

# Resolving Abstract Definite Anaphora in Chinese Texts

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## Abstract

Anaphora is a rhetorical device commonly used in written texts. It denotes the use of terms referring to previously-mentioned entities, concepts, or events. In this paper, the definite anaphora in Chinese texts is addressed and empirical approaches to tackle abstract anaphors are presented. The resolution is built on the association between target anaphors and the corresponding referents in their multiple-type features extracted from different levels of discourse units. Experimental results show that features extracted from clauses are more useful than those extracted from sentences in referent identification. Besides, the presented salience-based model outperforms the SVM-based model no matter whether the best set of extracted features is employed or not.

**Keywords:** Anaphora Resolution, Chinese Text, Definite Anaphora, Feature Extraction

## 1. Introduction

### 1.1 Motivation

Anaphora is an instance of an expression referring to the preceding utterances. Effective anaphora resolution enhances understanding of a text and facilitates many applications of natural language processing. The resolution involves anaphor recognition and referent recognition. In Chinese texts, anaphors can be missing or be present as pronouns, demonstratives and definite descriptions. Common pronouns are like “他” (“he, him”), “她” (“she, her”), “它” (“it”), “我們” (“we, us”), “他們” (“they, them”); demonstratives are “這” (“this”), “那” (“that”) and definite description are like the pattern “這+[quantifier ]+noun phrase.” Without concerning zero anaphora, about 54% of the explicit anaphors are pronouns, 40% are definite descriptions, and 6% are demonstratives in a corpus containing 20 news articles.

Essentially, the challenges involved with Chinese anaphora resolution are attributed to the complexities of Chinese sentence structures. It is known that although a Chinese sentence

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