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**Middle Polish Dependency Treebank  
in Universal Dependencies format:  
Design, Implementation, and Analysis**

Master's thesis  
in COGNITIVE SCIENCE

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## **Summary**

This thesis presents a rule-based approach to converting the Middle Polish Dependency Treebank (MPDT), annotated in a Polish-specific scheme, into the Universal Dependencies (UD) format. After introducing the project motivation, data sources, and target standard, the thesis outlines general design assumptions behind the conversion, the mapping strategy, and the validation workflow. It reports overall outcomes of the conversion and sketches applications and extensions, including releasing MPDT-UD and implications for research in historical language processing within cognitive science.

## **Keywords**

Middle Polish, dependency trees, treebank conversion, Universal Dependencies

## **The title of the thesis in Polish**

Średniopolski Bank Drzew Zależnościowych w formacie Universal Dependencies: projekt, implementacja i analiza

## **Streszczenie**

Praca przedstawia podejście regułowe do konwersji Średniopolskiego Banku Drzew Zależnościowych (MPDT), anotowanego w polskim schemacie, do formatu Universal Dependencies (UD). Po krótkim omówieniu motywacji, danych i standardu docelowego zaprezentowano ogólne założenia projektu, strategię odwzorowań oraz schemat wali-dacji. Przedstawiono ogólne wyniki konwersji oraz możliwe zastosowania i kierunki rozwoju, w tym udostępnienie MPDT-UD i znaczenie dla badań nad przetwarzaniem języka historycznego w kognitywistyce.

## **Słowa kluczowe**

język średniopolski, drzewa zależnościowe, konwersja korpusu, Universal Dependencies

## **The title of the thesis in English**

Middle Polish Dependency Treebank in Universal Dependencies format: Design, Implementation, and Analysis

# Contents

<b>1. Motivation and Background . . . . .</b>	5
1.1. Motivation . . . . .	5
1.2. Project Scope . . . . .	5
1.3. Objectives and Contributions . . . . .	5
1.4. Key Concepts and Resources . . . . .	5
1.4.1. Dependency Trees . . . . .	5
1.4.2. Universal Dependencies (UD) . . . . .	5
1.4.3. Resources Overview (KorBa, MPDT, PDB) . . . . .	5
1.5. Structure of the Document . . . . .	5
<b>2. Linguistic Features of Middle Polish . . . . .</b>	6
2.1. Corpora and Annotation Context . . . . .	6
2.1.1. KorBa . . . . .	6
2.1.2. MPDT (Middle Polish Dependency Treebank) . . . . .	6
2.1.3. PDB and Relation to MPDT . . . . .	6
2.2. Middle Polish: Key Linguistic Features Relevant to Conversion . . . . .	6
2.2.1. Orthography and Punctuation . . . . .	6
2.2.2. Morphology . . . . .	6
2.2.3. Syntax . . . . .	6
2.3. Annotation Principles for This Work . . . . .	6
2.3.1. Scope and Exclusions . . . . .	6
2.3.2. Tokenization and Normalization . . . . .	6
2.3.3. Extended POS (ExtPos) . . . . .	6
2.4. Summary . . . . .	6
<b>3. Conversion Design and Implementation . . . . .</b>	7
3.1. Design Overview and Pipeline . . . . .	7
3.2. POS and Morphological Mapping . . . . .	7
3.3. Dependency Relation Conversion . . . . .	7
3.4. Logging, Testing, and Traceability . . . . .	7
3.5. Processing Workflow . . . . .	7

<b>4. Validation and Outcomes</b>	8
4.1. Evaluation Data	8
4.2. UD Validation Setup	8
4.3. Results Overview	8
4.4. Qualitative Error Analysis	8
4.5. Known Limitations and Outstanding Issues	8
<b>5. Applications and Cognitive Science Perspective</b>	9
5.1. Release	9
5.1.1. Packaging and License	9
5.1.2. Repository and UD Integration	9
5.2. Use Cases	9
5.2.1. Historical Syntax and Diachrony	9
5.2.2. Parser Training and Evaluation	9
5.3. Cognitive Science Perspective	9
5.3.1. Processing Constraints	9
5.3.2. Category Change Over Time	9
5.4. Future Work	9
5.4.1. Coverage and Phenomena	9
5.4.2. Generalization and Automation	9

# Chapter 1

## Motivation and Background

### 1.1. Motivation

### 1.2. Project Scope

### 1.3. Objectives and Contributions

### 1.4. Key Concepts and Resources

#### 1.4.1. Dependency Trees

#### 1.4.2. Universal Dependencies (UD)

#### 1.4.3. Resources Overview (KorBa, MPDT, PDB)

### 1.5. Structure of the Document

# Chapter 2

## Linguistic Features of Middle Polish

### 2.1. Corpora and Annotation Context

#### 2.1.1. KorBa

#### 2.1.2. MPDT (Middle Polish Dependency Treebank)

#### 2.1.3. PDB and Relation to MPDT

### 2.2. Middle Polish: Key Linguistic Features Relevant to Conversion

#### 2.2.1. Orthography and Punctuation

#### 2.2.2. Morphology

#### 2.2.3. Syntax

### 2.3. Annotation Principles for This Work

#### 2.3.1. Scope and Exclusions

#### 2.3.2. Tokenization and Normalization

#### 2.3.3. Extended POS (ExtPos)

### 2.4. Summary

# Chapter 3

## Conversion Design and Implementation

- 3.1. Design Overview and Pipeline
- 3.2. POS and Morphological Mapping
- 3.3. Dependency Relation Conversion
- 3.4. Logging, Testing, and Traceability
- 3.5. Processing Workflow

# **Chapter 4**

## **Validation and Outcomes**

**4.1. Evaluation Data**

**4.2. UD Validation Setup**

**4.3. Results Overview**

**4.4. Qualitative Error Analysis**

**4.5. Known Limitations and Outstanding Issues**

# Chapter 5

## Applications and Cognitive Science Perspective

### 5.1. Release

#### 5.1.1. Packaging and License

#### 5.1.2. Repository and UD Integration

### 5.2. Use Cases

#### 5.2.1. Historical Syntax and Diachrony

#### 5.2.2. Parser Training and Evaluation

### 5.3. Cognitive Science Perspective

#### 5.3.1. Processing Constraints

#### 5.3.2. Category Change Over Time

### 5.4. Future Work

#### 5.4.1. Coverage and Phenomena

#### 5.4.2. Generalization and Automation