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Chinese Preordering on Multiple Syntactic Levels

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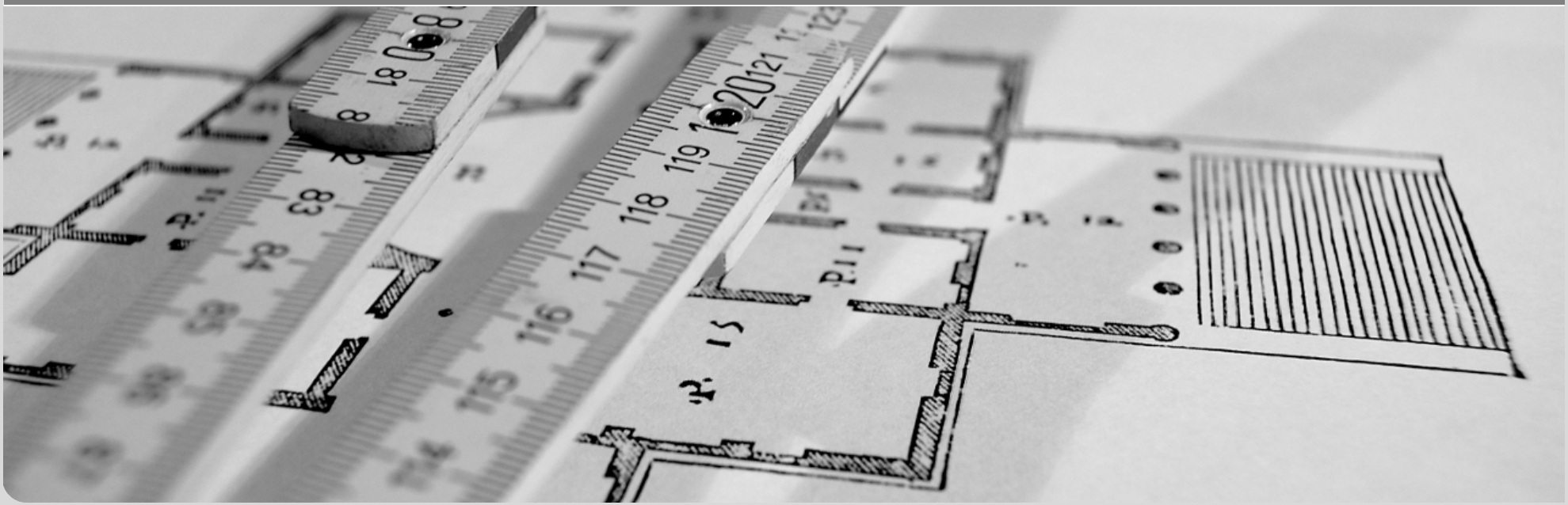

Outline

1. Introduction
2. Foundations
3. Reordering Approach
4. Results
5. Conclusion
6. Outlook

Introduction

Goal & Motivation & Reason, etc.

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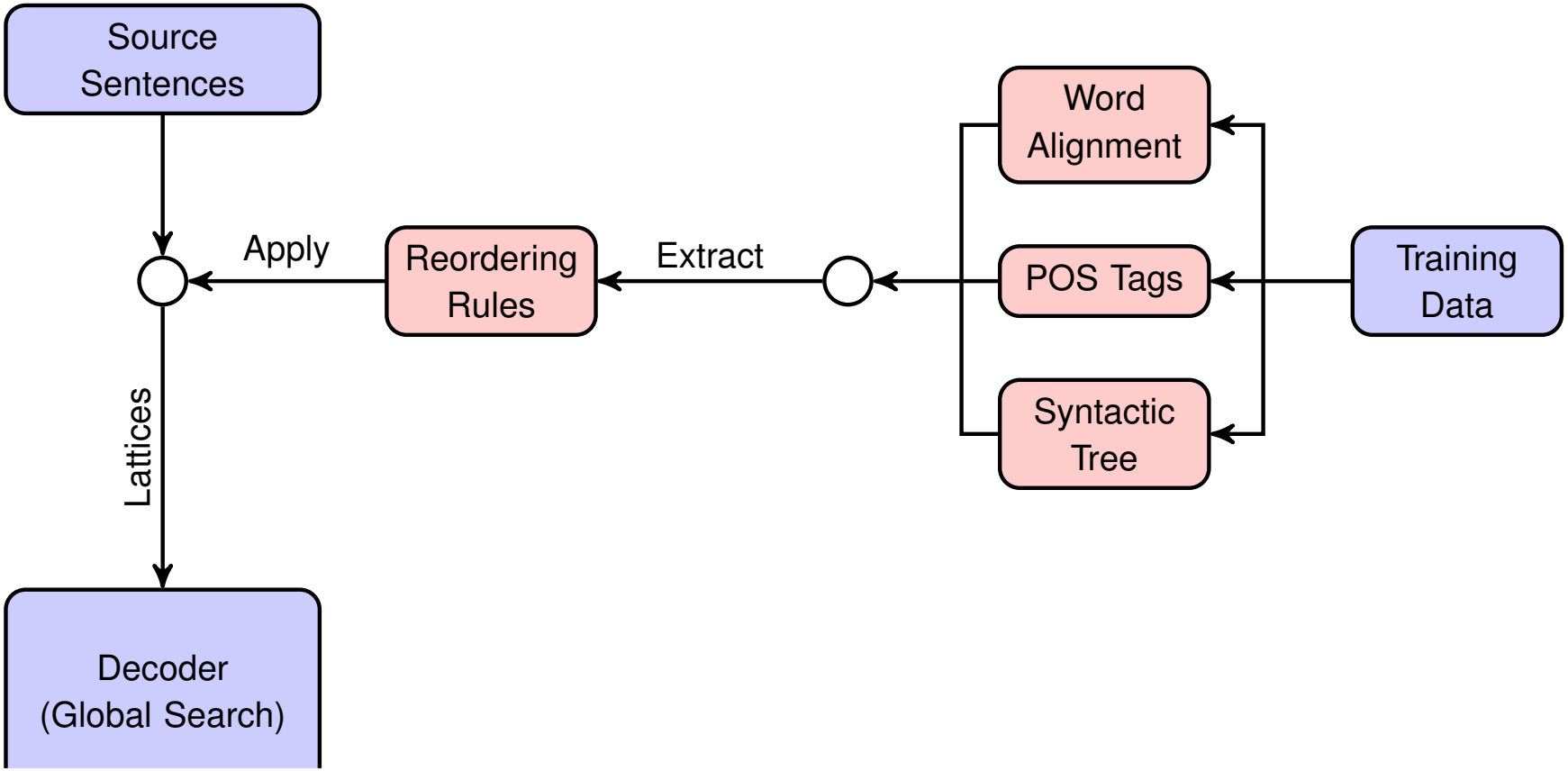
Preordering System

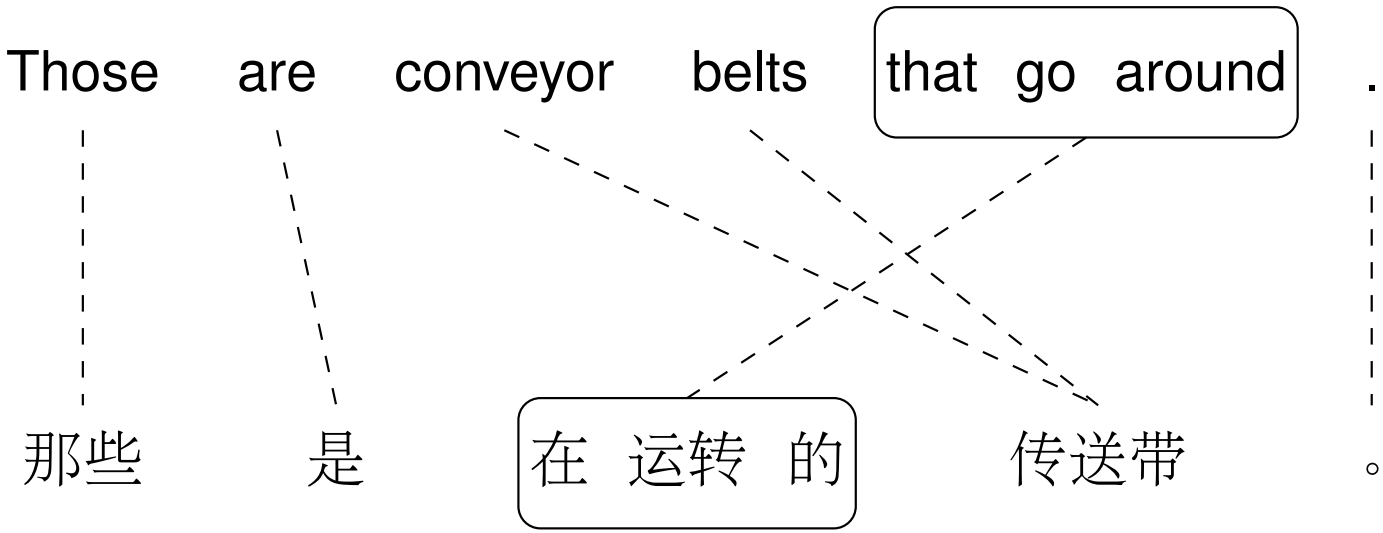


Rreordering Rules

- Short rules
- Long rules
- Tree rules

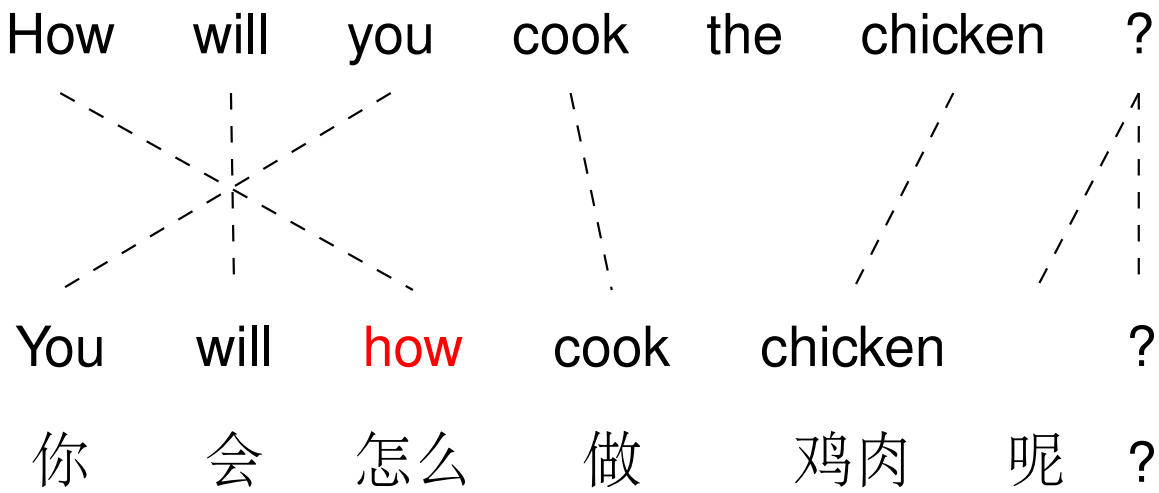
Chinese Word Orders

- Premodifier instead of postmodifier
  - Adverbials
  - Relative clauses
  - Preposition phrases



Chinese Word Orders

- Questions



- Special sentence constructions
  - *There aren't many people around that are really involved with architecture as clients.*
  - *Never would India have thought on this scale before.*

Reordering Problems

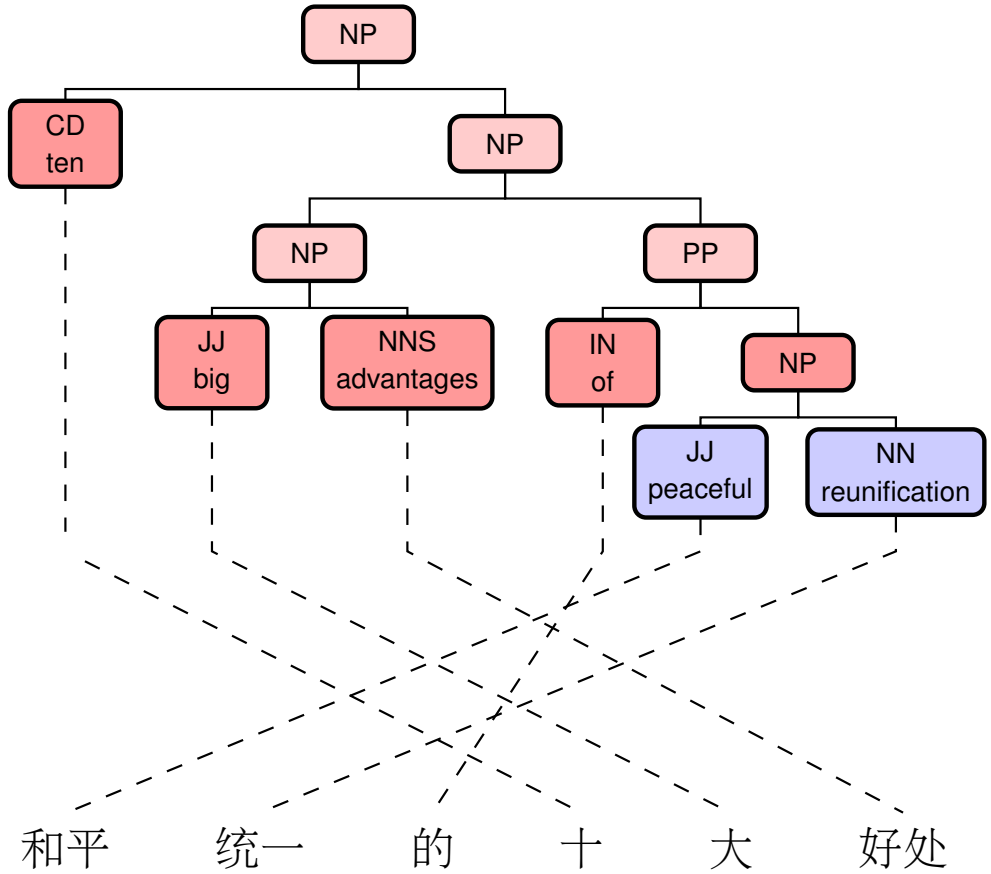
- Long distance position change

  I find this very much disturbing when we are talking about what is going on right and wrong with democracy these days.

  现在，每当我跟别人讨论我们的民主什么是对的，什么是错的我都为此觉得很无力。

Reordering Problems

- Long distance position change
- Reordering on multiple syntactic levels



Reordering Patterns

Rule Extraction & Application

- X

Rule Extraction

Rule Application

Results: EN → CH

	BLEU Score	Improvement	TER
Baseline	12.07		72.15
+Short Rules	12.50	3.56 %	71.41
+Long Rules	12.99	7.62 %	70.71
+Tree Rules	13.38	10.85 %	68.27
+MLT Rules	13.81	14.42 %	68.20
Oracle Reordering	18.58	53.94 %	62.13
Long Rules	12.31	1.99 %	71.81
Tree Rules	13.30	10.19 %	70.42
MLT Rules	13.68	13.34 %	70.25

Results: CH → EN

	BLEU Score	Improvement	TER
Baseline	21.80		62.09
+Short Rules	22.90	5.05 %	61.64
+Long Rules	23.13	6.10 %	61.43
+Tree Rules	23.84	9.36 %	60.95
+MLT Rules	24.14	10.73 %	60.79
Oracle Reordering	26.80	22.94 %	56.97
Long Rules	22.10	1.38 %	62.21
Tree Rules	23.35	7.11 %	61.52
MLT Rules	23.96	9.91 %	60.83

Conclusion

- Better translation quality
- Better syntactic structure
- Space for further improvement

Outlook

- Other rule types
- Better reordering approaches
- Vector presentation as feature
- Reordering with less information

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Thank you for your attention

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