

## **Section 4    Linguistics**

### Chapter 1   Linguistics



# Chapter 1. Linguistics

## Academic and Research Staff

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## 1.1 Introduction

The work of the Linguistics group is directed towards a better understanding of the mental capacities of human beings through the study of the nature, acquisition and use of language. Language is a uniquely human faculty: only humans appear to be capable of learning and using a language, and every normal human acquires knowledge of one or more languages.

We are trying to understand how this linguistic knowledge is represented in the speaker's mind. The central issues of linguistics research are:

1. What is the nature of linguistic knowledge? What do speakers of a particular language such as Latvian, Spanish or Walpiri know, and how does knowledge of one language resemble or differ from that of another language?
2. How do speakers acquire this knowledge?
3. How do speakers put this knowledge to use in producing and understanding utterances?
4. What are the physiological mechanisms that provide the material basis for storage, acquisition and utilization of linguistic knowledge?

Our ability to answer these questions differs considerably, and our research reflects these differences. At present, we have progressed further with regard to answering the questions posed by item one and have made less progress with item four. Currently, our research is heavily concentrated on issues concerned with the nature of the knowledge that characterizes fluent speakers of various languages. However, we are making a significant effort to solve the other questions also.

We are studying these topics along a number of parallel lines. Linguists have investigated the principles by which words are concatenated to form meaningful sentences. These principles have been the primary domain of inquiry into the disciplines of syntax and semantics. Phonology studies the sound structure of words while morphology examines the manner in which different languages combine different meaning-bearing units (specif-

ically, stems, prefixes, suffixes and infixes) to form words. The latter topic has attracted increasing interest in recent years and will probably become more prominent in our research efforts in the future.

## 1.2 Abstracts of Doctoral Dissertations

The following are abstracts of dissertations submitted in 1993 to the Department of Linguistics and Philosophy in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Linguistics.

### 1.2.1 Binding as an Interface Condition: An Investigation of Hindi Scrambling

Douglas Arnold Jones

#### **Abstract**

This thesis provides an analysis of scrambling, following the Minimalist program of Chomsky 1992, examining Hindi as a case study and occasionally making comparisons with Japanese.

The first major claim is that there are two kinds of operations that yield scrambling. One type, called outer scrambling, is an operator-variable construction and is the result of movement. The other type, called Inner scrambling, is the result of several conspiring factors that allow permutation without movement. These factors are triggered by (1) the strength feature of functional heads (2) economy principles that hold at phonological form and (3) full interpretation, which causes the Agr structure to be deleted after its agreement relations have been established. These factors cause TnsP to collapse into an N-ary branching structure containing the arguments of the verb. It is assumed that linear order is not fixed until spellout. Therefore, the N-ary branching structure is free to yield and hence no trace of movement, Inner scrambling is not subject to reconstruction effects. Outer scrambling, since it is an operator-variable construction, is subject to reconstruction effects.

The second major claim is that the subject is special in that at least part of it must raise at LF to the checking domain of C degrees. If the subject cannot be split, for example, when the subject is a monomorphemic pronoun, the entire subject must raise. The result is a novel solution to a problem for the minimalist framework, namely, an account of how both strong and weak crossover may be treated as interface conditions at Logical Form in scrambling constructions.

Furthermore, these structures are integral to an account which captures the subject-orientation of reflexive anaphors. The account also captures the lack of subject orientation for reciprocal anaphors.

### 1.2.2 Topics in Ewe Syntax

Christopher Thad Collins

#### **Abstract**

This thesis analyzes a number of problems in Ewe syntax. Its goal is to show how several difficult problems in Ewe syntax have natural treatments in the generative grammar framework, and how these problems bear on current theoretical issues.

Chapter one gives a brief overview of the assumptions that are adopted in this thesis. The assumptions of this thesis are largely those of Chomsky (1992) and Hale and Keyser (1993).

Chapter two gives an analysis of determiner doubling in Ewe. In this construction the third person singular object pronoun doubles a DP that does not have structural case. Determiner doubling as analyzed as a kind of *default* case assignment. Its precise distribution has important consequences for the grammar of Ewe, including the analysis of serial verb constructions (SVCs), the verbal noun constructions, and A'-movement.

This system of default case found in Ewe will be situated in a general theory of default case, including Yoruba *ni*: and Russian instrumental. The implications of default case are drawn for the general theory of case given in Chomsky (1992).

Chapter three gives a theory of serial verb constructions (SVCs). The main assumptions that are made are that SVCs involve LF incorporation and that "argument sharing" is mediated by empty categories. These two assumptions lead to an account of many subtle phenomena concerning SVCs.

Chapter four gives an analysis of how the form of the third person singular subject pronoun depends on movement to Spec CP. The analysis is

extended to successive cyclic movement, where it is shown that principles of economy of derivation play a role.

### 1.2.3 Minimalism in Syntactic Derivation

Toshifusa Oka

#### **Abstract**

This thesis proposes a theory of how syntactic derivations are constrained. Within the minimalist program of Chomsky 1992, linguistic expressions are optimal realizations of interface conditions. Optimal derivations have minimal cost. The cost of a derivation is determined by principles of economy.

A novel formulation of the system of economy principles is proposed. For example, the shortest steps principle of Chomsky (1992) is replaced by the shallowness principle, which requires that operations must be the shallowest in the phrase markers, and other principles such as the procrastinate principle are redefined. It is also proposed that economy principles are ordered in a certain way. Furthermore, a system of feature-checking is proposed, generalizing abstract case to PP complements and adjuncts.

As a consequence, wh-movement phenomena that have been treated as independent phenomena, including the superiority, nesting, and ECP effects, are explained within a system based purely on economy basis, crosslinguistic and intralinguistic variations being derived from parameterized morphological properties.

### 1.2.4 A/A-Bar Partition Derivation

Hiroaki Tada

#### **Abstract**

This thesis investigates some relations of the problem of A/A-bar partition of movement types and the proper formulation of economy principles.

In chapter 2, I will explore two interrelated problems of scrambling. The first one, called the landing site problem, is why and how the apparently single operation scrambling behaves A-movement and A-bar-movement. The second one, called the optionality problem, is whether scrambling is an optional operation, and if so, why it can violate the last resort principle. The answer to the first question leads to the derivational view of A/A-bar partition. The answer to the second question leads to a

system of effect-based economy principles. In particular, the last resort principle is replaced by the compensation principle which requires the external effect of movement to be compensated for by its internal effect.

In chapter 3, I will discuss the problem of uniformity of chain-steps and suggest that the uniformity can be derived from step-wise application of compensation principle, and discusses complex cases such as German partial *wh*-movement and Mayan focus antipassives in light of the compensation principle and derivational view of A/A-bar-partition.

In chapter 4, I will discuss two phenomena related to the problem of multiple specifier in A and A-bar systems: extraction out of multiple specifier configuration and absorption of multiple *wh*-phrases. They are claimed to support Cheng's (1991) view that *wh*-movement is not driven by feature-checking as NP-movement is.

### 1.2.5 Agr-Based Case Theory and its Interaction with the A-Bar System

Akira Watanabe

#### **Abstract**

This thesis proposes a modification of the Agr-based case theory of Chomsky (1992) to deal with the phenomena of case absorption. The proposed hypothesis claims that Agr must undergo further feature checking with an appropriate functional head after case checking takes place in AgrP. For this reason, CP is needed immediately above

Agr-sP for nominative and null case checking; accusative case checking needs TP in simplex clauses and what will be called HP in participle constructions. When these projections are missing, case checking becomes impossible, resulting in case absorption. This explains the distribution of PRO and ECM/raising with respect to the case checking process in Agr-sP. Accusative case absorption in the participial passive and what will be called the reduced causative also fall under our account. This system is extended to the case of pre/post-positions.

Given the pivotal role of Tns in the proposed system, a dependency is expected between the feature checking in Agr-sP and the feature checking in Agr-oP. Some such cases from Irish, Japanese, and Icelandic are discussed.

The proposed modification requires the V+Infl complex to be raised to C°, creating a configuration where the A-system including case and inflection interacts with the A-bar movement which makes use of Spec of CP. *Wh*-agreement and the comp-trace phenomena are given a uniform treatment from this perspective. At the same time, the modified case theory questions the blocking effect of negation for head movement. Instead, the influence of negation on the inflectional system is captured in terms of modality.

