Outline of Demonstration

Encoding Schemes for Mapping Between Orthography and Phonology in Connectionist Networks

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Outline

- **Objective**

  Mapping between orthography and phonology.

- **Problems**

  general problems

  representational issues in neural networks.

  e.g generalisation, identical representation.

  specific problems

  representing sequences

  e.g segmentation, keeping information

- **The need to have a general framework**

  Methods of representation

  Local

  Distributed

  Techniques of representation

  Coarse-coded

  Microfeature

  Windowing

  Sizing (Shaping)

- **The schemes**

Input Units

Wickelgraph

Window

Mix

Recurrent

Output Units

Wickelfeature

Window

Single

- The network Trained on 500 words chosen randomly for 250 epochs. (on the 9 different combinations)
- The main two factors that I focused on are : Capability of learning Minimising the error (to a minimum)
- Some other factors such as generalisation, capturing regularities, remain to be tested.
- Also some other factors should be considered such as decoding the output, and ordering.
- From the main two factors and the others (theoretically) , I recommend the Mix scheme for the input units and the window(1) for the output units .

The Demo

- 1- demonstrate the ESOP software (Encoding schemes for mapping between orthography and phonology)
- 2- After training the network on 92 polysyllabic words, 83 words give 100
- 3- After training the network on the first 500 words in the dictionary, 425 words give 100the target.