

# Variable-Length Inputs and Outputs

Variable-length input can be handled by recurrent NNs:

- Processing one input symbol at a time.
  - Initial state  $h_0 = (0)$  (or some sentence representation).
  - The same (trained) transformation  $A$  used every time.

$$h_t = A(h_{t-1}, x_t) \quad (2)$$

- Unroll in time (up to a fixed length limit).

