

The background of the cover is composed of several interlocking puzzle pieces of various shapes and sizes, outlined in a light gray color. The pieces are scattered across the page, with some overlapping. The overall theme is that of a puzzle or a collection of parts.

Coyote Papers:

The University of Arizona Working Papers in Linguistics

Volume 12

2001

LANGUAGE IN COGNITIVE SCIENCE

Edited by
Rachel L. Hayes
William D. Lewis
Erin L. O'Bryan
Tania S. Zamuner

Notes on cover art

Original artwork by Alina Twist, Linguistics Graduate Student
at the University of Arizona

Table of Contents

<i>Notes on Cover Art</i>	ii
<i>Table of Contents</i>	iii
<i>Editors' Introduction</i>	iv
<i>Abstracts</i>	vi
Modeling Semantic Coherence from Corpus Data: The Fact and the Frequency of a Co-occurrence VIKTOR PEKAR.....	1
Measuring Conceptual Distance Using WordNet: The Design of a Metric for Measuring Semantic Similarity WILLIAM D. LEWIS.....	9
Syntax in Performance: Minimalist Derivation in the Late Assignment of Syntax Theory ERIN L. O'BRYAN.....	17
The Perception of Novel Phoneme Contrasts in a Second Language: A Developmental Study of Native Speakers of English Learning Japanese Singleton and Geminate Consonant Contrasts RACHEL L. HAYES.....	28
Organizing Linguistic Data: Thematic Introducers as an Example SYLVIE PORHIEL.....	42
<i>Ordering Information for Coyote Papers and Other Linguistics Circle Publications</i>	62

Editors' Introduction

The study of language in cognitive science seeks to understand language within the context of the human mind and the nature of intelligence. Thus, research in this field is multidisciplinary and incorporates approaches from other fields such as computer science, neuroscience, philosophy, psychology, and speech language sciences. This special volume of Coyote Papers brings together studies that bear on the nature of mental representations of language, and how these representations are stored, processed, and modeled.

Rachel Hayes' paper entitled "The Perception of Novel Phoneme Contrasts in a Second Language" examines the role of acoustic information in the perception of native and non-native phoneme contrasts. She argues that the acoustic property of consonant duration is the primary cue used by language learners and native speakers of Japanese in the perception of the singleton and geminate consonants.

William Lewis', Viktor Pekar's and Sylvie Porhiel's papers all employ corpora studies. Here, computational analyses of language samples are used as tools to further understand and model linguistic structure. Lewis' paper, "Measuring Conceptual Distance Using WordNet: The Design of a Metric for Measuring Semantic Similarity", presents a new solution to the problem of how to measure semantic similarity between pairs of words using the WordNet lexical database. Pekar's paper, "Modeling Semantic Coherence from Corpus Data: The Fact and the Frequency of a Co-occurrence," proposes a model in which the presence or absence of a co-occurrence is more important than the frequency of a co-occurrence. The models' performance was then tested and found to correlate with speakers' intuitions. Sylvie Porhiel's paper, "Organizing Linguistic Data: Thematic Introducers as an Example," models a classification system for thematic introducers in French through an examination of these structures in a linguistic database. These three papers illustrate that when linguistic research is coupled with research from computer science, we develop a greater understanding of the nature of linguistic representations and structures.

Erin O'Bryan's paper, entitled "Minimalist Derivation in the Late Assignment of Syntax Theory", is an example of integrating linguistic theory into a model of linguistic performance. Specifically, O'Bryan demonstrates that Minimalist derivation can be incorporated into the Late Assignment of Syntax Theory model of language comprehension and shows that the two frameworks complement each other.

The papers presented here provide experimental approaches, theoretical modeling, and corpora studies of language, addressing the nature of linguistic representations across the areas of morphology, phonology, semantics, and syntax. Not only do these studies bear on the nature of our mental representations and processing of language, but they also have more general implications for computational applications which employ language. For example, Lewis' metric for measuring words' semantic similarities can be applied to search engines and text retrieval systems.

This volume is the first in the Coyote Papers series to be available in both electronic and printed forms. We look forward to reaching a wider readership with the introduction of the online version.

Rachel L. Hayes, William D. Lewis, Erin L. O'Bryan, & Tania S. Zamuner