



University of Haifa



Minerva Stiftung Gesellschaft
für die Forschung m.b.H



Technion

Structural Precedence in Reading

The activation of prosodic representation

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The hypothesis of structural precedence in reading

The processing of structure precedes and paves the way for the processing of content.

3 lines of research:

- Letter detection
- Eye-tracking
- Reading prosody

Tw'as brillig, and the slithy toves
did gyre and gimble in the wabe.
All mimsy were the borogoves
And the mome raths outgrabe.

(Louis Carroll)

3 lines of research:

- Letter detection
- Eye-tracking
- Reading prosody

Prosodic representation

- **activated during reading.**
- **reflects the structure of the sentence.**
- **assists in maintaining sentence structure in working memory.**
- **facilitates integrative processes in reading.**

Natural reading prosody:

From the lecture in the university she learned that for many years biologists are trying to break the genetic code.

Experimenter:

for

Participant:

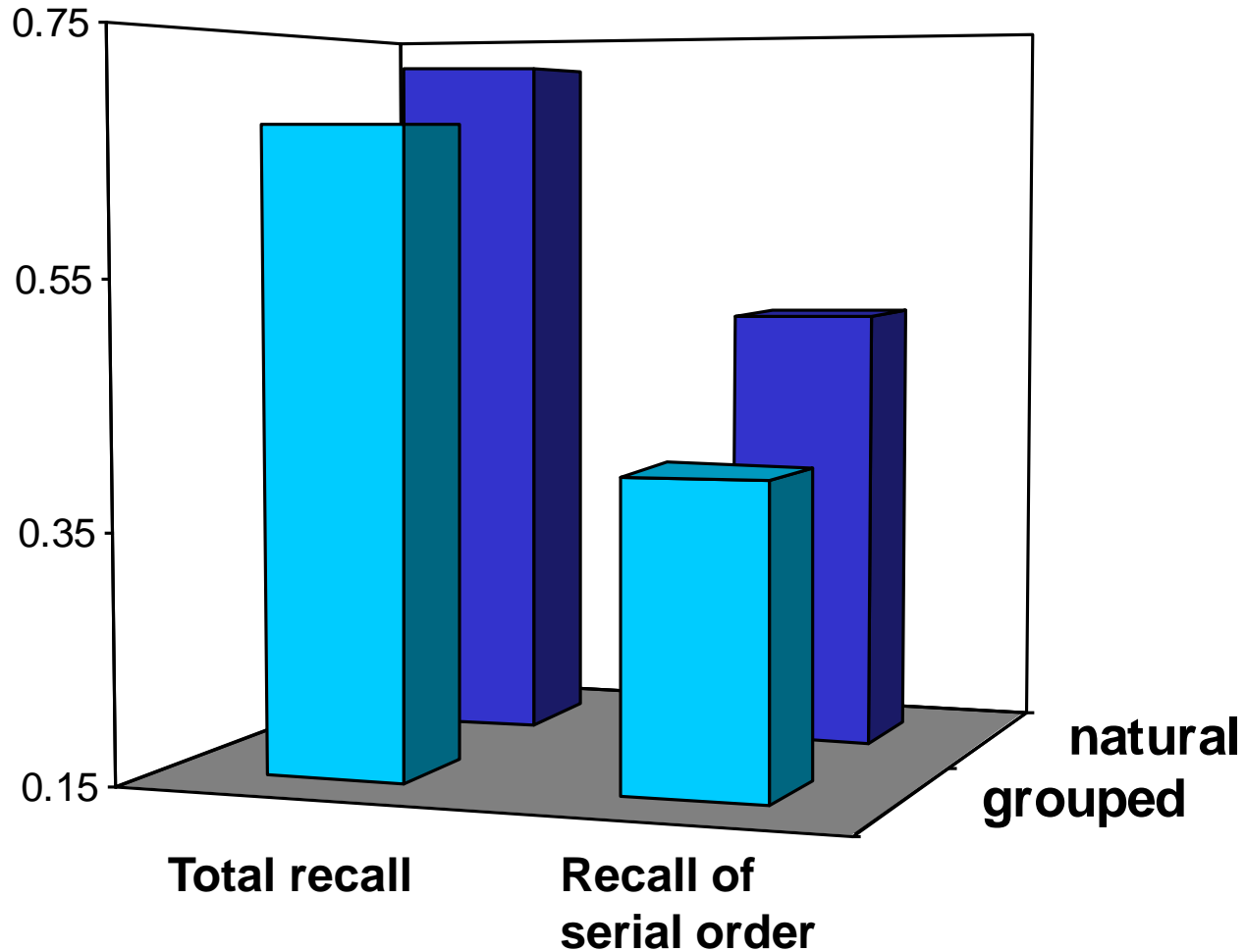
many years biologists are trying to break the genetic code.

Grouped reading prosody:

From the lecture // in the university //
she learned that // for many years //
biologists are trying // to break the // genetic code.

Probability* of recall - order vs. quantity

*Probability is input bound



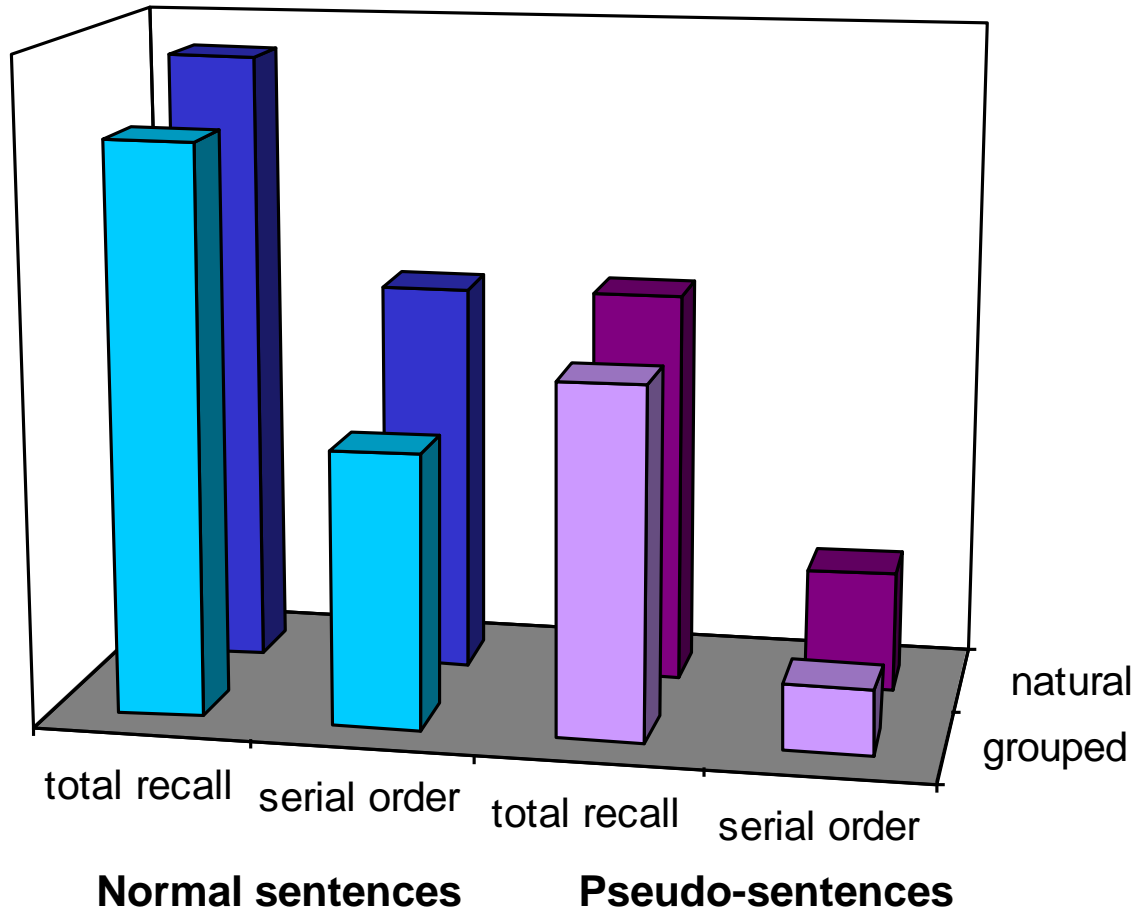
Pseudo sentences

From the table in the music she barked that for some cats papers are going to eat the deep tree.

From the table // in the music // she barked that // for some cats // papers are going // to eat the // deep tree.

Probability* of recall: normal & pseudo sentences order vs. quantity

*Probability is input bound



Conclusions:

Reading prosody which is coherent with sentence structure:

- improves recall relative to other prosodic chunking.
- contributes to preservation of sentence organization.
- facilitates integrative processing of meaning.

