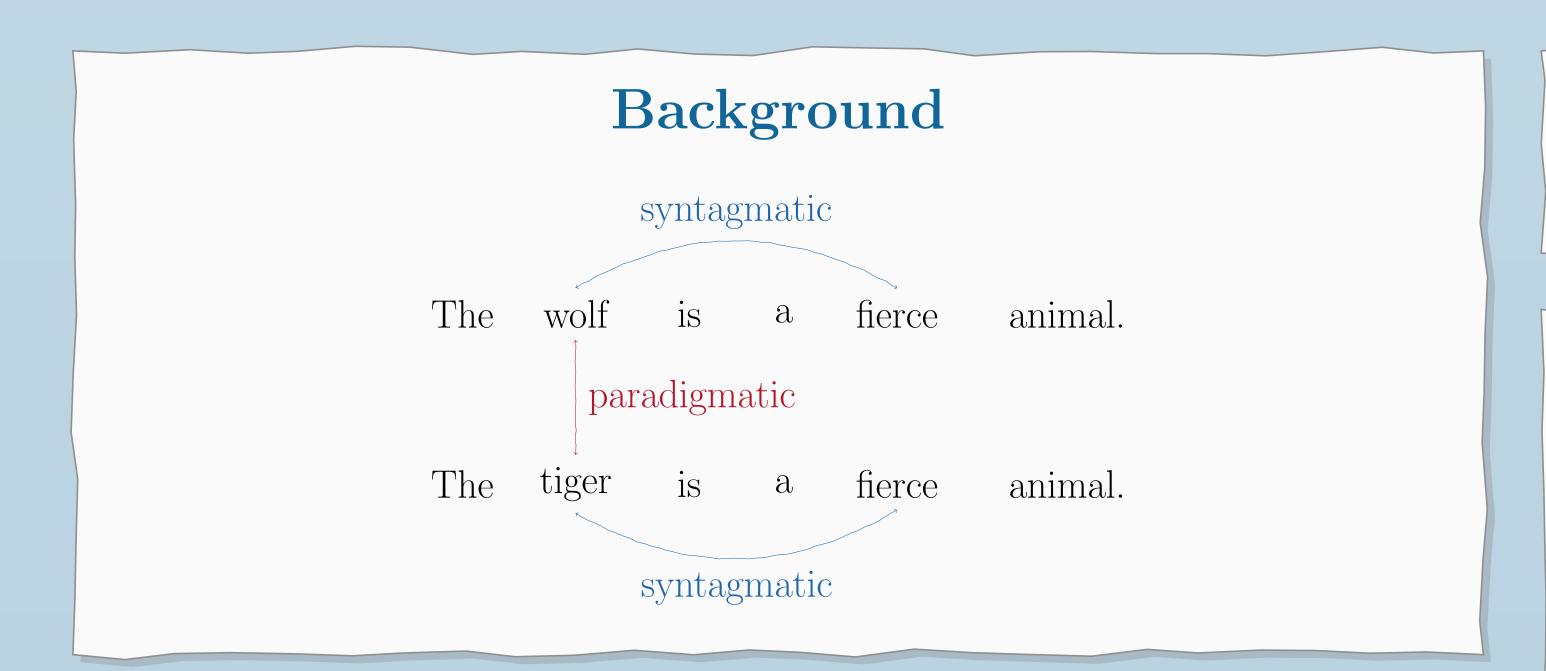
# Learning Word Representations by Jointly Modeling

Syntagmatic and Paradigmatic Relations

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# $\begin{array}{c} \text{Model} \\ \text{ the } \\ \\ \ell = \sum_{n=1}^{N} \sum_{\substack{w_i^n \in d_n}} \left( \log p(w_i^n | h_i^n) + \log p(w_i^n | d_n) \right) \\ \\ \ell = \sum_{n=1}^{N} \sum_{\substack{w_i^n \in d_n}} \left( \log p(w_i^n | h_i^n) + \log p(w_i^n | d_n) \right) \\ \\ \ell = \sum_{n=1}^{N} \sum_{\substack{w_i^n \in d_n}} \left( \log \sigma(\overline{w_i^n} \cdot \overline{h_i^n}) + \log \sigma(\overline{w_i^n} \cdot \overline{d_n}) \right) \\ \\ + k \cdot \mathbb{E}_{w' \sim P_{\text{dw}}} \log \sigma(\overline{w'} \cdot \overline{h_i^n}) \\ \\ + k \cdot \mathbb{E}_{w' \sim P_{\text{dw}}} \log \sigma(\overline{w'} \cdot \overline{d_n}) \right) \\ \\ + \log \sigma(\overline{w_i^n} \cdot \overline{d_n}) + k \cdot \mathbb{E}_{w' \sim P_{\text{dw}}} \log \sigma(\overline{w'} \cdot \overline{d_n}) \right) \\ \\ \end{array}$

### Blocks

Blocks are arranged in a grid, by default, with width by default **\textwdith**. They are created by the command

\block [options] {title}{contents}

The title may be left empty, resulting in no title area being created for the block (as seen in a later block to the right). Further blocks will be placed below automatically, at a distance defined by blockverticalspace.

If you want to change the position of the title matter or the contents in the block, you may by setting in the options

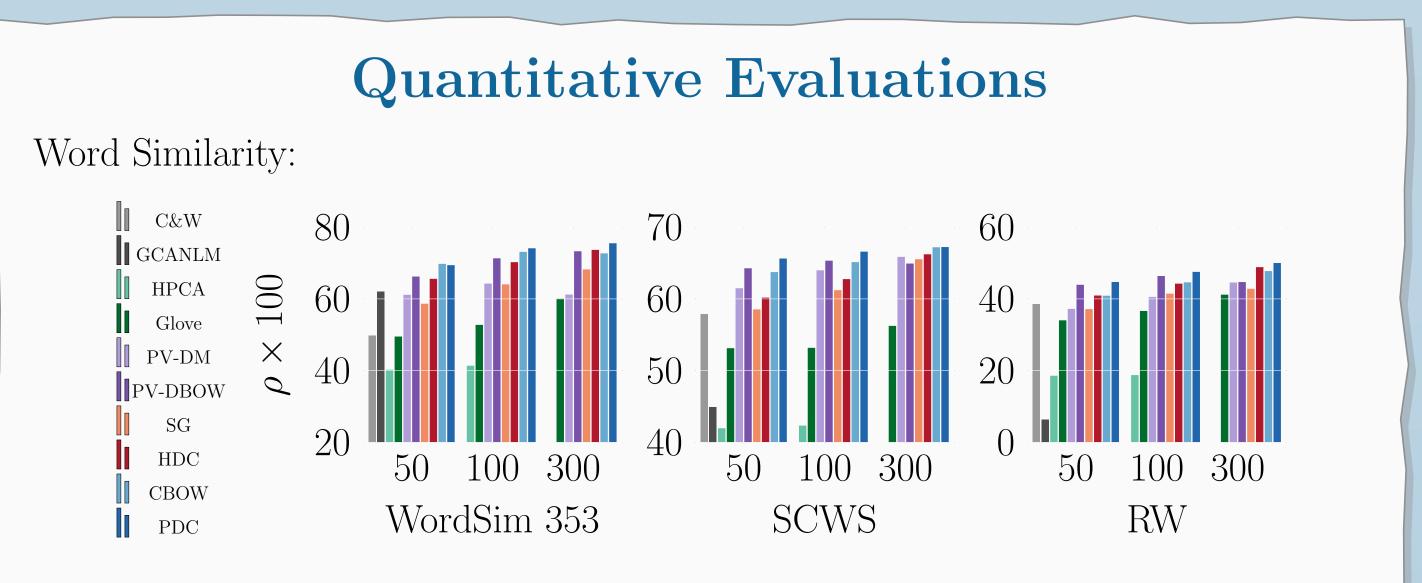
titleoffsetx, titleoffsety, bodyoffsetx, bodyoffsety

which let you adjust the vertical or horizontal position of the two parts of the block, respectively. You can also make, relative to the default width, the title and block body by setting

titlewidthscale, bodywidthscale

The title's alignment can be set by titleleft, titlecenter, titleright, the body may be shifted vertically by setting bodyverticalshift, and the shape of the block can be altered by setting roundedcorners, linewidth. The inner margins of the title can by set by titleinnersep, bodyinnersep.

# Qualitative Evaluations



### Subcolumns

If you want to have an additional subdivision of columns inside a column, you may use the \subcolumns environment inside of a column environment. The functionality is similar to that of columns, but now the widths are relative to the width of the current column.

An example use of subcolumns is. \begin{subcolumns}

\begin{subcolumns}
\subcolumn{.6}
\block{...}{...}
\subcolumn{.4}
\block{...}{...}
\block{...}{...}
\end{subcolumns}

## Changing the Poster's Appearance

If the default appearance of the title, background, blocks, and notes is not desired, you may change the colors by calling the color style along with a general layout theme with the commands

\usecolorpalette{color palette}
\usecolorstyle{color style}

and

\usetheme{layout style}

where the color palette and style and layout style are either the name of a custom made or one of the offered predefined choices listed in the manual or the comments of this poster's source. Individual changes can be made to the style of the background, title matter, blocks, inner blocks, and notes by using one of the following (along with either a custom-designed style or a predefined style listed in the manual or the comments of this poster's source). These changes are made with the commands

\usebackgroundstyle[]{}, \usetitlestyle[]{},
\useblockstyle[]{},\innerblockstyle[]{},
\usenotestyle[]{}

Custom styles for these can be made; this is detailed in the manual.