 20, 33, 44, -1, 3, 7, 33, -1]},
    {"Taxon": "Portuguese", "Segments": [4, 16, 20, 33, 44, 3, 7, 33, -1, -1]},
    {"Taxon": "Catalan", "Segments": [4, 14, 20, 28, 31, 38, 4, -1, -1, -1]},
    {"Taxon": "Walloon", "Segments": [14, 20, 33, 7, 13, 73, 0, -1, -1, -1]},
    {"Taxon": "Friulian", "Segments": [14, 20, 33, 31, 13, 73, 37, -1, -1, -1]},
    {"Taxon": "Romanian", "Segments": [14, 20, 33, 47, 13, 10, 0, -1, -1, -1]}
  ]
},
{
  "Name": "ToRub", "Data": [
    {"Taxon": "Latin", "Segments": [24, 33, 7, 52, 54, 33, 0]},
    {"Taxon": "French", "Segments": [24, 36, 67, 0, -1, -1, -1]},
    {"Taxon": "Spanish", "Segments": [24, 28, 0, 1, 27, 28, -1]},
    {"Taxon": "Italian", "Segments": [24, 33, 0, 73, 27, 33, 0]},
    {"Taxon": "Catalan", "Segments": [24, 28, 4, 1, 27, -1, -1]},
    {"Taxon": "Walloon", "Segments": [24, 33, 17, -1, -1, -1, -1]},
    {"Taxon": "Friulian", "Segments": [24, 33, 0, -1, 27, -1, -1]},
    {"Taxon": "Romanian", "Segments": [24, 33, 0, 52, 27, -1, -1]}
  ]
},
{
  "Name": "ToRub-Exfricare", "Data": [
    {"Taxon": "PortugueseBrazil", "Segments": [47, 16, 24, 28, 47, 1, 27, 28]},
    {"Taxon": "Portuguese", "Segments": [47, 16, 24, 28, 47, 71, 27, 28]}
  ]
},
]
```

Appendix 1 - Prior Segment Frequencies

```
{
  "Name": "ToRub-Frictare", "Data": [
    {
      "Taxon": "Latin", "Segments": [24, 33, 7, 52, 20, 54, 33, 0]},
    {
      "Taxon": "French", "Segments": [24, 36, 6, 20, 0, -1, -1, -1]},
    {
      "Taxon": "Spanish", "Segments": [24, 28, 6, 20, 27, 28, -1, -1]},
    {
      "Taxon": "Italian", "Segments": [24, 33, 0, 20, 20, 27, 33, 0]},
    {
      "Taxon": "Walloon", "Segments": [24, 36, 6, 20, 0, -1, -1, -1]}
  ]
},
{
  "Name": "ToRub-Frictiare", "Data": [
    {
      "Taxon": "Spanish", "Segments": [24, 33, 7, 14, 27, 28]},
    {
      "Taxon": "Catalan", "Segments": [24, 28, 4, 14, 27, -1]}
  ]
},
{
  "Name": "ToWash", "Data": [
    {
      "Taxon": "Latin", "Segments": [32, 27, 8, 54, 33, 0]},
    {
      "Taxon": "French", "Segments": [32, 27, 18, 0, -1, -1]},
    {
      "Taxon": "Spanish", "Segments": [32, 27, 79, 27, 28, -1]},
    {
      "Taxon": "Italian", "Segments": [32, 27, 18, 27, 33, 0]},
    {
      "Taxon": "PortugueseBrazil", "Segments": [32, 29, 18, 27, 28, -1]},
    {
      "Taxon": "Portuguese", "Segments": [32, 29, 18, 27, 28, -1]},
    {
      "Taxon": "Catalan", "Segments": [35, 4, 19, 27, -1, -1]},
    {
      "Taxon": "Walloon", "Segments": [32, 27, 18, 0, -1, -1]},
    {
      "Taxon": "Friulian", "Segments": [32, 27, 18, 54, -1, -1]},
    {
      "Taxon": "Romanian", "Segments": [32, 27, -1, -1, -1, -1]}
  ]
},
{
  "Name": "ToWipe", "Data": [
    {
      "Taxon": "Latin", "Segments": [20, 0, 33, 1, 0, 33, 0]},
    {
      "Taxon": "Italian", "Segments": [20, 31, 33, 10, 0, 33, 0]}
  ]
},
{
  "Name": "ToWipe-Extergere", "Data": [
    {
      "Taxon": "Latin", "Segments": [0, 52, 14, 20, 0, 33, 1, 0, 33, 0]},
    {
      "Taxon": "Spanish", "Segments": [0, -1, 14, 20, 27, 28, 14, 7, 28, -1]},
    {
      "Taxon": "Catalan", "Segments": [4, -1, 14, 20, 4, 33, 3, 7, -1, -1]},
    {
      "Taxon": "Romanian", "Segments": [-1, -1, 16, 20, 0, 33, 10, 0, -1, -1]}
  ]
},
{
  "Name": "ToWipe-Exsucare", "Data": [
    {
      "Taxon": "Latin", "Segments": [0, 52, 14, -1, 21, 52, -1, 54, 33, 0]},
    {
      "Taxon": "French", "Segments": [0, -1, 14, 63, 7, -1, 12, 0, -1, -1]},
    {
      "Taxon": "Spanish", "Segments": [0, 13, 34, -1, 15, 1, -1, 27, 28, -1]},
    {
      "Taxon": "Italian", "Segments": [27, 16, 16, -1, 15, 1, -1, 27, 33, 0]},
    {
      "Taxon": "PortugueseBrazil", "Segments": [74, -1, 16, -1, 15, 1, -1, 27, 28, -1]},
    {
      "Taxon": "Portuguese", "Segments": [74, -1, 16, -1, 15, 71, -1, 27, 28, -1]},
    {
      "Taxon": "Catalan", "Segments": [4, -1, 16, -1, 15, 1, 27, -1, -1, -1]},
    {
      "Taxon": "Walloon", "Segments": [-1, -1, 14, -1, 15, -1, 8, 0, -1, -1]},
    {
      "Taxon": "Friulian", "Segments": [-1, -1, 14, -1, 15, -1, 12, 54, -1, -1]},
    {
      "Taxon": "Romanian", "Segments": [15, -1, 14, -1, -1, 52, -1, 27, -1, -1]}
  ]
},
{
  "Name": "ToWipe-Limpidare", "Data": [
    {
      "Taxon": "Latin", "Segments": [32, 7, 26, 49, 7, 23, 54, 33, 0]},
    {
      "Taxon": "Spanish", "Segments": [32, 7, 26, 49, 12, -1, 27, 28, -1]},
    {
      "Taxon": "PortugueseBrazil", "Segments": [32, 44, -1, 49, -1, -1, 27, 28, -1]},
    {
      "Taxon": "Portuguese", "Segments": [32, 44, -1, 49, -1, -1, 27, 28, -1]}
  ]
},
{
  "Name": "ToPull", "Data": [
    {
      "Taxon": "Latin", "Segments": [20, 7, 33, 54, 33, 0]},
    {
      "Taxon": "French", "Segments": [20, 7, 36, 0, -1, -1]},
    {
      "Taxon": "Spanish", "Segments": [20, 7, 28, 27, 28, -1]},
    {
      "Taxon": "Italian", "Segments": [20, 7, 33, 27, 33, 0]}
  ]
}
```


Appendix 1 - Prior Segment Frequencies

```
{
  "Taxon": "PortugueseBrazil", "Segments": [46, 7, 28, 27, -1, -1]},
  "Taxon": "Portuguese", "Segments": [20, 7, 28, 27, 28, -1]},
  "Taxon": "Catalan", "Segments": [20, 7, 28, 27, -1, -1]},
  "Taxon": "Walloon", "Segments": [20, 7, 33, 0, -1, -1]},
  "Taxon": "Friulian", "Segments": [20, 7, 33, 54, -1, -1]}
}],
{
  "Name": "ToPull-Pulsare", "Data": [
    {"Taxon": "Latin", "Segments": [49, 15, 32, 14, 54, 33, 0]},
    {"Taxon": "French", "Segments": [49, 15, -1, 14, 0, -1, -1]},
    {"Taxon": "Spanish", "Segments": [49, 15, -1, 34, 27, 28, -1]},
    {"Taxon": "Italian", "Segments": [49, 15, 32, 14, 27, 33, 0]},
    {"Taxon": "PortugueseBrazil", "Segments": [49, 15, -1, 16, 27, 28, -1]},
    {"Taxon": "Portuguese", "Segments": [49, 15, -1, 16, 27, 28, -1]},
    {"Taxon": "Walloon", "Segments": [49, 21, 14, 37, -1, -1, -1]},
    {"Taxon": "Friulian", "Segments": [49, 15, 32, 14, 54, -1, -1]},
    {"Taxon": "Romanian", "Segments": [49, 15, 32, 14, 27, -1, -1]}
  ]
},
{
  "Name": "ToPull-Trahere", "Data": [
    {"Taxon": "Latin", "Segments": [20, 33, 27, 40, 0, 33, 0]},
    {"Taxon": "French", "Segments": [20, 36, -1, -1, 31, 36, -1]},
    {"Taxon": "Italian", "Segments": [20, 33, 27, 33, -1, 33, 0]},
    {"Taxon": "PortugueseBrazil", "Segments": [20, 28, 27, 50, 0, -1, -1]},
    {"Taxon": "Portuguese", "Segments": [20, 28, 29, 50, 0, 28, -1]},
    {"Taxon": "Catalan", "Segments": [20, 28, 31, 8, -1, 28, 4]},
    {"Taxon": "Friulian", "Segments": [20, 33, 72, -1, -1, -1, -1]},
    {"Taxon": "Romanian", "Segments": [20, 33, 27, 10, 0, -1, -1]}
  ]
},
{
  "Name": "ToPush", "Data": [
    {"Taxon": "Latin", "Segments": [7, 26, 49, 7, 13, 73, 0, 33, 0]},
    {"Taxon": "Italian", "Segments": [7, 26, 49, 7, 13, 10, 0, 33, 0]},
    {"Taxon": "Catalan", "Segments": [4, 26, 49, 31, 38, -1, 4, -1, -1]},
    {"Taxon": "Romanian", "Segments": [47, 26, 49, 7, 13, 10, 0, -1, -1]}
  ]
},
{
  "Name": "ToThrow", "Data": [
    {"Taxon": "Latin", "Segments": [12, 27, 52, 20, 54, 33, 0]},
    {"Taxon": "French", "Segments": [3, 4, -1, 20, 0, -1, -1]},
    {"Taxon": "Spanish", "Segments": [-1, 0, -1, 46, 27, 28, -1]},
    {"Taxon": "Italian", "Segments": [10, 0, 20, 20, 27, 33, 0]},
    {"Taxon": "PortugueseBrazil", "Segments": [3, 59, 20, 27, 28, -1, -1]},
    {"Taxon": "Portuguese", "Segments": [3, 59, 20, 27, 28, -1, -1]},
    {"Taxon": "Catalan", "Segments": [34, 7, 20, 27, -1, -1, -1]},
    {"Taxon": "Walloon", "Segments": [10, 31, 20, 0, -1, -1, -1]}
  ]
},
{
  "Name": "ToThrow-Lanceare", "Data": [
    {"Taxon": "Latin", "Segments": [32, 27, 13, 52, 0, 54, 33, 0]},
    {"Taxon": "French", "Segments": [32, 43, -1, 14, -1, 0, -1, -1]},
    {"Taxon": "Spanish", "Segments": [32, 27, 13, -1, 58, -1, 27, 28]},
    {"Taxon": "Italian", "Segments": [32, 27, 13, 46, 27, 33, 0, -1]},
    {"Taxon": "PortugueseBrazil", "Segments": [32, 45, -1, 14, -1, 27, -1, -1]},
    {"Taxon": "Portuguese", "Segments": [32, 45, -1, 14, -1, 27, 28, -1]},
    {"Taxon": "Catalan", "Segments": [35, 4, 13, 14, -1, 27, -1, -1]},
    {"Taxon": "Walloon", "Segments": [32, 27, 13, 66, -1, 37, -1, -1]},
    {"Taxon": "Friulian", "Segments": [32, 27, 13, 46, 54, -1, -1, -1]}
  ]
},
{
  "Name": "ToThrow-Eruncare", "Data": [
    {"Taxon": "Latin", "Segments": [25, -1, 33, 15, 13, 52, 54, 33, 0]},
  ]
}
```

Appendix 1 - Prior Segment Frequencies

```
{
  "Taxon": "Spanish", "Segments": [27, -1, 33, 27, 13, 52, 27, 28, -1]},
  "Taxon": "Italian", "Segments": [27, 33, 33, 6, 13, 46, 27, 33, 0]},
  "Taxon": "Romanian", "Segments": [27, -1, 28, 15, 75, 52, 27, -1, -1]}
}],
{"Name": "ToTie", "Data": [
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  {"Taxon": "French", "Segments": [32, 7, -1, 0, -1, -1]},
  {"Taxon": "Spanish", "Segments": [32, 0, 1, 27, 28, -1]},
  {"Taxon": "Italian", "Segments": [32, 0, 1, 27, 33, 0]},
  {"Taxon": "Catalan", "Segments": [35, 7, 71, 27, -1, -1]},
  {"Taxon": "Walloon", "Segments": [32, 9, 12, 37, -1, -1]},
  {"Taxon": "Friulian", "Segments": [32, 0, -1, 54, -1, -1]},
  {"Taxon": "Romanian", "Segments": [32, 0, 73, 27, -1, -1]}
]},
{"Name": "ToTie-Aptare", "Data": [
  {"Taxon": "Latin", "Segments": [27, 49, 20, 54, 33, 0]},
  {"Taxon": "Spanish", "Segments": [27, -1, 20, 27, 28, -1]},
  {"Taxon": "PortugueseBrazil", "Segments": [29, -1, 20, 27, 28, -1]},
  {"Taxon": "Portuguese", "Segments": [29, -1, 20, 27, 28, -1]}
]},
{"Name": "ToSew", "Data": [
  {"Taxon": "Latin", "Segments": [52, 2, 13, -1, 14, 15, 0, 33, 0]},
  {"Taxon": "French", "Segments": [52, 15, -1, 23, -1, -1, -1, 36, -1]},
  {"Taxon": "Spanish", "Segments": [52, 6, -1, -1, 14, -1, 0, 28, -1]},
  {"Taxon": "Italian", "Segments": [52, 15, -1, -1, 46, -1, 7, 33, 0]},
  {"Taxon": "PortugueseBrazil", "Segments": [52, 15, -1, -1, 50, -1, 0, 28, -1]},
  {"Taxon": "Portuguese", "Segments": [52, 15, -1, -1, 50, -1, 0, 28, -1]},
  {"Taxon": "Catalan", "Segments": [52, 15, -1, -1, 50, -1, 7, -1, -1]},
  {"Taxon": "Walloon", "Segments": [52, 64, -1, -1, 50, -1, -1, -1, -1]},
  {"Taxon": "Friulian", "Segments": [52, 15, -1, -1, 50, 7, -1, -1, -1]},
  {"Taxon": "Romanian", "Segments": [66, 39, -1, -1, 14, -1, 0, -1, -1]}
]},
{"Name": "ToCount", "Data": [
  {"Taxon": "Latin", "Segments": [52, 6, 26, 49, 15, 20, 54, 33, 0]},
  {"Taxon": "French", "Segments": [52, 61, -1, -1, -1, 20, 0, -1, -1]},
  {"Taxon": "Spanish", "Segments": [52, 6, 13, -1, -1, 20, 27, 28, -1]},
  {"Taxon": "Italian", "Segments": [52, 6, 13, -1, -1, 20, 27, 33, 0]},
  {"Taxon": "PortugueseBrazil", "Segments": [52, 61, -1, -1, -1, 20, 27, 28, -1]},
  {"Taxon": "Portuguese", "Segments": [52, 61, -1, -1, -1, 20, 27, 28, -1]},
  {"Taxon": "Catalan", "Segments": [52, 15, 26, -1, -1, 20, 27, -1, -1]},
  {"Taxon": "Walloon", "Segments": [52, 61, -1, -1, 20, 0, -1, -1, -1]},
  {"Taxon": "Friulian", "Segments": [52, 6, 13, -1, -1, 20, 54, -1, -1]}
]},
{"Name": "ToCount-Enumerare", "Data": [
  {"Taxon": "Latin", "Segments": [25, 13, 15, 26, 0, 33, 54, 33, 0]},
  {"Taxon": "French", "Segments": [0, 13, 15, 26, 0, 36, 0, -1, -1]},
  {"Taxon": "Spanish", "Segments": [0, 13, 15, 26, 0, 28, 27, 28, -1]},
  {"Taxon": "Italian", "Segments": [0, 13, 15, 26, 0, 33, 27, 33, 0]},
  {"Taxon": "PortugueseBrazil", "Segments": [0, 13, 15, 26, 0, 28, 27, 28, -1]},
  {"Taxon": "Portuguese", "Segments": [0, 13, 15, 26, 0, 28, 27, 28, -1]},
  {"Taxon": "Catalan", "Segments": [0, 13, 15, 26, 0, 28, 27, -1, -1]},
  {"Taxon": "Romanian", "Segments": [-1, 13, 15, 26, 27, 33, 27, -1, -1]}
]},
{"Name": "ToSay", "Data": [
  {"Taxon": "Latin", "Segments": [23, 37, 52, 0, 33, 0]},
  {"Taxon": "French", "Segments": [23, 7, -1, -1, 36, -1]},

```


Appendix 1 - Prior Segment Frequencies

```
{
  "Taxon": "Spanish", "Segments": [23, 0, 58, 7, 28, -1]},
  "Taxon": "Italian", "Segments": [23, 7, -1, -1, 33, 0]},
  "Taxon": "PortugueseBrazil", "Segments": [23, 7, 50, -1, 0, 28]},
  "Taxon": "Portuguese", "Segments": [23, 7, 50, -1, 0, 28]},
  "Taxon": "Catalan", "Segments": [23, 7, -1, -1, -1, -1]},
  "Taxon": "Walloon", "Segments": [23, 37, -1, -1, 36, -1]},
  "Taxon": "Friulian", "Segments": [23, 37, -1, -1, -1, -1]},
  "Taxon": "Romanian", "Segments": [50, 7, 46, 0, -1, -1]}
}],
{
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    {
      "Taxon": "Latin", "Segments": [0, 52, 14, 49, 2, 13, 0, 33, 0]},
      "Taxon": "Italian", "Segments": [-1, -1, 14, 49, 6, 33, -1, 33, 0]},
      "Taxon": "Romanian", "Segments": [-1, -1, 14, 49, 15, 13, 0, -1, -1]}
    ]
  },
{
  "Name": "ToSing-AncestralClass", "Data": [
    {
      "Taxon": "Latin", "Segments": [52, 27, 13, 20, 54, 33, 0]},
      "Taxon": "French", "Segments": [16, 43, -1, 20, 0, -1, -1]},
      "Taxon": "Spanish", "Segments": [52, 27, 13, 20, 27, 28, -1]},
      "Taxon": "Italian", "Segments": [52, 27, 13, 20, 27, 33, 0]},
      "Taxon": "PortugueseBrazil", "Segments": [52, 45, -1, 20, 27, 28, -1]},
      "Taxon": "Portuguese", "Segments": [52, 45, -1, 20, 27, 28, -1]},
      "Taxon": "Catalan", "Segments": [52, 4, 13, 20, 27, -1, -1]},
      "Taxon": "Walloon", "Segments": [46, 48, -1, 20, 0, -1, -1]},
      "Taxon": "Friulian", "Segments": [66, 27, 13, 20, 54, -1, -1]},
      "Taxon": "Romanian", "Segments": [52, 47, 13, 20, 27, -1, -1]}
    ]
  },
{
  "Name": "ToPlay-Ludere", "Data": [
    {
      "Taxon": "Latin", "Segments": [32, 21, 23, 0, 33, 0]},
      "Taxon": "Spanish", "Segments": [32, 15, 23, 7, 28, -1]}
    ]
  },
{
  "Name": "ToPlay-Jiocare", "Data": [
    {
      "Taxon": "Latin", "Segments": [12, 6, -1, 52, 54, 33, 0]},
      "Taxon": "French", "Segments": [3, -1, 8, -1, 0, -1, -1]},
      "Taxon": "Spanish", "Segments": [34, 15, -1, 73, 27, 28, -1]},
      "Taxon": "Italian", "Segments": [10, 6, -1, 52, 27, 33, 0]},
      "Taxon": "PortugueseBrazil", "Segments": [3, 6, -1, 1, 27, 36, -1]},
      "Taxon": "Portuguese", "Segments": [3, 15, -1, 71, 27, 28, -1]},
      "Taxon": "Catalan", "Segments": [3, 15, -1, 1, 27, -1, -1]},
      "Taxon": "Walloon", "Segments": [10, 15, 8, -1, 0, -1, -1]},
      "Taxon": "Friulian", "Segments": [10, 15, 12, -1, 54, -1, -1]},
      "Taxon": "Romanian", "Segments": [3, 15, -1, 52, 27, -1, -1]}
    ]
  },
{
  "Name": "ToFloat", "Data": [
    {
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      "Taxon": "French", "Segments": [24, 32, 22, 52, 20, 63, 0, -1, -1]},
      "Taxon": "Spanish", "Segments": [24, 32, 15, 1, 20, 8, 27, 28, -1]},
      "Taxon": "Italian", "Segments": [24, 32, 15, 20, 20, 15, 27, 33, 0]},
      "Taxon": "PortugueseBrazil", "Segments": [24, 32, 15, -1, 20, 15, 27, 36, -1]},
      "Taxon": "Portuguese", "Segments": [24, 32, 15, -1, 20, 15, 27, 28, -1]},
      "Taxon": "Catalan", "Segments": [24, 32, 15, 52, 20, 15, 27, -1, -1]},
      "Taxon": "Romanian", "Segments": [24, 32, 15, 66, 20, 15, 27, -1, -1]}
    ]
  },
{
  "Name": "ToFloat-Fluitare", "Data": [
    {
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      "Taxon": "Italian", "Segments": [24, 32, 15, 7, 20, 27, 33, 0]}
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  },
}]
```

Appendix 1 - Prior Segment Frequencies

```
{
  "Name": "ToFlow", "Data": [
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    { "Taxon": "French", "Segments": [24, 32, 22, 0, -1, -1] },
    { "Taxon": "Spanish", "Segments": [24, 32, 15, 7, 28, -1] },
    { "Taxon": "Italian", "Segments": [24, 32, 15, 7, 33, 0] },
    { "Taxon": "PortugueseBrazil", "Segments": [24, 32, 8, 7, 36, -1] },
    { "Taxon": "Portuguese", "Segments": [24, 32, 8, 7, 28, -1] },
    { "Taxon": "Catalan", "Segments": [24, 32, 15, 7, -1, -1] }
  ]
},
{
  "Name": "ToFlow-Colare", "Data": [
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    { "Taxon": "French", "Segments": [52, 15, 32, 0, -1, -1] },
    { "Taxon": "Spanish", "Segments": [52, 6, 32, 27, 28, -1] },
    { "Taxon": "Italian", "Segments": [52, 6, 32, 27, 33, 0] },
    { "Taxon": "PortugueseBrazil", "Segments": [52, 6, -1, 27, 36, -1] },
    { "Taxon": "Portuguese", "Segments": [52, 15, -1, 27, 28, -1] },
    { "Taxon": "Catalan", "Segments": [52, 15, 65, 27, -1, -1] },
    { "Taxon": "Walloon", "Segments": [52, 9, 32, 0, -1, -1] }
  ]
},
{
  "Name": "ToFlow-Excurrere", "Data": [
    { "Taxon": "Latin", "Segments": [0, 52, 14, 52, 15, 33, 33, 0, 33, 0] },
    { "Taxon": "Spanish", "Segments": [0, -1, 14, 52, 15, 33, 7, 28, -1, -1] },
    { "Taxon": "Italian", "Segments": [-1, -1, 14, 52, 6, 33, 33, 0, 33, 0] },
    { "Taxon": "PortugueseBrazil", "Segments": [7, -1, 16, 52, 6, -1, 36, 0, 36, -1] },
    { "Taxon": "Portuguese", "Segments": [7, -1, 16, 52, 15, -1, 56, 0, 28, -1] },
    { "Taxon": "Catalan", "Segments": [4, -1, 14, 52, 6, -1, 33, 4, -1, -1] },
    { "Taxon": "Friulian", "Segments": [-1, -1, 14, 52, 6, -1, 33, 37, -1, -1] },
    { "Taxon": "Romanian", "Segments": [-1, -1, 14, 52, 15, 28, 10, 0, -1, -1] }
  ]
},
{
  "Name": "ToFlow-Currere", "Data": [
    { "Taxon": "Latin", "Segments": [52, 15, 33, 33, 0, 33, 0] },
    { "Taxon": "French", "Segments": [52, 15, -1, 36, 7, 36, -1] },
    { "Taxon": "Spanish", "Segments": [52, 6, -1, 33, 0, 28, -1] },
    { "Taxon": "Italian", "Segments": [52, 6, 33, 33, 0, 33, 0] },
    { "Taxon": "PortugueseBrazil", "Segments": [52, 6, -1, 36, 0, 36, -1] },
    { "Taxon": "Portuguese", "Segments": [52, 15, -1, 36, 0, 28, -1] },
    { "Taxon": "Catalan", "Segments": [52, 6, -1, 33, 4, -1, -1] },
    { "Taxon": "Friulian", "Segments": [52, 6, -1, 33, 7, -1, -1] },
    { "Taxon": "Romanian", "Segments": [52, 15, 28, 10, 0, -1, -1] }
  ]
},
{
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    { "Taxon": "French", "Segments": [3, 4, 32, 0, -1, -1] },
    { "Taxon": "Spanish", "Segments": [-1, 0, 32, 27, 28, -1] },
    { "Taxon": "Italian", "Segments": [10, 0, 32, 27, 33, 0] },
    { "Taxon": "PortugueseBrazil", "Segments": [3, 47, 32, 27, 28, -1] },
    { "Taxon": "Portuguese", "Segments": [3, 47, 32, 27, 28, -1] },
    { "Taxon": "Catalan", "Segments": [3, 4, 32, 27, -1, -1] },
    { "Taxon": "Walloon", "Segments": [10, 27, 32, 0, -1, -1] }
  ]
},
{
  "Name": "ToFreeze-Glaciare", "Data": [
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    { "Taxon": "French", "Segments": [1, 32, 27, -1, 14, -1, 0, -1, -1] },
    { "Taxon": "Italian", "Segments": [1, 12, 27, 20, 46, 12, 27, 33, 0] },
    { "Taxon": "Catalan", "Segments": [1, 32, 4, -1, 14, -1, 27, -1, -1] },
    { "Taxon": "Friulian", "Segments": [73, 32, 27, -1, 46, -1, 54, -1, -1] }
  ]
}
```

Appendix 1 - Prior Segment Frequencies

```
}},
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  {"Taxon": "Latin", "Segments": [7, 13, 1, 32, 27, 52, 7, 54, 33, 0]},
  {"Taxon": "Romanian", "Segments": [47, 13, 73, -1, 0, 53, -1, 27, -1, -1]}
]},
{"Name": "ToBurn-Brojan", "Data": [
  {"Taxon": "French", "Segments": [19, 36, 22, 32, 0, -1, -1]},
  {"Taxon": "Italian", "Segments": [19, 33, 15, 46, 27, 33, 0]},
  {"Taxon": "Walloon", "Segments": [19, 36, 21, 32, 0, -1, -1]},
  {"Taxon": "Friulian", "Segments": [19, 33, 15, 50, 54, -1, -1]}
]},
{"Name": "ToBurn-Cremare", "Data": [
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  {"Taxon": "French", "Segments": [52, 36, 27, 26, 0, -1, -1]},
  {"Taxon": "Spanish", "Segments": [52, -1, 0, 26, 27, 28, -1]},
  {"Taxon": "Italian", "Segments": [52, 33, 0, 26, 27, 33, 0]},
  {"Taxon": "PortugueseBrazil", "Segments": [52, -1, 60, 26, 27, 28, 0]},
  {"Taxon": "Portuguese", "Segments": [52, -1, 59, 26, 27, 36, 0]},
  {"Taxon": "Catalan", "Segments": [52, 33, 4, 26, 27, -1, -1]}
]},
{"Name": "ToBurn-Flammare", "Data": [
  {"Taxon": "Latin", "Segments": [24, 32, 27, 26, 26, 54, 33, 0]},
  {"Taxon": "French", "Segments": [24, 32, 43, -1, 19, 0, -1, -1]},
  {"Taxon": "Spanish", "Segments": [24, 32, 27, -1, 26, 0, 27, 28]},
  {"Taxon": "Italian", "Segments": [24, 12, 27, 26, 26, 27, 33, 0]},
  {"Taxon": "Catalan", "Segments": [24, 65, 27, 26, 27, -1, -1, -1]}
]},
{"Name": "ToBurn-Ardere", "Data": [
  {"Taxon": "Latin", "Segments": [27, 33, 23, 25, 33, 0]},
  {"Taxon": "French", "Segments": [27, 36, 23, -1, 36, -1]},
  {"Taxon": "Spanish", "Segments": [27, 28, 23, 0, 28, -1]},
  {"Taxon": "Italian", "Segments": [27, 33, 23, 0, 33, 0]},
  {"Taxon": "PortugueseBrazil", "Segments": [27, 36, 23, 0, 36, -1]},
  {"Taxon": "Portuguese", "Segments": [29, 28, 23, 0, 28, -1]},
  {"Taxon": "Romanian", "Segments": [27, 28, 23, 0, -1, -1]}
]},
{"Name": "ToBurn-Flagrare", "Data": [
  {"Taxon": "Latin", "Segments": [24, 32, 27, 1, 33, 54, 33, 0]},
  {"Taxon": "French", "Segments": [24, 32, 27, 1, 36, 0, -1, -1]},
  {"Taxon": "Spanish", "Segments": [24, 32, 27, 1, 28, 27, 28, -1]},
  {"Taxon": "Italian", "Segments": [24, 32, 27, 1, 33, 27, 33, 0]},
  {"Taxon": "PortugueseBrazil", "Segments": [24, 32, 27, 73, 36, 27, 36, -1]},
  {"Taxon": "Portuguese", "Segments": [24, 32, 27, 1, 28, 27, 28, -1]}
]},
{"Name": "ToBurn-Incendere", "Data": [
  {"Taxon": "Latin", "Segments": [7, 13, 52, 0, 13, 23, -1, 0, 33, 0]},
  {"Taxon": "French", "Segments": [81, -1, 14, 43, -1, 23, 12, 0, -1, -1]},
  {"Taxon": "Spanish", "Segments": [0, 13, 58, 0, 13, 23, -1, 0, 28, -1]},
  {"Taxon": "Italian", "Segments": [7, 13, 46, 31, 13, 23, 12, 27, 33, 0]},
  {"Taxon": "PortugueseBrazil", "Segments": [44, -1, 14, 0, 13, 10, 11, 27, 28, -1]},
  {"Taxon": "Portuguese", "Segments": [44, -1, 14, 74, -1, 23, 12, 27, 28, -1]},
  {"Taxon": "Catalan", "Segments": [4, 13, 14, 0, 13, 23, -1, -1, 28, 4]},
  {"Taxon": "Romanian", "Segments": [47, 13, 46, 7, 13, 23, 3, 0, -1, -1]}
]},
{"Name": "ToBurn-AncestralClass8", "Data": [
  {"Taxon": "Latin", "Segments": [15, 14, 20, 15, 32, 54, 33, 0]},
```

Appendix 1 - Prior Segment Frequencies

```
{
  "Taxon": "Italian", "Segments": [15, 14, 20, 6, 32, 27, 33, 0]},
  "Taxon": "Romanian", "Segments": [15, 14, 20, 15, 33, 27, -1, -1]}
}],
{"Name": "All", "Data": [
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  {"Taxon": "Italian", "Segments": [6, 38, 38, 7, -1]}
]},
{"Name": "All-Totus", "Data": [
  {"Taxon": "Latin", "Segments": [20, 2, -1, 20, 15, 14]},
  {"Taxon": "French", "Segments": [20, 15, -1, -1, -1, -1]},
  {"Taxon": "Spanish", "Segments": [20, 6, -1, 23, 6, -1]},
  {"Taxon": "Italian", "Segments": [20, 15, 20, 20, 6, -1]},
  {"Taxon": "PortugueseBrazil", "Segments": [20, 6, -1, 23, 15, -1]},
  {"Taxon": "Portuguese", "Segments": [20, 6, -1, 51, 15, -1]},
  {"Taxon": "Catalan", "Segments": [20, 6, -1, 20, -1, -1]},
  {"Taxon": "Walloon", "Segments": [20, 9, -1, -1, -1, -1]},
  {"Taxon": "Friulian", "Segments": [23, 15, -1, 20, -1, -1]},
  {"Taxon": "Romanian", "Segments": [20, 6, -1, 20, -1, -1]}
]},
{"Name": "Many", "Data": [
  {"Taxon": "Latin", "Segments": [26, 15, 32, 20, 15, 14]},
  {"Taxon": "French", "Segments": [26, 15, -1, -1, -1, -1]},
  {"Taxon": "Spanish", "Segments": [26, 15, -1, 46, 6, -1]},
  {"Taxon": "Italian", "Segments": [26, 6, 32, 20, 6, -1]},
  {"Taxon": "PortugueseBrazil", "Segments": [26, 85, 86, -1, 20, 15]},
  {"Taxon": "Portuguese", "Segments": [26, 85, 86, -1, 20, 15]},
  {"Taxon": "Catalan", "Segments": [26, 6, 32, -1, -1, -1]},
  {"Taxon": "Friulian", "Segments": [26, 6, 32, 66, -1, -1]},
  {"Taxon": "Romanian", "Segments": [26, 15, 32, 20, -1, -1]}
]},
{"Name": "Many-Tantus", "Data": [
  {"Taxon": "Latin", "Segments": [20, 27, 13, 20, 15, 14]},
  {"Taxon": "Spanish", "Segments": [20, 27, 13, 20, 6, -1]},
  {"Taxon": "Italian", "Segments": [20, 27, 13, 20, 6, -1]},
  {"Taxon": "PortugueseBrazil", "Segments": [20, 45, -1, 20, 15, -1]},
  {"Taxon": "Portuguese", "Segments": [20, 45, -1, 20, 15, -1]},
  {"Taxon": "Catalan", "Segments": [20, 27, 13, 20, -1, -1]},
  {"Taxon": "Friulian", "Segments": [20, 27, 13, 66, -1, -1]}
]},
{"Name": "Some", "Data": [
  {"Taxon": "French", "Segments": [6, -1, 52, 87, -1, -1]},
  {"Taxon": "Spanish", "Segments": [27, 32, 73, 15, 13, 6]},
  {"Taxon": "Italian", "Segments": [27, 32, 52, 15, 13, 6]},
  {"Taxon": "PortugueseBrazil", "Segments": [27, 8, 1, 85, -1, -1]},
  {"Taxon": "Portuguese", "Segments": [27, 65, 1, 85, -1, -1]},
  {"Taxon": "Catalan", "Segments": [4, 32, 1, 15, -1, -1]}
]},
{"Name": "Few", "Data": [
  {"Taxon": "Latin", "Segments": [49, 88, 52, 15, 14]},
  {"Taxon": "French", "Segments": [49, 68, -1, -1, -1]},
  {"Taxon": "Spanish", "Segments": [49, 6, 52, 6, -1]},
  {"Taxon": "Italian", "Segments": [49, 9, 52, 6, -1]},
  {"Taxon": "PortugueseBrazil", "Segments": [49, 6, 8, 52, 15]},
  {"Taxon": "Portuguese", "Segments": [49, 6, 8, 52, 15]},
  {"Taxon": "Catalan", "Segments": [49, 9, 52, -1, -1]},
  {"Taxon": "Walloon", "Segments": [49, 61, -1, -1, -1]},
```

Appendix 1 - Prior Segment Frequencies

```
{
  "Taxon": "Friulian", "Segments": [49, 2, 52, -1, -1]}
}},
{"Name": "Other", "Data": [
  {"Taxon": "Latin", "Segments": [27, 32, 20, 0, 33, -1]},
  {"Taxon": "French", "Segments": [6, -1, 20, -1, 36, -1]},
  {"Taxon": "Spanish", "Segments": [6, -1, 20, -1, 28, 6]},
  {"Taxon": "Italian", "Segments": [27, 32, 20, -1, 33, 6]},
  {"Taxon": "PortugueseBrazil", "Segments": [6, 8, 20, -1, 28, 15]},
  {"Taxon": "Portuguese", "Segments": [6, 8, 20, -1, 28, 15]},
  {"Taxon": "Catalan", "Segments": [27, 32, 20, -1, 28, 4]},
  {"Taxon": "Walloon", "Segments": [61, -1, 20, -1, -1, -1]},
  {"Taxon": "Friulian", "Segments": [27, 32, 20, -1, 33, 7]},
  {"Taxon": "Romanian", "Segments": [27, 32, 20, -1, -1, -1]}
]},
{"Name": "Other-Alius", "Data": [
  {"Taxon": "Latin", "Segments": [27, 32, 7, 15, 14]},
  {"Taxon": "PortugueseBrazil", "Segments": [27, 8, -1, -1, -1]},
  {"Taxon": "Portuguese", "Segments": [27, 65, -1, -1, -1]}
]},
{"Name": "Big", "Data": [
  {"Taxon": "Latin", "Segments": [26, 27, 73, 13, 15, 26]},
  {"Taxon": "Spanish", "Segments": [26, 27, -1, 38, 6, -1]},
  {"Taxon": "Italian", "Segments": [26, 27, 38, 38, 6, -1]}
]},
{"Name": "Big-Grandem", "Data": [
  {"Taxon": "Latin", "Segments": [73, 33, 27, 13, 23, 0, 26]},
  {"Taxon": "French", "Segments": [1, 36, 48, -1, -1, -1, -1]},
  {"Taxon": "Spanish", "Segments": [1, 28, 27, 13, 23, 0, -1]},
  {"Taxon": "Italian", "Segments": [1, 33, 27, 13, 23, 0, -1]},
  {"Taxon": "PortugueseBrazil", "Segments": [1, 28, 45, -1, 10, 7, -1]},
  {"Taxon": "Portuguese", "Segments": [1, 28, 45, -1, 23, 47, -1]},
  {"Taxon": "Catalan", "Segments": [73, 33, 27, 13, -1, -1, -1]},
  {"Taxon": "Walloon", "Segments": [73, 36, 48, -1, -1, -1, -1]},
  {"Taxon": "Friulian", "Segments": [73, 33, 27, 13, 20, -1, -1]}
]},
{"Name": "Big-Majjorem", "Data": [
  {"Taxon": "Latin", "Segments": [26, 72, 12, 6, 33, 0, 26]},
  {"Taxon": "Romanian", "Segments": [26, 27, -1, -1, -1, 28, 0]}
]},
{"Name": "Long-Longum", "Data": [
  {"Taxon": "Latin", "Segments": [32, 6, -1, 13, 1, 15, 26]},
  {"Taxon": "French", "Segments": [32, 42, -1, -1, -1, -1, -1]},
  {"Taxon": "Spanish", "Segments": [32, 6, -1, 13, 73, 6, -1]},
  {"Taxon": "Italian", "Segments": [32, 15, -1, 13, 1, 6, -1]},
  {"Taxon": "PortugueseBrazil", "Segments": [32, 61, -1, 1, 15, -1, -1]},
  {"Taxon": "Portuguese", "Segments": [32, 61, -1, 1, 15, -1, -1]},
  {"Taxon": "Catalan", "Segments": [35, 6, -1, 75, -1, -1, -1]},
  {"Taxon": "Walloon", "Segments": [32, 61, -1, -1, -1, -1, -1]},
  {"Taxon": "Friulian", "Segments": [32, 15, 13, 52, -1, -1, -1]},
  {"Taxon": "Romanian", "Segments": [32, 15, 13, 73, -1, -1, -1]}
]},
{"Name": "Long-Largum", "Data": [
  {"Taxon": "Latin", "Segments": [32, 27, 33, 73, 15, 26]},
  {"Taxon": "French", "Segments": [32, 27, 36, 3, -1, -1]},
  {"Taxon": "Spanish", "Segments": [32, 27, 28, 71, 6, -1]},
  {"Taxon": "Italian", "Segments": [32, 27, 33, 1, 6, -1]},
```

Appendix 1 - Prior Segment Frequencies

```
{
  "Taxon": "PortugueseBrazil", "Segments": [32, 27, 36, 1, 15, -1]},
  "Taxon": "Portuguese", "Segments": [32, 27, 28, 1, 15, -1]},
  "Taxon": "Catalan", "Segments": [35, 27, 28, 52, -1, -1]},
  "Taxon": "Friulian", "Segments": [32, 27, 33, 52, -1, -1]},
  "Taxon": "Romanian", "Segments": [32, 27, 33, 73, -1, -1]}
}],
{
  "Name": "Wide", "Data": [
    {"Taxon": "Latin", "Segments": [32, 54, 20, 15, 26]},
    {"Taxon": "French", "Segments": [32, 0, -1, -1, -1]},
    {"Taxon": "Spanish", "Segments": [32, 27, 20, 6, -1]},
    {"Taxon": "Italian", "Segments": [32, 27, 20, 6, -1]},
    {"Taxon": "PortugueseBrazil", "Segments": [32, 27, 20, 15, -1]},
    {"Taxon": "Portuguese", "Segments": [32, 27, 20, 15, -1]},
    {"Taxon": "Romanian", "Segments": [32, 27, 20, -1, -1]}
  ]
},
{
  "Name": "Wide-Amplum", "Data": [
    {"Taxon": "Latin", "Segments": [27, 26, 49, 32, 15, 26]},
    {"Taxon": "French", "Segments": [43, -1, 49, 32, -1, -1]},
    {"Taxon": "Spanish", "Segments": [27, 13, 46, -1, 6, -1]},
    {"Taxon": "Italian", "Segments": [27, 26, 49, 12, 6, -1]},
    {"Taxon": "PortugueseBrazil", "Segments": [45, -1, 16, -1, 15, -1]},
    {"Taxon": "Portuguese", "Segments": [45, -1, 16, -1, 15, -1]},
    {"Taxon": "Catalan", "Segments": [27, 26, 49, 32, 4, -1]}
  ]
},
{
  "Name": "Heavy", "Data": [
    {"Taxon": "Latin", "Segments": [1, 33, 27, 8, 7, 14]},
    {"Taxon": "French", "Segments": [1, 36, 27, 18, -1, -1]},
    {"Taxon": "Spanish", "Segments": [1, 28, 27, 19, 0, -1]},
    {"Taxon": "Italian", "Segments": [1, 33, 31, 18, 0, -1]},
    {"Taxon": "PortugueseBrazil", "Segments": [1, 28, 27, 18, 7, -1]},
    {"Taxon": "Portuguese", "Segments": [1, 28, 27, 18, 47, -1]},
    {"Taxon": "Catalan", "Segments": [1, 28, 0, 8, -1, -1]},
    {"Taxon": "Walloon", "Segments": [73, 33, 27, 18, -1, -1]},
    {"Taxon": "Friulian", "Segments": [73, 33, 31, 18, 7, -1]},
    {"Taxon": "Romanian", "Segments": [73, 28, 0, 8, -1, -1]}
  ]
},
{
  "Name": "Heavy-Lurdus", "Data": [
    {"Taxon": "Latin", "Segments": [32, 15, 33, 23, 15, 14]},
    {"Taxon": "French", "Segments": [32, 15, 36, -1, -1, -1]},
    {"Taxon": "Spanish", "Segments": [32, 0, 28, 23, 6, -1]},
    {"Taxon": "Italian", "Segments": [32, 6, 33, 23, 6, -1]},
    {"Taxon": "PortugueseBrazil", "Segments": [32, 0, 28, 23, 6, -1]},
    {"Taxon": "Portuguese", "Segments": [32, 0, 28, 23, 6, -1]}
  ]
},
{
  "Name": "Heavy-Pesant", "Data": [
    {"Taxon": "Latin", "Segments": [49, 25, 14, 27, 13, 20, -1]},
    {"Taxon": "French", "Segments": [49, 4, 50, 43, -1, -1, -1]},
    {"Taxon": "Spanish", "Segments": [49, 0, 14, 27, -1, 51, 6]},
    {"Taxon": "Italian", "Segments": [49, 0, 14, 27, 13, 20, 0]},
    {"Taxon": "PortugueseBrazil", "Segments": [49, 0, 50, 27, -1, 23, 15]},
    {"Taxon": "Portuguese", "Segments": [49, 47, 50, 27, -1, 51, 15]},
    {"Taxon": "Catalan", "Segments": [49, 4, 50, 27, -1, 20, -1]},
    {"Taxon": "Friulian", "Segments": [49, 0, 50, 27, 13, 20, -1]}
  ]
},
{
  "Name": "Small", "Data": [
    {"Taxon": "Latin", "Segments": [49, 7, 20, 20, 7, 20, 15, 14]},
  ]
}
```


Appendix 1 - Prior Segment Frequencies

```
{
  "Taxon": "French", "Segments": [49, 4, -1, 20, 7, -1, -1, -1]},
  {"Taxon": "Catalan", "Segments": [49, 4, 20, 7, 20, -1, -1, -1]},
  {"Taxon": "Walloon", "Segments": [49, 7, -1, 20, 7, -1, -1, -1]}
}],
{"Name": "Small-Pittinus", "Data": [
  {"Taxon": "Latin", "Segments": [49, 7, 20, 20, 7, 13, 15, 14]},
  {"Taxon": "Spanish", "Segments": [49, 0, -1, 52, 0, 38, 6, -1]},
  {"Taxon": "Italian", "Segments": [49, 7, 20, 46, 7, 13, 6, -1]},
  {"Taxon": "PortugueseBrazil", "Segments": [49, 0, 52, 0, 13, 15, -1, -1]},
  {"Taxon": "Portuguese", "Segments": [49, 47, 52, 0, 13, 15, -1, -1]},
  {"Taxon": "Romanian", "Segments": [49, 15, -1, 53, 7, 13, -1, -1]}
]},
{"Name": "Small-Pitulus", "Data": [
  {"Taxon": "Latin", "Segments": [49, 7, -1, 20, 15, 32, 15, 14]},
  {"Taxon": "Italian", "Segments": [49, 7, 52, 52, 6, 32, 6, -1]},
  {"Taxon": "Friulian", "Segments": [49, 7, -1, 46, 15, 32, -1, -1]}
]},
{"Name": "Short", "Data": [
  {"Taxon": "Latin", "Segments": [52, 15, 33, 20, 15, 14]},
  {"Taxon": "French", "Segments": [52, 15, 36, -1, -1, -1]},
  {"Taxon": "Spanish", "Segments": [52, 6, 28, 20, 6, -1]},
  {"Taxon": "Italian", "Segments": [52, 6, 33, 20, 6, -1]},
  {"Taxon": "PortugueseBrazil", "Segments": [52, 15, 36, 20, 15, -1]},
  {"Taxon": "Portuguese", "Segments": [52, 15, 28, 20, 15, -1]},
  {"Taxon": "Catalan", "Segments": [52, 15, 28, 20, -1, -1]},
  {"Taxon": "Walloon", "Segments": [52, 21, 36, -1, -1, -1]},
  {"Taxon": "Friulian", "Segments": [52, 15, 33, 20, -1, -1]}
]},
{"Name": "Short-Brevis", "Data": [
  {"Taxon": "Latin", "Segments": [19, 33, 0, 8, 7, 14]},
  {"Taxon": "French", "Segments": [19, 36, 31, 24, -1, -1]},
  {"Taxon": "Spanish", "Segments": [19, 28, 0, 19, 0, -1]},
  {"Taxon": "Italian", "Segments": [19, 33, 31, 18, 0, -1]},
  {"Taxon": "PortugueseBrazil", "Segments": [19, 28, 31, 18, 7, -1]},
  {"Taxon": "Portuguese", "Segments": [19, 28, 31, 18, 47, -1]},
  {"Taxon": "Catalan", "Segments": [19, 28, 0, 8, -1, -1]},
  {"Taxon": "Walloon", "Segments": [19, 36, 0, 24, -1, -1]}
]},
{"Name": "Narrow", "Data": [
  {"Taxon": "Latin", "Segments": [27, 13, 1, 15, 14, 20, 15, 14]},
  {"Taxon": "Spanish", "Segments": [27, 13, 1, 6, 14, 20, 6, -1]},
  {"Taxon": "Italian", "Segments": [27, 13, 1, 15, 14, 20, 6, -1]},
  {"Taxon": "Romanian", "Segments": [47, 75, 73, 15, 14, 20, -1, -1]}
]},
{"Name": "Narrow-Strictus", "Data": [
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  {"Taxon": "French", "Segments": [0, -1, 20, 36, 8, 27, -1, -1, -1, -1, -1]},
  {"Taxon": "Spanish", "Segments": [0, 14, 20, 28, -1, 0, -1, -1, 46, 6, -1]},
  {"Taxon": "Italian", "Segments": [-1, 14, 20, 33, -1, 0, -1, 20, 20, 6, -1]},
  {"Taxon": "PortugueseBrazil", "Segments": [7, 14, 20, 28, -1, 59, -1, -1, 20, 15, -1]},
  {"Taxon": "Portuguese", "Segments": [47, 16, 20, 28, -1, 60, -1, -1, 20, 15, -1]},
  {"Taxon": "Catalan", "Segments": [4, 14, 20, 28, -1, 31, -1, -1, 20, -1, -1]},
  {"Taxon": "Walloon", "Segments": [-1, 14, 20, 36, -1, 64, -1, -1, -1, -1, -1]},
  {"Taxon": "Friulian", "Segments": [-1, 14, 20, 33, -1, 31, -1, -1, 20, -1, -1]},
  {"Taxon": "Romanian", "Segments": [-1, 14, 20, 33, -1, 47, 26, -1, 20, -1, -1]}
]}
```

Appendix 1 - Prior Segment Frequencies

```
{
  "Name": "Thin", "Data": [
    { "Taxon": "Latin", "Segments": [26, 7, 13, 21, -1, 20, 15, 14]},
    { "Taxon": "French", "Segments": [26, 4, 13, 22, -1, -1, -1, -1]},
    { "Taxon": "Spanish", "Segments": [26, 0, 13, 15, -1, 23, 6, -1]},
    { "Taxon": "Italian", "Segments": [26, 7, 13, 15, -1, 20, 6, -1]},
    { "Taxon": "PortugueseBrazil", "Segments": [26, 7, -1, 15, -1, 23, 15, -1]},
    { "Taxon": "Portuguese", "Segments": [26, 7, -1, 15, -1, 51, 15, -1]},
    { "Taxon": "Catalan", "Segments": [26, 4, 13, 15, -1, 20, -1, -1]},
    { "Taxon": "Walloon", "Segments": [26, 7, 13, 15, -1, -1, -1, -1]},
    { "Taxon": "Friulian", "Segments": [26, 7, 13, 21, -1, 20, -1, -1]},
    { "Taxon": "Romanian", "Segments": [26, 4, 33, 15, 13, 20, -1, -1]}
  ]
},
{
  "Name": "Thin-Delicatus", "Data": [
    { "Taxon": "Latin", "Segments": [23, 25, 32, 7, 52, 54, 20, 15, 14]},
    { "Taxon": "French", "Segments": [23, 21, -1, -1, 3, 25, -1, -1, -1]},
    { "Taxon": "Spanish", "Segments": [23, 0, 32, -1, 71, 27, 51, 6, -1]},
    { "Taxon": "Italian", "Segments": [23, 0, 32, 7, 52, 27, 20, 6, -1]},
    { "Taxon": "PortugueseBrazil", "Segments": [23, 0, 8, -1, 1, 27, 23, 15, -1]},
    { "Taxon": "Portuguese", "Segments": [23, 31, 65, -1, 71, 27, 51, 15, -1]},
    { "Taxon": "Catalan", "Segments": [23, 4, 32, 7, 52, 27, 20, -1, -1]}
  ]
},
{
  "Name": "Thin-Subtilis", "Data": [
    { "Taxon": "Latin", "Segments": [14, 15, 19, 20, 37, 32, 0, 26]},
    { "Taxon": "Spanish", "Segments": [14, 15, -1, 20, 7, 32, -1, -1]},
    { "Taxon": "Italian", "Segments": [14, 6, 20, 20, 7, 32, 0, -1]},
    { "Taxon": "PortugueseBrazil", "Segments": [14, 15, 46, 7, 8, -1, -1, -1]},
    { "Taxon": "Portuguese", "Segments": [14, 15, 46, 7, 8, -1, -1, -1]},
    { "Taxon": "Catalan", "Segments": [14, 15, 49, 20, 7, 32, -1, -1]},
    { "Taxon": "Walloon", "Segments": [14, 21, 20, 7, -1, -1, -1, -1]},
    { "Taxon": "Friulian", "Segments": [14, 15, 20, 37, 32, -1, -1, -1]},
    { "Taxon": "Romanian", "Segments": [14, 15, 19, 53, 7, 33, 0, -1]}
  ]
},
{
  "Name": "Green", "Data": [
    { "Taxon": "Latin", "Segments": [8, 7, 33, 7, 23, 0, 26]},
    { "Taxon": "French", "Segments": [18, 0, 36, -1, -1, -1, -1]},
    { "Taxon": "Spanish", "Segments": [19, 0, 28, -1, 23, 0, -1]},
    { "Taxon": "Italian", "Segments": [18, 0, 33, -1, 23, 0, -1]},
    { "Taxon": "PortugueseBrazil", "Segments": [18, 0, 28, -1, 23, 47, -1]},
    { "Taxon": "Portuguese", "Segments": [18, 0, 28, -1, 23, 47, -1]},
    { "Taxon": "Catalan", "Segments": [18, 31, 28, -1, 20, -1, -1]},
    { "Taxon": "Walloon", "Segments": [18, 31, 36, -1, -1, -1, -1]},
    { "Taxon": "Friulian", "Segments": [18, 31, 33, -1, 20, -1, -1]},
    { "Taxon": "Romanian", "Segments": [18, 0, 28, -1, 23, 0, -1]}
  ]
},
{
  "Name": "One", "Data": [
    { "Taxon": "Latin", "Segments": [21, 13, 15, 26]},
    { "Taxon": "French", "Segments": [87, -1, -1, -1]},
    { "Taxon": "Spanish", "Segments": [15, 13, 6, -1]},
    { "Taxon": "Italian", "Segments": [15, 13, 6, -1]},
    { "Taxon": "PortugueseBrazil", "Segments": [85, -1, -1, -1]},
    { "Taxon": "Portuguese", "Segments": [85, -1, -1, -1]},
    { "Taxon": "Catalan", "Segments": [15, 13, -1, -1]},
    { "Taxon": "Walloon", "Segments": [61, -1, -1, -1]},
    { "Taxon": "Friulian", "Segments": [15, 75, -1, -1]},
    { "Taxon": "Romanian", "Segments": [15, 13, 15, -1]}
  ]
},
}
```


Appendix 1 - Prior Segment Frequencies

```
{
  "Name": "Two-Duos", "Data": [
    {"Taxon": "Latin", "Segments": [23, 15, 2, 14]},
    {"Taxon": "French", "Segments": [23, -1, 68, -1]},
    {"Taxon": "Spanish", "Segments": [23, -1, 6, 14]},
    {"Taxon": "PortugueseBrazil", "Segments": [23, -1, 17, 14]},
    {"Taxon": "Portuguese", "Segments": [23, -1, 17, 16]},
    {"Taxon": "Catalan", "Segments": [23, -1, 6, 14]},
    {"Taxon": "Walloon", "Segments": [23, -1, 64, -1]},
    {"Taxon": "Friulian", "Segments": [23, -1, 17, -1]},
    {"Taxon": "Romanian", "Segments": [23, -1, 17, -1]}
  ]
},
{
  "Name": "Two-Duae", "Data": [
    {"Taxon": "Latin", "Segments": [23, 15, -1, 72]},
    {"Taxon": "Italian", "Segments": [23, 15, -1, 0]},
    {"Taxon": "Romanian", "Segments": [23, 6, 8, 4]}
  ]
},
{
  "Name": "Two-Duas", "Data": [
    {"Taxon": "Latin", "Segments": [23, 15, 27, 14]},
    {"Taxon": "PortugueseBrazil", "Segments": [23, 15, 29, 14]},
    {"Taxon": "Portuguese", "Segments": [23, 15, 29, 16]}
  ]
},
{
  "Name": "Three", "Data": [
    {"Taxon": "Latin", "Segments": [20, 33, -1, 25, 14]},
    {"Taxon": "French", "Segments": [20, 36, 8, 78, -1]},
    {"Taxon": "Spanish", "Segments": [20, 28, -1, 0, 14]},
    {"Taxon": "Italian", "Segments": [20, 33, -1, 0, -1]},
    {"Taxon": "PortugueseBrazil", "Segments": [20, 28, -1, 0, 14]},
    {"Taxon": "Portuguese", "Segments": [20, 28, -1, 0, 16]},
    {"Taxon": "Catalan", "Segments": [20, 33, -1, 31, 14]},
    {"Taxon": "Walloon", "Segments": [20, 33, -1, 64, -1]},
    {"Taxon": "Friulian", "Segments": [20, 33, -1, 25, -1]},
    {"Taxon": "Romanian", "Segments": [20, 33, -1, 59, -1]}
  ]
},
{
  "Name": "Four", "Data": [
    {"Taxon": "Latin", "Segments": [70, -1, 27, 20, 20, 8, 6, 33, -1]},
    {"Taxon": "French", "Segments": [52, -1, 27, -1, 20, -1, -1, 36, -1]},
    {"Taxon": "Spanish", "Segments": [52, 8, 27, -1, 20, -1, -1, 28, 6]},
    {"Taxon": "Italian", "Segments": [52, 8, 27, 20, 20, -1, -1, 33, 6]},
    {"Taxon": "PortugueseBrazil", "Segments": [52, 8, 27, -1, 20, -1, -1, 28, 15]},
    {"Taxon": "Portuguese", "Segments": [52, 8, 27, -1, 20, -1, -1, 28, 15]},
    {"Taxon": "Catalan", "Segments": [52, 8, 27, -1, 20, -1, -1, 28, 4]},
    {"Taxon": "Walloon", "Segments": [52, 8, 27, -1, 20, -1, -1, -1, -1]},
    {"Taxon": "Friulian", "Segments": [52, 8, 27, -1, 20, -1, -1, 33, 7]},
    {"Taxon": "Romanian", "Segments": [49, -1, 27, -1, 20, -1, -1, 33, 15]}
  ]
},
{
  "Name": "Five", "Data": [
    {"Taxon": "Latin", "Segments": [70, 37, 13, 70, -1, 0]},
    {"Taxon": "French", "Segments": [14, 74, -1, 52, -1, -1]},
    {"Taxon": "Spanish", "Segments": [58, 7, 13, 52, -1, 6]},
    {"Taxon": "Italian", "Segments": [46, 7, 75, 52, 8, 0]},
    {"Taxon": "PortugueseBrazil", "Segments": [14, 44, -1, 52, -1, 15]},
    {"Taxon": "Portuguese", "Segments": [14, 44, -1, 52, -1, 15]},
    {"Taxon": "Catalan", "Segments": [14, 7, 75, 52, -1, -1]},
    {"Taxon": "Walloon", "Segments": [14, 74, -1, 52, -1, -1]},
    {"Taxon": "Friulian", "Segments": [46, 7, 75, 52, -1, -1]},
    {"Taxon": "Romanian", "Segments": [46, 7, 13, 46, -1, -1]}
  ]
}
```

Appendix 1 - Prior Segment Frequencies

```
}},
{"Name": "Here", "Data": [
  {"Taxon": "Latin", "Segments": [-1, 0, 52, 52, 15, 26, 40, 37, 52]},
  {"Taxon": "French", "Segments": [7, -1, -1, 14, -1, -1, -1, 7, -1]},
  {"Taxon": "Spanish", "Segments": [-1, 27, -1, 52, -1, -1, -1, 7, -1]},
  {"Taxon": "Italian", "Segments": [-1, -1, -1, 52, 8, -1, -1, 7, -1]},
  {"Taxon": "PortugueseBrazil", "Segments": [-1, 27, -1, 52, -1, -1, -1, 7, -1]},
  {"Taxon": "Portuguese", "Segments": [-1, 29, -1, 52, -1, -1, -1, 7, -1]},
  {"Taxon": "Catalan", "Segments": [-1, 27, -1, 52, -1, -1, -1, 7, -1]},
  {"Taxon": "Friulian", "Segments": [-1, 27, -1, 52, -1, -1, -1, 7, -1]}
]},
{"Name": "There", "Data": [
  {"Taxon": "Latin", "Segments": [7, 32, 32, 54, 52]},
  {"Taxon": "French", "Segments": [-1, -1, 32, 27, -1]},
  {"Taxon": "Spanish", "Segments": [27, -1, 5, 27, -1]},
  {"Taxon": "Italian", "Segments": [-1, -1, 32, 27, -1]},
  {"Taxon": "PortugueseBrazil", "Segments": [-1, -1, 32, 27, -1]},
  {"Taxon": "Portuguese", "Segments": [-1, -1, 32, 27, -1]},
  {"Taxon": "Catalan", "Segments": [4, -1, 35, 27, -1]},
  {"Taxon": "Walloon", "Segments": [-1, -1, 32, 27, -1]},
  {"Taxon": "Romanian", "Segments": [-1, -1, 32, 27, -1]}
]},
{"Name": "There-Ibi", "Data": [
  {"Taxon": "Latin", "Segments": [7, 19, 37]},
  {"Taxon": "Italian", "Segments": [-1, 18, 7]}
]},
{"Name": "There-AdIbi", "Data": [
  {"Taxon": "Spanish", "Segments": [27, 7]},
  {"Taxon": "PortugueseBrazil", "Segments": [27, 7]},
  {"Taxon": "Portuguese", "Segments": [29, 7]}
]},
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  {"Taxon": "Latin", "Segments": [70, -1, 7, 14]},
  {"Taxon": "French", "Segments": [52, -1, 7, -1]},
  {"Taxon": "Italian", "Segments": [52, -1, 7, -1]},
  {"Taxon": "Catalan", "Segments": [52, -1, 7, -1]},
  {"Taxon": "Walloon", "Segments": [52, -1, 37, -1]},
  {"Taxon": "Friulian", "Segments": [52, 8, 7, -1]}
]},
{"Name": "Who-Quem", "Data": [
  {"Taxon": "Latin", "Segments": [70, -1, 0, 26, -1]},
  {"Taxon": "Spanish", "Segments": [52, 12, 0, 13, -1]},
  {"Taxon": "PortugueseBrazil", "Segments": [52, -1, 41, -1, -1]},
  {"Taxon": "Portuguese", "Segments": [52, -1, 55, -1, -1]},
  {"Taxon": "Romanian", "Segments": [82, -1, 7, 13, 0]}
]},
{"Name": "What", "Data": [
  {"Taxon": "Latin", "Segments": [70, -1, 7, 23]},
  {"Taxon": "French", "Segments": [52, 8, 27, -1]},
  {"Taxon": "Spanish", "Segments": [52, -1, 0, -1]},
  {"Taxon": "Italian", "Segments": [52, -1, 0, -1]},
  {"Taxon": "PortugueseBrazil", "Segments": [52, -1, 7, -1]},
  {"Taxon": "Portuguese", "Segments": [52, -1, 47, -1]},
  {"Taxon": "Catalan", "Segments": [52, -1, 31, -1]},
  {"Taxon": "Walloon", "Segments": [52, 8, 62, -1]},
  {"Taxon": "Friulian", "Segments": [46, -1, 0, -1]},
```

Appendix 1 - Prior Segment Frequencies

```
{
  "Taxon": "Romanian", "Segments": [46, -1, 0, -1]}
}},
{"Name": "When-Quando", "Data": [
  {"Taxon": "Latin", "Segments": [70, -1, 27, 13, 23, 2]},
  {"Taxon": "French", "Segments": [52, -1, 48, -1, -1, -1]},
  {"Taxon": "Spanish", "Segments": [52, 8, 27, 13, 23, 6]},
  {"Taxon": "Italian", "Segments": [52, 8, 27, 13, 23, 6]},
  {"Taxon": "PortugueseBrazil", "Segments": [52, 8, 45, -1, 23, 15]},
  {"Taxon": "Portuguese", "Segments": [52, 8, 45, -1, 23, 15]},
  {"Taxon": "Catalan", "Segments": [52, 8, 27, 13, -1, -1]},
  {"Taxon": "Walloon", "Segments": [52, 8, 27, 13, 23, -1]},
  {"Taxon": "Friulian", "Segments": [52, 8, 27, 13, 20, -1]},
  {"Taxon": "Romanian", "Segments": [52, -1, 47, 13, 23, -1]}
]},
{"Name": "How-Quomodo", "Data": [
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  {"Taxon": "French", "Segments": [52, 9, 26, -1, -1, -1]},
  {"Taxon": "Spanish", "Segments": [52, 6, 26, 6, -1, -1]},
  {"Taxon": "Italian", "Segments": [52, 6, 26, 0, -1, -1]},
  {"Taxon": "PortugueseBrazil", "Segments": [52, 6, 26, 15, -1, -1]},
  {"Taxon": "Portuguese", "Segments": [52, 6, 26, 15, -1, -1]},
  {"Taxon": "Catalan", "Segments": [52, 9, 26, -1, -1, -1]},
  {"Taxon": "Walloon", "Segments": [52, 9, 26, 81, -1, -1]},
  {"Taxon": "Friulian", "Segments": [46, 0, 26, 21, 20, -1]},
  {"Taxon": "Romanian", "Segments": [52, 15, 26, -1, -1, -1]}
]},
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  {"Taxon": "Latin", "Segments": [13, 2, 13]},
  {"Taxon": "French", "Segments": [13, 42, -1]},
  {"Taxon": "Spanish", "Segments": [13, 6, -1]},
  {"Taxon": "Italian", "Segments": [13, 6, 13]},
  {"Taxon": "PortugueseBrazil", "Segments": [13, 45, 89]},
  {"Taxon": "Portuguese", "Segments": [13, 45, 89]},
  {"Taxon": "Catalan", "Segments": [13, 6, -1]},
  {"Taxon": "Friulian", "Segments": [13, 6, -1]},
  {"Taxon": "Romanian", "Segments": [13, 15, -1]}
]},
{"Name": "Not-Nec", "Data": [
  {"Taxon": "Latin", "Segments": [13, 0, 52]},
  {"Taxon": "French", "Segments": [13, 7, -1]},
  {"Taxon": "Spanish", "Segments": [13, 7, -1]},
  {"Taxon": "Italian", "Segments": [13, 0, -1]},
  {"Taxon": "PortugueseBrazil", "Segments": [13, 41, -1]},
  {"Taxon": "Portuguese", "Segments": [13, 55, -1]},
  {"Taxon": "Catalan", "Segments": [13, 7, -1]},
  {"Taxon": "Walloon", "Segments": [13, 74, -1]}
]},
{"Name": "And-Et", "Data": [
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  {"Taxon": "French", "Segments": [0, -1]},
  {"Taxon": "Spanish", "Segments": [7, -1]},
  {"Taxon": "Italian", "Segments": [0, -1]},
  {"Taxon": "PortugueseBrazil", "Segments": [7, -1]},
  {"Taxon": "Portuguese", "Segments": [7, -1]},
  {"Taxon": "Catalan", "Segments": [7, -1]},
  {"Taxon": "Walloon", "Segments": [31, -1]}
```

Appendix 1 - Prior Segment Frequencies

```
{
  {"Taxon": "Friulian", "Segments": [0, -1]},
  {"Taxon": "Romanian", "Segments": [0, -1]}
}],
{"Name": "And-Si", "Data": [
  {"Taxon": "Latin", "Segments": [14, 37, 52]},
  {"Taxon": "Romanian", "Segments": [16, 7, -1]}
]}
]
}

#####
# RevBayes Source File for Linguistomics Project #
#####
clear()
path = "C:/Users/shawn/Documents/Code/Linguistomics/Run/Run1/"
gammapath = path+"Gamma.trees"

# Read in discrete character data
data = readDiscreteCharacterData(path+"Characters.nex")

# Get some useful variables from the data. We need these later on
num_taxa <- data.ntaxa()

# Number of branches in an rooted tree
num_branches <- 2 * num_taxa - 2
taxa <- data.taxa()

# Create helper variables
moves = VectorMoves()
monitors = VectorMonitors()

#####
# Tree Model #
#####

# Outgroup is a clade consisting of one language
out_group = clade("Latin")

# Prior distribution on the tree topology
topology ~ dnUniformTopology(taxa, outgroup=out_group, rooted=TRUE)

# These are moves that change the tree topology
moves.append(mvNNI(topology, weight=num_taxa/2.0))
moves.append(mvSPR(topology, weight=num_taxa/10.0))

# Branch length prior
for (i in 1:num_branches) {
  bl[i] ~ dnExponential(10.0)
  moves.append(mvScale(bl[i]))
}

TL := sum(bl)
```

Appendix 1 - Prior Segment Frequencies

```
psi := treeAssembly(topology, bl)

#####
# Substitution Model #
#####

# This is the number of unique characters from the segment filters
unique_chars = 90

# Jukes-Cantor model
Q <- fnJC(unique_chars)

#####
# Gamma model for among-site variation #
#####
alpha ~ dnUniform(0, 10.0)
moves.append(mvScale(alpha, weight=1))
site_rates := fnDiscretizeGamma(alpha, alpha, 4)

#####
# PhyloCTMC Model #
#####
seq ~ dnPhyloCTMC(tree=psi, Q=Q, type="Standard", siteRates=site_rates)
seq.clamp(data)

#####
# Analysis #
#####

# You can use any node as the argument of model()
mymodel = model(psi)
n_gen = 10

# This prints monitors to the screen
monitors.append(mnScreen(TL, printgen=n_gen))

# This monitors the trees and puts them in a file
monitors.append(mnFile(psi, filename=gammapath, printgen=n_gen))

# Model monitor
monitors.append(mnModel(filename=path+"Gamma.log", printgen=n_gen))
mymcmc = mcmc(mymodel, moves, monitors, nruns=1, combine="mixed")
mymcmc.run(generations=1000)

# Summarizes the MCMC runs
mymcmc.operatorSummary()

#####
# Post processing #
#####
```

Appendix 1 - Prior Segment Frequencies

```
treetrace      = readTreeTrace(gammapath, outgroup=out_group)
map_tree       = mapTree(treetrace, path+"Gamma_MAP.tree")
mcc_tree       = mccTree(treetrace, path+"Gamma_MCC.tree")
consensus_tree = consensusTree(treetrace, path+"Gamma_Consensus.tree")
```

```
# Exit the program
```

```
q()
```

Char. Segment Words containing this segment

Appendix 1 - Prior Segment Frequencies

0	<p>e ego:, ew, jew, usted, vose, vɔse, voste, embrə, femmina, feməv, femjə, fembra, feme je, mulierem, muxer, moʎʎe, muʎeʁ, muʎe, mujere, dɔne, hominem, ombre, infantem, infante, fante, nenēj, nen, epuz, esposa, mulier, muxer, moʎʎe, muʎeʁ, muʎe, mujere, epu, esposo, ma:trem, meʁ, maðre, ma:dre, meʁ, piskem, peθ, peʃfe, peʃ, peʃte, awem, abe, awikellum, useʎ, passerem, passero, pasəre, flo:rem, f jo:re, floare, ne, nariʃe, so:lem, sole, soare, soreli, lune, etwal, estreja, stella, istrelə, iʃtrelə, stele, age, ploje, ploaje, mare, meʁ, sa:lem, sale, se, sare, terra, teʁ, tjera, teʁə, tjere, ka:li:ginem, kaliɖʒine, nebula, njebla, nebbja, newlə, negurə, tene:braj, te:nebre, tene:bra:s, tenəbʁ, tinjeblas, te:nebre, tənebrəs, fyne, fumate, θjelo, ʃer, wentum, bj ento, ben, fwego, no:men, no:me, nume, no:minem, nombre, lengwa, bibere, beber, bere, bebeʁ, biβer, bevi, komedere, komer, kome, kumer, manduka:re, mǎze, mandʒ are, morde:re, morðer, mɔrdere, mɔrdeʁ, murðer, morsika:re, morsikare, murseka, su:gere, syse, suɖe, konspuere, kɔspyə, eskupir, sputere, esputar, sputare, ski:re, sa pere, saber, sabəʁ, səber, kogno:skere, konothər, konoffere, kɔnesəʁ, kupiser, kunɔa ʃte, ko:gitare, kɔide, koɖʒitare, kuɖʒeta, pe:nsa:re, pǎse, pensar, pensare, pēse, peŋsa: time:re, temer, temere, teməʁ, timer, temə, temi, teme, tremere, tremər, tremare, tr eməʁ, trimer, dormi:re, dormire, wi:were, vivere, viveʁ, viver, morire, moʁəʁ, muʁ er, neka:re, nwaje, neka, anegar, annegare, tɥe, tuwe, macta:re, mate, okki:dere, utʃ idere, utʃide, pugna:re, puppare, battuere, battere, bateʁ, bəter, bate, kaptiare, ʃase, kattʃare, pulsa:re, puse, pulsare, ra:dere, raer, radere, ʁaəʁ, ʁaer, rade, ʁa:ze, rasare, nata:re, nwotare, naviga:re, naze, nabegar, navigare, wola:re, vole, volare, vɔle, zvo lare, ʃəmine, kamminare, ʃimine, maʁʃe, mergere, merɖʒere, merɖʒe, ambita:re, an dare, weni:re, benir, venire, veni, ekstendere, etǎdʁ, ekstender, estendere, istēdeʁ, i ʃtēder, əstendɔ, ekstinde, jake:re, zezix, jaθer, ɖʒaʃe:re, zəzəʁ, zəzer, ɖʒere, jesi, sed ere, ser, sedere, seʁ, sedə, sedenta:re, sentar, senta:re, stare, estar, stare, leva:re, ləve, jebar, levare, leʁaʁ, leʁa:re, altiare, ose, alsare, tornare, tuʁne, tornare, tu:rne, gyra: re, zixə, ɖʒirare, viʁe, virare, torʁe:re, torθer, torʃere, turser, tɔaʃe, kadere, kaer, kadere, ʃjade, tɔbe, tume, tene:re, tener, tenere, teʁ, ter, tsine, segurar, eksprimere, epʁēdʁ, ekspremir, spremer, iʃpʁəmeʁ, iʃpʁəmer, əspʁemə, esprimi, skreme, serrere, serar, seʁa, serare, seʁe, θerar, serrare, se:re, appektora:re, apretar, stringere, etʁēdʁ, estrenir, strinɖʒere, stringe, strinɖʒe, frika:re, fʁeje, fregar, fregare, frea, freka, fri kta:re, fʁote, frettare, lawa:re, lave, lavare, tergere, tərɖʒere, ekstergere, estarsir, ʃt erɖʒe, eksu:ka:re, esɔije, enxugar, affugare, suwe, limpida:re, tira:re, tiʁe, tirare, tire, puse, trahere, trarre, traze, trəzer, tradʒe, impingere, impinɖʒere, impinɖʒe, jakta:re, zəte, etʃar, ɖʒettare, ɖʒete, lankea:re, lǎse, lanʃare, e:runka:re, arrontʃare, liga:re, lie, legar, legare, lea:re, lega, apta:re, ko:nsuere, koser, kuʃire, kuzer, ɔase, komputa:re, kōte, kontare, kōte, e:numera:re, enumeʁe, enumerar, enumerare, enumera, di:kere, deθir, dire, dizer, ziʃe, ekspo:nere, sporre, spune, kanta:re, ʃāte, kantare, ʃāte, lu:d ere, joka:re, zwe, ɖʒokare, ɖʒuwe, flu:ktua:re, flyktɥe, fluttuare, fluita:re, fluitare, f luere, flye, fluire, ko:la:re, kule, kolare, kɔle, ekskurrere, eskurir, skorrere, iʃkoʁəʁ, iʃkurer, skurɖʒe, kurrere, korer, korrere, koʁəʁ, kuʁer, kurɖʒe, gela:re, zəle, elar, ɖʒe lare, ɖʒale, glakia:re, glase, gʒatʃjare, inglakia:re, ingetsa, bɔyle, brutʃare, bɔu:le, kr ema:re, kʁame, kemaʁ, kremare, kɔjmaʁe, kejməʁe, flamma:re, flābe, flamear, ʃja mmare, arde:re, arder, ardere, aʁdeʁ, ərder, arde, flagra:re, flagʁe, flagrare, inkend ere, ēsǎdʒe, enθender, inʃendjare, isenɖʒiar, ənsendɔ, inʃindʒe, ustula:re, ustolare, alter, grandem, grande, grande, majjorem, mare, le, grabe, grəve, grew, grew, lerdo, pesaðo, pesante, pezadu, pezant, pekeɲo, pekenu, pikenu, brewis, brebe, brəve, bre w, bʁef, etʁwa, est</p> <p>reʃfo, stretto, menudo, delyaðo, delikato, dewgadɔ, subti:lem, sottile, subtsire, wiri dem, veʁ, berde, verde, verdi, verde, due, tres, tre, tref, kʷi:nkʷe, ʃiŋkwe, ekkumhi: k, kʷem, kjen, ʃfine, ke, ʃe, kome, ʃemu:t, nek, ne, et, e</p>
---	---

Appendix 1 - Prior Segment Frequencies

1	g	ego:, agwə, lago, lagu, ka:li:ginem, negurə, fwego, fogu, lāg, leŋgwa, lingwa, līgwe, musəga, musəgar, su:gere, sugaɤ, sugar, kogno:skere, ko:gita:re, nəga, anegar, anegare, nabegar, navigare, nəbəga, naviga, segurar, siguraɤ, fregar, frəga, iffrigar, tergere, ekstergere, enxugar, affugare, ɛfugar, əfuga, liga:re, legar, legare, zogaa, zuga, flugtwar, gela:re, glakia:re, glase, gjatfjare, gləsa, inglakia:re, flagra:re, flagkə, flagrar, flagrare, flagrar, awgū, atgū, əlgu, gɤā, grande, grande, grēdʒi, grēdi, longum, lūngo, lōgu, largo, laɤgu, largu, grawis, gɤav, grabe, grēve, gravi, gravi, grew, angustus, angosto, angusto, dewgadu
2	o:	ego:, no:s, no:i, no:, wo:s, vo:i, vo:, homo:, spo:s, flo:rem, fjo:re, flo:r, so:lem, no:men, no:me, no:minem, kogno:skere, ko:gita:re, ko:nsuere, ekspo:nere, ko:la:re, to:tus, po:k, duo:s, k ^w ando:, k ^w o:modo, no:n
3	z	zə, zə, pluza, kalizē, kelizē, māze, mēzaɤ, mēzar, mənza, kuzitaɤ, kuzitar, naze, zeziz, zəzək, zəzer, zawra, zikə, zizar, zira, əftrizir, əftrizir, əstərzi, zəte, zəjtar, zwe, zogaa, zuyar, zuga, zuka, zəle, zilar, zəla, inffindze, laɤz, du:ze:
4	ə	zə, dənə, dɤamnə, ɤmə, əspəzə, mərit, əspəs, marə, pasəre, lunə, lunə, əstel, ajɤwə, apə, pluza, tərə, tsarə, newlə, negurə, tənəbrəs, fɤəfə, limbə, bəwra, mənza, musəga, musəgar, musəɤa, əskupi, səβə, kunɛfə, pənsa, pəsa, temə, biwra, nəga, mətə, batrə, kəsa, rawra, rəza, rəska, nəda, nəbəga, fəmine, kəmina, vənɪk, bəni, əstendrə, zawra, zəfɤə, əsta, ləve, ləba, əlsa, tərsə, kawra, kədə, tənɪk, təni, ifprəmek, ifprəmer, əspremə, sərar, səra, əftrizir, əftrizir, əstreɤə, frəga, frəsa, əstərzi, əfuga, trəwra, əmpɛrə, zəte, lənsa, kənta, əskorə, korə, zəle, zəla, gləsa, krəma, ənsendrə, əlgu, altrə, amplə, pəzā, pəzat, pəti, pətit, əstret, mənɤ, mənut, mərunt, dəlɪkat, dowə, kwatrə, əla
5	j	jo, estreja, jubja, jaθer, jebar, aja
6	o	jo, io, jo, nos, no, bos, vof, vos, vose, voste, mołle, domina, doɤa, done, hominem, ombre, omē, om, homo:, wəmo, nipo, nino, sponsa, esposa, ispoza, ifpozə, mołle, mariðo, marito, sponsus, esposo, spəzo, ispozu, ifpozu, sokius, səfə, sots, wazo, utfello, paxaro, passero, fruto, frutto, flor, floɤ, naso, na:so, sol, sole, soliculus, soreli, o, pjodɤa, ploje, lago, lago, θjelo, fɤelo, bjento, vento, fokum, fwego, fwəko, fogu, foyu, fok, apɤ, anno, nomi, nomi, nombre, komedere, komer, kome, morde:re, moɤdɤ, moɤder, moɤdek, morsika:re, moskar, morsikare, konspuere, kogno:skere, konothɛr, konoffere, kopeseɤ, koposi, koɤitare, dormire:re, dormir, dormire, doɤmiɤ, dormi, morir, morire, moɤek, okki:dere, kosaɤ, nwotare, wola:re, vole, bolar, volare, voaa, zvolare, zvola:, ose, torna:re, tornar, tornare, toɤnaɤ, torna:, toɤk ^w ere, toɤθer, appektorare:re, fɤote, frotar, arronffare, koser, komputa:re, kontar, kontare, kontar:, sporre, joka:re, ɤokare, zogaa, kolar, kolare, koaa, skorrere, ifkoɤek, əskorə, skorir, korer, korrere, koɤek, korə, kori, ustolare, omne:s, opɤi, todo, tutto, todu, toɤu, tot, muɤfo, molto, mol, molc, tanto, okœ, alguno, alkuno, poko, pəko, powku, oɤk, otro, altro, owtru, mapɤ, mapɤo, mapɤo, majjorem, longum, longo, lungo, loɤ, larɤo, largo, lato, anffo, ampjo, lerdo, lordo, pesaðo, pekeɤo, pittfino, pikkolo, korto, korto, angosto, angusto, estreɤfo, stretto, menudo, minuto, delyaðo, delikato, sottile, uno, dos, dowə, k ^w attwor, kwatro, kwattro, θinko, kwando, k ^w o:modo, komo, kome, komu, no, non

Appendix 1 - Prior Segment Frequencies

7	i	io, no:i, vo:i, fe:mina, femmina, fẽmine, mulierem, domina, hominem, infantem, in fante, ifẽfi, nijo, nino, ispoza, mulier, m̃ari, mariðo, marito, maridu, m̃ariðu, marit, m̃arit, ispozu, sokius, m̃ori, piskem, pejsi, avi, awikellum, f̃uqi, nariθ, nariθfe, nar is, ñerif, solicolus, soreli, istrel̃e, pluwia, pl̃qi, ka:li:ginem, kalina, kalid̃gine, kaliz̃ẽj, k̃eliz̃ẽj, tinjeblas, kajkia, vint, nomi, no:minem, ling ^w a, lingwa, limb̃a, bibere, bevi, mwardi, morsika:re, morsikare, kuspĩx, kuspir, eskupir, ̃askupi, fti, kiñh, kõnosi, ko:gita:re, k̃uide, kwidar, kođitare, kuzitãx, kuzitar, time:re, temi, trima:̃, d̃õxm̃ĩx, dormir, dormire, d̃õxm̃ĩx, durmir, durmi, dwãxmi, dormi, viṽx, bibir, vivere, vivẽx, viver, biwr̃a, vivi, via, mũx̃ĩx, morir, morire, muri, m̃ari, muri, tu:ta:ri, ̃oks̃ĩx, ut̃fid ere, uksi, ut̃fide, batir, bati, kaptia:re, naviga:re, navigare, naviga:̃, naviga, f̃amine, kaminar, kamminare, k̃em̃ĩx̃ãx, k̃em̃ĩx̃ãr, k̃em̃ina, f̃imine, f̃jamina, ambita:re, ṽan ĩx, benir, venire, vĩx, vir, b̃ani, vini, vĩni, veni, ist̃ẽdẽx, if̃t̃ẽdẽr, ekstinde, zez̃ĩx, jesi, altia:re, zĩx̃e, xirar, đ̃irare, zirar, zira, đ̃ira:̃, vĩx̃e, birar, virare, virar, bira, k̃eir, t̃an ĩx, t̃ani, tini, tinji, tsine, eksprimere, ekspremir, if̃pr̃amẽx, if̃pr̃amer, esprimi, string ere, estrepĩr, strind̃gere, ̃ãf̃trĩzir, ̃ãf̃trĩzir, stringe, frika:re, frikta:re, frisar, estarsir, ̃ãst̃ar̃zi, es̃qĩje, limpida:re, limp̃jar, tira:re, tĩx̃e, tirar, tirare, f̃ira, tira, tire, tira:̃, imp ingere, impind̃gere, impind̃ge, xita, liga:re, lie, ̃lĩya, kuf̃ire, kuzi, kuzi, dĩx, deθir, di re, dizẽr, di, zĩf̃e, ludir, fluita:re, fluitare, fluĩr, fluire, flwĩx, flwir, flui, eskurir, i f̃kõx̃ẽx, if̃kurẽr, kũx̃ĩx, kori, glakia:re, inglakia:re, inkendere, inf̃end̃jare, inf̃ind̃ze, õr̃ni, altri, alius, gr̃ẽđ̃i, grawis, gravi, grevi, pittitus, p̃ati, p̃atit, piti, pittinus, pit̃fi no, putsin, pitulus, pikkolo, pit̃ful, brewis, brevi, striktus, istrejt̃u, minu:tus, minuto, miudu, miuð̃u, minu, minu:t, de:lika:tus, delikato, d̃elikat, sutil, sottile, suf̃ĩw, supt il, su:ti, subtsire, wiridem, kwatri, θ̃inko, f̃ĩñkwe, sĩñk, f̃ĩñk, f̃ĩnt̃f, isi, aki, kwi, ̃eki, illa:k, ibi:̃, vi, ai, ̃ei, k ^w is, ki, kwi, f̃ĩne, k ^w id, ni, i, fi
8	w	ew, jew, wo:s, w̃omo, pwas̃o, awem, aw, awikellum, wazo, s̃ow, etwal, aywa, akkwa, agw̃e, aj̃yw̃a, ̃e:w, pluwia, saw, ñevw̃e, newl̃a, s̃ew, wentum, fwego, fw̃oko, lengwa, lingwa, lĩgw̃e, bw̃ãx, b̃ewr̃a, mwardi, savwãx, kwidar, dwãxmi, wi:were, biwr̃a, n waje, tuwe, rawr̃a, nwotare, wolare, vwar, wenire, zawr̃a, sw̃ãx, f̃wãx, kawr̃a, law are, suwe, tr̃ewr̃a, z̃we, đ̃uwe, flugtwar, flwĩx, flwir, awg̃u, powku, owtru, aw, gr awis, grew, grew, brewis, brew, et̃k̃wa, dewgadu, suf̃ĩw, wiridem, dow̃a, t̃k̃wa, k ^w a ttwor, kwatro, kwattro, kwatru, kwatr̃a, kwat, kwatri, f̃ĩñkwe, kwi, kwi, kwa, kw ̃e, kwando, kw̃ẽdu, kwan, kwand, kwant
9	o	zo, nojs, ñõf, vojs, ṽose, d̃onna, d̃oña, d̃one, ̃om, ̃om̃ẽj, ̃om̃a, ̃om, w̃omo, sp̃oza, ̃ãsp̃oza, sp̃ozo, ̃ãsp̃os, s̃õf̃o, fl̃o, s̃ow, s̃õł, s̃ol, s̃õl̃o, s̃olej, nj̃oly, fw̃oko, f̃ok, ñom, ñõj, m̃ordere, k̃oñet̃x, kiñh, d̃õxm̃ĩx, m̃ari, ̃oks̃ĩx, ṽole, t̃õx̃d̃x, t̃õr̃f̃ere, t̃ors̃a, lõji, k̃ole, to, p̃oko, p̃o k, k̃om, k̃om̃ẽ
10	đ	đ̃i, pjod̃đ̃a, kalid̃gine, mand̃gare, sud̃ge, kođitare, kuđgeta, ñeđ̃i, m̃erđ̃gere, merđ̃ge, đ̃ãf̃e:re, đ̃gere, đ̃irare, đ̃ira:̃, strind̃gere, strind̃ge, t̃erđ̃gere, f̃terđ̃ge, trađ̃ge, impind̃gere, impind̃ge, đ̃ettare, đ̃ete, đ̃okare, đ̃uwe, đ̃uja:̃, skurđ̃ge, kurđ̃ge, đ̃elare, đ̃ale, is̃end̃g iar, gr̃ẽđ̃i
11	r	đ̃i, na:ris, is̃end̃g iar
12	j	jo, jew, nojs, vojs, fem̃je, femeje, mujere, mujere, ut̃jel, frujt, f̃jo:re, jub̃ja, pjod̃đ̃a, p loje, pl̃oaje, tjera, tjere, nj̃oly, njebla, nebb̃ja, tinjeblas, sj̃el, θ̃jelo, bjento, skuj̃pa, kuj da, f̃jamina, jake:re, jesi, f̃jade, tinji, es̃qĩje, suja:̃, limp̃jar, jakta:re, lõji, joka:re, đ̃u jar, gjat̃f̃jare, f̃jammare, ̃ẽs̃ãđ̃je, inf̃end̃jare, is̃ẽđ̃jar, majjorem, amp̃jo, kjen

Appendix 1 - Prior Segment Frequencies

13	n	<p>no:s, nu, nos, no:i, nojs, noj, no, no:, noj, fe:mina, femmina, femine, domina, donna, done, donə, done, dɔamənə, hominem, infantem, infante, fante, nijo, nino, nenēj, n en, sponsa, sponsus, na:sus, ne, naso, na:so, nas, na:s, nas, nariθ, nariʃe, naris, neriʃ, na:ris, lu:na, lyn, luna, ʎunə, lən, lune, lunə, ka:li:ginem, kalina, kalidʒine, nebula, njɔly, njebla, nebbja, nɛvwe, newlə, negurə, tene:braj, tɛ:nebre, tene:bra:s, tenɛbɤ, ti njeblas, tɛ:nebre, tɛnebrəs, wentum, bjento, vɛnto, ben, vint, vint, annum, anno, ɛn u, an, no:men, nɔ, no:me, nomi, nomi, nɔm, nɔ, nɔj, nume, no:minem, nombre, lin g^wa, lingwa, lɛnge, manduka:re, mandukar, mandʒare, minka, konspuere, kogno:sk ere, kɔnɛtɤ, konoθer, konoffere, kunɛʃə, kinɔh, kunqafte, pe:nsare, pensar, pensare, pənsa, neka:re, nwaje, nəga, neka, anegar, annegare, pugna:re, nata:re, nadar, nwot are, nadaɤ, nəðar, nəda, nada:, naviga:re, naʒe, nabegar, navigare, naviʒaɤ, nəviʒar, nəbəga, nədʒi:, navigar, naviga, ʃəmine, kaminar, kamminare, kəmina, ʃimine, ʃja mina, andar, andare, wenire, vənɪɤ, benir, venire, bəni, vini, veni, ekstendere, ekst ender, estendere, əstendrə, ekstinde, sedenta:re, sentar, sentar, torna:re, tuɤne, torn ar, tornare, toɤnaɤ, turnar, turna, tu:rne, torna:, turna, tene:re, tənɪɤ, tener, tenere, tənɪ, tini, tinji, tsine, stringere, strindʒere, stringe, strɛngi:, strindʒe, enxugar, impi ngere, impindʒere, impindʒe, lankea:re, lanθar, lanʃare, ʎənsa, lanci:, lanʃa:, ɛ:run ka:re, arankar, arronʃare, ko:nsuere, kontar, kontare, konta:, ɛ:numera:re, enumɛɤe, enumerar, enumerare, enumera, numara, ekspɔ:nere, spune, kanta:re, kantar, kant are, kənta, canta:, kinta, inglakiare, ingetsa, inkendere, enθender, intʃendjare, ise nɔɔrar, ənsendrə, intʃindʒe, omne:s, tantus, tanto, tant, tanc, alguno, alkuno, magn um, grandem, grande, grande, gran, grant, longum, longo, lungo, lunk, lung, anʃo, pe:sant, pesante, pezant, pittinus, pittino, pekenu, pikenu, putsin, angustus, angos to, angusto, minu:tus, məny, menudo, minuto, mənut, minu, minu:t, mərunt, u:num, uno, un, unu, k^wi:nk^we, θinko, ʃintʃ, kjen, ʃine, k^wando:, kwando, kwan, kwand, k want, kind, no:n, nɔ, no, non, nəw, nu, nek, ni, ne, nəj, nəj, nə</p>
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Appendix 1 - Prior Segment Frequencies

14	s	<p>no:s, nos, nojs, wo:s, bos, vojs, bus, vos, usted, vose, vose, voste, sponsa, esposa, spɔz a, ispoza, əspɔzə, marit:us, sponsus, esposo, spɔzo, ispozu, əspɔs, spo:s, sokius, sɔfɔ, sots, piskem, pɛs, pwasɔ̃, useɹ, passerem, passero, pasɛru, pasəre, fru:ktus, na:sus, n aso, na:so, nas, na:s, nas, naris, na:ris, so:lem, sol, sole, sɔw, sɔt, sɔl, sɔlɔ, sɔare, solic ulus, sɔlej, soreli, ste:lla, estreja, stella, istrelɛ, əstɛl, stɔ:l, stɛle, stɛa, sa:lem, sɛl, sal, sale, saw, se, sa:l, sare, tene:bra:s, tinjeblas, tənɛbrəs, fumasɛ, sjɛl, sɛw, sɛl, si:ɤ, mor sika:re, moskar, morsikare, musəga, musəgar, musəya, murseka, su:gere, syse, suga ɤ, sugar, sysi, suɟɛ, konspuere, kɔ̃spye, kuspiɤ, eskupiɹ, əskupi, skujpa, sputere, es putar, sputare, spuda:, ski:re, sapere, savwaɤ, saber, sabɛɤ, səber, səβɛ, savø:r, save:, kogno:skere, kopeseɤ, kupiser, koposi, pe:nsa:re, pāse, pensar, pensare, pēsɤ, pēsar, pənsa, pēse, peɤsa:, pəsa, ɔksiɤ, uksi, fase, kasɤ, kəsar, kəsa, ʃɛsi:, pulsa:re, puse, p ulsare, pulsa:, pulsa, rasar, rasare, rasa:, raskar, rəska, kosaɹ, kusar, ekstendere, ek stender, estəndere, istēdeɤ, əstendrə, ekstinde, jesi, sede:re, swaɤ, ser, sedere, seɤ, s edenta:re, sentar, sɛtar, senta:, sta:re, estar, stare, əsta, ɛs, sta:, sta, ose, aɹsa, aɹsar, ə lsa, hɔ:si:, turser, tɔrsə, segurar, siguraɤ, siyurar, eksprimere, ekspremir, spremerɛ, əspremə, esprimi, skreme, serrere, serar, seɤa, sərar, səra, serare, seɤe, serrare, siɤa r, sere, stringere, estreɹiɹ, strindɟere, əstreɹə, stringe, strɛngi:, strindɟɛ, frisar, frəsa, ekstergere, estarsir, əstərzi, eksu:ka:re, esɟije, suwe, suja:, uska, puse, pu:si:, pulsa:, lāse, lēsa, lēsar, ɹənsa, ko:nsuere, koser, ɔqase, ekspo:nere, sporre, spune, ekskurre re, eskurir, skorrere, əskorə, skori:, skurdɟɛ, glase, gləsa, ɛsədje, ɹsendɟiar, ɹsədjar, ə nsendrə, ustula:re, ustolare, ustura, omne:s, to:tus, multus, tantus, paɤkus, alius, gr awis, lurdus, pe:sant, pesaɔ̃, pesante, pittitus, pittinus, pitulus, kurtus, brewis, an gustus, angosto, angusto, ingust, striktus, estreɹfɔ, stretto, istrejtɹ, əstret, stɤø:, stɹɛt, strimt, minut:us, de:lika:tus, subti:lem, sutil, sottile, suɹfiw, suptil, su:ti, suti:l, subts ire, duo:s, dos, dojs, duas, duəs, tre:s, tres, trəs, sɛk, siku, siɹk, isi, kʷis, si:k</p>
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Appendix 1 - Prior Segment Frequencies

15	u	nu, vu, bus, tu, usted, mulierem, muxer, мулех, мулех, муле, муі:р, mujere, epuz, mulier, muxer, мулех, мулех, муле, муі:р, mujere, mari:tus, maridu, mēriðu, spon sus, epu, ispozu, iſpozu, sokius, awikellum, utſello, useł, utſjel, paseru, fruktus, f ruto, frutto, frute, frujt, frut, frukt, nāsus, soliculus, luna, luə, lunə, lune, lunə, p luwia, jubja, juvə, plužə, lakum, lagu, layu, nebula, negurə, fumata, fuma:ta, fuma sə, fumate, kajlum, wentum, vētu, fokum, fogu, foɣu, annum, ɐnu, nume, kumer, manduka:re, mandukar, murðer, musəga, musəgar, musəɣa, murseka, sugaɣ, sugar, cuca:, suðe, konspuere, kuspiɣ, kuspiɾ, eskupiɾ, əskupi, skuɣpa, sputere, esputar, sp utare, spuda:, kupiser, kunɛʃə, kunqaste, kuzitaɣ, kuzitar, kujda, kuðgeta, durmir, durmi, durmi:, muɣiɣ, muɣer, muri, muri:, muri, tuwe, utſidere, uksi, utſide, pugn are, pupar, puppare, pupa, battuere, pulsa:re, puse, puxar, pulsare, puʃaɣ, puʃar, pu lsa:, pulsa, kusar, bula, zbura, lua, tuɣne, turnar, turna, turna, turser, tumbat, tum ba, tume, segurar, siguraɣ, siɣurar, enxugar, affugare, ɛʃugar, ɛʃuɣar, əʃuga, suwe, suja:, uska, puse, pulsa:, ɛ:runka:re, aruɣka, ko:nsuere, kudɣ, kuʃfire, kuzer, kuzi, k uzi, komputa:re, kumta, ɛ:numera:re, enumeɣe, enumerar, enumerare, enumera, n umara, spune, ludir, xugar, zuɣar, zuga, ɟuwe, ɟuja:, zuka, flu:ktua:re, flugtwar, f luttuare, flutuax, flutuar, fluktua, fluctua, fluita:re, fluitare, fluere, fluir, fluire, flui, kule, kuar, kuła, ekskurrere, eskurir, iſkurer, skurðe, kurrere, kuɣiɣ, kuɣer, kurðe, bruʃfare, bruza:, ustula:re, ustolare, ustura, to:tus, tu, tutto, todə, toðu, dut, multus, mu, muʃo, mūjtu, mult, tantus, tētu, tētu, alguno, alkuno, əlgu, paɣkus, p owku, owtru, alius, magnum, longum, lungu, lōgu, lunk, lung, largum, laɣgu, largu, la:tum, latu, amplum, ɛʃu, lurdu, luɣ, pezadu, pizaðu, pittitus, pittinus, pekenu, p ikenu, putsin, pitulus, piʃul, kurtus, kuɣ, kuɣtu, kurtu, kurt, kurt, angustus, angus to, iɣgust, striktus, istrejtə, iſtrejtə, minu:tus, menudo, minuto, miudu, miuðu, mə nut, minu, mərunt, de:lika:tus, dewgadu, deɣaðu, subti:lem, sutil, suʃiw, subtil, su ti:l, subtsire, u:num, uno, un, uɣ, unu, duo:s, duaj, due, duas, duəs, duɛʃ, kwatru, pat ru, siku, ekkumhi:k, kwēdu, komu, kum, nu
16	ʃ	nəʃ, vof, iſpozə, iſpozu, peʃʃe, peʃʃi, peʃʃi, pef, peʃte, nəriʃ, iſtrele, juvə, trevəʃ, kuʃ piɾ, ʃti, konoffere, kunɛʃə, kunqaste, ʃase, puʃaɣ, puʃar, ɣaʃkaɣ, ɣəʃkar, ʃəmine, m aɣʃe, iſtēder, ʃedə, iſtar, alʃa:, ʃwaɣ, iſprəmeɣ, iſprəmer, əʃtriʒir, əʃtriʒir, iſfriɣar, iſfriɣar, ʃterðe, affugare, ɛʃugar, ɛʃuɣar, əʃuga, ʃāte, iſkoɣeɣ, iſkurer, ɛʃu, iſtrejtə, doʃʃ, duɛʃ, tref, ʃi
17	oj	noj, voj, froj, dojs, doʃʃ, doj
18	v	vu, vo:i, vɔjs, vof, vos, vo:, voj, vose, vɔse, veste, avi, avi, juvə, nəvwə, trevəʃ, vā, v ento, vētu, vē, vint, vint, bevi, savwaɣ, savø:r, save:, vivɣ, vivere, viveɣ, viver, vivi, via, naviga:re, navigare, naviɣaɣ, nəviɣar, naviga:, naviga, vole, volare, voaɣ, vwar, vɔle, zvolare, zvolar, vənɣ, venire, viɣ, vir, vini, vini:, veni, leva:re, ləve, levare, le vaɣ, livar, leva:, viɣe, virare, virar, lave, lavare, ləvar, lava:, ɣəv, ɣreɣe, ɣavi, ɣrav i, ɣrav, ɣrevi, brəve, brəvi, brəvi, vɛɣ, verde, verdi, vɛrt, vɛɣ, vɛrt, verde, vi
19	b	bos, bus, embra, fembra, ombre, abe, jubja, nebula, njebla, nebbja, tene:braj, tē:nebre, tene:bra:s, tenəbɣ, tinjeblas, tē:nebre, tənəbrəs, bjento, ben, nombre, limbə, bibere, bwəɣ, beber, bere, bebeɣ, biʃer, bəwɾə, bə:ɣ, bevi, bəa, saber, sabəɣ, səber, bibir, biw rə, battuere, batɣ, batir, battere, bateɣ, bəter, batrə, bate, bati, nabegar, nəbəga, bol ar, bula, zbura, ambita:re, benir, bəni, jebar, ləba, birar, bira, tōbe, tumbat, tōbaɣ, t ōbar, tumba, bɣyle, bruʃfare, bku:le, bruza:, flābe, ɣrabe, brewis, bɣef, brebe, brəve, brəvi, brəvi, brew, bɣef, subti:lem, subtsire, berde, ibi:

Appendix 1 - Prior Segment Frequencies

20	t	tu:, ty, tu, usted, voste, infan ^t em, infan ^t e, fan ^t e, i ^f ēti, mari:tus, marito, marit, mar i:t, mērit, mā:trem, pe ^f te, ut ^f ello, fru:ktus, fruto, frutto, frutē, fru ^j t, frut, frukt, st eilla, etwal, estreja, stella, istrele, i ^f trele, əstel, stō:l, stele, stēa, la:t, terra, tēx, tjera, terra, tēx, tēx, tēx, tēx, tjere, tene:braj, tē:nebre, tene:bra:s, tenēx, tinjeblas, tē:n ebre, trēvēf, tēnebrās, fu:ma:ta, fumata, fuma:ta, fumate, wentum, bjento, vento, v ētu, vint, vint, sputere, esputar, sputare, fti, kōnētē, kunqas ^t e, ko:gita:re, koḡitare, kuzita ^x , kuzitar, kuḡeta, time:re, temer, temere, temēx, timer, temə, temi, teme, tr emere, tremar, tremare, tremēx, trimer, trima:, tu:tari, t ^q e, tuwe, mactare, mate, m atar, mata ^x , mētar, mēta, ut ^f idere, battuere, bat ^x , batir, battere, bate ^x , bēter, batrē, bate, bati, kaptia:re, kat ^f are, nata:re, nwotare, ambita:re, ekstendere, etādx, ekste nder, estendere, istēdex, i ^f tēder, əstendrə, ekstinde, sedenta:re, sentar, sētar, senta:, sta:re, et ^x , estar, stare, i ^f tar, əsta, sta:, sta, altia:re, alt ^f a:, torna:re, tu ^x ne, tornar, to rnare, to ^x na ^x , turnar, turna, tu ^r ne, torna:, turna, tork ^w :ere, tōdx, torθer, tō ^r fere, turser, tōrsə, tōar ^f e, tōbe, tumar, tōba ^x , tōbar, tumba, tume, tene:re, tēnīx, tener, t enere, tēx, ter, tēni, tini, tinji, appektora:re, apretar, ēpirtar, stringere, et ^x ēdx, estr enir, strind ^g ere, ə ^f trīzir, ə ^f trīzir, əstrejə, stringe, strēngi:, strind ^g e, friktare, f ^x ote, frotar, frettare, tergere, tēḡere, ekstergere, estarsir, əstərzi, fterḡe, tira:re, ti ^x e, ti rar, tirare, tira, tire, tira:, trahere, tēx, trarre, traze, trēzer, trēwrə, traj, traḡe, jak ta:re, zəte, ḡettare, zejtar, xita, ḡete, apta:re, atar, etar, komputa:re, kōte, kontar, k ontare, kōtar, kumta, kōte, konta:, kanta:re, fāte, kantar, kantare, kētar, kēnta, fāt e, cantar, kinta, flu:ktua:re, flykt ^q e, flugtwar, fluttuare, flutu ^x , flutuar, fluktua, fluctua, fluita:re, fluitare, g ^j at ^f jare, ustula:re, ustolare, ustura, to:tus, tu, todo, tut to, todū, tot, tō, dut, multus, molto, mū ^j tu, mult, tantus, tanto, tētu, tētu, tant, tanc, alter, ot ^x , otro, altro, owtru, altrə, ōt, altri, alt, grant, la:tum, lato, latu, lat, p esant, pesante, pəzat, pezant, pittitus, pēti, pētit, piti, pittinus, pit ^f ino, pitulus, ku rtus, korto, korto, ku ^x tu, kurtu, kurt, kurt, angustus, angosto, angusto, iḡust, stri ktus, et ^x wa, estre ^f o, stretto, istrejtū, i ^f trejtū, əstrēt, st ^x ō:, strēt, strimt, minu:tus, m inuto, mēnut, minu:t, mērunt, de:lika:tus, delikato, dēlikat, subtilēm, sutil, sottile, suptil, su:ti, suti:l, vērt, vērt, tre:s, tēwə, tres, tre, tref, trēs, trō:, tre:, trej, k ^w attwor, kat ^x , kwatro, kwattro, kwatru, kwatrə, kwat, kwatri, patru, kwant, f ^q emu:t, et
21	u:	tu:, u:hē, fru:ktus, lu:na, plu: ^x , fu:ma:ta, fu:k, su:gere, tu:tari, tu ^r ne, eksu:ka:re, pu: si:, lu:dere, flu:ktua:re, b ^x u:le, ku: ^x , minu:tus, minu:t, du:ze:, su:ti, u:num, f ^q emu:t
22	y	ty, fry, lyn, njoly, fyne, syse, sysi:, kōspyē, gyra:re, flykt ^q e, flye, b ^x yle, mēny
23	d	usted, domina, dam, do ⁿ a, dōnna, done, dōnə, dōem, dōne, dōamnə, maridu, mā:dre, p ^j odḡa, komedere, manduka:re, mandukar, morde:re, mōdx, mōrdere, mōrdēx, m wardi, spuda:, k ^q ide, kwidar, kujda, k ^x ēdx, dormi:re, dō ^x mīx, dormir, dormire, dō ^x mīx, durmir, durmi, dwa ^x mi, durmi:, dormi, okki:dere, ut ^f idere, u ^f ide, ra:dere, r adere, rada:, rade, nadar, nada ^x , nāda, nada:, andar, andare, ēda ^x , ēdar, ekstendere, etādx, ekstender, estendere, istēdex, i ^f tēder, əstendrə, ekstinde, sede:re, sedere, fē dēa, sedenta:re, tōdx, kadere, kadere, f ^j jade, kādēa, ep ^x ēdx, et ^x ēdx, limpida:re, kud ^x , di:kere, di ^x , deθir, dire, dizer, di, di: ^x , di:, lu:dere, ludir, arde:re, a ^x dx, arder, arde re, a ^x dēx, ērder, arde, inkendere, ēsādje, enθender, in ^f ēndjare, i ^s ēdjār, ənsendrə, i n ^f indze, todo, todū, dut, grandem, grande, grande, grēdi, lurdus, lerdo, lordo, peza du, menudo, miudu, de:lika:tus, du:ze:, delyaḡo, delikato, dewgaḡu, dē ^l yaḡu, dēlika t, wiridem, berde, verde, verdi, verde, duo:s, dō, dos, dojs, do ^j f, dō:, doj, duaj, due, d owə, duas, duēs, duēf, k ^w id, k ^w ando:, kwando, kwēdu, kwand, kind, k ^w o:modo

Appendix 1 - Prior Segment Frequencies

24	f	fe:mina, fam, femmina, femev, femjv, fembra, fœm, fəmine, femeje, infantem, ãfã, infante, fante, ifẽfi, ifẽti, efã, fruktus, fɤqi, fruto, frutto, frutv, frujt, fry, frut, frukt, flo:rem, flœv, flor, fjo:re, flov, flv, flœ:v, flo:r, flqare, fu:ma:ta, fyme, fumata, fuma:ta, fumasv, fumate, fokum, fœ, fwego, fwəko, fogu, foyu, fək, fœ, fu:k, fok, frika:re, fɤje, fregar, fregare, frəga, froj, frea, freka, iffrigar, iffriyar, frikta:re, fɤte, frotar, frettare, frisar, frəsa, flu:ktua:re, flyktv, flugtwar, fluttuare, flutuav, flutuar, fluktua, fluctua, fluita:re, fluitare, fluere, flye, fluir, fluire, flwiv, flwir, flui, flamma:re, flābe, flamear, fjammar, flāma, flagra:re, flagv, flagrar, flagrar e, flagvav, flagrar, bɤef, bɤef
25	e:	fe:mina, ste:lla, tene:braj, tene:bra:s, morde:re, save:, pe:nsa:re, time:re, jake:re, dʒaf e:re, sede:re, tork ^w :re, tene:re, e:runka:re, e:numera:re, arde:re, omne:s, pe:sant, de:l ika:tus, du:ze:, tre:s, tre:
26	m	fe:mina, fam, embra, femmina, femev, femjv, fembra, fœm, fəmine, femeje, mulier em, muxer, moʎle, muʎev, muʎer, muʎe, muir, mujere, domina, dam, dœm, dɔam nə, hominem, ɔm, ombre, omẽj, ɔmẽj, ɔmə, ɔm, om, homo:, wəmo, infantem, mulier, muxer, moʎle, muʎev, muʎer, muʎe, muir, mujere, maritus, mavi, mariðo, marito, maridu, məriðu, marit, marit, mərīt, ma:trem, mev, maðre, ma:dre, mẽj, marə, mev, məri, piskem, awem, awikellum, passerem, flo:rem, so:lem, lakum, mare, mev, mar, mav, mar, mev, ma:r, sa:lem, ka:liginem, fu:ma:ta, fyme, fumata, fuma:ta, fumasv, fumate, kajlum, wentum, fokum, annum, no:men, no:me, nomi, nomi, nœm, nume, no:minem, nombre, limbə, komedere, komer, kome, kumer, manduka:re, mǎze, ma ndukas, mandʒare, mẽza, mẽzar, mərza, mari:, maɲja:, minka, morde:re, moɤv, moɤer, mɔrdere, moɤev, mɔɤer, mwardi, morsika:re, moskar, morsikare, musəga, musəgar, musəya, murseka, time:re, temer, temere, temev, timer, temə, temi, teme, tremere, tremar, tremare, tremev, trimer, trima:, dormi:re, dœmiv, dormir, dormire, dœmiv, durmir, durmi, dwaɤmi, durmi:, dormi, muv, morir, morire, moev, muv er, muri, məri, muri:, muri, macta:re, mate, matar, mata, mətər, mətə, mafja:, fəmine, kaminar, kamminare, kəmirav, kəmirar, kəmina, fimine, fjamina, mavse, m a:rʃi:, mergere, mərɤere, mərɤe, ambita:re, tumbar, tumba, tume, esprimere, eks premir, spremere, isprəmev, isprəmer, əspremə, esprimi, skreme, limpida:re, limpjar, impingere, impinɤere, əmpɛrə, impinɤe, komputa:re, kumta, e:numera:re, enume v, enumerar, enumerare, enumera, numara, krema:re, kəame, kemar, kremare, k ɛjmare, kejmav, krəma, flamma:re, flamear, fjammar, flāma, omne:s, multus, mu, mufo, molto, mũjtu, mol, molc, mult, magnum, mapo, mapno, grandem, majjorem, mare, longum, largum, la:tum, amplum, ampjo, amplə, strimt, minutus, mənny, me nudo, minuto, miudu, miuðu, mənūt, minu, minut, mərunt, subtilē, wiridem, u: num, ekkumhi:k, k ^w em, k ^w o:modo, kœm, komo, kome, komu, kœmẽ, fɛmu:t, kum

Appendix 1 - Prior Segment Frequencies

27	a	<p>fe:mina, fam, embra, femmina, fembra, domina, dam, doṇa, dōnna, infantem, inf ante, fante, sponsa, esposa, spōza, ispoza, mari:tus, maṛi, mariḏo, marito, maridu, marit, marit, maḏre, marə, pwasḏ, awem, abe, avi, avi, aw, awikellum, wazo, passe rem, paxaro, passero, paseru, pasere, naso, nas, nas, nariḡ, nariḡe, naris, luna, luna, ste:lla, etwal, estreja, stella, ak^wa, aywa, akkwa, agwə, age, apə, pluwia, jubja, pjo dḡa, lakum, lak, lago, lago, lagu, layu, Ḳak, mare, mar, maḡ, mar, sal, sale, saw, sar e, terra, tjera, terra, tsarə, kalina, kalidḡine, kalizēḡ, nebula, njebla, nebbja, tinjeblas, fu:ma:ta, fumata, fuma:ta, fumasə, fumate, kajkia, annum, aṇo, anno, aṇ, aṇ, an, li ng^wa, lengwa, lingwa, manduka:re, mandukaṛ, mandḡare, mēḡzaḡ, mēḡzaṛ, mənḡza, m aṇi: maṇja: minka, mwardi, moskaṛ, morsikare, musəga, musəgar, musəḡa, murse ka, sugaḡ, sugar, skuḡpa, esputar, sputare, sapere, savwaḡ, saber, sabəḡ, savə:ṛ, save:, kwidar, koḡitare, kuzitaḡ, kuzitaṛ, kujda, kuḡeta, pensar, pensare, pēsəḡ, pēsəṛ, p ənsa, pəsa, tremare, dwaḡmi, via, nəga, neka, anegar, annegare, macta:re, mate, ma tar, mataḡ, mētar, mēta, maḡja: puṇar, puṇṇare, puṇa, battuere, batḡ, batir, battere, bateḡ, batrə, bate, bati, kaptia:re, fase, kaḡar, katḡare, kasəḡ, kəsəṛ, kəsa, caḡa: pu xar, pulsare, puḡaḡ, puḡaṛ, pulsa, raer, radere, ḡaḡ, rawrə, rada: rade, rasar, rasare, ḡazaḡ, ḡeḡaṛ, rəza, rasa: raskaṛ, ḡaḡkaḡ, ḡeḡkaṛ, rəska, kosaḡ, kusaṛ, nata:re, nadaṛ, nwotare, nadaḡ, nēḡar, nēda, nada: naviga:re, naḡe, nabegar, navigare, naviḡaḡ, n eḡiḡaṛ, nəbəga, naviga: naviga, bolar, volare, voaḡ, vwar, bula, zvolare, zburā, kam inar, kamminare, kəmiṇaḡ, kəmiṇaṛ, kəmina, ḡjamina, maḡse, ambita:re, andar, a ndare, ēdaḡ, ēdaṛ, jake:re, jaḡer, ḡaḡe:re, zawrə, swaḡ, sentaṛ, sētaṛ, estar, stare, iḡt aṛ, əsta, sta, jebar, levare, levaḡ, liḡaṛ, Ḳəba, lua, altia:re, alḡar, altsare, aḡsa, aḡsar, ə lsa, altḡa: tornaṛ, tornare, toḡnaḡ, turnaṛ, turna, turna, xiraṛ, ḡirare, ziraṛ, zira, bi rar, virare, virar, bira, kadere, fwaḡ, kaer, kadere, kawrə, ḡjade, tumbaṛ, tōbaḡ, tōb aṛ, tumba, seguraṛ, siguraḡ, siḡuraṛ, serar, seḡa, səraṛ, səra, serare, ḡeraṛ, serrare, s iḡaṛ, appekto:re, apretaṛ, eḡirtaṛ, fregaṛ, fregare, frəga, frea, freka, iḡfrigaṛ, iḡfr iḡaṛ, frotar, frettare, frisaṛ, frəsa, lawa:re, lave, laḡaṛ, lavare, leḡaṛ, lava: la, estars iṛ, enxugaṛ, affugare, ēfugaṛ, ēfuyar, əfuga, uska, limpjaṛ, liḡaṛ, tiraṛ, tirare, ḡira, t ira, trahere, trarre, traze, traḡe, jakta:re, eḡaṛ, ḡettaṛ, zeḡtaṛ, xita, lankea:re, lanḡ aṛ, lanḡare, lēsa, lēsəṛ, Ḳənsa, lanci: lanḡa: arankaṛ, arronḡare, aruḡka, legaṛ, lega re, Ḳiḡa, lega, apta:re, atar, etar, kontar, kontare, kōtaṛ, kumta, enumerar, enumera re, enumera, numara, kanta:re, kantaṛ, kantare, kētaṛ, kənta, canta: kinta, xugaṛ, ḡokare, zogaḡ, zuḡaṛ, zuga, zuka, flugtwar, fluttuare, flutuəḡ, flutuəṛ, fluktua, fl uctua, fluitare, kolaṛ, kolare, koaḡ, kuaṛ, kuḡa, elar, ḡelare, zilaṛ, zəla, ḡale, glaki are, glase, gjaḡḡare, gləsa, glaḡa: inglakia:re, ingetsa, bruḡare, kḡame, kemaṛ, kre mare, kējmare, kejmaḡe, krəma, flamma:re, flameaṛ, fjammare, flama, arde:re, aḡd ḡ, arder, ardere, aḡdeḡ, arde, flagra:re, flagḡe, flagraṛ, flagrare, flagḡaḡ, flagraṛ, in ḡendḡare, iḡendḡaṛ, iḡēḡjaṛ, ustolare, ustura, tantus, tanto, tant, tanc, alguno, alku no, awḡū, aḡḡū, alter, altro, altrə, altri, alt, alius, aw, aḡ, magnum, maṇo, maṇṇo, g randem, grande, grande, gran, grant, mare, largum, laḡz, laḡyo, largo, laḡgu, largu, Ḳark, lark, larg, lato, latu, lat, amplum, anḡo, ampjo, amplə, grawis, ḡəv, grabe, ḡr avi, gravi, grav, pe:sant, pesaḏo, pesante, pezaḡu, piḡaḡu, pəzat, pezant, angustus, angosto, angusto, etḡwa, deḡaḡo, delikato, dewgaḡu, deḡaḡu, dəlikat, duas, k^watt wor, katḡ, kwatro, kwattro, kwatru, kwatrə, kwat, kwatri, patru, aki, la, aja, əḲa, a i, kwa, k^wando: kwando, kwan, kwand, kwant</p>
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Appendix 1 - Prior Segment Frequencies

28	r	embra, fembra, muxer, mu _l er, ombre, muxer, mu _l er, mariðo, maridu, mēriðu, mari t, maðre, marə, paxaro, pasəru, pasəre, fruto, frutə, frujt, flor, fjo:re, fləare, nariθ, naris, nərif, sɔare, estreja, istrele, iftrele, mar, trevef, tənebrəs, fjer, nombre, beber, bere, biβer, bəwrə, komer, kumer, mandukar, mandɟare, mēzar, morðer, murðer, mo skar, morsikare, sugar, kuspir, eskupir, esputar, sputare, saber, səber, konοθer, kup iser, kwidar, kuzitar, pensar, pensare, pēsar, temer, timer, tremes, tremek, trimer, d ormir, durmir, bibir, viver, biwrə, morir, muker, muri, anegar, matar, mētar, uttfide re, pupar, batir, bēter, batrə, kaθar, kəsar, puxar, pufar, raer, vøer, rawrə, rasar, vøz ar, raskar, vøfkar, kusar, nadar, nwotare, nēðar, nabegar, nēviyar, bolar, volare, v war, zvolare, zburə, kaminar, kamminare, kəminar, andar, ēdar, benir, venire, vir, ekstender, iftēder, əstendrə, jaθer, ɟafje:re, zəzer, zawrə, ser, sentar, sētar, estar, if tar, jebar, livar, alθar, ałsar, tornar, turnar, xirar, ɟirare, zirar, zira, birar, virare, v irar, bira, torθer, kaer, kadere, kəir, tumber, tōbar, tener, tenere, ter, segurar, sigur a, siyurar, ekspremir, əspremə, serar, sərar, θerar, siɣar, apretar, ɐpirtar, estrepir, əstrepi, fregar, frəga, iffrigar, iffriyar, frotar, frisar, frəsa, laβar, ləvar, estarsir, e nxugar, ēfugar, ēfuyar, limpjar, lipar, tinar, fira, tira, traze, trezer, trewrə, efar, zej tar, lanθar, lēsar, arankar, arunka, legar, atar, ɐtar, koser, kuzer, kontar, kōtar, en umerar, enumera, deθir, dizer, kantar, kētar, ludir, xugar, zuyar, flugtwar, flutuar, fluir, flwir, kolar, kuar, eskurir, ifkurer, skurɟe, korer, ku _l er, kurɟe, elar, zilar, k emar, kəjmare, flamear, arder, ɐrder, arde, flagrar, flagrar, enθender, isendɟiar, isēd jar, ənsendrə, otro, owtru, altrə, grande, grēɟi, grēdi, mare, larɣo, largu, ʎark, grabe, gravi, gravi, grew, grew, lerdo, korto, kurtu, kurt, brebe, brēvi, brēvi, brew, estrefo, istrejt, iftrejt, əstret, berde, verdi, vert, verde, tres, tref, kwatro, kwatru, kwatrə
29	v	femeə, femje, done, ifpoze, mēriðu, pasəru, frutə, nərif, luə, istrele, iftrele, agwə, f uvə, təkə, təkə, kəlizē, nēvwə, trevef, fumase, enu, ligwə, səber, mētar, bēter, kəsar, vøer, vøzar, vøfkar, nēðar, nēviyar, kəminar, kəminar, zəzek, zəzer, kəir, ɐpirtar, lə var, trezer, ɐtar, ɐrder, duəs, duəf, eki, ei
30	œ	fœm, dœm, flœk
31	ε	fəmine, efā, pəs, pəhō, uttfello, utfjel, əstəl, stele, mək, səl, terra, təkə, tərə, tjere, nēw wə, tenebək, trevef, sjel, fəlo, səw, səl, vento, lənge, bəwrə, səβe, kənətək, kunefə, fesi:, nēɟi:, mēɟere, estendere, etək, ɛs, spremere, sere, əstrepi, strengi:, tēɟere, təkək, tr ɛwrə, əmpɛrə, ɟete, intfendjare, greve, grevi, bəkəf, brēve, brēvi, brēvi, əstret, stret, d ɛɣaðu, vert, vək, vert, tres, kə, ɛ

Appendix 1 - Prior Segment Frequencies

32	1	<p>mulierem, mulier, awikellum, uttfello, utfjel, flo:rem, flœx, flor, flox, flɔ, flø:x, flo:r, flqare, so:lem, sol, sole, sɔl, sɔlɔ, solculus, sɔlej, soreli, lu:na, lyn, luna, luə, lɔn, lune, lunə, stella, etwal, stella, istrelə, ɪstrelə, əstəl, stɔ:l, stɛle, pluwia, plɔi, plu:zə, pl u:x, ploje, plɔaje, lakum, lak, lago, lago, lagu, layu, la:t, sa:lem, sɛl, sal, sale, sa:l, ka: li:ginem, kalina, kalidʒine, kalizēj, kɛlizēj, nebula, njɔly, njebla, newlə, tinjeblas, k ajlum, sjel, θjelo, ʃfelo, sɛl, ʃi:l, ling^wa, lāg, lɛŋgwa, lingwa, ligwə, lēu, lɛngɛ, limbə, pulsa:re, pulsare, pulsa:, pulsa, wola:re, vole, bolar, volare, bula, vɔle, zvolare, zvola:, leva:re, ləve, levare, levax, livar, leva:, lua, altia:re, alθar, altsare, əlsa, altfa:, lawa:r e, lave, laβar, lavare, lɛvar, lava:, la, limpida:re, limpjar, lɪpar, pulsa:, lankea:re, lāse, lanθar, lanʃare, lēsa, lēsar, lanci:, lanʃa:, ligare, lie, legar, legare, lɔji:, lea:, lega, lu: dere, ludic, flu:ktua:re, flyktɔe, flugtwar, fluttuare, flutuax, flutuar, fluktua, fluc tua, fluita:re, fluitare, fluere, flye, fluir, fluire, flwix, flwir, flui, ko:la:re, kule, ko lar, kolare, kɔle, gela:re, zɔle, elar, dʒelare, zɪlar, zɔla, dʒale, glakia:re, glase, glɛsa, g latfa:, inglakia:re, bɔyle, bɔu:le, flammare, flābe, flamear, flagra:re, flagxɛ, flagrar, flagrare, flagxax, flagrar, ustula:re, ustolare, multus, molto, mol, molc, mult, algu no, alkuno, əlgu, alter, altro, altrə, altri, alt, alius, longum, lɔ, longo, lungo, lōgu, lō, lunk, lung, largum, laxɜ, larɔo, largo, laxgu, largu, lark, larg, la:tum, le, lato, latu, l at, amplum, āpl, amplə, lurdus, lɔx, lerdo, lordo, pitulus, pikkolo, piʃul, de:lika:tus, delyaɔo, delikato, dɛlikat, subti:lem, sutil, sottile, suptil, suti:l, illa:k, la</p>
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Appendix 1 - Prior Segment Frequencies

33	r	mulierem, mui:r, mujere, mulier, mui:r, mujere, mari:tus, marito, mari:t, mærit, ma:trem, ma:dre, mōri, passerem, passero, fru:ktus, frutto, frut, frukt, flo:rem, flo:r, nari:fe, na:rīs, soreli, mare, mar, ma:r, sare, terra, tjera, tērra, tērā, tjere, tsarā, negurā, tene:braj, tē:nebre, tene:bra:s, tē:nebre, bibere, komedere, manduka:re, morde:re, mōrdere, mwardi, morsika:re, morsikare, musəgar, murseka, su:gere, konspuere, spute re, ski:re, sapere, kogno:skere, konoffere, ko:gita:re, koḡitare, pe:nsa:re, time:re, te mere, tremere, tremare, trima:, dormi:re, dormire, durmi, durmi:, dormi, wi:were, v ivere, morire, muri:, muri, neka:re, annegare, tu:tari, macta:re, okki:dere, pugna:re, puṇṇare, battuere, battere, kaptia:re, katṭfare, pulsa:re, pulsare, ra:dere, raer, radere, rawrā, rada:, rade, rasar, rasare, rāza, rasa:, raskar, raska, nata:re, naviga:re, navig are, wola:re, mergere, mērdḡere, merḡe, ambita:re, andare, weni:re, ekstendere, est ēndere, jake:re, ḡere, sede:re, sedere, sedenta:re, sta:re, stare, leva:re, levare, altia:re, altsare, torna:re, tornare, turna, tur:ne, torna:, turna, gyra:re, ḡirare, ḡira:, virare, tork ^w ere, tōrṭfere, turser, tōrsə, tōarṭfe, kadere, kawrā, tenere, esprimere, sprēme re, iṣprēmē, iṣprəmer, esprimi, skreme, serrere, serar, sēra, serare, θerar, serrare, appetkora:re, stringere, strindḡere, əṣtrīzīr, əṣtrīzīr, stringe, strēngi:, strindḡe, frika: re, fregare, froj, frea, freka, frikta:re, frettare, frisar, lawa:re, lavare, tergere, tērdḡ ere, ekstergere, əstərzi, ṣterḡe, eksu:ka:re, affugare, limpida:re, tira:re, tirare, tire, t ira:, trahere, trarre, traj, tradḡe, impingere, impindḡere, jakta:re, ḡettare, lankea:re, lanṭfare, e:runka:re, arankar, arronṭfare, liga:re, legare, apta:re, ko:nsuere, kuṭfire, komputa:re, kontare, e:numera:re, enumerare, numara, di:kere, dire, ekspō:nere, sp orre, kanta:re, kantare, lu:dere, joka:re, ḡokare, flu:ktua:re, fluttuare, fluita:re, flu itare, fluere, fluire, ko:la:re, kolare, ekskurrere, eskurir, skorrere, əskorā, skori:, ku rrere, korer, korrere, korā, kori, gela:re, ḡelare, glakia:re, gjatṭfare, inglakia:re, br uṭfare, bruzar, kremare, kremare, krēma, flamma:re, fjammare, arde:re, ardere, fla gra:re, flagrare, inkendere, inṭēndjare, ustula:re, ustolare, ustura, alter, altro, altri, grandem, grande, gran, grant, majjorem, largum, largo, lark, larg, grawis, grēve, gr av, grevi, lurdus, lordo, kurtus, korto, kurt, brewis, breve, striktus, stretto, strēt, st rimt, mārunt, subṭsire, wiridem, verde, vērt, tre:s, tre, trēs, trō:, tre:, trej, k ^w attwor, kwattro, kwatri, patru
34	x	muxer, muxer, pa:xa:ro, puxar, xīrar, enxugar, xita, xugar
35	λ	moλλe, muλeḡ, muλer, muλε, moλλe, muλeḡ, muλer, muλε, useλ, λunā, λak, λəba, λənsa, λiḡa, λoṇ, λark, əλa
36	в	muλeḡ, muλeḡ, maḡi, meḡ, fḡi, flōeḡ, floḡ, flō:ḡ, plu:ḡ, meḡ, maḡ, meḡ, teḡ, teḡe, te ḡe, te:ḡ, tenēbḡ, si:ḡ, bwak, bebeḡ, bō:ḡ, mēzav, moḡdḡ, moḡdeḡ, sugav, kuspiḡ, savw av, sabēḡ, kōnēḡ, kōneseḡ, kuzitaḡ, pēsav, temēḡ, kḡēdḡ, tremēḡ, dōḡmiḡ, dōḡmiḡ, dwavmi, vivḡ, viveḡ, muḡiḡ, moḡeḡ, muḡer, mataḡ, əksiḡ, batḡ, bateḡ, kasav, puḡav, vaēḡ, vveḡ, vaze, vazav, vazar, vafkav, vefkar, nadaḡ, navīḡav, voav, kēmiḡav, maḡ ṣe, ēdāḡ, vāniḡ, viḡ, etāḡ, istēdeḡ, zeziv, zēzeḡ, swav, seḡ, etḡ, levav, tuḡne, toḡnav, ziḡe, viḡe, tōḡdḡ, ṣwav, tōḡav, tāniḡ, teḡ, siḡurav, epḡēdḡ, iṣprēmēḡ, seḡa, seḡe, siḡar, etḡēdḡ, fḡeje, fḡote, tiḡe, tḡeḡ, kudḡ, enumeḡe, diḡ, di:ḡ, zogav, flutuaḡ, flwiḡ, koav, iḡkōeḡ, kuḡiḡ, kōeḡ, kuḡer, bḡyle, bḡu:le, kḡame, kejmaḡe, avḡ, avḡeḡ, flagḡe, fl agvav, oṭḡ, ḡvā, ḡvā, laḡz, laḡgu, ḡrav, luḡ, kuḡ, kuḡtu, ku:ḡ, bḡef, bḡef, etḡwa, stḡō:, veḡ, vev, tḡwā, katḡ
37	i:	mui:r, mui:r, mari:tus, mari:t, ka:li:ginem, si:ḡ, ṭi:l, maḡi:, sysi:, ski:re, dormi:re, du rmi:, wi:were, muri:, okki:dere, ṭeṣi:, neḡḡi:, ma:rṭfi:, weni:re, viḡi:, hō:si:, strēngi:, pu si:, lanci:, lōji:, di:kere, di:ḡ, di:, skori:, subti:lem, suti:l, k ^w i:nk ^w e, ekkumhi:k, ibi:, ki:, si:k

Appendix 1 - Prior Segment Frequencies

38	n	doɲa, niɲo, aɲo, aɲ, mənɜa, maɲi:, koɲesɛ, kuɲiser, koɲosi, puɲar, puɲɲare, puɲa, kɛmiɲaɛ, kɛmiɲar, viɲi:, estɛɲiɛ, ɛstɛɲə, ɛmpɛɲə, oɲɲi, maɲo, maɲɲo, pekeɲo
39	qa	dɔamɲə, flɔare, sɔare, plɔaje, kuɲɔafte, tɔartʃe, ɔɔase
40	h	hominem, homo:, pɛhɔ, u:hɛ:, kinɔh, hɔ:si:, trahere, ekkumhi:k
41	ẽj	omẽj, ɔmẽj, nenẽj, kalizẽj, kẽj, nẽj
42	õ	õ, nõ, kõspye, lõ, nõ
43	ã	ãfã, vã, ã, lãg, mãze, pãse, etãdɛ, lãse, ʃãte, flãbe, ẽsãdje, ãpl, pɛzã
44	ĩ	ĩfẽʃi, ĩfẽti, liɣwɛ, ɛʃtriɜir, ɛʃtriɜir, liɲar, ĩsendɜiar, ĩsɛdɜar, siɲu
45	ẽ	ĩfẽʃi, ĩfẽti, mẽɜaɛ, mẽɜar, ẽdaɛ, ẽdar, lẽsa, lẽsar, kẽtar, tẽtu, tẽtu, grẽɜɜi, grẽdi, ẽʃu, kwẽdu, nẽw
46	ʃ	ĩfẽʃi, sɔʃo, utʃello, utʃjel, nariʃe, ʃɛatʃə, ʃɛlo, ʃi:l, ʃer, utʃidere, utʃide, kattʃare, ʃɛsi:, catʃar, ʃimine, ʃjamina, ma:ɾʃi:, ɜatʃe:re, zəʃɛa, tɔɾʃere, tɔartʃe, ʃɛ:ɾ, ʃjade, ʃira, eʃar, lanʃare, lanʃar, arronʃare, kuʃire, ziʃe, ʃãte, ɟjatʃjare, glaʃa:, bruʃare, inʃɛndɜare, inʃindze, muʃo, anʃo, pitʃino, piʃul, estɾeʃo, suʃiw, ʃiɲkwe, ʃiɲk, ʃinʃ, ʃe, ʃemu:t
47	i	ĩfẽti, iʃpozɛ, iʃpozu, peʃʃi, avi, iʃtrele, vint, nomi, biʃɛr, minka, kuɲiser, timer, tri mer, naviɣaɛ, neviɣar, iʃtar, livar, siɟuraɛ, siɟurar, siɜar, ɛpiɾtar, strindɜe, iʃfriɟar, iʃfriɟar, impindɜe, kinta, ɜilar, ingetsa, inʃindze, grẽdi, gravi, pizaðu, pikenu, brevi, iɲɟust, iʃtreɟtu, strimt, verdi, ki, kind
48	ã	ɛfã, ã, ʃãte, ɟãã, ɟãã, kã
49	p	sponsa, epuz, esposa, spɔza, ispoza, iʃpozɛ, ɛspɔzə, sponsus, epu, esposo, spɔzo, ispo zu, iʃpozu, ɛspɔs, spɔ:s, piskem, peθ, peʃʃe, peʃʃi, peʃʃi, peʃ, pɛs, peʃte, pwasõ, pɛhɔ, passerem, paxaro, passero, pasɛru, pasɛre, apə, pluwia, plɔi, pɟodɜa, pluɜə, plu:ɛ, p loje, plɔaje, konspuere, kõspye, kuspiɛ, kuʃpiɛ, eskupiɛ, ɛskupi, skuɟpa, sputere, esp utar, sputare, spuda:, sapere, pe:nsa:re, pãse, pensar, pensare, pɛsaɛ, pɛsar, pɛnsa, p ẽse, peɲsa:, pɛsa, pugna:re, puɲar, puɲɲare, puɲa, kaptia:re, pulsa:re, puse, puxar, p ulsare, puʃaɛ, puʃar, pulsa:, pulsa, eksprimere, ɛpɛdɛ, ekspremiɛ, spremer, iʃprə meɛ, iʃpremer, ɛspremɔ, esprimi, appektora:re, apɾetar, ɛpiɾtar, limpida:re, limpjar, liɲar, puse, pu:si:, pulsa:, impingere, impindɜere, ɛmpɛɲə, impindɜe, apta:re, kompu ta:re, eksponere, sporre, spune, paɲkus, pø, poko, pɔko, powku, pɔk, pø, pɔ:k, ampl um, ãpl, ampjo, amplə, pe:sant, pɛzã, pesaðo, pesante, pezadu, pizaðu, pɛzat, pezant, pittitus, pəti, pətit, piti, pittinus, pekeɲo, pitʃino, pekenu, pikenu, putsin, pitulus, p ikkolo, piʃul, suptil, patru
50	z	epuz, spɔza, ispoza, iʃpozɛ, ɛspɔzə, spɔzo, ispozu, iʃpozu, wazo, ɱaze, ɱazar, ɱazar, rɛza, zvolare, zvola:, zbura, zeziɛ, zezeɛ, zezer, zəʃɛa, traze, trezer, kuzer, kuzi, kɔ:z, kuzi, dizer, ziʃe, bruza:, pɛzã, pezadu, pizaðu, pɛzat, pezant
51	ð	mariðu, meɾiðu, maðre, moɾðer, muɾðer, neðar, toðu, pesaðo, pizaðu, miuðu, deɣa ðo, deɣaðu

Appendix 1 - Prior Segment Frequencies

52	k	sokius, piskem, awikellum, fru:ktus, frukt, akkwa, lakum, lak, ʌak, ka:li:ginem, ka lina, kalidžine, kalizēj, kēlizēj, kajkia, kajlum, fokum, fwoko, fək, fu:k, fok, komed ere, komer, kome, kumer, manduka:re, mandukar, minka, morsika:re, moskar, mor sikare, murseka, konspuere, kōspyē, kuspiɤ, kuʃpiɤ, eskupiɤ, əskupi, skuɟpa, ski:re, kogno:skere, kōnetɤ, konoθer, konoffere, kōneseɤ, kupiser, kunɛʃə, kinɔh, koposi, kunɔafte, ko:gita:re, kɔide, kwidar, koɟitare, kuzitaɤ, kuzitar, kujda, kuɟeta, kɤē dɤ, neka:re, neka, okki:dere, ɔksiɤ, uksi, kaptia:re, kaθar, katʃare, kasax, kəsar, kəs a, raskar, ɤafkaɤ, ɤɛʃkar, rəska, kosaɭ, kusar, kaminar, kamminare, kēmijax, kēm iɟar, kəmina, ekstendere, ekstender, ekstinde, jake:re, kadere, kaer, kadere, kɤir, k awrə, kədə, eksprimere, ekspremiɤ, skreme, appekto:re, frika:re, freka, frikta:re, ekstergere, eksu:ka:re, uska, jakta:re, lankea:re, e:runka:re, arankar, aruɟka, ko:nsu ere, kudɤ, koser, kuʃfire, kuzer, kuzi, kō:z, kuzi, komputa:re, kōte, kontar, kontare, kōtar, kumta, kōte, konta:, di:kere, ekspō:nere, kanta:re, kantar, kantare, kētar, kən ta, kinta, joka:re, ɟokare, ɟuka, flu:ktua:re, flyktɥe, fluktua, ko:lare, kule, kolar, kolare, koax, kuar, kuɭa, kōle, ekskurrere, eskurir, skorrere, ifkoɤɤ, ifkurer, əsko rə, skori:, skurɟe, kurrere, kuɤiɤ, korer, korre, koɤɤ, kuɤer, korə, kori, kurɟe, g lakia:re, inglakia:re, kremare, kɤame, kemar, kremare, kɤjmare, keɟmare, krəma, i nkendere, okōē, alkuno, paɟkus, poko, pōko, powku, pək, pō:k, lunk, ʌark, lark, pek epo, pekenu, pikenu, pikkolo, kurtus, kuɤ, korto, korto, kuɤtu, kurtu, kurt, ku:ɤ, k urt, striktus, de:lika:tus, delikato, dəlikat, katɤ, kwatro, kwattro, kwatru, kwatrə, kwat, kwatri, sēk, θinko, ʃiɟkwe, siku, siɟk, ʃiɟk, ekkumhi:k, aki, kwi, ɤki, illa:k, k i, ki:, kwi, kjen, kēj, kēj, kwa, ke, ki, kɛ, kwɛ:, kă, kwando, kwēdu, kwan, kwand, k want, kind, kōm, komo, kome, komu, kōmē, kum, nek, si:k
53	ts	sots, tsarə, altsare, tsine, ingetsa, putsin, subtsire
54	a:	ma:trem, ma:dre, na:sus, na:so, na:s, na:rɪs, la:t, ma:r, sa:lem, sa:l, ka:li:ginem, tene:b ra:s, fu:ma:ta, fuma:ta, manduka:re, maɟɟar, morsika:re, cuca:, spuda:, ko:gita:re, pe: nsare, peɟsa:, trima:, neka:re, tu:tari, macta:re, maʃa:, pugna:re, kaptia:re, caʃa:, pu lsa:re, pulsa:, ra:dere, rada:, rasa:, nata:re, nada:, naviga:re, naviga:, wola:re, zvola:, ma:rʃi:, ambita:re, sedenta:re, senta:, stare, sta:, leva:re, leva:, altia:re, altʃa:, torna:r e, torna:, gyra:re, ɟira:, appekto:re, frika:re, frikta:re, lawa:re, lava:, eksu:ka:re, su ja:, limpida:re, tirare, tira:, pulsa:, jakta:re, lankea:re, lanʃa:, e:runka:re, liga:re, lea:, apta:re, komputa:re, konta:, e:numera:re, kanta:re, canta:, joka:re, ɟuja:, flu:ktua:re, fluita:re, ko:lare, gela:re, glakia:re, glatʃa:, inglakia:re, bruza:, kremare, flamma:re, flagra:re, ustula:re, la:tum, de:lika:tus, illa:k
55	ēj	mēj, kēlizēj, kēj, nēj
56	r	mɛr, fry, savø:r, mōri, ma:rʃiɤ, ʃɛ:r, sərar, sere, ifkurer
57	ɒ	mōri
58	θ	peθ, nariθ, θjelo, konoθer, kaθar, jaθer, alθar, torθer, θerar, lanθar, deθir, enθender, θinko
59	ej	peɟi, zeɟtar, keɟmare, istreɟtu, treɟ
60	ɤj	peɟi, keɟmare, iftreɟtu
61	ō	pwasō, pēhō, nō, tōbe, tōbax, tōbar, kōte, kōtar, kōte, pō, ōt, lōgu, lō, ō
62	ɛ:	u:hɛ:, ɛ:w, tɛ:ɤ, tɛ:nebre, tɛ:nebre, ʃɛ:r, kwɛ:
63	ɥ	fɤɥi, plɥi, kɔide, tɥe, esɥije, flyktɥe
64	ø:	flø:ɤ, stø:l, fø:, bø:ɤ, savø:r, kō:z, stɤø:, dø:, trø:
65	ɭ	sɔɭ, aɭsa, aɭsar, kuɭa, ʃɭama, aɭgū, aɭ, deɭɤaɟu
66	c	soliculus, cuca:, macta:re, caʃa:, lanci:, ɔqase, canta:, fluctua, molc, tanc
67	ɛj	sōlej, fɤɛje

Appendix 1 - Prior Segment Frequencies

68	ø	løn, fø, pø, dø
69	ɛa	stɛa, tʃɛatʃə, bɛa, zəʃɛa, ʃedɛa, kədɛa
70	k ^w	ak ^w a, tork ^w ere, k ^w attwor, k ^w i:nk ^w e, k ^w is, k ^w em, k ^w id, k ^w ando:, k ^w o:modo
71	ʏ	aʏwa, aʏwə, laʏu, foʏu, musəʏa, naviʏaɤ, nəviʏaɤ, siʏuraɤ, iʃfriʏaɤ, ɛʃuʏaɤ, ʎiʏa, zuʏaɤ, laʏo, delyaɔo, dɛʎaɔu
72	aj	aʏwə, tene:braj, kajkia, kajlum, nwaje, traj, majjorem, duaj
73	g	age, lago, lɛngɛ, pugna:re, naviga:re, naviga:, mergere, gyra:re, stringere, stringe, st rɛngi:, fregare, impingere, lega, xugar, glatʃa:, ingetsa, flagɤaɤ, alguno, magnum, g randem, gran, gɤã, grant, longo, lung, largum, larg, grav, grevi, grew, iŋgust
74	ẽ	vẽtu, vẽ, pẽsaɤ, pẽsaɤ, kɛẽdɤ, istẽdɤ, iʃtẽder, sɛtar, ɛʃugar, ɛʃuʏaɤ, iʃɛdjaɤ, sɛk, nẽ
75	ŋ	aŋ, nŋ, lɛŋgwa, maŋʃa:, peŋsa:, aɤuŋka, ʎoŋ, iŋgust, uŋ, tʃiŋkwe, siŋk, tʃiŋk
76	g ^w	ling ^w a
77	ẽu	lẽu
78	a	bwaɤ, ɤaze, tɤwa
79	β	biβer, səβɛ, laβaɤ
80	ʃ	maŋʃa:
81	ẽ	pẽse, epɛẽdɤ, etɛẽdɤ, ɛsɔdʒe, kɔmẽ
82	tʃ	matʃa:, tʃine
83	ɫ	kosaɫ
84	ɔ:	hɔ:si:
85	ũ	mũjtu, awgũ, aɫgũ, ũ
86	j	mũjtu
87	œ	okœ, œ
88	aʊ	paʊkus
89	ẽw	nẽw

Latin

Cognate	IPA	Sounds
I	-ego:	ay-g-O
We	no:-s	n-O-s
YouPlural	wo:-s	w-O-s
YouSingular	tu:	t-U
Woman	fe:-mi-n-a	f-ai-m-e-n-ah
Woman-Mulier	mulierem	m-u-l-e-ay-r-ay-m
Woman-Domina	domina	d-oh-m-e-n-ah
ManHumanBeing	homi-nem	h-oh-m-e-n-ay-m
ManHumanBeing-Homo	-homo:	h-oh-m-O
Child	infantem	e-n-f-ah-n-t-ay-m
Wife	-sponsa	s-p-oh-n-s-ah
Wife-Mulier	mulier-	m-u-l-e-ay-r
Husband	mari:tus	m-ah-r-E-t-u-s
Husband-Sponsus	-sponsus	s-p-oh-n-s-u-s
Husband-Socius	sokius	s-oh-k-e-u-s
Mother	ma:trem	m-A-t-r-ay-m
Fish-Piskem	piskem	p-e-s-k-ay-m

Appendix 1 - Prior Segment Frequencies

Bird-Avem	awem	ah-w-ay-m
Bird-Avicellum	-awi-k-ellum	ah-w-e-k-ay-l-l-u-m
Bird-Passerem	passerem	p-ah-s-s-ay-r-ay-m
Fruit	fru:-ktus	f-r-U-k-t-u-s
Flower	flo:rem	f-l-O-r-ay-m
Nose	na:sus	n-A-s-u-s
Sun	so:lem	s-O-l-ay-m
Sun-Soliculus	soliculus	s-oh-l-e-tya-u-l-u-s
Moon	lu:na	l-U-n-ah
Star	-st-e:lla	s-t-ai-l-l-ah
Water	a-k ^w -a	ah-kw-ah
Rain	plu-wia	p-l-u-w-e-ah
Lake	lakum	l-ah-k-u-m
Sea	mare	m-ah-r-ay
Salt	'sa:lem	s-A-l-ay-m
Earth	t-erra	t-ay-r-r-ah
Fog	ka:li:ginem	k-A-l-E-g-e-n-ay-m
Fog-Nebula	n-e-bula	n-ay-b-u-l-ah
Fog-Tenebrae	tene:braj	t-ay-n-ai-b-r-aj_diphthong
Fog-Tenebras	t-en-e:bra:s	t-ay-n-ai-b-r-A-s
Fog-Fumata	fu:ma:ta	f-U-m-A-t-ah
Fog-Caecia	kajkia	k-aj_diphthong-k-e-ah
Sky	'k-ajlum	k-aj_diphthong-l-u-m
Wind	w-entum	w-ay-n-t-u-m
Fire-Focus	f-okum	f-oh-k-u-m
Year	annum	ah-n-n-u-m
Name-Nomen	no:men	n-O-m-ay-n
Name-Nominem	no:min-em	n-O-m-e-n-ay-m
Tongue	ling ^w -a	l-e-n-gw-ah
ToDrink	'bib-ere	b-e-b-ay-r-ay
ToEat	komedere	k-oh-m-ay-d-ay-r-ay
ToEat-Manducare	manduka:re	m-ah-n-d-u-k-A-r-ay
ToBite	m-orde:re	m-oh-r-d-ai-r-ay
ToBite-Morsicare	morsika:re	m-oh-r-s-e-k-A-r-ay
ToSuck	su:gere	s-U-g-ay-r-ay
ToSpit	konspuere	k-oh-n-s-p-u-ay-r-ay
ToSpit-Sputare	-sputere	s-p-u-t-ay-r-ay
ToKnow	ski:re	s-k-E-r-ay
ToKnow-Sapere	sap-ere	s-ah-p-ay-r-ay
ToKnow-Cognoscere	kogno:skere	k-oh-g-n-O-s-k-ay-r-ay
ToThink	k-o:gita:re	k-O-g-e-t-A-r-ay
ToThink-Pensare	pe:nsa:re	p-ai-n-s-A-r-ay
ToFear	time:re	t-e-m-ai-r-ay
ToFear-Tremere	trem-ere	t-r-ay-m-ay-r-ay
ToSleep	d-ormi:re	d-oh-r-m-E-r-ay
ToLive	wi:were	w-E-w-ay-r-ay
ToKill	n-eka:re	n-ay-k-A-r-ay

Appendix 1 - Prior Segment Frequencies

ToKill-Tutari	tu:-ta:ri	t-U-t-A-r-e
ToKill-Mactare	macta:re	m-ah-tya-t-A-r-ay
ToKill-Occidere	okki:dere	oh-k-k-E-d-ay-r-ay
ToFight	pugna:re	p-u-j-n-A-r-ay
ToFight-Battuere	battuere	b-ah-t-t-u-ay-r-ay
ToHunt-Captiare	kaptia:re	k-ah-p-t-e-A-r-ay
ToHit	pulsa:re	p-u-l-s-A-r-ay
ToScratch	ra:dere	r-A-d-ay-r-ay
ToSwim	n-ata:re	n-ah-t-A-r-ay
ToSwim-Navigare	naviga:re	n-ah-v-e-j-A-r-ay
ToFly	wola:re	w-oh-l-A-r-ay
ToWalk-Mergere	mergere	m-ay-r-j-ay-r-ay
ToWalk-Ambitare	ambita:re	ah-m-b-e-t-A-r-ay
ToCome	weni:re	w-ay-n-E-r-ay
ToLieAsInABed	ekstendere	ay-k-s-t-ay-n-d-ay-r-ay
ToLieAsInABed-lacere	ja-ke:re	jg-ah-k-ai-r-ay
ToSit	s-e-de:re	s-ay-d-ai-r-ay
ToSit-Sedentare	sedenta:re	s-ay-d-ay-n-t-A-r-ay
ToStand	-sta:re	s-t-A-r-ay
ToStand-Levare	leva:re	l-ay-v-A-r-ay
ToStand-Altiare	-altia:re	ah-l-t-e-A-r-ay
ToTurnIntransitive	torna:re	t-oh-r-n-A-r-ay
ToTurnIntransitive-Gyrare	gyra:re	j-eeh-r-A-r-ay
ToTurnIntransitive-Torquere	tork ^w e:re	t-oh-r-kw-ai-r-ay
ToFall	k-adere	k-ah-d-ay-r-ay
ToHold	ten-e:re	t-ay-n-ai-r-ay
ToSqueeze	eksprim-ere	ay-k-s-p-r-e-m-ay-r-ay
ToSqueeze-Serrere	serrere	s-ay-r-r-ay-r-ay
ToSqueeze-Serare	se-rare	s-ay-r-ah-r-ay
ToSqueeze-Appetorare	appetora:re	ah-p-p-ay-k-t-oh-r-A-r-ay
ToSqueeze-Stringere	-stringere	s-t-r-e-n-j-ay-r-ay
ToRub	frika:re	f-r-e-k-A-r-ay
ToRub-Frictare	frikta:re	f-r-e-k-t-A-r-ay
ToWash	lawa:re	l-ah-w-A-r-ay
ToWipe	tergere	t-ay-r-g-ay-r-ay
ToWipe-Extergere	ekstergere	ay-k-s-t-ay-r-g-ay-r-ay
ToWipe-Exsucare	eks-u:k-a:re	ay-k-s-U-k-A-r-ay
ToWipe-Limpidare	limpida:re	l-e-m-p-e-d-A-r-ay
ToPull	tira:re	t-e-r-A-r-ay
ToPull-Pulsare	pulsa:re	p-u-l-s-A-r-ay
ToPull-Trahere	trahere	t-r-ah-h-ay-r-ay
ToPush	impingere	e-m-p-e-n-j-ay-r-ay
ToThrow	jakta:re	jg-ah-k-t-A-r-ay
ToThrow-Lanceare	lankea:re	l-ah-n-k-ay-A-r-ay
ToThrow-Eruncare	e:-runka:re	ai-r-u-n-k-A-r-ay
ToTie	liga:re	l-e-g-A-r-ay
ToTie-Aptare	apta:re	ah-p-t-A-r-ay

Appendix 1 - Prior Segment Frequencies

ToSew	ko:n-suere	k-O-n-s-u-ay-r-ay
ToCount	komputa:re	k-oh-m-p-u-t-A-r-ay
ToCount-Enumerare	e:numera:re	ai-n-u-m-ay-r-A-r-ay
ToSay	di:kere	d-E-k-ay-r-ay
ToSay-Exponere	ekspo:nere	ay-k-s-p-O-n-ay-r-ay
ToSing-AncestralClass	kanta:re	k-ah-n-t-A-r-ay
ToPlay-Ludere	lu:dere	l-U-d-ay-r-ay
ToPlay-Jiocare	jo-ka:re	jg-oh-k-A-r-ay
ToFloat	flu:ktua:re	f-l-U-k-t-u-A-r-ay
ToFloat-Fluitare	fluita:re	f-l-u-e-t-A-r-ay
ToFlow	fluere	f-l-u-ay-r-ay
ToFlow-Colare	ko:la:re	k-O-l-A-r-ay
ToFlow-Excurrere	ekskurrere	ay-k-s-k-u-r-r-ay-r-ay
ToFlow-Currere	kurrere	k-u-r-r-ay-r-ay
ToFreeze	gela:re	g-ay-l-A-r-ay
ToFreeze-Glaciare	gla-kia:re	g-l-ah-k-e-A-r-ay
ToFreeze-Inglaciare	inglakia:re	e-n-g-l-ah-k-e-A-r-ay
ToBurn-Cremare	krema:re	k-r-ay-m-A-r-ay
ToBurn-Flammare	flamma:re	f-l-ah-m-m-A-r-ay
ToBurn-Ardere	arde:re	ah-r-d-ai-r-ay
ToBurn-Flagrare	flagra:re	f-l-ah-g-r-A-r-ay
ToBurn-Incendere	inkend-ere	e-n-k-ay-n-d-ay-r-ay
ToBurn-AncestralClass8	ustula:re	u-s-t-u-l-A-r-ay
All	omne:s	oh-m-n-ai-s
All-Totus	to:-tus	t-O-t-u-s
Many	multus	m-u-l-t-u-s
Many-Tantus	tantus	t-ah-n-t-u-s
Few	paukus	p-au_diphthong-k-u-s
Other	alter-	ah-l-t-ay-r
Other-Alius	alius	ah-l-e-u-s
Big	magnum	m-ah-j-n-u-m
Big-Grandem	grandem	j-r-ah-n-d-ay-m
Big-Majjorem	majjorem	m-aj_diphthong-jg-oh-r-ay-m
Long-Longum	'lo-ngum	l-oh-n-g-u-m
Long-Largum	largum	l-ah-r-j-u-m
Wide	'la:tum	l-A-t-u-m
Wide-Amplum	amplum	ah-m-p-l-u-m
Heavy	grawis	g-r-ah-w-e-s
Heavy-Lurdus	lurdus	l-u-r-d-u-s
Heavy-Pesant	pe:sant-	p-ai-s-ah-n-t
Small	pittitus	p-e-t-t-e-t-u-s
Small-Pittinus	'pittinus	p-e-t-t-e-n-u-s
Small-Pitulus	pi-tulus	p-e-t-u-l-u-s
Short	kurtus	k-u-r-t-u-s
Short-Brevis	brewis	b-r-ay-w-e-s
Narrow	angustus	ah-n-g-u-s-t-u-s
Narrow-Strictus	-str-i-ktus	s-t-r-e-k-t-u-s

Appendix 1 - Prior Segment Frequencies

Thin	minu:ˌtus	m-e-n-U-t-u-s
Thin-Delicatus	deːlikaːtus	d-ai-l-e-k-A-t-u-s
Thin-Subtilis	subtiːlem	s-u-b-t-E-l-ay-m
Green	ˈwiridem	w-e-r-e-d-ay-m
One	ˈuːnum	U-n-u-m
Two-Duos	duoːs	d-u-O-s
Two-Duae	du-aj	d-u-aj_diphthong
Two-Duas	duas	d-u-ah-s
Three	tr-eːs	t-r-ai-s
Four	kʷ-attwor-	kw-ah-t-t-w-oh-r
Five	ˈkʷiːnkʷ-e	kw-E-n-kw-ay
Here	-ekkumhiːk	ay-k-k-u-m-h-E-k
There	illaːk	e-l-l-A-k
There-Ibi	ibiː	e-b-E
Who-Qui	kʷ-is	kw-e-s
Who-Quem	kʷ-em-	kw-ay-m
What	ˈkʷ-id	kw-e-d
When-Quando	kʷ-andoː	kw-ah-n-d-O
How-Quomodo	ˈkʷoːmodo	kw-O-m-oh-d-oh
Not	noːn	n-O-n
Not-Nec	nek	n-ay-k
And-Et	et	ay-t
And-Si	siːk	s-E-k

French

Cognate	IPA	Sounds
I	ʒə--	gzah-aah
We	nu--	n-u
YouPlural	vu--	v-u
YouSingular	ty	t-eeh
Woman	fa-m-----	f-ah-m
Woman-Domina	dam---	d-ah-m
ManHumanBeing	-ɔm-----	euh-m
ManHumanBeing-Homo	-õ--	oon
Child	ã-fã----	NasalA-f-NasalA
Wife	e-pu-z-	ay-p-u-zz
Husband	maʁi---	m-ah-rr-e
Husband-Sponsus	e-pu----	ay-p-u
Mother	me-ʁ--	m-ay-rr
Fish-Pescion	pwasõ	p-w-ah-s-on
Bird-Avicellum	wa---z-o----	w-ah-zz-oh
Fruit	fʁʁi----	f-rr-eu-e
Flower	flœʁ--	f-l-OpenMidNearFrontRounded-rr
Nose	ne---	n-ay
Sun-Soliculus	sɔləj----	s-euh-l-eh_diphthong
Moon	lyn-	l-eeh-n
Star	e-twa-l-	ay-t-w-ah-l

Appendix 1 - Prior Segment Frequencies

Water	o----	oh
Rain	plɥ--i-	p-l-eu-e
Lake	lak--	l-ah-k
Sea	mɛɤ-	m-eh-rr
Salt	sɛl--	s-eh-l
Earth	t-e-ɤ-	t-ay-rr
Fog-Nebula	njo---ly	n-jg-euh-l-eeh
Fog-Tenebras	t-en-ɛbɤ-	t-ay-n-eh-b-rr
Fog-Fumata	fyme--	f-eeh-m-ay
Sky	sjɛl--	s-jg-eh-l
Wind	v-ã----	v-NasalA
Fire-Focus	f-ø---	f-uu
Year	ã----	NasalA
Name-Nomen	nõ---	n-oon
Tongue	lã-g--	l-NasalA-g
ToDrink	b--waɤ-	b-w-a-rr
ToEat-Manducare	mã-ʒ--e--	m-NasalA-gzah-ay
ToBite	m-oɤd-ɤ-	m-oh-rr-d-rr
ToSuck	syse--	s-eeh-s-ay
ToSpit	kõ-spye-	k-oon-s-p-eeh-ay
ToKnow-Sapere	savwaɤ-	s-ah-v-w-ah-rr
ToKnow-Cognoscere	kɔ-nɛ-tɤ-	k-euh-n-eh-t-rr
ToThink	kɥ--ide--	k-eu-e-d-ay
ToThink-Pensare	pã-se--	p-NasalA-s-ay
ToFear-Tremere	kɤẽ-d-ɤ-	k-rr-ehn-d-rr
ToSleep	d-ɔɤmiɤ-	d-euh-rr-m-e-rr
ToLive	viv-ɤ-	v-e-v-rr
ToDie	mukɤɤ-	m-u-rr-e-rr
ToKill	nwaje--	n-w-aj_diphthong-ay
ToKill-Tutari	t-ɥ-e--	t-eu-ay
ToKill-Mactare	ma-te--	m-ah-t-ay
ToKill-Occidere	ɔksi--ɤ-	euh-k-s-e-rr
ToFight-Battuere	bat--ɤ-	b-ah-t-rr
ToHunt-Captiare	ʃa-s-e--	shh-ah-s-ay
ToHit	pu-se	p-u-s-ay
ToScratch-Rasare	ɤaze--	rr-a-zz-ay
ToSwim-Navigare	na--ʒe--	n-ah-gzah-ay
ToFly	vole--	v-oh-l-ay
ToWalk	ʃəmine--	shh-aah-m-e-n-ay
ToWalk-Marcher	maɤʃe	m-ah-rr-shh-ay
ToCome	vəniɤ-	v-aah-n-e-rr
ToLieAsInABed	e-tã-d-ɤ-	ay-t-NasalA-d-rr
ToLieAsInABed-lacere	ʒe-zɤɤ-	gzah-ay-zz-e-rr
ToSit	swa--ɤ-	s-w-ah-rr
ToStand	ɛ-t-ɤ-	eh-t-rr
ToStand-Levare	ləve--	l-aah-v-ay
ToStand-Altiare	-o-s-e--	oh-s-ay

Appendix 1 - Prior Segment Frequencies

ToTurnIntransitive	tʉne--	t-u-rr-n-ay
ToTurnIntransitive-Gyrare	ʒiʉe--	gzah-e-rr-ay
ToTurnIntransitive	viʉe--	v-e-rr-ay
-AncestralClass3		
ToTurnIntransitive-Torquere	tʉd-ʉ-	t-euh-rr-d-rr
ToFall	ʃwa--ʉ-	shh-w-ah-rr
ToFall-Tumbare	tõ-be-	t-on-b-ay
ToHold	tən-iʉ-	t-aah-n-e-rr
ToSqueeze	e--pʉʉ-d-ʉ-	ay-p-rr-ehnn-d-rr
ToSqueeze-Serare	se-ʉe--	s-ay-rr-ay
ToSqueeze-Stringere	e-tʉʉ-d-ʉ-	ay-t-rr-ehnn-d-rr
ToRub	fʉʉje--	f-rr-eh_diphthong-ay
ToRub-Frictare	fʉʉte--	f-rr-oh-t-ay
ToWash	lave--	l-ah-v-ay
ToWipe-Exsucare	e-sʉi-je--	ay-s-eu-e-jg-ay
ToPull	tʉe--	t-e-rr-ay
ToPull-Pulsare	pu-se--	p-u-s-ay
ToPull-Trahare	tʉ--ʉʉ-	t-rr-eh-rr
ToThrow	ʒə-te	gzah-aah-t-ay
ToThrow-Lanceare	lã-s-e-	l-NasalA-s-ay
ToTie	li-e--	l-e-ay
ToSew	ku-d---ʉ-	k-u-d-rr
ToCount	kõ---te--	k-on-t-ay
ToCount-Enumerare	enumere--	ay-n-u-m-ay-rr-ay
ToSay	di--ʉ	d-e-rr
ToSing-AncestralClass	ʃã-te--	shh-NasalA-t-ay
ToPlay-Jiocare	ʒ-w-e--	gzah-w-ay
ToFloat	flyktʉe--	f-l-eeh-k-t-eu-ay
ToFlow	flye--	f-l-eeh-ay
ToFlow-Colare	kule--	k-u-l-ay
ToFlow-Currere	ku-ʉiʉ-	k-u-rr-e-rr
ToFreeze	ʒəle--	gzah-aah-l-ay
ToFreeze-Glaciare	gla-s-e--	g-l-ah-s-ay
ToBurn-Brojan	bʉyle--	b-rr-eeh-l-ay
ToBurn-Cremare	kʉame--	k-rr-ah-m-ay
ToBurn-Flammare	flã-be--	f-l-NasalA-b-ay
ToBurn-Ardere	aʉd-ʉ-	ah-rr-d-rr
ToBurn-Flagrare	flagʉe--	f-l-ah-g-rr-ay
ToBurn-Incendere	ɛ-sã-dje--	ehnn-s-NasalA-d-jg-ay
All-Totus	tu----	t-u
Many	mu---	m-u
Some	o-kœ-	oh-k-uuh
Few	pø---	p-uu
Other	o-t-ʉ-	oh-t-rr
Big-Grandem	gʉã---	g-rr-an
Long-Longum	lõ-----	l-oon
Long-Largum	laʉʒ--	l-ah-rr-gzah

Appendix 1 - Prior Segment Frequencies

Wide	le---	l-ay
Wide-Amplum	ã-pl--	NasalA-p-l
Heavy	gɤav--	g-rr-ah-v
Heavy-Lurdus	luɤ---	l-u-rr
Heavy-Pesant	pəzã---	p-aah-zz-NasalA
Small	pə-ti---	p-aah-t-e
Short	kuɤ---	k-u-rr
Short-Brevis	bɤɛf--	b-rr-eh-f
Narrow-Strictus	e-tɤwa-----	ay-t-rr-w-ah
Thin	məny----	m-aah-n-eeh
Thin-Delicatus	du:--ʒe:---	d-U-gzah-ai
Green	veɤ----	v-ay-rr
One	œ---	uuh
Two-Duos	d-ø-	d-uu
Three	tɤwɑ-	t-rr-w-a
Four	k-a-t--ɤ-	k-ah-t-rr
Five	sẽ-k--	s-ehn-k
Here	i--s---i-	e-s-e
There	--la-	l-ah
Who-Qui	k-i-	k-e
What	kwa-	k-w-ah
When-Quando	k-ã---	k-an
How-Quomodo	kɔm---	k-euh-m
Not	nɔ-	n-oon
Not-Nec	ni-	n-e
And-Et	e-	ay

Spanish

Cognate	IPA	Sounds
I	j--o	VdPalatalFricative-oh
We	no-s	n-oh-s
YouPlural	bo-s	b-oh-s
YouSingular	tu	t-u
YouSingular	-usted	u-s-t-ay-d
-VostramMercedem		
Woman	-e-m-br-a	ay-m-b-er-ah
Woman-Mulier	mux-er--	m-u-xha-ay-er
Woman-Domina	do--ɲa	d-oh-VdPalatalNasal-ah
ManHumanBeing	om-bre-	oh-m-b-er-ay
Child	infante-	e-n-f-ah-n-t-ay
Child-Ninnus	nɲo	n-e-VdPalatalNasal-oh
Wife	espo-sa	ay-s-p-oh-s-ah
Wife-Mulier	mux-er-	m-u-xha-ay-er
Husband	marid̃o-	m-ah-er-e-dd-oh
Husband-Sponsus	espo-so-	ay-s-p-oh-s-oh
Mother	maðre-	m-ah-dd-er-ay
Fish-Piskem	peθ---	p-ay-th

Appendix 1 - Prior Segment Frequencies

Bird-Avem	abe-	ah-b-ay
Bird-Passerem	pa-xaro-	p-ah-xha-ah-er-oh
Fruit	fru--to-	f-er-u-t-oh
Flower	flor--	f-l-oh-er
Nose	naso-	n-ah-s-oh
Nose-Nares	nariθ-	n-ah-er-e-th
Sun	sol--	s-oh-l
Moon	luna	l-u-n-ah
Star	estre-ja	ay-s-t-er-ay-VdPalatalFricative-ah
Water	'a-ɣwa	ah-juh-w-ah
Rain	j-u-bja	VdPalatalFricative-u-b-jg-ah
Lake	lago-	l-ah-j-oh
Sea	mar-	m-ah-er
Salt	sal--	s-ah-l
Earth	'tje-ra	t-jg-ay-r-ah
Fog	kali--na-	k-ah-l-e-n-ah
Fog-Nebula	nje-b-la	n-jg-ay-b-l-ah
Fog-Tenebras	t-injeblas	t-e-n-jg-ay-b-l-ah-s
Fog-Fumata	fumata	f-u-m-ah-t-ah
Sky	'θjelo	th-jg-ay-l-oh
Wind	'bjento-	b-jg-ay-n-t-oh
Fire-Focus	fwego-	f-w-ay-g-oh
Year	a-ɲo-	ah-VdPalatalNasal-oh
Name-Nominem	nom-bre-	n-oh-m-b-er-ay
Tongue	'lengwa	l-ay-nya-g-w-ah
ToDrink	beb-er-	b-ay-b-ay-er
ToEat	kome--r-	k-oh-m-ay-er
ToEat-Manducare	mandukar-	m-ah-n-d-u-k-ah-er
ToBite	m-orðer-	m-oh-er-dd-ay-er
ToBite-Morsicare	mo-s-kar-	m-oh-s-k-ah-er
ToSpit-Exconspuere	esku-pir	ay-s-k-u-p-e-er
ToSpit-Sputare	esputar	ay-s-p-u-t-ah-er
ToKnow-Sapere	sab-er-	s-ah-b-ay-er
ToKnow-Cognoscere	ko-noθer-	k-oh-n-oh-th-ay-er
ToThink	kw--idar-	k-w-e-d-ah-er
ToThink-Pensare	pensar-	p-ay-n-s-ah-er
ToFear	temer-	t-ay-m-ay-er
ToFear-Tremere	trem-er-	t-er-ay-m-ay-er
ToSleep	d-ormir-	d-oh-er-m-e-er
ToLive	bibir-	b-e-b-e-er
ToDie	morir-	m-oh-er-e-er
ToKill-Adnecare	a-negar-	ah-n-ay-g-ah-er
ToKill-Mactare	ma-tar-	m-ah-t-ah-er
ToFight	pu-ɲar-	p-u-VdPalatalNasal-ah-er
ToFight-Battuere	ba-t-ir-	b-ah-t-e-er
ToHunt-Captiare	ka-θ-ar-	k-ah-th-ah-er
ToHit	pu-xar-	p-u-xha-ah-er

Appendix 1 - Prior Segment Frequencies

ToScratch	ra-er-	r-ah-ay-er
ToScratch-Rasare	rasar-	r-ah-s-ah-er
ToScratch-Rasicare	raskar	r-ah-s-k-ah-er
ToSwim	n-adar-	n-ah-d-ah-er
ToSwim-Navigare	nabegar-	n-ah-b-ay-g-ah-er
ToFly	bolar-	b-oh-l-ah-er
ToWalk	kaminar-	k-ah-m-e-n-ah-er
ToWalk-Ambitare	and--ar-	ah-n-d-ah-er
ToCome	benir-	b-ay-n-e-er
ToLieAsInABed	ekstender-	ay-k-s-t-ay-n-d-ay-er
ToLieAsInABed-lacere	ja-θer-	VdPalatalFricative-ah-th-ay-er
ToSit	s-e--r-	s-ay-er
ToSit-Sedentare	se--ntar-	s-ay-n-t-ah-er
ToStand	estar-	ay-s-t-ah-er
ToStand-Levare	jebar-	VdPalatalFricative-ay-b-ah-er
ToStand-Altiare	-alθ-ar-	ah-l-th-ah-er
ToTurnIntransitive	tornar-	t-oh-er-n-ah-er
ToTurnIntransitive-Gyrare	xirar-	xha-e-er-ah-er
ToTurnIntransitive	birar-	b-e-er-ah-er
-AncestralClass3		
ToTurnIntransitive-Torquere	torθer-	t-oh-er-th-ay-er
ToFall	k-a-er-	k-ah-ay-er
ToFall-Tumbare	tumbar	t-u-m-b-ah-er
ToHold	ten-er-	t-ay-n-ay-er
ToHold-Segurar	segurar	s-ay-g-u-er-ah-er
ToSqueeze	eksprem-ir-	ay-k-s-p-er-ay-m-e-er
ToSqueeze-Serrere	se-rar	s-ay-r-ah-er
ToSqueeze-Serare	θe-rar-	th-ay-r-ah-er
ToSqueeze-Appetorare	a-p--retar-	ah-p-er-ay-t-ah-er
ToSqueeze-Stringere	estrep-ir-	ay-s-t-er-ay-VdPalatalNasal-e-er
ToRub	fregar-	f-er-ay-g-ah-er
ToRub-Frictare	frotar-	f-er-oh-t-ah-er
ToRub-Frictiare	frisar	f-r-e-s-ah-er
ToWash	laßar-	l-ah-bb-ah-er
ToWipe-Extergere	e-starsir-	ay-s-t-ah-er-s-e-er
ToWipe-Exsucare	enx-ug-ar-	ay-n-xha-u-g-ah-er
ToWipe-Limpidare	limpj-ar-	l-e-m-p-jg-ah-er
ToPull	tirar-	t-e-er-ah-er
ToPull-Pulsare	pu-xar-	p-u-xha-ah-er
ToThrow	-e-tfar	ay-ts-ah-er
ToThrow-Lanceare	lan-θ-ar	l-ah-n-th-ah-er
ToThrow-Eruncare	a-rankar	ah-r-ah-n-k-ah-er
ToTie	legar-	l-ay-g-ah-er
ToTie-Aptare	a-tar-	ah-t-ah-er
ToSew	ko--s-er-	k-oh-s-ay-er
ToCount	kon--tar-	k-oh-n-t-ah-er
ToCount-Enumerare	enumerar-	ay-n-u-m-ay-er-ah-er

Appendix 1 - Prior Segment Frequencies

ToSay	deθir	d-ay-th-e-er
ToSing-AncestralClass	kantar-	k-ah-n-t-ah-er
ToPlay-Ludere	ludir-	l-u-d-e-er
ToPlay-Jiocare	xu-gar-	xha-u-j-ah-er
ToFloat	flugtwar-	f-l-u-g-t-w-ah-er
ToFlow	fluir-	f-l-u-e-er
ToFlow-Colare	kolar-	k-oh-l-ah-er
ToFlow-Excurrere	e-skurir-	ay-s-k-u-r-e-er
ToFlow-Currere	ko-rer-	k-oh-r-ay-er
ToFreeze	-elar-	ay-l-ah-er
ToBurn-Cremare	k-emar-	k-ay-m-ah-er
ToBurn-Flammare	fla-mear	f-l-ah-m-ay-ah-er
ToBurn-Ardere	arder-	ah-er-d-ay-er
ToBurn-Flagrare	flagrar	f-l-ah-g-er-ah-er
ToBurn-Incendere	enθend-er-	ay-n-th-ay-n-d-ay-er
All-Totus	to-do-	t-oh-d-oh
Many	mu-ʃo-	m-u-ts-oh
Many-Tantus	tanto-	t-ah-n-t-oh
Some	alguno	ah-l-j-u-n-oh
Few	poko-	p-oh-k-oh
Other	o-t-ro	oh-t-er-oh
Big	ma-ɲo-	m-ah-VdPalatalNasal-oh
Big-Grandem	grande-	g-er-ah-n-d-ay
Long-Longum	lo-ngo-	l-oh-n-j-oh
Long-Largum	laryo-	l-ah-er-juh-oh
Wide	lato-	l-ah-t-oh
Wide-Amplum	anʃ-o-	ah-n-ts-oh
Heavy	grabe-	g-er-ah-b-ay
Heavy-Lurdus	lerdo-	l-ay-er-d-oh
Heavy-Pesant	pesa-ðo	p-ay-s-ah-dd-oh
Small-Pittinus	pe-kepo-	p-ay-k-ay-VdPalatalNasal-oh
Short	korto-	k-oh-er-t-oh
Short-Brevis	brebe-	b-er-ay-b-ay
Narrow	angosto-	ah-n-g-oh-s-t-oh
Narrow-Strictus	estr-e--ʃo-	ay-s-t-er-ay-ts-oh
Thin	menu-do-	m-ay-n-u-d-oh
Thin-Delicatus	del-ʎaðo-	d-ay-l-juh-ah-dd-oh
Thin-Subtilis	su-til--	s-u-t-e-l
Green	ber-de-	b-ay-er-d-ay
One	'uno-	u-n-oh
Two-Duos	d-os	d-oh-s
Three	tr-es	t-er-ay-s
Four	kwa-t--ro	k-w-ah-t-er-oh
Five	'θink-o	th-e-n-k-oh
Here	-a-k---i-	ah-k-e
There	a-ja-	ah-VdPalatalFricative-ah
There-Adlbi	ai	ah-e

Appendix 1 - Prior Segment Frequencies

Who-Quem	kjen-	k-jg-ay-n
What	k-e-	k-ay
When-Quando	kwando	k-w-ah-n-d-oh
How-Quomodo	komo--	k-oh-m-oh
Not	no-	n-oh
Not-Nec	ni-	n-e
And-Et	i-	e

Italian

Cognate	IPA	Sounds
I	i--o	e-oh
We	no:i-	n-O-e
YouPlural	'vo:i-	v-O-e
YouSingular	tu	t-u
Woman	femmi-n-a	f-ay-m-m-e-n-ah
Woman-Mulier	moʎʎe---	m-oh-yuh-yuh-ay
Woman-Domina	dɔn-na	d-euh-n-n-ah
ManHumanBeing-Homo	wɔmo	w-euh-m-oh
Child	--fante-	f-ah-n-t-ay
Child-Ninnus	nino	n-e-n-oh
Wife	-spɔ-za	s-p-euh-zz-ah
Wife-Mulier	moʎʎe--	m-oh-yuh-yuh-ay
Husband	marito-	m-ah-r-e-t-oh
Husband-Sponsus	-spɔ-zo-	s-p-euh-zz-oh
Husband-Socius	sɔʎf-o-	s-euh-ts-oh
Mother	ma:dre-	m-A-d-r-ay
Fish-Piskem	peʎʎe-	p-ay-shh-shh-ay
Bird-Avicellum	--u-tʎf-ello-	u-t-ts-eh-l-l-oh
Bird-Passerem	passero-	p-ah-s-s-ay-r-oh
Fruit	fru-tto-	f-r-u-t-t-oh
Flower	'fjo:re-	f-jg-O-er-ay
Nose	na:so-	n-A-s-oh
Nose-Nares	nariʎe	n-ah-r-e-ts-ay
Sun	sole-	s-oh-l-ay
Moon	luna	l-u-n-ah
Star	-st-ella	s-t-ay-l-l-ah
Water	akkwa	ah-k-k-w-ah
Rain	pjoddʒ-a	p-jg-oh-d-VdPalatoAlveolarSibilant-ah
Lake	lago-	l-ah-g-oh
Sea	mare	m-ah-r-ay
Salt	sale-	s-ah-l-ay
Earth	't-erra	t-eh-r-r-ah
Fog	kalidʒine-	k-ah-l-e-VdPalatoAlveolarSibilant-e-n-ay
Fog-Nebula	n-ebb-ja	n-ay-b-b-jg-ah
Fog-Tenebrae	tɛ:nebre	t-Eh-n-ay-b-r-ay
Fog-Tenebras	t-ɛ:n-ebre-	t-Eh-n-ay-b-r-ay
Fog-Fumata	fuma:ta	f-u-m-A-t-ah

Appendix 1 - Prior Segment Frequencies

Sky	'ʃ-elo-	ts-eh-l-oh
Wind	'v-ento-	v-eh-n-t-oh
Fire-Focus	fwoko-	f-w-euh-k-oh
Year	anno-	ah-n-n-oh
Name-Nomen	no:me-	n-O-m-ay
Tongue	'lingwa	l-e-n-g-w-ah
ToDrink	be---re	b-ay-er-ay
ToEat-Manducare	mandʒ--are	m-ah-n-VdPalatoAlveolarSibilant-ah-er-ay
ToBite	m-ordere	m-euh-r-d-ay-r-ay
ToBite-Morsicare	morsikare	m-oh-r-s-e-k-ah-er-ay
ToSpit-Sputare	-sputare	s-p-u-t-ah-er-ay
ToKnow-Sapere	sap-ere	s-ah-p-ay-r-ay
ToKnow-Cognoscere	ko-noʃfere	k-oh-n-oh-shh-shh-ay-r-ay
ToThink	k-odʒitare	k-oh-VdPalatoAlveolarSibilant-e-t-ah-r-ay
ToThink-Pensare	pensare	p-ay-n-s-ah-er-ay
ToFear	temere	t-ay-m-ay-r-ay
ToFear-Tremere	trem-are	t-r-ay-m-ah-r-ay
ToSleep	d-ormire	d-oh-r-m-e-r-ay
ToLive	vivere	v-e-v-ay-r-ay
ToDie	morire	m-oh-r-e-r-ay
ToKill-Adnecare	annegare	ah-n-n-ay-g-ah-r-ay
ToKill-Occidere	utʃidere	u-t-ts-e-d-ay-er-ay
ToFight	pupnare	p-u-VdPalatalNasal-VdPalatalNasal-ah-r-ay
ToFight-Battuere	batt-ere	b-ah-t-t-ay-r-ay
ToHunt-Captiare	kattʃ-are	k-ah-t-ts-ah-r-ay
ToHit	pulsare	p-u-l-s-ah-r-ay
ToScratch	radere	r-ah-d-ay-r-ay
ToScratch-Rasare	rasare	r-ah-s-ah-r-ay
ToSwim	nwotare	n-w-oh-t-ah-er-ay
ToSwim-Navigare	navigare	n-ah-v-e-g-ah-r-ay
ToFly	volare	v-oh-l-ah-er-ay
ToFly-Exvolare	zvolare	zz-v-oh-l-ah-er-ay
ToWalk	kamminare	k-ah-m-m-e-n-ah-er-ay
ToWalk-Mergere	merdʒere	m-eh-r-VdPalatoAlveolarSibilant-ay-r-ay
ToWalk-Ambitare	and--are	ah-n-d-ah-r-ay
ToCome	venire	v-ay-n-e-er-ay
ToLieAsInABed	e-stendere	ay-s-t-eh-n-d-ay-r-ay
ToLieAsInABed-lacere	dʒa-ʃe:re	VdPalatoAlveolarSibilant-ah-ts-ai-er-ay
ToSit	s-edere	s-ay-d-ay-r-ay
ToStand	-stare	s-t-ah-r-ay
ToStand-Levare	levare	l-ay-v-ah-r-ay
ToStand-Altiare	-altsare	ah-l-VlAlveolarSibilantAffricate-ah-r-ay
ToTurnIntransitive	tornare	t-oh-r-n-ah-r-ay
ToTurnIntransitive-Gyrare	dʒirare	VdPalatoAlveolarSibilant-e-r-ah-er-ay
ToTurnIntransitive	virare	v-e-r-ah-er-ay
-AncestralClass3		
ToTurnIntransitive-Torquere	tortʃere	t-euh-r-ts-ay-r-ay

Appendix 1 - Prior Segment Frequencies

ToFall	k-adere	k-ah-d-ay-er-ay
ToHold	ten-ere	t-ay-n-ay-er-ay
ToSqueeze	--sprēm-ere	s-p-r-eh-m-ay-r-ay
ToSqueeze-Serare	serrare	s-ay-r-r-ah-r-ay
ToSqueeze-Stringere	-strindʒere	s-t-r-e-n-VdPalatoAlveolarSibilant-ay-r-ay
ToRub	fregare	f-r-ay-j-ah-r-ay
ToRub-Frictare	frettare	f-r-ay-t-t-ah-r-ay
ToWash	lavare	l-ah-v-ah-r-ay
ToWipe	tərɖʒere	t-eh-r-VdPalatoAlveolarSibilant-ay-r-ay
ToWipe-Exsucare	aʃʃ-ug-are	ah-shh-shh-u-g-ah-r-ay
ToPull	tirare	t-e-r-ah-r-ay
ToPull-Pulsare	pulsare	p-u-l-s-ah-r-ay
ToPull-Trahere	trar-re	t-r-ah-r-r-ay
ToPush	impindʒere	e-m-p-e-n-VdPalatoAlveolarSibilant-ay-r-ay
ToThrow	dʒettare	VdPalatoAlveolarSibilant-ay-t-t-ah-r-ay
ToThrow-Lanceare	lanʃʃare	l-ah-n-ts-ah-r-ay
ToThrow-Eruncare	arronʃare	ah-r-r-oh-n-ts-ah-r-ay
ToTie	legare	l-ay-g-ah-r-ay
ToSew	ku--ʃʃ-ire	k-u-ts-e-r-ay
ToCount	kon--tare	k-oh-n-t-ah-r-ay
ToCount-Enumerare	enumerare	ay-n-u-m-ay-r-ah-r-ay
ToSay	di--re	d-e-r-ay
ToSay-Exponere	--spor-re	s-p-oh-r-r-ay
ToSing-AncestralClass	kantare	k-ah-n-t-ah-r-ay
ToPlay-Jiocare	dʒo-kare	VdPalatoAlveolarSibilant-oh-k-ah-r-ay
ToFloat	fluttuare	f-l-u-t-t-u-ah-r-ay
ToFloat-Fluitare	fluitare	f-l-u-e-t-ah-r-ay
ToFlow	fluire	f-l-u-e-r-ay
ToFlow-Colare	kolare	k-oh-l-ah-r-ay
ToFlow-Excurrere	--skorrere	s-k-oh-r-r-ay-r-ay
ToFlow-Currere	korrere	k-oh-r-r-ay-r-ay
ToFreeze	dʒelare	VdPalatoAlveolarSibilant-ay-l-ah-r-ay
ToFreeze-Glaciare	gʒattʃʃare	g-jg-ah-t-ts-jg-ah-r-ay
ToBurn-Brojan	brutʃʃare	b-r-u-ts-ah-r-ay
ToBurn-Cremare	kremare	k-r-ay-m-ah-r-ay
ToBurn-Flammare	fjammare	f-jg-ah-m-m-ah-r-ay
ToBurn-Ardere	ardere	ah-r-d-ay-r-ay
ToBurn-Flagrare	flagrare	f-l-ah-g-r-ah-r-ay
ToBurn-Incendere	intʃendʒare	e-n-ts-eh-n-d-jg-ah-r-ay
ToBurn-AncestralClass8	ustolare	u-s-t-oh-l-ah-r-ay
All	oɲɲi-	oh-VdPalatalNasal-VdPalatalNasal-e
All-Totus	tutto-	t-u-t-t-oh
Many	molto-	m-oh-l-t-oh
Many-Tantus	tanto-	t-ah-n-t-oh
Some	alkuno	ah-l-k-u-n-oh
Few	poko-	p-euh-k-oh
Other	alt-ro	ah-l-t-r-oh

Appendix 1 - Prior Segment Frequencies

Big	mapno-	m-ah-VdPalatalNasal-VdPalatalNasal-oh
Big-Grandem	grande-	g-r-ah-n-d-ay
Long-Longum	lu-ngo-	l-u-n-g-oh
Long-Largum	largo-	l-ah-r-g-oh
Wide	lato-	l-ah-t-oh
Wide-Amplum	ampjo-	ah-m-p-jg-oh
Heavy	greve-	g-r-eh-v-ay
Heavy-Lurdus	lordo-	l-oh-r-d-oh
Heavy-Pesant	pesante	p-ay-s-ah-n-t-ay
Small-Pittinus	pittfino-	p-e-t-ts-e-n-oh
Small-Pitulus	pikkolo-	p-e-k-k-oh-l-oh
Short	korto-	k-oh-r-t-oh
Short-Brevis	breve-	b-r-eh-v-ay
Narrow	angusto-	ah-n-g-u-s-t-oh
Narrow-Strictus	-str-e-tto-	s-t-r-ay-t-t-oh
Thin	minu-to-	m-e-n-u-t-oh
Thin-Delicatus	delikato-	d-ay-l-e-k-ah-t-oh
Thin-Subtilis	sottile-	s-oh-t-t-e-l-ay
Green	ver-de-	v-ay-r-d-ay
One	'uno-	u-n-oh
Two-Duae	du-e	d-u-ay
Three	'tr-e-	t-r-ay
Four	kwatt--ro	k-w-ah-t-t-r-oh
Five	'fijnkwe	ts-e-nya-k-w-ay
Here	---kw---i-	k-w-e
There	--la-	l-ah
There-Ibi	-vi	v-e
Who-Qui	k-i-	k-e
What	k-e-	k-ay
When-Quando	kwando	k-w-ah-n-d-oh
How-Quomodo	kome--	k-oh-m-ay
Not	non	n-oh-n
Not-Nec	ne-	n-ay
And-Et	e-	ay

Brazilian Portuguese

Cognate	IPA	Sounds
I	-e-w	ay-w
We	nɔj-s	n-euh-jg-s
YouPlural	vɔjs	v-euh-jg-s
YouSingular	tu	t-u
YouSingular	vos-e-	v-oh-s-ay
-VostramMercedem		
Woman	fe-me---ø	f-ay-m-ay-ahh
Woman-Mulier	muʎ-ek--	m-u-yuh-ay-rr
Woman-Domina	do--nø	d-oh-n-ahh
ManHumanBeing	omẽj---	oh-m-nasal_diphthong_portuguese1

Appendix 1 - Prior Segment Frequencies

Child	ĩ-fẽ-ŋĩ-	een-f-ahn-ts-e
Child-Ninnus	nenẽj	n-ay-n-nasal_diphthong_portuguese1
Wife	ispo-za	e-s-p-oh-zz-ah
Wife-Mulier	muʎ-ek-	m-u-yuh-ay-rr
Husband	maridu-	m-ah-er-e-d-u
Husband-Sponsus	ispo-zu-	e-s-p-oh-zz-u
Mother	mẽj----	m-nasal_diphthong_portuguese2
Fish-Piskem	pejʃ-i-	p-ej_diphthong-shh-e
Bird-Avem	avi-	ah-v-e
Bird-Passerem	pa-sẽru-	p-ah-s-ahh-er-u
Fruit	fru--tẽ-	f-er-u-t-ahh
Flower	flok--	f-l-oh-rr
Nose-Nares	naris-	n-ah-er-e-s
Sun	sow--	s-euh-w
Moon	lu-ẽ	l-u-ahh
Star	istre-lẽ	e-s-t-er-ay-l-ahh
Water	'a-gwẽ	ah-g-w-ahh
Rain	ʃ-u-v-ẽ	shh-u-v-ahh
Lake	lagu-	l-ah-g-u
Sea	maʎ-	m-ah-rr
Salt	saw--	s-ah-w
Earth	't-e-kẽ	t-ay-rr-ahh
Fog	kalizẽj---	k-ah-l-e-gzah-nasal_diphthong_portuguese1
Fog-Nebula	n-ẽ-vw-ẽ	n-eh-v-w-ahh
Fog-Fumata	fumasẽ	f-u-m-ah-s-ahh
Sky	s-ẽw--	s-eh-w
Wind	'v-ẽ-tu-	v-ehn-t-u
Fire-Focus	f-ogu-	f-oh-g-u
Year	ẽ-nu-	ahh-n-u
Name-Nomen	nomi-	n-oh-m-e
Tongue	'lĩ-gwẽ	l-een-g-w-ahh
ToDrink	beb-ek-	b-ay-b-ay-rr
ToEat	kome---	k-oh-m-ay
ToEat-Manducare	mẽ-ʒ--ak-	m-ahn-gzah-ah-rr
ToBite	m-okdek-	m-oh-rr-d-ay-rr
ToBite-Morsicare	mu-sẽga--	m-u-s-aah-g-ah
ToSuck	sugaʎ-	s-u-g-ah-rr
ToSpit	ku-spiʎ	k-u-s-p-e-rr
ToKnow-Sapere	sab-ek-	s-ah-b-ay-rr
ToKnow-Cognoscere	ko-ɲes-ek-	k-oh-VdPalatalNasal-ay-s-ay-rr
ToThink	k-uʒitaʎ-	k-u-gzah-e-t-ah-rr
ToThink-Pensare	pẽ-saʎ-	p-ehn-s-ah-rr
ToFear	temek-	t-ay-m-ay-rr
ToFear-Tremere	trem-ek-	t-er-ay-m-ay-rr
ToSleep	d-okmiʎ-	d-oh-rr-m-e-rr
ToLive	vivek-	v-e-v-ay-rr
ToDie	mokek-	m-oh-rr-ay-rr

Appendix 1 - Prior Segment Frequencies

ToKill-Mactare	ma-taʁ-	m-ah-t-ah-rr
ToFight-Battuere	ba-t-eʁ-	b-ah-t-ay-rr
ToHunt-Captiare	ka-s-aʁ-	k-ah-s-ah-rr
ToHit	pu-ʃaʁ-	p-u-shh-ah-rr
ToScratch	ʁa-eʁ-	rr-ah-ay-rr
ToScratch-Rasare	ʁazaʁ-	rr-ah-zz-ah-rr
ToScratch-Rasicare	ʁaʃkaʁ	rr-ah-shh-k-ah-rr
ToScratch-Coctiare	kosaʃ	k-oh-s-ah-VdRetroflexApproximant
ToSwim	n-adaʁ-	n-ah-d-ah-rr
ToSwim-Navigare	naviʝaʁ-	n-ah-v-eee-juh-ah-rr
ToFly	vo-aʁ-	v-oh-ah-rr
ToWalk	kəmiɲaʁ-	k-ahh-m-e-VdPalatalNasal-ah-rr
ToWalk-Ambitare	ẽ-d--aʁ-	ahn-d-ah-rr
ToCome	v--iʁ-	v-e-rr
ToLieAsInABed	istẽ-deʁ-	e-s-t-ehn-d-ay-rr
ToLieAsInABed-lacere	ʒe-zeʁ-	gzah-ahh-zz-ay-rr
ToSit	s-e--ʁ-	s-ay-rr
ToSit-Sedentare	sẽ---tar-	s-ehn-t-ah-er
ToStand	istar-	eee-shh-t-ah-er
ToStand-Levare	levaʁ-	l-ay-v-ah-rr
ToStand-Altiare	-aʃs-a--	ah-ssha-s-ah
ToTurnIntransitive	toʁnaʁ-	t-oh-rr-n-ah-rr
ToTurnIntransitive-Gyrare	ʒirar-	gzah-e-er-ah-er
ToTurnIntransitive	virar-	v-e-er-ah-er
-AncestralClass3		
ToTurnIntransitive-Torquere	turser-	t-u-r-s-ay-r
ToFall	k-ø-ir-	k-ahh-e-er
ToFall-Tumbare	tõ-baʁ	t-on-b-ah-rr
ToHold	te---ʁ-	t-ay-rr
ToHold-Segurar	siguraʁ	s-eee-g-u-er-ah-rr
ToSqueeze	i-ʃprəm-eʁ-	e-shh-p-r-aah-m-ay-rr
ToSqueeze-Serrere	se-ʁa--	s-ay-rr-ah
ToSqueeze-Serare	si-ʁar-	s-eee-rr-ah-er
ToSqueeze-Appetorare	ø-pi-r-tar-	ahh-p-eee-er-t-ah-er
ToSqueeze-Stringere	əʃtri-ʒir-	aah-shh-t-r-een-gzah-e-r
ToRub-Exfricare	iʃfrigaʁ	eee-shh-f-er-eee-g-ah-er
ToWash	lɛvaʁ-	l-ahh-v-ah-er
ToWipe-Exsucare	ẽ-ʃ-ug-ar-	ehn-shh-u-g-ah-er
ToWipe-Limpidare	li-p--ar-	l-een-p-ah-er
ToPull	ʃira--	ts-e-er-ah
ToPull-Pulsare	pu-ʃar-	p-u-shh-ah-er
ToPull-Trahere	traze--	t-er-ah-zz-ay
ToThrow	ʒejtar	gzah-ej_diphthong-t-ah-er
ToThrow-Lanceare	lẽ-s-a--	l-ahn-s-ah
ToTie-Aptare	ø-tar-	ahh-t-ah-er
ToSew	ku--z-er-	k-u-zz-ay-er
ToCount	kõ---tar-	k-on-t-ah-er

Appendix 1 - Prior Segment Frequencies

ToCount-Enumerare	enumerar-	ay-n-u-m-ay-er-ah-er
ToSay	diz-er	d-e-zz-ay-er
ToSing-AncestralClass	kẽ-tar-	k-ahn-t-ah-er
ToPlay-Jiocare	ʒo-gaʁ-	gzah-oh-g-ah-rr
ToFloat	flu-tuaʁ-	f-l-u-t-u-ah-rr
ToFlow	flwiʁ-	f-l-w-e-rr
ToFlow-Colare	ko-aʁ-	k-oh-ah-rr
ToFlow-Excurrere	i-ʃko-ʁeʁ-	e-shh-k-oh-rr-ay-rr
ToFlow-Currere	ko-ʁeʁ-	k-oh-rr-ay-rr
ToFreeze	ʒilar-	gzah-eee-l-ah-er
ToBurn-Cremare	k-ɐjmare	k-diphthong_portuguese-m-ah-er-ay
ToBurn-Ardere	aʁdeʁ-	ah-rr-d-ay-rr
ToBurn-Flagrare	flagʁaʁ-	f-l-ah-j-rr-ah-rr
ToBurn-Incendere	ĩ-sendʒiar-	een-s-ay-n-VdPalatoAlveolarSibilant -NearCloseFrontUnrounded-ah-er
All-Totus	to-du-	t-oh-d-u
Many	mũj-tu	m-ooo-jn-t-u
Many-Tantus	tẽ-tu	t-ahn-t-u
Some	awgũ--	ah-w-g-ooo
Few	powku	p-oh-w-k-u
Other	owt-ru	oh-w-t-er-u
Other-Alius	aw---	ah-w
Big-Grandem	grẽ-dʒi-	g-er-ahn-VdPalatoAlveolarSibilant-e
Long-Longum	lõ-gu-	l-on-g-u
Long-Largum	laʁgu-	l-ah-rr-g-u
Wide	latu-	l-ah-t-u
Wide-Amplum	ẽ-ʃ-u-	ahn-shh-u
Heavy	gravi-	g-er-ah-v-e
Heavy-Lurdus	lerdo-	l-ay-er-d-oh
Heavy-Pesant	peza-du	p-ay-zz-ah-d-u
Small-Pittinus	pekenu-	p-ay-k-ay-n-u
Short	kugtu-	k-u-rr-t-u
Short-Brevis	'brevi-	b-er-eh-v-e
Narrow-Strictus	istr-ej--tu-	e-s-t-er-ej_diphthong-t-u
Thin	mi-u-du-	m-e-u-d-u
Thin-Delicatus	dew-gadu-	d-ay-w-g-ah-d-u
Thin-Subtilis	sufiɰw--	s-u-ts-e-w
Green	ver-di-	v-ay-er-d-eee
One	ũ---	ooo
Two-Duos	d-ojs	d-oj_diphthong-s
Two-Duas	dues	d-u-ahh-s
Three	tr-es	t-er-ay-s
Four	kwa-t--ru	k-w-ah-t-er-u
Five	'sĩ-k-u	s-eeen-k-u
Here	-a-k---i-	ah-k-e
There	--la-	l-ah
There-Adlbi	ai	ah-e

Appendix 1 - Prior Segment Frequencies

Who-Quem	k-ẽj--	k-nasal_diphthong_portuguese1
What	k-i-	k-e
When-Quando	kwẽ-du	k-w-ahn-d-u
How-Quomodo	komu--	k-oh-m-u
Not	nẽw	n-ahn-wh
Not-Nec	nẽj	n-nasal_diphthong_portuguese1
And-Et	i-	e

Portuguese

Cognate	IPA	Sounds
I	-e-w	ay-w
We	nɔ-ʃ	n-euh-shh
YouPlural	vo-ʃ	v-oh-shh
YouSingular	tu	t-u
YouSingular	vɔs-e-	v-euh-s-ay
-VostramMercedem		
Woman	'fe-mj---ɐ	f-ay-m-jg-ahh
Woman-Mulier	muɫ-er--	m-u-yuh-ay-er
Woman-Domina	do--nɐ	d-oh-n-ahh
ManHumanBeing	ɔmẽj---	euh-m-nasal_diphthong_portuguese1
Child	ĩ-fẽ-ti-	een-f-ahn-t-eee
Child-Ninnus	nenẽj	n-ay-n-nasal_diphthong_portuguese1
Wife	ifpo-zɐ	eee-shh-p-oh-zz-ahh
Wife-Mulier	muɫ-er-	m-u-yuh-ay-er
Husband	mɛriðu-	m-ahh-er-e-dd-u
Husband-Sponsus	ifpo-zu-	eee-shh-p-oh-zz-u
Mother	mẽj----	m-nasal_diphthong_portuguese2
Fish-Piskem	pɛij-i-	p-diphthong_portuguese-shh-eee
Bird-Avem	avi-	ah-v-eee
Bird-Passerem	pa-sɛru-	p-ah-s-ahh-er-u
Fruit	fru--tɐ-	f-er-u-t-ahh
Flower	flor--	f-l-oh-er
Nose-Nares	nɛrijf-	n-ahh-er-e-shh
Sun	sɔɫ--	s-euh-ssha
Moon	lu-ɐ	l-u-ahh
Star	iftre-lɐ	eee-shh-t-er-ay-l-ahh
Water	'a-gwɐ	ah-g-w-ahh
Rain	ʃ-u-v-ɐ	shh-u-v-ahh
Lake	layu-	l-ah-juh-u
Sea	mar-	m-ah-er
Salt	sal--	s-ah-l
Earth	't-ɛ-kɐ	t-eh-rr-ahh
Fog	kɛlizẽj---	k-ahh-l-e-gzah-nasal_diphthong_portuguese2
Fog-Nebula	n-ɛ-vw-ɐ	n-eh-v-w-ahh
Fog-Tenebras	tr---ɛv-ɐʃ	t-er-eh-v-ahh-shh
Fog-Fumata	fumasɐ	f-u-m-ah-s-ahh
Sky	s-ɛw--	s-eh-w

Appendix 1 - Prior Segment Frequencies

Wind	'v-ẽ-tu-	v-ehn-t-u
Fire-Focus	f-oɣu-	f-oh-juh-u
Year	ɐ-nu-	ahh-n-u
Name-Nomen	nomi-	n-oh-m-eee
Tongue	'li-gwɐ	l-een-g-w-ahh
ToDrink	biβ-er-	b-eee-bb-ay-er
ToEat	kum--er-	k-u-m-ay-er
ToEat-Manducare	mẽ-ʒ--ar-	m-ahn-gzah-ah-er
ToBite	m-urðer-	m-u-er-dd-ay-er
ToBite-Morsicare	mu-səgar-	m-u-s-aah-g-ah-r
ToSuck	sugar-	s-u-g-ah-er
ToSpit	ku-ʃpir	k-u-shh-p-e-er
ToKnow-Sapere	sɐb-er-	s-ahh-b-ay-er
ToKnow-Cognoscere	ku-ɲis-er-	k-u-VdPalatalNasal-eee-s-ay-er
ToThink	k-uʒitar-	k-u-gzah-e-t-ah-er
ToThink-Pensare	pẽ-sar-	p-ehn-s-ah-er
ToFear	timer-	t-eee-m-ay-er
ToFear-Tremere	trim-er-	t-er-eee-m-ay-er
ToSleep	d-urmīr-	d-u-er-m-e-er
ToLive	viver-	v-e-v-ay-er
ToDie	muker-	m-u-rr-ay-er
ToKill-Mactare	mɐ-tar-	m-ahh-t-ah-er
ToFight-Battuere	bɐ-t-er-	b-ahh-t-ay-er
ToHunt-Captiare	kɐ-s-ar-	k-ahh-s-ah-er
ToHit	pu-ʃar-	p-u-shh-ah-er
ToScratch	kɐ-er-	rr-ahh-ay-er
ToScratch-Rasare	kɐzar-	rr-ahh-zz-ah-er
ToScratch-Rasicare	kɐʃkar	rr-ahh-shh-k-ah-er
ToScratch-Coctiare	kusar	k-u-s-ah-er
ToSwim	n-ɐðar-	n-ahh-dd-ah-er
ToSwim-Navigare	nɐviɣar-	n-ahh-v-eee-juh-ah-er
ToFly	vw-ar-	v-w-ah-er
ToWalk	kɐmijnar-	k-ahh-m-e-VdPalatalNasal-ah-er
ToWalk-Ambitare	ẽ-d--ar-	ahn-d-ah-er
ToCome	v--ir-	v-e-er
ToLieAsInABed	iftẽ-der-	e-shh-t-ehn-d-ay-er
ToLieAsInABed-lacere	ʒɐ-zer-	gzah-ahh-zz-ay-er
ToSit	s-e--r-	s-ay-er
ToSit-Sedentare	sẽ---tar-	s-ehn-t-ah-er
ToStand	iftar-	eee-shh-t-ah-er
ToStand-Levare	livar-	l-eee-v-ah-er
ToStand-Altiare	-aɫs-ar-	ah-ssha-s-ah-er
ToTurnIntransitive	turnar-	t-u-er-n-ah-er
ToTurnIntransitive-Gyrare	ʒirar-	gzah-e-er-ah-er
ToTurnIntransitive	ʒirar-	gzah-e-er-ah-er
-AncestralClass3		
ToTurnIntransitive-Torquere	turser-	t-u-r-s-ay-r

Appendix 1 - Prior Segment Frequencies

ToFall	k-ɐ-ir-	k-ahh-e-er
ToFall-Tumbare	tõ-bar	t-on-b-ah-er
ToHold	te---r-	t-ay-er
ToHold-Segurar	siɣurar	s-eee-juh-u-er-ah-er
ToSqueeze	i-ʃprəm-er-	e-shh-p-r-aah-m-ay-r
ToSqueeze-Serrere	sə-rar-	s-aah-VIUvularTrill-ah-er
ToSqueeze-Serare	si-ɸar-	s-eee-rr-ah-er
ToSqueeze-Appetorare	ɐ-pi-r-tar-	ahh-p-eee-er-t-ah-er
ToSqueeze-Stringere	əʃtriŋir-	aah-shh-t-r-een-gzah-e-r
ToRub-Exfricare	ɪfrɪɣar	eee-shh-f-er-eee-juh-ah-er
ToWash	lɐvar-	l-ahh-v-ah-er
ToWipe-Exsucare	ẽ-ʃ-uy-ar-	ehn-shh-u-juh-ah-er
ToWipe-Limpidare	li-p--ar-	l-een-p-ah-er
ToPull	tɪrar-	t-e-er-ah-er
ToPull-Pulsare	pu-ʃar-	p-u-shh-ah-er
ToPull-Trahere	trɛzer-	t-er-ahh-zz-ay-er
ToThrow	ʒɛjtar	gzah-ej_diphthong-t-ah-er
ToThrow-Lanceare	lɛ-s-ar-	l-ahn-s-ah-er
ToTie-Aptare	ɐ-tar-	ahh-t-ah-er
ToSew	ku--z-er-	k-u-zz-ay-er
ToCount	kõ---tar-	k-on-t-ah-er
ToCount-Enumerare	enumerar-	ay-n-u-m-ay-er-ah-er
ToSay	diz-er	d-e-zz-ay-er
ToSing-AncestralClass	kẽ-tar-	k-ahn-t-ah-er
ToPlay-Jiocare	ʒu-ɣar-	gzah-u-juh-ah-er
ToFloat	flu-tuar-	f-l-u-t-u-ah-er
ToFlow	flwir-	f-l-w-e-er
ToFlow-Colare	ku-ar-	k-u-ah-er
ToFlow-Excurrere	i-ʃku-rɛr-	e-shh-k-u-VIUvularTrill-ay-er
ToFlow-Currere	ku-ɸer-	k-u-rr-ay-er
ToFreeze	ʒɪlar-	gzah-eee-l-ah-er
ToBurn-Cremare	k-ejmaɛ	k-ej_diphthong-m-ah-rr-ay
ToBurn-Ardere	ɐrder-	ahh-er-d-ay-er
ToBurn-Flagrare	flagrar-	f-l-ah-g-er-ah-er
ToBurn-Incendere	ĩ-sẽ-djar-	een-s-ehn-d-jg-ah-er
All-Totus	to-ðu-	t-oh-dd-u
Many	mũj-tu	m-ooo-jn-t-u
Many-Tantus	tẽ-tu-	t-ahn-t-u
Some	aɫgũ--	ah-ssha-g-ooo
Few	powku	p-oh-w-k-u
Other	owt-ru	oh-w-t-er-u
Other-Alius	aɫ---	ah-ssha
Big-Grandem	grẽ-di-	g-er-ahn-d-eee
Long-Longum	lõ-gu-	l-on-g-u
Long-Largum	lɔrgu-	l-ah-er-g-u
Wide	latu-	l-ah-t-u
Wide-Amplum	ẽ-ʃ-u-	ahn-shh-u

Appendix 1 - Prior Segment Frequencies

Heavy	gravi-	g-er-ah-v-eee
Heavy-Lurdus	lerdo-	l-ay-er-d-oh
Heavy-Pesant	piza-ðu	p-eee-zz-ah-dd-u
Small-Pittinus	pikenu-	p-eee-k-ay-n-u
Short	kurtu-	k-u-er-t-u
Short-Brevis	'brɛvi-	b-er-eh-v-eee
Narrow-Strictus	iftɾ-ɐj--tu-	eee-shh-t-er-diphthong_portuguese-t-u
Thin	mi-u-ðu-	m-e-u-dd-u
Thin-Delicatus	dɛɫ-ɣaðu-	d-eh-ssha-juh-ah-dd-u
Thin-Subtilis	suʃiɥw--	s-u-ts-e-w
Green	ver-di-	v-ay-er-d-eee
One	ũ---	ooo
Two-Duos	d-ojʃ	d-oj_diphthong-shh
Two-Duas	duɐʃ	d-u-ahh-shh
Three	tr-eʃ	t-er-ay-shh
Four	kwa-t--ru	k-w-ah-t-er-u
Five	'sĩ-k-u	s-een-k-u
Here	-ɐ-k---i-	ahh-k-e
There	--la-	l-ah
There-Adlbi	ɐi	ahh-e
Who-Quem	k-ɐj--	k-nasal_diphthong_portuguese2
What	k-i-	k-eee
When-Quando	kwɛ̃-du	k-w-ahn-d-u
How-Quomodo	komu--	k-oh-m-u
Not	nɛ̃w	n-ahn-wh
Not-Nec	nɛ̃j	n-nasal_diphthong_portuguese2
And-Et	i-	e

Catalan

Cognate	IPA	Sounds
I	ʒ--ɔ	gzah-euh
YouPlural	bu-s	b-u-s
YouSingular	tu	t-u
YouSingular	voste-	v-oh-s-t-ay
-VostramMercedem		
Woman	fe-m-br-a	f-ay-m-b-er-ah
Woman-Mulier	muʎ-e---	m-u-yuh-ay
Woman-Domina	dɔ--nə	d-euh-n-aah
ManHumanBeing	-ɔmə---	euh-m-aah
Child-Ninnus	nen-	n-ay-n
Wife	əspɔ-zə	aah-s-p-euh-zz-aah
Wife-Mulier	muʎ-e-	m-u-yuh-ay
Husband	marit--	m-ah-er-e-t
Husband-Sponsus	əspɔ-s--	aah-s-p-euh-s
Mother	ma-rə-	m-ah-er-aah
Fish-Piskem	peʃ---	p-ay-shh
Bird-Avem	aw--	ah-w

Appendix 1 - Prior Segment Frequencies

Bird-Avicellum	--u--s-e-ʌ--	u-s-ay-yuh
Fruit	fruj-t--	f-er-u-jg-t
Flower	flɔ---	f-l-euh
Nose	nas	n-ah-s
Nose-Nares	naːrɪs-	n-A-r-NearCloseFrontUnrounded-s
Sun	sɔl--	s-euh-l
Moon	ʌunə	yuh-u-n-aah
Star	əst-ɛ-l-	aah-s-t-eh-l
Water	ˈaj-ɣwə	aj_diphthong-juh-w-aah
Rain	plu-ɜ-ə	p-l-u-gzah-aah
Lake	ʌak--	yuh-ah-k
Sea	mar-	m-ah-r
Salt	sal--	s-ah-l
Earth	ˈt-ɛ-rə	t-eh-r-aah
Fog-Nebula	n-e--wɫə	n-ay-w-l-aah
Fog-Tenebras	t-ən-ebrəs	t-aah-n-ay-b-er-aah-s
Sky	s-ɛl--	s-eh-l
Wind	b-en---	b-ay-n
Fire-Focus	f-ɔk--	f-euh-k
Year	a-ɲ--	ah-VdPalatalNasal
Name-Nomen	nɔm--	n-euh-m
ToDrink	bɛw--rə	b-eh-w-er-aah
ToEat-Manducare	mənɜ--a--	m-aah-VdPalatalNasal-gzah-ah
ToBite-Morsicare	mu-səɣa--	m-u-s-aah-juh-ah
ToSpit-Exconspuere	əsku-pi	aah-s-k-u-p-e
ToKnow-Sapere	səβ-ɛ--	s-aah-bb-eh
ToKnow-Cognoscere	ku-nɛʃ-ə--	k-u-n-eh-shh-aah
ToThink	k-u-jda--	k-u-jg-d-ah
ToThink-Pensare	pənsa--	p-aah-n-s-ah
ToFear	temə--	t-ay-m-aah
ToSleep	d-urmi--	d-u-r-m-e
ToLive	biw-rə	b-e-w-er-aah
ToDie	muri--	m-u-er-e
ToKill	n-əga--	n-aah-g-ah
ToKill-Mactare	mə-ta--	m-aah-t-ah
ToKill-Occidere	uksi----	u-k-s-e
ToFight	pu-ɲa--	p-u-VdPalatalNasal-ah
ToFight-Battuere	ba-t--rə	b-ah-t-er-aah
ToHunt-Captiare	kə-s-a--	k-aah-s-ah
ToScratch	raw-rə	r-ah-w-er-aah
ToScratch-Rasare	rəza--	r-aah-zz-ah
ToScratch-Rasicare	rəska-	r-aah-s-k-ah
ToSwim	n-əda--	n-aah-d-ah
ToSwim-Navigare	nəbəga--	n-aah-b-aah-g-ah
ToFly	bula--	b-u-l-ah
ToWalk	kəmina--	k-aah-m-e-n-ah
ToCome	bəni--	b-aah-n-e

Appendix 1 - Prior Segment Frequencies

ToLieAsInABed	ə-stend-rə	aah-s-t-ay-n-d-er-aah
ToLieAsInABed-lacere	ʒaw--rə	gzah-ah-w-er-aah
ToStand	əsta--	aah-s-t-ah
ToStand-Levare	ʎəba--	yuh-aah-b-ah
ToStand-Altiare	-əls-a--	aah-l-s-ah
ToTurnIntransitive	turna-	t-u-r-n-ah
ToTurnIntransitive-Gyrare	ʒira--	gzah-e-er-ah
ToTurnIntransitive	bira--	b-e-er-ah
-AncestralClass3		
ToTurnIntransitive-Torquere	tərsə--	t-euh-r-s-aah
ToFall	k-aw-rə	k-ah-w-r-aah
ToFall-Tumbare	tumba-	t-u-m-b-ah
ToHold	tən-i--	t-aah-n-e
ToSqueeze	ə-sprem-ə--	aah-s-p-er-ay-m-aah
ToSqueeze-Serrere	sə-ra--	s-aah-r-ah
ToSqueeze-Stringere	əstreɲə	aah-s-t-er-eh-VdPalatalNasal-aah
ToRub	frəga--	f-er-aah-g-ah
ToRub-Frictiare	frəsa-	f-er-aah-s-ah
ToWash	ʎəba--	yuh-aah-b-ah
ToWipe-Extergere	ə-stərʒi--	aah-s-t-aah-r-gzah-e
ToWipe-Exsucare	ə-ʃ-uga--	aah-shh-u-g-ah
ToPull	tira--	t-e-er-ah
ToPull-Trahere	trəw-rə	t-er-eh-w-er-aah
ToPush	əmpɛɲ-ə--	aah-m-p-eh-VdPalatalNasal-aah
ToThrow	xita	xha-e-t-ah
ToThrow-Lanceare	ʎəns-a--	yuh-aah-n-s-ah
ToTie	ʎiya--	yuh-e-juh-ah
ToSew	ku--z-i--	k-u-zz-e
ToCount	kum--ta--	k-u-m-t-ah
ToCount-Enumerare	enumera--	ay-n-u-m-ay-er-ah
ToSay	di	d-e
ToSing-AncestralClass	kənta--	k-aah-n-t-ah
ToPlay-Jiocare	ʒu-ga--	gzah-u-g-ah
ToFloat	fluktua--	f-l-u-k-t-u-ah
ToFlow	flui--	f-l-u-e
ToFlow-Colare	kula--	k-u-ssha-ah
ToFlow-Excurrere	ə-sko-rə--	aah-s-k-oh-r-aah
ToFlow-Currere	ko-rə--	k-oh-r-aah
ToFreeze	ʒəla--	gzah-aah-l-ah
ToFreeze-Glaciare	glə-s-a--	g-l-aah-s-ah
ToBurn-Cremare	krəma--	k-r-aah-m-ah
ToBurn-Flammare	flama--	f-ssha-ah-m-ah
ToBurn-Incendere	ənsend--rə	aah-n-s-ay-n-d-er-aah
All-Totus	to-t--	t-oh-t
Many	mol---	m-oh-l
Many-Tantus	tant--	t-ah-n-t
Some	əlgu--	aah-l-g-u

Appendix 1 - Prior Segment Frequencies

Few	pək--	p-euh-k
Other	alt-rə	ah-l-t-er-aah
Big-Grandem	gran---	j-r-ah-n
Long-Longum	ʌo-ŋ---	yuh-oh-nya
Long-Largum	ʌark--	yuh-ah-er-k
Wide-Amplum	amplə-	ah-m-p-l-aah
Heavy	grew--	g-er-ay-w
Heavy-Pesant	pəza-t-	p-aah-zz-ah-t
Small	pətit--	p-aah-t-e-t
Short	kurt--	k-u-er-t
Short-Brevis	brew--	b-er-ay-w
Narrow-Strictus	əstr-ε--t--	aah-s-t-er-eh-t
Thin	mənu-t--	m-aah-n-u-t
Thin-Delicatus	dəlikat--	d-aah-l-e-k-ah-t
Thin-Subtilis	suptil--	s-u-p-t-e-l
Green	vɛr-t--	v-eh-er-t
One	'un--	u-n
Two-Duos	d-os	d-oh-s
Three	'tr-əs	t-r-eh-s
Four	kwa-t--rə	k-w-ah-t-er-aah
Five	'sɪŋk--	s-e-nya-k
Here	-a-k---i-	ah-k-e
There	ə-ʌa-	aah-yuh-ah
Who-Qui	k-i-	k-e
What	k-ε-	k-eh
When-Quando	kwan	k-w-ah-n
How-Quomodo	kəm---	k-euh-m
Not	no-	n-oh
Not-Nec	ni-	n-e
And-Et	i-	e

Walloon

Cognate	IPA	Sounds
I	dʒɪ--	VdPalatoAlveolarSibilant -NearCloseFrontUnrounded
We	no--	n-oh
YouPlural	vo-s	v-oh-s
YouSingular	ty	t-eeh
Woman	fœ-m-----	f-OpenMidNearFrontRounded-m
Woman-Domina	dœm---	d-OpenMidNearFrontRounded-m
ManHumanBeing	-ɔm----	euh-m
Child	ε-fǣ----	eh-f-an
Mother	me-r--	m-ay-VIUvularTrill
Fish-Pescion	p-εhõ	p-eh-h-on
Bird-Avicellum	--u:--h-ε:----	U-h-Eh
Fruit	fry-----	f-VIUvularTrill-eeh
Flower	flø:ʁ--	f-l-o-rr

Appendix 1 - Prior Segment Frequencies

Nose	ne---	n-ay
Sun	sɔlo-	s-euh-l-euh
Moon	løn-	l-uu-n
Star	-st-ø:-l-	s-t-o-l
Water	ε:--w-	Eh-w
Rain	plu:-ɣ--	p-l-U-rr
Lake	lak--	l-ah-k
Sea	meɣ-	m-ay-rr
Salt	se---	s-ay
Earth	t-ε:-ɣ-	t-Eh-rr
Sky	s-i:ɣ--	s-E-rr
Wind	v-ẽ----	v-ehn
Fire-Focus	f-ø:---	f-o
Year	ã----	an
Name-Nomen	nõ---	n-on
Tongue	lẽu-----	l-eu_nasalized_diphthong
ToDrink	b---ø:ɣ-	b-o-rr
ToEat-Manducare	maɲ---i:--	m-ah-VdPalatalNasal-E
ToSuck	sysi:--	s-eeh-s-E
ToKnow-Sapere	sav-ø:R-	s-ah-v-o-VIUvularTrill
ToKnow-Cognoscere	ki-nəh----	k-e-n-euh-h
ToThink-Pensare	pẽ-se--	p-ehnn-s-ay
ToSleep	dwaɣmi--	d-w-ah-rr-m-e
ToDie	mɔri--	m-euh-VIUvularTrill-e
ToKill-Tutari	tuw-e--	t-u-w-ay
ToFight-Battuere	bat-e--	b-ah-t-ay
ToHunt-Captiare	ʃɛ-s-i:--	ts-eh-s-E
ToSwim-Navigare	ne--dʒi:--	n-eh-VdPalatoAlveolarSibilant-E
ToFly	vɔle--	v-euh-l-ay
ToWalk	ʃimine--	ts-e-m-e-n-ay
ToWalk-Marcher	ma:Rʃi:	m-A-VIUvularTrill-ts-E
ToCome	vini--	v-e-n-e
ToLieAsInABed-lacere	dʒe--re	VdPalatoAlveolarSibilant-ay-r-ay
ToStand	εs----	eh-s
ToStand-Levare	lɔve--	l-aah-v-ay
ToStand-Altiare	hɔ:-s-i:	h-LongOpenMidBackRounded-s-E
ToTurnIntransitive	tu:rne-	t-U-r-n-ay
ToTurnIntransitive	viɣe--	v-e-rr-ay
-AncestralClass3		
ToFall	ʃf-ε:--R-	ts-Eh-VIUvularTrill
ToFall-Tumbare	tum-e-	t-u-m-ay
ToHold	tin-i--	t-e-n-e
ToSqueeze-Serare	sɛ-re--	s-eh-VIUvularTrill-ay
ToSqueeze-Stringere	stringe	s-t-r-e-n-j-ay
ToRub	froj----	f-r-oj_diphthong
ToRub-Frictare	fɔte--	f-rr-oh-t-ay
ToWash	lave--	l-ah-v-ay

Appendix 1 - Prior Segment Frequencies

ToWipe-Exsucare	--s-u-we--	s-u-w-ay
ToPull	tire--	t-e-r-ay
ToPull-Pulsare	pu:si:--	p-U-s-E
ToThrow	dʒete	VdPalatoAlveolarSibilant-eh-t-ay
ToThrow-Lanceare	lanc-i:-	l-ah-n-tya-E
ToTie	loji:--	l-euh-jg-E
ToSew	kø:--z----	k-o-zz
ToCount	kõ--te--	k-on-t-ay
ToSay	di:--ʁ	d-E-rr
ToSing-AncestralClass	fʃã-te--	ts-an-t-ay
ToPlay-Jiocare	dʒuw-e--	VdPalatoAlveolarSibilant-u-w-ay
ToFlow-Colare	kole--	k-euh-l-ay
ToFreeze	dʒale--	VdPalatoAlveolarSibilant-ah-l-ay
ToBurn-Brojan	bʁu:le--	b-rr-U-l-ay
All-Totus	tɔ----	t-euh
Few	põ---	p-on
Other	õ-t---	on-t
Big-Grandem	gʁã---	j-rr-an
Long-Longum	lõ-----	l-on
Heavy	grav--	j-r-ah-v
Small	pi-ti---	p-e-t-e
Short	ku:ʁ---	k-U-rr
Short-Brevis	bʁef--	b-rr-ay-f
Narrow-Strictus	-stʁ-ø:-----	s-t-rr-o
Thin	minu----	m-e-n-u
Thin-Subtilis	su:ti---	s-U-t-e
Green	vɛʁ----	v-eh-rr
One	õ---	on
Two-Duos	d-ø:-	d-o
Three	tr-ø:-	t-r-o
Four	kwa-t----	k-w-ah-t
Five	sẽ-k--	s-ehn-k
There	--la-	l-ah
Who-Qui	k-i:-	k-E
What	kwe:-	k-w-Eh
When-Quando	kwand	k-w-ah-n-d
How-Quomodo	kõmẽ--	k-euh-m-ehnn
Not-Nec	nẽ-	n-ehn
And-Et	ɛ-	eh

Friulian

Cognate	IPA	Sounds
I	j--o	jg-oh
We	no:--	n-O
YouPlural	vo:--	v-O
YouSingular	tu	t-u
Woman	fɛ-mi-n-ɛ	f-eh-m-e-n-eh

Appendix 1 - Prior Segment Frequencies

Woman-Mulier	mu--i:r--	m-u-E-r
Woman-Domina	dɔ--ne	d-euh-n-ay
ManHumanBeing	-ɔm----	euh-m
Wife-Mulier	mu-i:r-	m-u-E-r
Husband	mari:t--	m-ah-r-E-t
Husband-Sponsus	-spo:-s--	s-p-O-s
Mother	mɔ-ri-	m-OpenBackRounded-r-e
Fish-Piskem	pɛs---	p-eh-s
Bird-Avicellum	--u--ʃʃɛ-l--	u-ts-jg-eh-l
Fruit	fru--t--	f-r-u-t
Flower	flo:r--	f-l-O-r
Nose	na:s--	n-A-s
Sun-Soliculus	sore--li-	s-oh-r-ay-l-e
Moon	lune	l-u-n-ay
Star	-st-ɛ-le	s-t-eh-l-ay
Water	a-g-e	ah-j-ay
Rain	plo--je	p-l-oh-jg-ay
Lake	la:t--	l-A-t
Sea	ma:r-	m-A-r
Salt	sa:l--	s-A-l
Earth	tʃɛ-re	t-jg-eh-r-ay
Fog-Fumata	fumate	f-u-m-ah-t-ay
Sky	ʃ-i:l--	ts-E-l
Wind	'v-int--	v-e-n-t
Fire-Focus	f-u:k--	f-U-k
Year	a-ŋ--	ah-nya
Name-Nomen	nɔŋ--	n-euh-nya
Tongue	'leng-ɛ	l-eh-n-j-eh
ToDrink	bevi--	b-ay-v-e
ToEat-Manducare	maŋj--a:--	m-ah-nya-VdPalatalStop-A
ToBite	mwardi--	m-w-ah-r-d-e
ToSuck	cuca:--	tya-u-tya-A
ToSpit-Sputare	spuda:--	s-p-u-d-A
ToKnow-Sapere	sav-e:--	s-ah-v-ai
ToKnow-Cognoscere	ko-ɲos-i--	k-oh-VdPalatalNasal-oh-s-e
ToThink-Pensare	peɲsa:--	p-ay-nya-s-A
ToFear	temi--	t-ay-m-e
ToFear-Tremere	trim-a:--	t-r-e-m-A
ToSleep	d-urmi:--	d-u-r-m-E
ToLive	vivi--	v-e-v-e
ToDie	muri:--	m-u-r-E
ToKill-Mactare	matʃ-a:--	m-ah-VlAlveoloPalatalSibilantAffricate-A
ToFight-Battuere	bat-i--	b-ah-t-e
ToHunt-Captiare	ca-ʃ-a:--	tya-ah-ts-A
ToHit	pulsa:-	p-u-l-s-A
ToScratch	rada:--	r-ah-d-A
ToScratch-Rasare	rasa:--	r-ah-s-A

Appendix 1 - Prior Segment Frequencies

ToSwim	n-ada:--	n-ah-d-A
ToSwim-Navigare	naviga:--	n-ah-v-e-j-A
ToFly-Exvolare	zvola:--	zz-v-oh-l-A
ToWalk	ffamina--	ts-jg-ah-m-e-n-ah
ToCome	vipi:-	v-e-VdPalatalNasal-E
ToLieAsInABed-lacere	je-si--	jg-ay-s-e
ToSit-Sedentare	se--nta:--	s-ay-n-t-A
ToStand	-sta:--	s-t-A
ToStand-Levare	leva:--	l-ay-v-A
ToStand-Altiare	-altf-a:	ah-l-t-shh-A
ToTurnIntransitive	torna:--	t-oh-r-n-A
ToTurnIntransitive-Gyrare	džira:--	VdPalatoAlveolarSibilant-e-r-A
ToTurnIntransitive	džira:--	VdPalatoAlveolarSibilant-e-r-A
-AncestralClass3		
ToFall	ffjade--	ts-jg-ah-d-ay
ToHold	tinji--	t-e-n-jg-e
ToSqueeze	e-sprim-i--	ay-s-p-r-e-m-e
ToSqueeze-Stringere	strengi:--	s-t-r-eh-n-j-E
ToRub	fre-a--	f-r-ay-ah
ToWash	lava:--	l-ah-v-A
ToWipe-Exsucare	--s-u-ja:--	s-u-jg-A
ToPull	tira:--	t-e-r-A
ToPull-Pulsare	pulsa:--	p-u-l-s-A
ToPull-Trahere	traj---	t-r-aj_diphthong
ToThrow-Lanceare	lanfja:--	l-ah-n-ts-A
ToTie	le-a:--	l-ay-A
ToSew	ku--zi---	k-u-zz-e
ToCount	kon--ta:--	k-oh-n-t-A
ToSay	di:	d-E
ToSing-AncestralClass	canta:--	tya-ah-n-t-A
ToPlay-Jiocare	džuj-a:--	VdPalatoAlveolarSibilant-u-jg-A
ToFlow-Excurrere	--sko-ri:--	s-k-oh-r-E
ToFlow-Currere	ko-ri--	k-oh-r-e
ToFreeze-Glaciare	gla-f-a:--	j-l-ah-ts-A
ToBurn-Brojan	bruza:--	b-r-u-zz-A
All-Totus	du-t--	d-u-t
Many	molc--	m-oh-l-tya
Many-Tantus	tanc--	t-ah-n-tya
Few	po:k-	p-O-k
Other	alt-ri	ah-l-t-r-e
Big-Grandem	grant--	j-r-ah-n-t
Long-Longum	lunk--	l-u-n-k
Long-Largum	lark--	l-ah-r-k
Heavy	grevi-	j-r-eh-v-e
Heavy-Pesant	pezant-	p-ay-zz-ah-n-t
Small-Pitulus	pi-ful--	p-e-ts-u-l
Short	kurt--	k-u-r-t

Appendix 1 - Prior Segment Frequencies

Narrow-Strictus	-str-ε--t--	s-t-r-eh-t
Thin	minu:-t--	m-e-n-U-t
Thin-Subtilis	suti:l--	s-u-t-E-l
Green	ver-t--	v-eh-r-t
One	uŋ--	u-nya
Two-Duos	d-oj-	d-oj_diphthong
Three	'tr-e:-	t-r-ai
Four	kwa-t--ri	k-w-ah-t-r-e
Five	'fɪŋk--	ts-e-nya-k
Here	-a-k---i-	ah-k-e
Who-Qui	kwi-	k-w-e
What	fɛ-e-	ts-ay
When-Quando	kwant	k-w-ah-n-t
How-Quomodo	fɛmu:t-	ts-ay-m-U-t
Not	no-	n-oh
And-Et	e-	ay

Romanian

Cognate	IPA	Sounds
I	je-w	jg-ay-w
We	noj-	n-oj_diphthong
YouPlural	voj-	v-oj_diphthong
YouSingular	tu	t-u
Woman	fe-me--je	f-ay-m-ay-jg-ay
Woman-Mulier	mu-jere-	m-u-jg-ay-r-ay
Woman-Domina	doam-nə	d-midback_diphthong_romanian-m-n-aah
ManHumanBeing	-om----	oh-m
Wife-Mulier	mu-jere	m-u-jg-ay-r-ay
Husband	mərɪt--	m-aah-r-e-t
Husband-Socius	sɔts---	s-oh-VlAlveolarSibilantAffricate
Fish-Piskem	pefte-	p-ay-shh-t-ay
Bird-Passerem	pa-səre-	p-ah-s-aah-er-ay
Fruit	fru-kt--	f-r-u-k-t
Flower	floare-	f-l-midback_diphthong_romanian-er-ay
Nose	nas--	n-ah-s
Sun	soare-	s-midback_diphthong_romanian-er-ay
Moon	lunə	l-u-n-aah
Star	-st-ea---	s-t-midfront_diphthong_romanian
Water	a-p-ə	ah-p-aah
Rain	ploa--je	p-l-midback_diphthong_romanian-jg-ay
Lake	lak--	l-ah-k
Sea	mare	m-ah-r-ay
Salt	sare-	s-ah-r-ay
Earth	ts-a-rə	VlAlveolarSibilantAffricate-ah-r-aah
Fog-Nebula	negurə	n-ay-g-u-r-aah
Fog-Caecia	fɛaɪf-ə	ts-midfront_diphthong_romanian-ts-aah
Sky	fɛ-er--	ts-ay-er

Appendix 1 - Prior Segment Frequencies

Wind	v-int--	v-eee-n-t
Fire-Focus	f-ok--	f-oh-k
Year	an---	ah-n
Name-Nomen	nume-	n-u-m-ay
Tongue	'limb-ə	l-e-m-b-aah
ToDrink	b---ea--	b-midfront_diphthong_romanian
ToEat-Manducare	min--ka--	m-eee-n-k-ah
ToBite-Morsicare	murseka--	m-u-r-s-ay-k-ah
ToSuck	sudʒe--	s-u-VdPalatoAlveolarSibilant-ay
ToSpit-Exconspuere	-skujpa	s-k-u-jg-p-ah
ToKnow	ʃti--	shh-t-e
ToKnow-Cognoscere	ku-noaʃte--	k-u-n-midback_diphthong_romanian-shh-t-ay
ToThink	k-udʒeta--	k-u-VdPalatoAlveolarSibilant-ay-t-ah
ToThink-Pensare	pə-sa--	p-aah-s-ah
ToFear	teme--	t-ay-m-ay
ToSleep	d-ormi--	d-oh-r-m-e
ToLive	vi-a--	v-e-ah
ToDie	muri--	m-u-r-e
ToKill	n-eka--	n-ay-k-ah
ToKill-Occidere	u-ʃide--	u-ts-e-d-ay
ToFight-Battuere	bat-e--	b-ah-t-ay
ToHit	pulsa--	p-u-l-s-ah
ToScratch	rade--	r-ah-d-ay
ToSwim-Navigare	naviga--	n-ah-v-e-g-ah
ToFly-Exvolare	zbura--	zz-b-u-er-ah
ToWalk-Mergere	merdʒe--	m-ay-r-VdPalatoAlveolarSibilant-ay
ToCome	veni--	v-ay-n-e
ToLieAsInABed	ekstinde--	ay-k-s-t-e-n-d-ay
ToLieAsInABed-lacere	zə-ʃea--	zz-aah-ts-midfront_diphthong_romanian
ToSit	ʃ-eɖea--	shh-ay-d-midfront_diphthong_romanian
ToStand	-sta--	s-t-ah
ToStand-Levare	l-ua--	l-u-ah
ToTurnIntransitive	turna--	t-u-r-n-ah
ToTurnIntransitive-Torquere	toaʃte--	t-midback_diphthong_romanian-r-ts-ay
ToFall	kəɖea--	k-aah-d-midfront_diphthong_romanian
ToFall-Tumbare	tumba-	t-u-m-b-ah
ToHold	tsin-e--	VIAlveolarSibilantAffricate-e-n-ay
ToSqueeze	-sk-reme--	s-k-r-ay-m-ay
ToSqueeze-Stringere	strindʒe--	s-t-r-eee-n-VdPalatoAlveolarSibilant-ay
ToRub	freka--	f-r-ay-k-ah
ToWash	la----	l-ah
ToWipe-Extergere	--ʃterdʒe--	shh-t-ay-r-VdPalatoAlveolarSibilant-ay
ToWipe-Exsucare	u-s--k-a--	u-s-k-ah
ToPull-Pulsare	pulsa--	p-u-l-s-ah
ToPull-Trahere	tradʒe--	t-r-ah-VdPalatoAlveolarSibilant-ay
ToPush	impindʒe--	eee-m-p-e-n-VdPalatoAlveolarSibilant-ay
ToThrow-Eruncare	a-runʃka	ah-er-u-nya-k-ah

Appendix 1 - Prior Segment Frequencies

ToTie	lega--	l-ay-j-ah
ToSew	coḡa--s-e--	tya-midback_diphthong_romanian-s-ay
ToCount-Enumerare	-numara--	n-u-m-ah-r-ah
ToSay	ziṭṭe	zz-e-ts-ay
ToSay-Exponere	--spune	s-p-u-n-ay
ToSing-AncestralClass	kinta--	k-eee-n-t-ah
ToPlay-Jiocare	zu-ka--	gzah-u-k-ah
ToFloat	fluctua--	f-l-u-tya-t-u-ah
ToFlow-Excurrere	--skurdze--	s-k-u-er-VdPalatoAlveolarSibilant-ay
ToFlow-Currere	kurdze--	k-u-er-VdPalatoAlveolarSibilant-ay
ToFreeze-Inglaciare	ing-ets-a--	eee-n-j-ay-VlAlveolarSibilantAffricate-ah
ToBurn-Ardere	arde--	ah-er-d-ay
ToBurn-Incendere	inṭindze--	eee-n-ts-e-n-d-gzah-ay
ToBurn-AncestralClass8	ustura--	u-s-t-u-r-ah
All-Totus	to-t--	t-oh-t
Many	mult--	m-u-l-t
Other	alt---	ah-l-t
Big-Majjorem	ma---re	m-ah-er-ay
Long-Longum	lung--	l-u-n-j
Long-Largum	larg--	l-ah-r-j
Wide	lat--	l-ah-t
Heavy	grew--	j-er-ay-w
Small-Pittinus	pu-tsin--	p-u-VlAlveolarSibilantAffricate-e-n
Narrow	ingust--	eee-nya-j-u-s-t
Narrow-Strictus	-str-im-t--	s-t-r-eee-m-t
Thin	mərunt--	m-aah-r-u-n-t
Thin-Subtilis	subtsire-	s-u-b-VlAlveolarSibilantAffricate-e-r-ay
Green	ver-de-	v-ay-er-d-ay
One	unu-	u-n-u
Two-Duos	d-oj-	d-oj_diphthong
Two-Duae	dowə	d-oh-w-aah
Three	tr-ej-	t-r-ej_diphthong
Four	p-a-t--ru	p-ah-t-r-u
Five	ṭinṭi--	ts-e-n-ts
There	--la-	l-ah
Who-Quem	ṭine	VlAlveoloPalatalSibilantAffricate-e-n-ay
What	ṭe-	ts-ay
When-Quando	k-ind	k-eee-n-d
How-Quomodo	kum---	k-u-m
Not	nu-	n-u
And-Et	e-	ay
And-Si	ṣi-	shh-e

Pulmonic Consonants

Manner	Bilabial	Labial-Velar	Labio-Dental	Linguo-Labia	Dental	Alveolar	Post-Alveola	Retroflex	Palatal	Velar	Uvular	Pharyngeal Epiglottal	Glottal
Nasal	m					n			ɲ	ŋ			

Appendix 1 - Prior Segment Frequencies

Stop	p	b	k ^w	g ^w				t	d			c	ɟ	k	g			
Sibilant, Fricative								s	z	ʃ	ʒ							
Fricative	β			f	v		θ	ð					j	x	ɣ	ʁ		h
Approximant											ɭ		j					
Tap/Flap								r										
Trill								r								R		
Lateral, Fricative																		
Lateral, Approximant								l					ɭ					
Lateral, Tap/Flap																		

Shaded areas denote articulations judged to be impossible. Where symbols appear in pairs, the one to the right represents a modally voiced consonant.

Non-Pulmonic Consonants

Manner	Bilabial	Labio-Dental	Velar	Uvular	Pharyngeal Epiglottal
Ejective, Stop					
Ejective, Fricative					
Ejective, Lateral, Fricative					
Tenuis, Click					
Nasal, Click					
Tenuis, Lateral, Click					
Implosive					

Shaded areas denote articulations judged to be impossible. Where symbols appear in pairs, the one to the right represents a modally voiced consonant.

Appendix 1 - Prior Segment Frequencies

Vowels

	Front	Near-Front	Central	Near-Back	Back
Close	i • y		ɨ		u
Near-close		ɪ			
Close-mid	e • ø		ə		o
Mid					
Open-mid		œ • ɛ			ɔ
Near-open			ɐ		
Open		a			ɒ • ɑ

Where symbols appear in pairs, the one to the right represents a rounded vowel.

Long Vowels

	Front	Near-Front	Central	Near-Back	Back
Close	iː				uː
Mid	eː				oː
Open-mid		ɛː			ɔː
Open	øː		aː		

Pulmonic Affricates

Manner	Bilabial	Labio-Dental	Alveolar	Alveolo-Pala	Palato-Alveo	Velar	Uvular	Pharyngeal Epiglottal	Glottal
Sibilant			ts	tʃ	tʃ				
Non-Sibilant									
Lateral									

Shaded areas denote articulations judged to be impossible.

Ejective Affricates

Manner	Bilabial	Labio-Dental	Pharyngeal Epiglottal	Glottal
Central				
Lateral				

Shaded areas denote articulations judged to be impossible.

Appendix 1 - Prior Segment Frequencies

Other Segments

e Close-mid Front Vocoid Vowel Continuant	g Velar Voiced Pulmonic Stop Occlusive
oː Mid Back Rounded Vocoid Long Vowel Continuant	ʒ Post-Alveolar Voiced Pulmonic Sibilant Fricative Strident Obstruent Continuant
ə Close-mid Central Vowel	j Palatal Voiced Pulmonic Fricative Obstruent Continuant
o Close-mid Back Rounded Vocoid Vowel Continuant	i Close Front Vocoid Vowel Continuant
w Labial-Velar Vocoid Semivowel Voiced Approximant Continuant	ɔ Open-mid Back Rounded Vocoid Vowel Continuant
dʒ Palato-Alveolar Voiced Sibilant Affricate	ɪ Near-close Near-Front Vowel
j Palatal Vocoid Semivowel Voiced Pulmonic Approximant Continuant	n Alveolar Voiced Pulmonic Nasal Occlusive
s Alveolar Pulmonic Sibilant Fricative Strident Obstruent Continuant	u Close Back Rounded Vocoid Vowel Continuant
ʃ Post-Alveolar Pulmonic Sibilant Fricative Strident Obstruent Continuant	oj Mid Front Vowel Diphthong
v Labio-Dental Voiced Pulmonic Fricative Strident Obstruent Continuant	b Bilabial Voiced Pulmonic Stop Occlusive
t Alveolar Pulmonic Stop Occlusive	uː Close Back Rounded Long Vowel
y Close Front Rounded Vocoid Vowel Continuant	d Alveolar Voiced Pulmonic Stop Occlusive
f Labio-Dental Pulmonic Fricative Strident Obstruent Continuant	eː Mid Front Vocoid Long Vowel Continuant
m Bilabial Voiced Pulmonic Nasal Occlusive	a Open Near-Front Vocoid Vowel Continuant
ɾ Alveolar Voiced Pulmonic Tap/Flap Rhotic Vibrant Liquid	ɐ Near-open Central Rounded Vowel
œ Open-mid Near-Front Rounded Vocoid Vowel Continuant	ɛ Open-mid Near-Front Vocoid Vowel Continuant
l Alveolar Vocoid Voiced Pulmonic Lateral Approximant Rhotic Liquid	r Alveolar Voiced Pulmonic Trill Rhotic Vibrant Liquid
x Velar Pulmonic Fricative Obstruent Continuant	ʎ Palatal Vocoid Voiced Pulmonic Lateral Approximant Rhotic Liquid
ʁ Uvular Voiced Pulmonic Fricative Rhotic Strident Obstruent Continuant Liquid	iː Close Front Vocoid Long Vowel Continuant
ɲ Palatal Voiced Pulmonic Nasal Occlusive	o Mid Front Vowel Diphthong
h Glottal Pulmonic Fricative	ẽj Mid Front Nasal Vowel Diphthong
õ Open-mid Back Rounded Nasal Vowel	ã Near-close Back Nasal Vowel
ĩ Close Front Nasal Vowel	ẽ Near-open Central Rounded Nasal Vowel

Appendix 1 - Prior Segment Frequencies

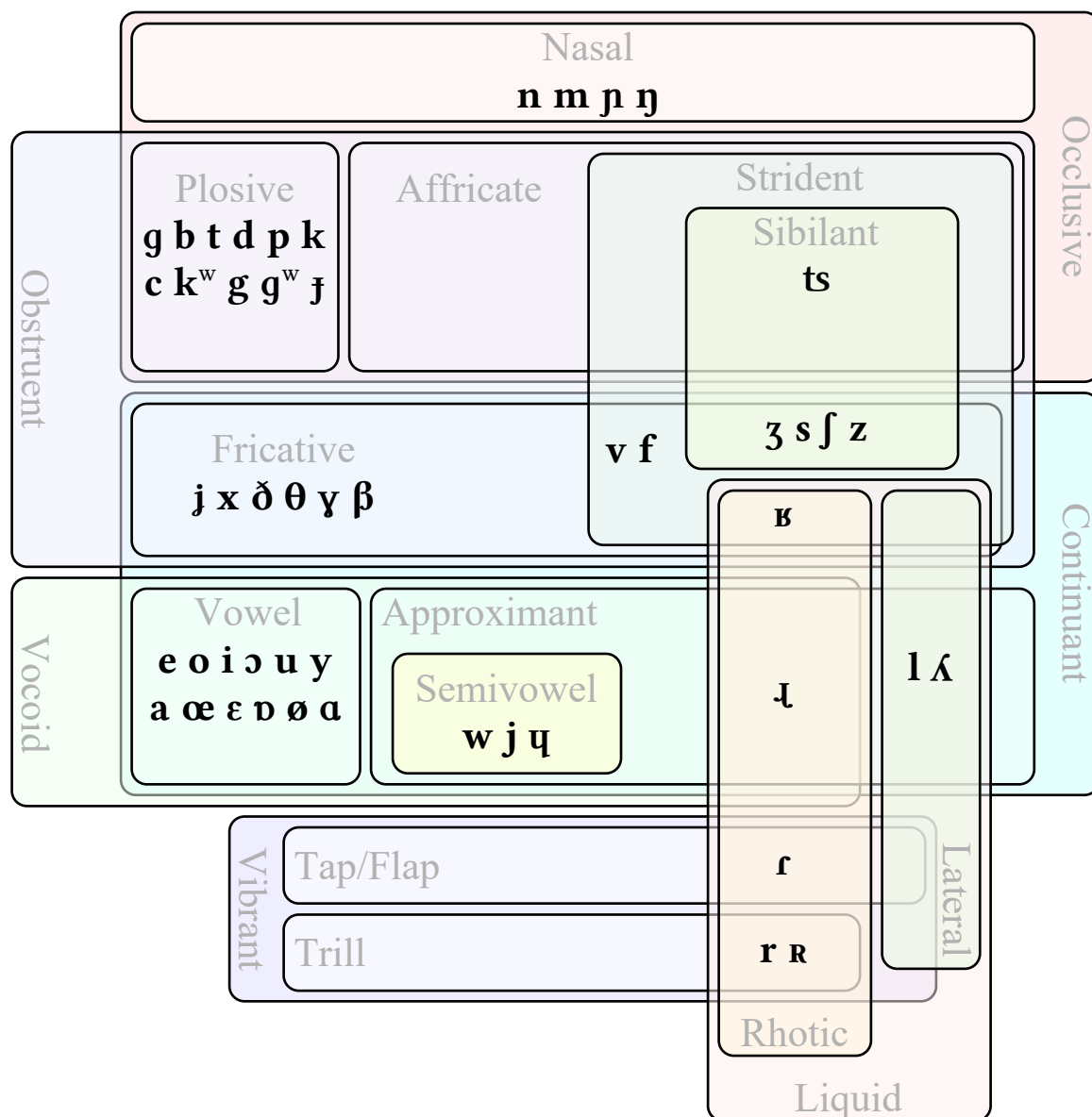
ɬ Palato-Alveolar Pulmonic Sibilant Affricate	ɪ Close Central Vowel
ã Near-open Central Nasal Vowel	p Bilabial Pulmonic Stop Occlusive
ʒ Alveolar Voiced Pulmonic Sibilant Fricative Strident Obstruent Continuant	ð Dental Voiced Pulmonic Fricative Obstruent Continuant
k Velar Pulmonic Stop Occlusive	ts Alveolar Pulmonic Sibilant Affricate Occlusive Strident
a: Open Central Vocoid Long Vowel Continuant	ẽĩ Mid Front Nasal Vowel Diphthong
ʀ Uvular Pulmonic Trill Rhotic Vibrant Liquid	ɒ Open Back Rounded Vocoid Vowel Continuant
θ Dental Pulmonic Fricative Obstruent Continuant	ej Mid Front Vowel Diphthong
ɛj Mid Front Vowel Diphthong	õ Close-mid Back Rounded Nasal Vowel
ɛ: Open-mid Near-Front Vocoid Long Vowel Continuant	ɥ Labial-Palatal Vocoid Semivowel Voiced Approximant Continuant
ø: Open Front Rounded Vocoid Long Vowel	ɭ Alveolar Voiced Velarized Pulmonic Lateral Approximant
c Palatal Pulmonic Stop Occlusive	ɛj Mid Front Vowel Diphthong
ø Close-mid Front Rounded Vocoid Vowel Continuant	ẽ Mid Front Vowel Diphthong
k Labial-Velar Pulmonic Stop Occlusive	ɣ Velar Voiced Pulmonic Fricative Obstruent Continuant
aj Mid Front Vowel Diphthong	g Velar Voiced Pulmonic Stop Occlusive
ẽ Close Back Nasal Vowel	ŋ Velar Voiced Pulmonic Nasal Occlusive
g Labial-Velar Voiced Pulmonic Stop Occlusive	ẽ Mid Front Nasal Vowel Diphthong
ɑ Open Back Vocoid Vowel Continuant	β Bilabial Voiced Pulmonic Fricative Obstruent Continuant
ʃ Palatal Voiced Pulmonic Stop Occlusive	ẽ Open-mid Near-Front Nasal Vowel
ɬ Alveolo-Palatal Pulmonic Sibilant Affricate	ɭ Retroflex Vocoid Voiced Pulmonic Approximant Rhotic Liquid
ɔ: Open-mid Back Rounded Vocoid Long Vowel Continuant	ũ Open Back Nasal Vowel
ĩ Palatal Nasal Approximant	œ Open-mid Near-Front Rounded Nasal Vowel Diphthong

Appendix 1 - Prior Segment Frequencies

a

Mid Front Vowel Diphthong

W̃ Labial-Velar Voiced Nasal Approximant



IPA Segments

Appendix 1 - Prior Segment Frequencies

ẽ	θ	β	ʈʃ
1EBD Close Back Nasal Vowel	03B8 Dental Pulmonic Fricative Obstruent Continuant	03B2 Bilabial Voiced Pulmonic Fricative Obstruent Continuant	02A7 Palato-Alveolar Pulmonic Sibilant Affricate
ts	ɖʒ	j	ʒ
02A6 Alveolar Pulmonic Sibilant Affricate Occlusive Strident	02A4 Palato-Alveolar Voiced Sibilant Affricate	029D Palatal Voiced Pulmonic Fricative Obstruent Continuant	0292 Post-Alveolar Voiced Pulmonic Sibilant Fricative Strident Obstruent Continuant
ʎ	ʃ	ʁ	ʀ
028E Palatal Vocoid Voiced Pulmonic Lateral Approximant Rhotic Liquid	0283 Post-Alveolar Pulmonic Sibilant Fricative Strident Obstruent Continuant	0281 Uvular Voiced Pulmonic Fricative Rhotic Strident Obstruent Continuant Liquid	0280 Uvular Pulmonic Trill Rhotic Vibrant Liquid
ɾ	ɭ	ɲ	ɭ̥
027E Alveolar Voiced Pulmonic Tap/Flap Rhotic Vibrant Liquid	027B Retroflex Vocoid Voiced Pulmonic Approximant Rhotic Liquid	0272 Palatal Voiced Pulmonic Nasal Occlusive	026B Alveolar Voiced Velarized Pulmonic Lateral Approximant
ɪ	ɨ	ɥ	ʏ
026A Near-close Near-Front Vowel	0268 Close Central Vowel	0265 Labial-Palatal Vocoid Semivowel Voiced Approximant Continuant	0263 Velar Voiced Pulmonic Fricative Obstruent Continuant

Appendix 1 - Prior Segment Frequencies

g	ɟ	ɛ	ə
0261 Velar Voiced Pulmonic Stop Occlusive	025F Palatal Voiced Pulmonic Stop Occlusive	025B Open-mid Near-Front Vocoid Vowel Continuant	0259 Close-mid Central Vowel
ɔ	ɒ	ɑ	ɐ
0254 Open-mid Back Rounded Vocoid Vowel Continuant	0252 Open Back Rounded Vocoid Vowel Continuant	0251 Open Back Vocoid Vowel Continuant	0250 Near-open Central Rounded Vowel
ũ	œ	ŋ	ĩ
0169 Open Back Nasal Vowel	0153 Open-mid Near-Front Rounded Vocoid Vowel Continuant	014B Velar Voiced Pulmonic Nasal Occlusive	0129 Close Front Nasal Vowel
ø	õ	ð	ã
00F8 Close-mid Front Rounded Vocoid Vowel Continuant	00F5 Close-mid Back Rounded Nasal Vowel	00F0 Dental Voiced Pulmonic Fricative Obstruent Continuant	00E3 Near-open Central Nasal Vowel
z	y	x	w
007A Alveolar Voiced Pulmonic Sibilant Fricative Strident Obstruent Continuant	0079 Close Front Rounded Vocoid Vowel Continuant	0078 Velar Pulmonic Fricative Obstruent Continuant	0077 Labial-Velar Vocoid Semivowel Voiced Approximant Continuant

Appendix 1 - Prior Segment Frequencies

v	u	t	s
0076 Labio-Dental Voiced Pulmonic Fricative Strident Obstruent Continuant	0075 Close Back Rounded Vocoid Vowel Continuant	0074 Alveolar Pulmonic Stop Occlusive	0073 Alveolar Pulmonic Sibilant Fricative Strident Obstruent Continuant
r	p	o	n
0072 Alveolar Voiced Pulmonic Trill Rhotic Vibrant Liquid	0070 Bilabial Pulmonic Stop Occlusive	006F Close-mid Back Rounded Vocoid Vowel Continuant	006E Alveolar Voiced Pulmonic Nasal Occlusive
m	l	k	j
006D Bilabial Voiced Pulmonic Nasal Occlusive	006C Alveolar Vocoid Voiced Pulmonic Lateral Approximant Rhotic Liquid	006B Velar Pulmonic Stop Occlusive	006A Palatal Vocoid Semivowel Voiced Pulmonic Approximant Continuant
i	h	g	f
0069 Close Front Vocoid Vowel Continuant	0068 Glottal Pulmonic Fricative	0067 Velar Voiced Pulmonic Stop Occlusive	0066 Labio-Dental Pulmonic Fricative Strident Obstruent Continuant
e	d	c	b
0065 Close-mid Front Vocoid Vowel Continuant	0064 Alveolar Voiced Pulmonic Stop Occlusive	0063 Palatal Pulmonic Stop Occlusive	0062 Bilabial Voiced Pulmonic Stop Occlusive

Appendix 1 - Prior Segment Frequencies

a	g ^w	ẽ	ɛː
0061 Open Near-Front Vocoid Vowel Continuant	0261, 02B7 Labial-Velar Voiced Pulmonic Stop Occlusive	025B, 0303 Open-mid Near-Front Nasal Vowel	025B, 02D0 Open-mid Near-Front Vocoid Long Vowel Continuant
ɛj	õ	ɔː	ã
025B, 006A Mid Front Vowel Diphthong	0254, 0303 Open-mid Back Rounded Nasal Vowel	0254, 02D0 Open-mid Back Rounded Vocoid Long Vowel Continuant	0251, 0303 Near-close Back Nasal Vowel
ẽ	aj	œẽ	øː
0250, 0303 Near-open Central Rounded Nasal Vowel	0250, 006A Mid Front Vowel Diphthong	0153, 0303 Open-mid Near-Front Rounded Nasal Vowel Diphthong	00F8, 02D0 Open Front Rounded Vocoid Long Vowel
w̃	uː	oː	oj
0077, 0303 Labial-Velar Voiced Nasal Approximant	0075, 02D0 Close Back Rounded Long Vowel	006F, 02D0 Mid Back Rounded Vocoid Long Vowel Continuant	006F, 006A Mid Front Vowel Diphthong
k ^w	j̃	iː	eː
006B, 02B7 Labial-Velar Pulmonic Stop Occlusive	006A, 0303 Palatal Nasal Approximant	0069, 02D0 Close Front Vocoid Long Vowel Continuant	0065, 02D0 Mid Front Vocoid Long Vowel Continuant

Appendix 1 - Prior Segment Frequencies

<p>ej</p> <p>0065, 006A</p> <p>Mid Front Vowel Diphthong</p>	<p>aː</p> <p>0061, 02D0</p> <p>Open Central Vocoid Long Vowel Continuant</p>	<p>aj</p> <p>0061, 006A</p> <p>Mid Front Vowel Diphthong</p>	<p>ẽụ</p> <p>1EBD, 0075, 032F</p> <p>Mid Front Nasal Vowel Diphthong</p>
<p>ẽĩ</p> <p>1EBD, 006A, 0303</p> <p>Mid Front Nasal Vowel Diphthong</p>	<p>tʃ</p> <p>0074, 0361, 0283</p> <p>Alveolo-Palatal Pulmonic Sibilant Affricate</p>	<p>ọa</p> <p>006F, 032F, 0061</p> <p>Mid Front Vowel Diphthong</p>	<p>eạ</p> <p>0065, 032F, 0061</p> <p>Mid Front Vowel Diphthong</p>
<p>ạụ</p> <p>0061, 0075, 032F</p> <p>Mid Front Vowel Diphthong</p>	<p>ẽĩ</p> <p>0250, 0303, 006A, 0303</p> <p>Mid Front Nasal Vowel Diphthong</p>		

Appendix 1 - Prior Segment Frequencies

˜	Linguo-Labial	ⁿ	Nasal release	˘	More rounded
˘	Lowered	ɹ	Retracted tongue root	↗	Global rise
ˆ	Rising falling tone	ː	Raised	˝	Extra high tone
˙	Breathy voiced	˙	Voiced	w	Labialized
˘	Extra short	˘	Mid-centralized	↓	Down-step
↑	Up-step	ː	Long	˘	Half-long
	Indeterminacy in french vowels		Begin Non-segmental notation		End non-segmental notation
ɸ	Voiced epiglottal fricative	!	Post-alveolar click		Minor group
	Dental click		Major group		Alveolar lateral click
‡	Palatal click	°	Voiceless descender	-	Combining macron
˘	Tie-bar below	˘	Tie-bar above	‡	Ready made combination
→	Becomes		Separator		

Latin

A classical language belonging to the Italic branch of the Indo-European languages. Latin was originally spoken in the area around Rome, known as Latium. Through the power of the Roman Republic, it became the dominant language in Italy, and subsequently throughout the western Roman Empire, before eventually becoming a dead language. Latin has contributed many words to the English language. In particular, Latin (and Ancient Greek) roots are used in English descriptions of theology, the sciences, medicine, and law.

By the late Roman Republic (75 BC), Old Latin had been standardised into Classical Latin. Vulgar Latin was the colloquial form spoken at that time and attested in inscriptions and the works of comic playwrights like Plautus and Terence[3] and author Petronius. Late Latin is the written language from the 3rd century; its colloquial form Vulgar Latin developed in the 6th to 9th centuries into the Romance languages, such as Italian, Sardinian, Venetian, Neapolitan, Sicilian, Piedmontese, Lombard, French, Franco-Provençal, Occitan, Corsican, Ladin, Friulan, Romansh, Catalan/Valencian, Aragonese, Spanish, Asturian, Galician, and Portuguese. Medieval Latin was used as a literary language from the 9th century to the Renaissance which used Renaissance Latin. Later, Early Modern Latin and New Latin evolved. Latin was the language of international communication, scholarship and science until well into the 18th century, when vernaculars (including the Romance languages) supplanted it. Ecclesiastical Latin remains the official language of the Holy See and the Roman Rite of the Catholic Church. Latin is a highly inflected language, with three distinct genders, six or seven noun cases, five declensions, four verb conjugations, six tenses, three persons, three moods, two voices, two or three aspects, and two numbers. The Latin alphabet is derived from the Etruscan and Greek alphabets and ultimately from the Phoenician alphabet.

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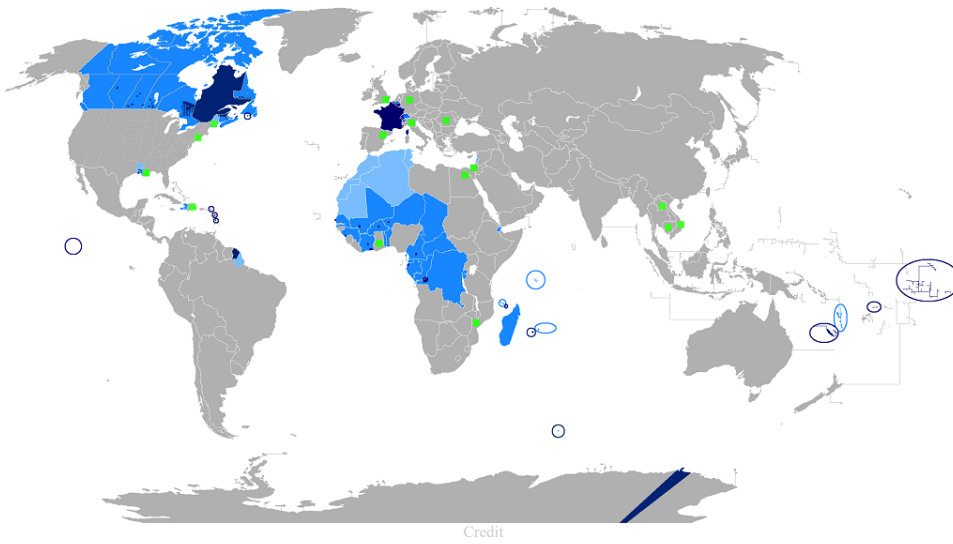
French

A Romance language of the Indo-European family. It descended from the Vulgar Latin of the Roman Empire, as did all Romance languages. French evolved from Gallo-Romance, the Latin spoken in Gaul, and more specifically in Northern Gaul. Its closest relatives are the other langues d'oïl—languages historically spoken in northern France and in southern Belgium, which French (Francien) largely supplanted.

French was also influenced by native Celtic languages of Northern Roman Gaul like Gallia Belgica and by the (Germanic) Frankish language of the post-Roman Frankish invaders. Today, owing to France's past overseas expansion, there are numerous French-based creole languages, most notably Haitian Creole. A French-speaking person or nation may be referred to as Francophone in both English and French.

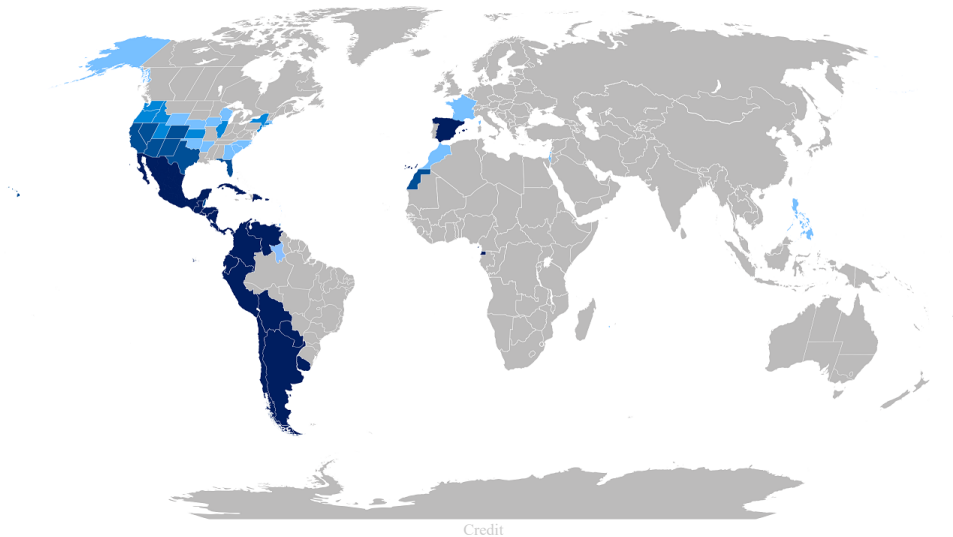
French is an official language in 29 countries across multiple continents, most of which are members of the Organisation internationale de la Francophonie (OIF), the community of 84 countries which share the official use or teaching of French. French is also one of six official languages used in the United Nations. It is spoken as a first language (in descending order of the number of speakers) in France; the Democratic Republic of Congo; Algeria; Morocco; Canada (provinces of Quebec, Ontario and New Brunswick as well as other Francophone regions); Cameroon; Belgium (Wallonia and the Brussels-Capital Region); Ivory Coast; Tunisia; western Switzerland (Romandy—all or part of the cantons of Bern, Fribourg, Geneva, Jura, Neuchâtel, Vaud, Valais); Monaco; parts of Luxembourg; parts of the United States (the states of Louisiana, Maine, New Hampshire and Vermont); northwestern Italy (autonomous region of Aosta Valley); and various communities elsewhere.

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Spanish

A Romance language that originated in the Iberian Peninsula of Europe. Today, it is a global language with nearly 500 million native speakers, mainly in Spain and the Americas. It is the world's second-most spoken native language after Mandarin Chinese, and the world's fourth-most spoken language overall after English, Mandarin Chinese, and Hindi.



Italian

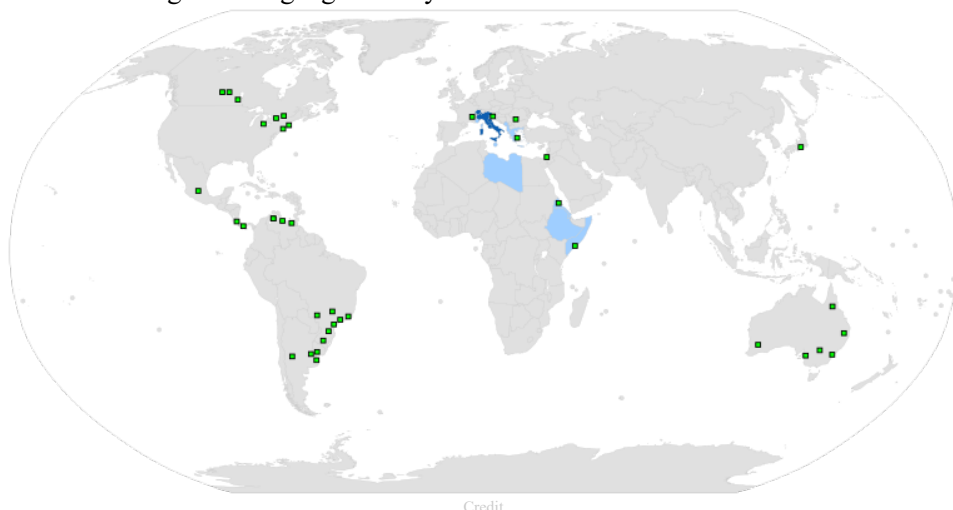
A Romance language of the Indo-European language family. Italian is the closest national language to Latin, from which it descends via vulgar Latin of the Roman Empire. Taking into account both national and regional languages, it is seen that Italian and Sardinian are together the least differentiated from Latin. Italian is an official language in Italy, Switzerland (Ticino and the Grisons), San Marino, and Vatican City. It has an official minority status in western Istria (Croatia and Slovenia).

It formerly had official status in Albania, Malta, Monaco, Montenegro (Kotor), Greece (Ionian Islands and

Appendix 1 - Prior Segment Frequencies

Dodecanese), and is generally understood in Corsica by Corsican speakers (many linguists classify Corsican as an Italian dialect). It used to be an official language in the former colonial areas of Italian East Africa and Italian North Africa, where it still has a significant role in various sectors.

Italian is also spoken by large immigrant and expatriate communities in the Americas and Australia. Italian is included under the languages covered by the European Charter for Regional or Minority languages in Bosnia and Herzegovina and in Romania, although Italian is neither a co-official nor a protected language in these countries. Many speakers of Italian are native bilinguals of both Italian (either in its standard form or regional varieties) and another regional language of Italy.



Brazilian Portuguese

The set of dialects of the Portuguese language native to Brazil and the most influential form of Portuguese worldwide. It is spoken by almost all of the 200 million inhabitants of Brazil and spoken widely across the Brazilian diaspora, today consisting of about two million Brazilians who have emigrated to other countries. With a population of over 205 million, Brazil is by far the world's largest Portuguese-speaking nation and the only one in the Americas.



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Portuguese

A Romance language originating in the Iberian Peninsula of Europe. It is the sole official language of Portugal, Angola, Mozambique, Guinea-Bissau, Cape Verde, São Tomé and Príncipe, and Brazil, while having co-official language status in East Timor, Equatorial Guinea, and Macau. A Portuguese-speaking person or nation is referred to as "Lusophone" (lusófono). As the result of expansion during colonial times, a cultural presence of Portuguese and Portuguese creole speakers are also found around the world. Portuguese is part of the Ibero-Romance group that evolved from several dialects of Vulgar Latin in the medieval Kingdom of Galicia and the County of Portugal, and has kept some Celtic phonology and its lexicon.



Catalan

Catalan (/ˈkætələn, -æn, ˌkætəˈlæn/; autonym: català or llengua catalana; Eastern Catalan: [kətəˈla]), known in the Valencian Community and Carche as Valencian, is a Western Romance language derived from Vulgar Latin. It is the official language of Andorra, and a co-official language of three autonomous communities in eastern Spain: Catalonia, the Valencian Community and the Balearic Islands. It also has semi-official status in the Italian comune of Alghero. It is also spoken in the Pyrénées-Orientales department of France and in two further areas in eastern Spain: the eastern strip of Aragon and the Carche area in the Region of Murcia. The Catalan-speaking territories are often called the Països Catalans or "Catalan Countries".

The language evolved from Vulgar Latin in the Middle Ages around the eastern Pyrenees. Nineteenth-century Spain saw a Catalan literary revival, culminating in the early 1900s.

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Walloon

A Romance language that is spoken in much of Wallonia and (to small extent) in Brussels, Belgium; some villages near Givet, northern France; a clutch of communities in northeastern Wisconsin, U.S.; and in some parts of Canada. It belongs to the langue d'oïl language family, the most prominent member of which is the French language. The historical background of its formation was the territorial extension since 980 of the Principality of Liège to the south and west.

Despite its rich literature, beginning anonymously in the 16th century and with well-known authors since 1756, the use of Walloon has decreased markedly since France's annexation of Wallonia in 1795. This period definitively established French as the language of social promotion, far more than it was before. After World War I, public schools provided French-speaking education to all children, inducing a denigration of Walloon, especially when accompanied by official orders in 1952 to punish its use in schools. Subsequently, since the middle of the 20th century, generational transmission of the language has decreased, resulting in Walloon almost becoming a dead language. Today it is scarcely spoken among younger people, with vast majority of its native speakers being the elderly (aged 65 and over). In 2007, the number of people with knowledge of the language was estimated at 600,000.

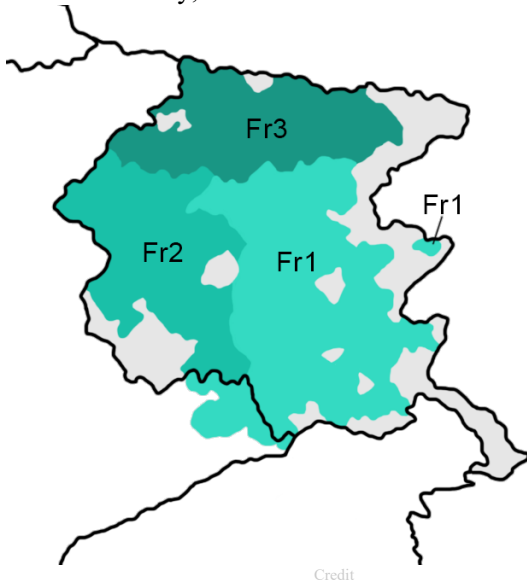
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Friulian

Friulian (/friˈuːliən/ free-OO-lee-ən) or Friulan (natively About this soundfurlan or marilenghe; Italian: friulano; German: Furlanisch; Slovene: furlanščina) is a Romance language belonging to the Rhaeto-Romance family, spoken in the Friuli region of northeastern Italy. Friulian has around 600,000 speakers, the vast majority of whom also speak Italian.

It is sometimes called Eastern Ladin since it shares the same roots as Ladin, but over the centuries, it has diverged under the influence of surrounding languages, including German, Italian, Venetian, and Slovene. Documents in Friulian are attested from the 11th century and poetry and literature date as far back as 1300. By the 20th century, there was a revival of interest in the language.



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Romanian

Romanian (obsolete spellings: Rumanian or Roumanian; autonym: limba română ['limba ro'minə] (About this soundlisten), or românește, lit. 'in Romanian') is a Balkan Romance language spoken by approximately 24–26 million people as a native language, primarily in Romania and Moldova, and by another 4 million people as a second language. According to another estimate, there are about 34 million people worldwide who can speak Romanian, of whom 30 million speak it as a native language. It is an official and national language of both Romania and Moldova and is one of the official languages of the European Union.

Romanian is a part of the Eastern Romance sub-branch of Romance languages, a linguistic group that evolved from several dialects of Vulgar Latin which separated from the Western Romance languages in the course of the period from the 5th to the 8th centuries. To distinguish it within the Eastern Romance languages, in comparative linguistics it is called Daco-Romanian as opposed to its closest relatives, Aromanian, Megleno-Romanian and Istro-Romanian. Romanian is also known as Moldovan in Moldova, although the Constitutional Court of Moldova ruled in 2013 that "the official language of the republic is Romanian".



Credit