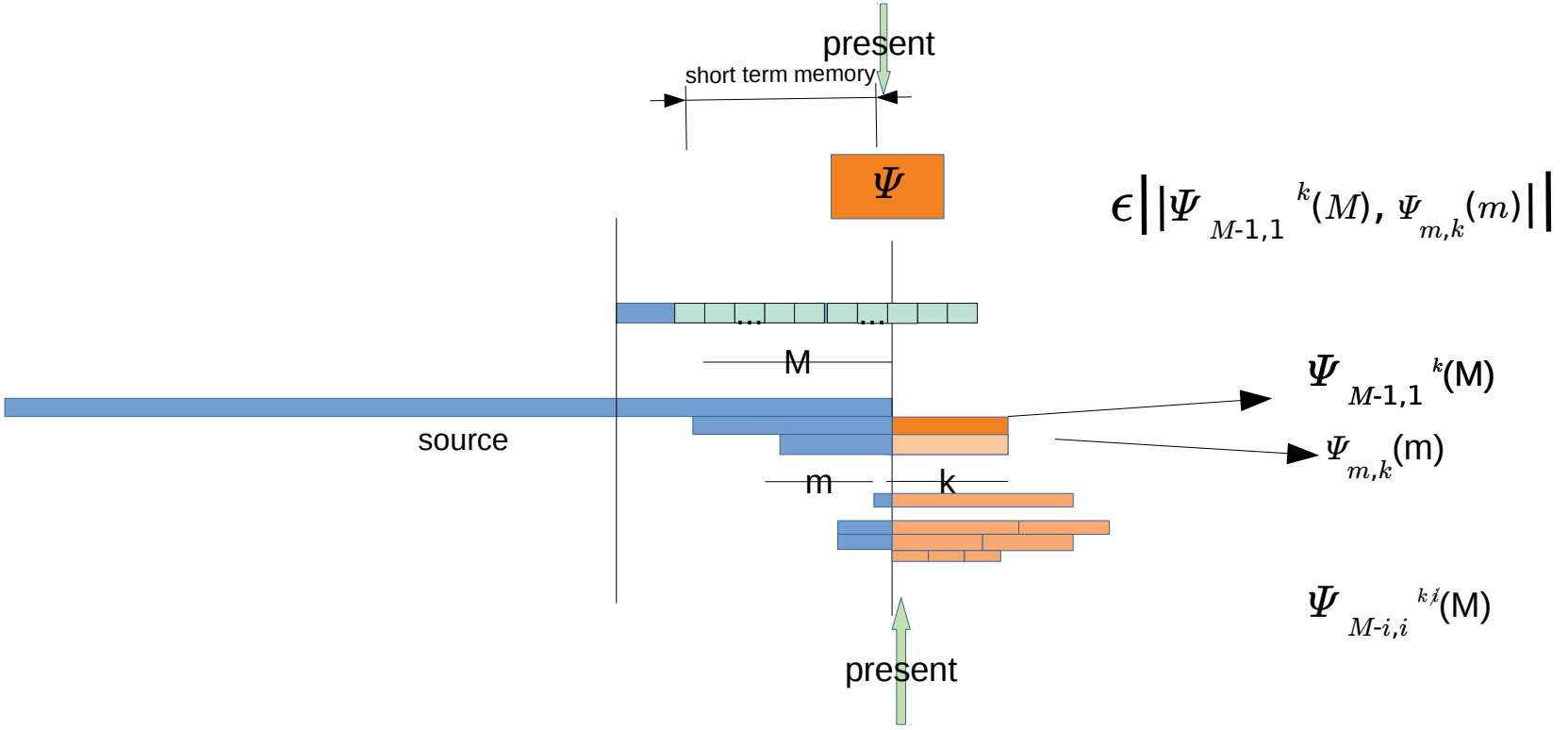
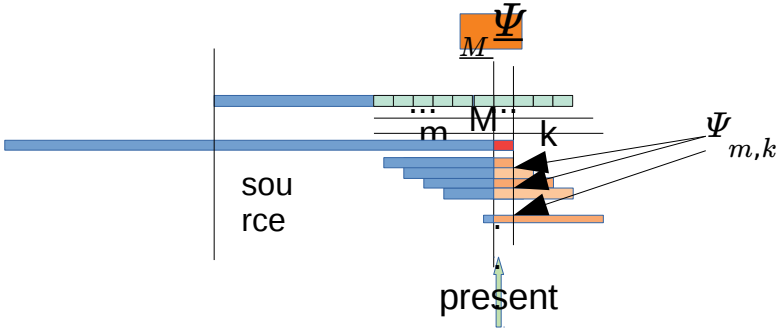
# Project 1
# Dreaming



# Project 2
# Convolutional M-1Predictor

Predict 1 symbol by means of a panel of $\Psi_{m,k}$ predictors for $k$ =1..M-1




$\Psi_{M\text{-}1,1}$

$\Psi_{M\text{-}2,2}$

$\Psi_{1,M\text{-}1}$

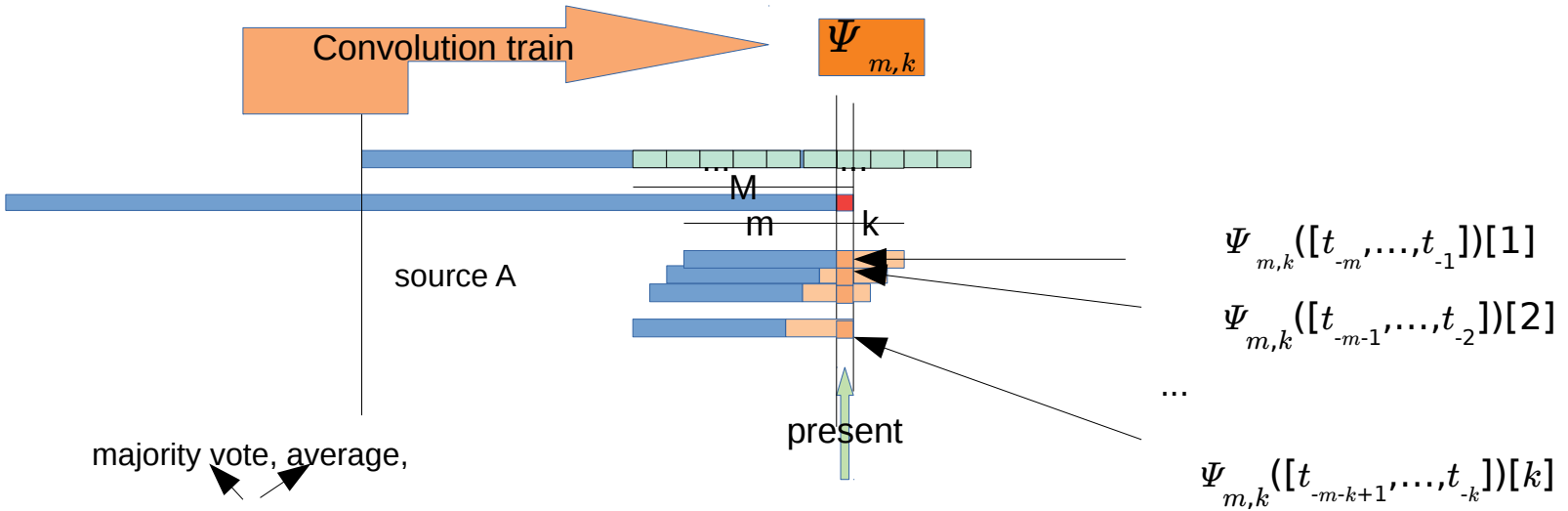
$panel\{\Psi_{m,k} : k=1,\ldots,M\text{-}1,\ m=M\text{-}k\}$

Statistics over several datasets

- PI
- Lozi alpha,beta
- Stock Market titles
- …
- natural language text
- natural language sound

# Project 3
# Convolutional (m,k)-1Predictor

Given any $\Psi_{m,k}$ predictor trained on the convolutional TS of the sequence we can construct the *convolutional predicted probabilities for the immediate future of the sequence* $\underline{\Psi}_{m,k}=\underline{p}(A)=[p(a_1),\ldots,p(a_n)]$




$$_{m,k}\underline{\Psi}=panel(\Psi_{m,k}([t_{-m},\ldots,t_{-1}])[1],\ldots,\Psi_{m,k}([t_{-m-k+1},\ldots,t_{-k}])[k])$$

$$p(a)=\Sigma_{j=1}^{k}(\Psi_{m,k}([t_{-m-j},\ldots,t_{-j}])[j]=a)*match(\Psi_{m,k}([t_{-m-j},\ldots,t_{-j}])[j\text{-}k,\ldots,j\text{-}1],[t_{-j},\ldots,t_{-1}])$$

weighted vote

# Statistics Report

Statistics over several datasets

- PI
- Lozi alpha,beta
- Stock Market titles
- …
- natural language text
- natural language sound

pdf Report