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Functional Thinking Functional Thinking Syntax over Time The Oxford Handbook of Experimental Syntax Syntax-based Statistical Machine Translation Comparative Studies in Germanic Syntax Introducing Syntax Interaction of Morphology and Syntax Current Approaches to Syntax New Perspectives on Romance Linguistics: Morphology, syntax, semantics and pragmatics Advances in Greek Generative Syntax Korean Morphosyntax: Focusing on Clitics and Their Roles in Syntax Syntax and Semantics A Phi-Syntax for Nominal Concord The Evolution of Functional Left Peripheries in Hungarian Syntax Syntax Computational Approaches to Morphology and Syntax Software Engineering Techniques Applied to Agricultural Systems Inflectional Paradigms Studies on Old High German Syntax The Cambridge Handbook of Historical Syntax On the Syntax of Negation Becoming Functional Handbook of Japanese Syntax Programming Languages: Principles and Paradigms Word and Paradigm Morphology Italian Syntax and Universal Grammar The Syntax-Morphology Interface Sensorimotor Cognition and Natural Language Syntax Jacob Wackernagel, Lectures on Syntax Jacob Wackernagel, Lectures on Syntax Morphology-Driven Syntax A Typological Perspective on Latvian Grammar Studies in Övdalian Morphology and Syntax Historical English Syntax The Syntax of German Methods for Assessing Children's Syntax Syntax. 2. Halbband Syntax Clitics in Phonology, Morphology and Syntax

This textbook introduces the basic concepts of syntax. The approach is thematic, dealing with the nature of syntactic relations and the main types of construction (predication, attribution, coordination etc.). Professor Matthews draws attention to the weakness of much current syntactic theory and considers the problem of indeterminacy, which theorists have been unable to treat in any systematic way. This book argues that syntactic parameters are set in a principled fashion on the basis of overt functional morphology. The main focus of the book is on the different positions of the finite verb in the Germanic SVO languages. In addition, other syntactic phenomena (null subjects, transitive expletive constructions and object shift) and other language families (Romance, Semitic and Slavic) are discussed. A common explanation for all of the discussed phenomena is proposed: If and only if the features for "person" are distinctively marked by the agreement morphology, the agreement affixes are listed separately in the lexicon and project phrases of their own in syntax where they attract the verb to the head positions and allow the specifier positions to be filled by various phonologically (un)realized elements. Special attention is given to issues of historical development and child language acquisition. First Published in 1994. Routledge is an imprint of Taylor & Francis, an informa company. This selection of papers presented at the 20th Comparative Germanic Syntax Workshop brings together contributions that address issues in syntactic predication and studies in the nominal system, as well as papers on data from the history of English and German. Showing a strong comparative commitment, the contributions include studies on previously neglected data on case and predicative structures in Icelandic and other Germanic languages, on the (non-)syntactic distinction of predicative vs. argument NP/DPs, on quirky V2 in Afrikaans, the pronominal system, resumptive pronouns with relative clauses in Zurich German, as well as historical papers on word-formation processes, on auxiliary selection in relation to counter factuality, and on the development of VO-OV orders in the history of English. This volume presents a wide range of studies that enrich both the theoretical understanding and the empirical foundation of comparative research on the Germanic languages. This excellent addition to the UTiCS series of undergraduate textbooks provides a detailed and up to date description of the main principles behind the design and implementation of modern programming languages. Rather than focusing on a specific language, the book identifies the most important principles shared by large classes of languages. To complete this general approach, detailed descriptions of the main programming paradigms, namely imperative, object-oriented, functional and logic are given, analysed in depth and compared. This provides the basis for a critical understanding of most of the programming languages. An historical viewpoint is also included, discussing the evolution of programming languages, and to provide a context for most of the constructs in use today. The book concludes with two chapters which introduce basic notions of syntax, semantics and computability, to provide a completely rounded picture of what constitutes a programming language. /div This volume showcases the contributions that formal experimental methods can make to syntactic research in the 21st century. Syntactic theory is both a domain of study in its own right, and one component of an integrated theory of the cognitive neuroscience of language. It provides a theory of the mediation between sound and meaning, a theory of the representations constructed during sentence processing, and a theory of the end-state for language acquisition. Given the highly interactive nature of the theory of syntax, this volume defines "experimental syntax" in the broadest possible terms, exploring both formal experimental methods that have been part of the domain of syntax since its inception (i.e., acceptability judgment methods) and formal experimental methods that have arisen through the interaction of syntactic theory with the domains of acquisition, psycholinguistics, and neurolinguistics. The Oxford Handbook of Experimental Syntax brings these methods together into a single experimental syntax volume for the first time, providing high-level reviews of major experimental work, offering guidance for researchers looking to incorporate these diverse methods into their own work, and inspiring new research that will push the boundaries of the theory of syntax. It will appeal to students and scholars from the advanced undergraduate level upwards in a range of fields including syntax, acquisition, psycholinguistics, neurolinguistics, and computational linguistics. This comprehensively annotated English edition of two series of lectures by the linguist and classical philologist Jacob Wackernagel offers an introduction not only to Greek, Latin, and comparative syntax but also to many topics in the history and pre-history of Greek and Latin, and their relations with other languages. This book contains fourteen articles that reflect current ideas on the phonology, morphology, and syntax of clitics. It covers the forms and functions of clitics in various typologically diverse languages and presents data from, e.g. European Portuguese, Macedonian, and Yoruba. It extensively deals with the prosodic structure of clitics, their morphological status, clitic placement, and clitic doubling. The form and behavior of clitics with respect to tonal phenomena and in verse are discussed in two articles (Akinlabi & Liberman, Reindl & Franks). Other articles address the prosodic representation of clitics in Irish (Green), the differences in the acquisition of clitics and strong pronouns in Catalan (Escobar & Gavarro), the similarities between clitics and affixes or words in Romance and Bantu languages (Cocchi, Crysmann, Monachesi, Ortman & Popescu), the semantics of clitics in the Greek DP and in Spanish doubling (Alexiadou & Stavrou, Uriagereka), and complex problems concerning verbal clitics in Romanian and Balkan languages (Legendre, Spencer, Tomic). Designed in part as a handbook to assist in the choice and use of methods for investigating children's grammer, this volume presents a selection of methods and pointers for designing and conducting experimental studies and for evaluating research. Printbegrænsninger: Der kan printes 10 sider ad gangen og max. 40 sider pr. session Even though the range of phenomena syntactic theories intend to account for is basically the same, the large number of current approaches to syntax shows how differently these phenomena can be interpreted, described, and explained. The goal of the volume is to probe into the question of how exactly these frameworks differ and what if anything they have in common.Descriptions of a sample of current approaches to syntax are presented by their major practitioners (Part I) followed by their metatheoretical underpinnings (Part II). Given that the goal is to facilitate a systematic comparison among the approaches, a checklist of issues was given to the contributors to address. The main headings are Data, Goals, Descriptive Tools, and Criteria for Evaluation. The chapters are structured uniformly allowing an item-by-item survey across the frameworks. The introduction lays out the parameters along which syntactic frameworks must be the same and how they may differ and a final paper draws some conclusions about similarities and differences.The volume is of interest to descriptive linguists, theoreticians of grammar, philosophers of science, and studies of the cognitive science of science. This is the first of two volumes emanating from the Linguistic Symposium on Romance Languages held at the

University of Texas at Austin in February 2005. It features the keynote address delivered by Denis Bouchard on exaptation and linguistic explanation, as well as seventeen contributions by emerging and internationally recognized scholars of Spanish, French, Italian, as well as Rumanian. While the emphasis bears on formal analyses, the coverage is remarkably broad, as topics range from morphology, syntax, semantics, pragmatics and language acquisition. Each article seeks to represent a new perspective on these topics and a variety of frameworks and concepts are exploited: distributive morphology, entailment theory, grammaticalization, information structure, left-periphery, polarity lattice, spatial individuation, thematic hierarchy, etc. This volume will challenge anyone interested in current issues in theoretical Romance Linguistics. This collection of original research focuses on various lesser studied aspects of Greek syntax. The articles combine a sound empirical coverage within current developments of generative theory and cover a wide spectrum of areas. The syntax of sentential structure is dealt with by two articles, one is an extensive analysis of the distribution of goal and beneficiary dative DPs in Greek (and cross-linguistically) and the other addresses the relation agree in small clauses (and between adjectives and nouns). Two articles study the acquisition of the left periphery and of eventivity and one focuses on the historical evolution of participles in Greek, out of which gerunds emerged. The syntax and semantics of wh-clauses in DP positions and of the non-volitional verb ?elo are the focus of two articles situated in the syntax⏐semantics interface. The DP domain is approached by two theoretical articles, one on a Greek possessive adjective and another on determiner heads. The final contribution studies the acquisition of the Greek definite article. The book focusses on the grammatical feature definiteness in German, visible in the inflection of adjectives (ein schön-es Kind vs. das schön-e Kind). It argues for an analysis of this effect that draws a connection to the visible categories of number and gender on nouns and related words rather than an abstract property. This conclusion rests on the conflation of the established grammatical categories into a single one, number-gender, which explains a vast body of grammatical phenomena in German and principles of language in general. This volume of essays offers a wide-ranging comparative analysis of Italian syntax. If you have an imperative (and probably object-oriented) programming background, this hands-on book will guide you through the alien world of functional programming. Author Joshua Backfield begins slowly by showing you how to apply the most useful implementation concepts before taking you further into functional-style concepts and practices. In each chapter, you'll learn a functional concept and then use it to refactor the fictional XXY company's imperative-style legacy code, writing and testing the functional code yourself. As you progress through the book, you'll migrate from Java 7 to Groovy and finally to Scala as the need for better functional language support gradually increases. Learn why today's finely tuned applications work better with functional code Transform imperative-style patterns into functional code, following basic steps Get up to speed with Groovy and Scala through examples Understand how first-class functions are passed and returned from other functions Convert existing methods into pure functions, and loops into recursive methods Change mutable variables into immutable variables Get hands-on experience with statements and nonstrict evaluations Use functional programming alongside object-oriented design The series Handbooks of Linguistics and Communication Science is designed to illuminate a field which not only includes general linguistics and the study of linguistics as applied to specific languages, but also covers those more recent areas which have developed from the increasing body of research into the manifold forms of communicative action and interaction. A proposal that the syntactic structure of a sentence reporting a concrete episode in the world can be interpreted as a description of the sensorimotor processes involved in experiencing that episode. How is the information we gather from the world through our sensory and motor apparatus converted into language? It is obvious that there is an interface between language and sensorimotor cognition because we can talk about what we see and do. In this book, Alistair Knott argues that this interface is more direct than commonly assumed. He proposes that the syntax of a concrete sentence—a sentence that reports a direct sensorimotor experience—closely reflects the sensorimotor processes involved in the experience. In fact, he argues, the syntax of the sentence can be interpreted as a description of these sensorimotor processes. Knott focuses on a simple concrete episode: a man grabbing a cup. He presents detailed models of the sensorimotor processes involved in experiencing this episode (drawing on research in psychology and neuroscience) and of the syntactic structure of the transitive sentence reporting the episode (drawing on Chomskyan Minimalist syntactic theory). He proposes that these two independently motivated models are closely linked—that the logical form of the sentence can be given a detailed sensorimotor characterization and that, more generally, many of the syntactic principles understood in Minimalism as encoding innate linguistic knowledge are actually sensorimotor in origin. Knott's sensorimotor reinterpretation of Chomsky opens the way for a psychological account of sentence processing that is compatible with a Chomskyan account of syntactic universals, suggesting a way to reconcile Chomsky's theory of syntax with the empiricist models of language often viewed as Mimimalism's competitors. The future of English linguistics as envisaged by the editors of Topics in English Linguistics lies in empirical studies which integrate work in English linguistics into general and theoretical linguistics on the one hand, and comparative linguistics on the other. The TiEL series features volumes that present interesting new data and analyses, and above all fresh approaches that contribute to the overall aim of the series, which is to further outstanding research in English linguistics. This book explains inflectional paradigms' role as the grammatical nexus at which mismatches between words' content and form are resolved. Theoretical studies of Latvian grammar have a great deal to offer to contemporary linguistics. Although traditionally Lithuanian has been the most widely studied Baltic language in diachronic and synchronic linguistics alike, Latvian has a number of distinctive features that can prove valuable both for historical, and perhaps even more so, for synchronic language research. Therefore, at the very least, contemporary typological, areal, and language contact studies involving Baltic languages should account for data from Latvian. Typologically, Latvian grammar is a classic Indo-European (Baltic) system with well-developed inflection and derivation. However, it also bears certain similarities to the Finno-Ugric languages, which can be reasonably explained by its areal and historical background. This applies, for example, to the mood system and its connections with modality and evidentiality in Latvian, also to the correlation between aspect and quantity as manifested in verbal and nominal (case) forms. The relations between debitive mood, certain constructions with reflexive verbs, and voice in Latvian are intriguing examples of unusual morphosyntactic features. Accordingly, the book focuses on the following topics: case system and declension (with emphasis on the polyfunctionality of case forms), gender, conjugation, tense and personal forms, aspect, mood, modality and evidentiality, reflexive verbs, and voice. The examples included in this book have been taken from the Balanced Corpus of Modern Latvian (Lidzsvarots musdienu latviešu valodas tekstu korpuss, available at www.korpuss.lv), www.google.lv, mass media, and fiction texts (see the List of language sources) without regard to relative frequency ratios. The present volume deals with hitherto unexplored issues on the interaction of morphology and syntax. These selected and invited papers mainly concern Cushitic and Chadic languages, the least-described members of the Afroasiatic family. Three papers in the volume explore one or more typological characteristics across an entire language family or branch, while others focus on one or two languages within a family and the implications of their structures for the family, the phylum, or linguistic typology as a whole. The diversity of topics addressed within the present volume reflects the great diversity of language structures and functions within the Afroasiatic phylum. If you're familiar with functional programming basics and want to gain a much deeper understanding, this in-depth guide takes you beyond syntax and demonstrates how you need to think in a new way. Software architect Neal Ford shows intermediate to advanced developers how functional coding allows you to step back a level of abstraction so you can see your programming problem with greater clarity. Each chapter shows you various examples of functional thinking, using numerous code examples from Java 8 and other JVM languages that include functional capabilities. This book may bend your mind, but you'll come away with a much better grasp of functional programming concepts. Understand why many imperative languages are adding functional capabilities Compare functional and imperative solutions to common problems Examine ways to cede control of routine chores to the runtime Learn how memoization and laziness eliminate hand-crafted solutions Explore functional approaches to design patterns and code reuse View real-world examples of functional thinking with Java 8, and in functional architectures and web frameworks Learn the pros and cons of living in a paradigmatically richer world If you're new to functional programming, check out Josh Backfield's book Becoming Functional. This book is an English version of two series of highly acclaimed introductory lectures given by the great Swiss linguist and classical philologist Jacob Wackernagel (1853-1938) at

the University of Basle in 1918-19 on aspects of Greek, Latin, and German as languages. Out of print in German since 1996, these lectures remain the best available introduction, in any language, not only to Greek, Latin, and comparative syntax but also to many topics in the history and pre-history of Greek and Latin, and their relations with other languages. Other subjects, such as the history of grammatical terminology, are also brilliantly dealt with. This new edition supplements the German original by providing a translation of all quotations and examples, a large number of detailed footnotes offering background information and suggestions for further reading, and a single bibliography which brings together Wackernagel's references and those added in the notes. Syncretism - where a single form serves two or more morphosyntactic functions - is a persistent problem at the syntax-morphology interface. It results from a 'mismatch' whereby the syntax of a language makes a particular distinction but the morphology does not. This pioneering book provides a full-length study of inflectional syncretism, presenting a typology of its occurrence across a wide range of languages. The implications of syncretism for the syntax-morphology interface have long been recognised: it argues either for an enriched model of feature structure (thereby preserving a direct link between function and form), or for the independence of morphological structure from syntactic structure. This book presents a compelling argument for the autonomy of morphology and the resulting analysis is illustrated in a series of formal case studies within Network Morphology. It will be welcomed by all linguists interested in the relation between words and the larger units of which they are a part. "The authors discuss the nature and uses of syntactic parsers and examine the problems and opportunities of parsing algorithms for finite-state, context-free, and various context-sensitive grammars. Syntax is the system of rules that we subconsciously follow when we build sentences. Whereas the grammar of English (or other languages) might look like a rather chaotic set of arbitrary patterns, linguistic science has revealed that these patterns can actually be understood as the result of a small number of grammatical principles. This lively introductory textbook is designed for undergraduate students in linguistics, English and modern languages with relatively little background in the subject, offering the necessary tools for the analysis of phrases and sentences while at the same time introducing state-of-the-art syntactic theory in an accessible and engaging way. Guiding students through a variety of intriguing puzzles, striking facts and novel ideas, Introducing Syntax presents contemporary insights into syntactic theory in one clear and coherent narrative, avoiding unnecessary detail and enabling readers to understand the rationale behind technicalities. Aids to learning include highlighted key terms, suggestions for further reading and numerous exercises, placing syntax in a broader grammatical perspective. This volume provides an introduction to word and paradigm models of morphology and the general perspectives on linguistic morphology that they embody. The recent revitalization of these models is placed in the larger context of the intellectual lineage that extends from classical grammars to current information-theoretic and discriminative learning paradigms. The synthesis of this tradition outlined in the volume highlights leading ideas about the organization of morphological systems that are shared by word and paradigm approaches, along with strategies that have been developed to formalize these ideas, and ways in which the ideas have been validated by experimental methodologies. An extended comparison of contemporary word and paradigm variants isolates the central assumptions about morphological units and relations that distinguish implicational from realizational models and clarifies the relation of these models to morpheme-based accounts. Designed to be accessible to a wide readership, this book will serve both as an introduction to morphology and morphological theory from the word and paradigm perspective for non-specialists, and for morphologists, as a detailed account of the history of the ideas that underlie these models. Korean Morphosyntax: Focusing on Clitics and Their Roles in Syntax presents a theory-neutral comprehensive analysis of Korean morphosyntax for advanced students and scholars of Korean language and linguistics. This book focuses on the morphosyntactic status of particles in Korean and highlights how this understanding allows for a proper analysis of sentences. As the significance of clitics in Korean has not been highlighted by previous works in such depth, this book offers the first comprehensive study of this aspect of the Korean language. The new observations offered here will allow readers to correctly identify the basic units of syntax and to properly analyze sentences in Korean. This book will be of interest to graduates and scholars interested in Korean linguistics and morphosyntax. Change is an inherent feature of all aspects of language, and syntax is no exception. While the synchronic study of syntax allows us to make discoveries about the nature of syntactic structure, the study of historical syntax offers even greater possibilities. Over recent decades, the study of historical syntax has proven to be a powerful scientific tool of enquiry with which to challenge and reassess hypotheses and ideas about the nature of syntactic structure which go beyond the observed limits of the study of the synchronic syntax of individual languages or language families. In this timely Handbook, the editors bring together the best of recent international scholarship on historical syntax. Each chapter is focused on a theme rather than an individual language, allowing readers to discover how systematic descriptions of historical data can profitably inform and challenge highly diverse sets of theoretical assumptions. This book adopts a generative framework to investigate the diachronic syntax of Hungarian, one of only a handful of non-Indo-European languages with a documented history spanning more than 800 years. Professor É. Kiss and several internationally recognized experts in the field bring together the best in traditional descriptive linguistics and the state-of-the-art in theoretical linguistics to offer an indepth and original survey of some of the most important structural changes in the history of Hungarian. The book specifically focuses on the restructuring of Hungarian syntax from head-final to head-initial, which started in the Proto-Hungarian age. This development led to fundamental structural changes, resulting in the evolution of functional left peripheries on various levels of syntactic structure by the 16th century. Chapters examine a number of related topics, including the emergence of focus, topic, and negative quantifiers, the marking of definiteness, universal quantifiers, and non-finite and finite subordination. The mechanisms of change are those observed in Indo-European languages (reanalysis, grammaticalization, cyclicity), but the paths of change have often been different. The book will be of interest to researchers and graduate students working in historical and diachronic linguistics, as well as all those interested in the mechanisms and theory of linguistic change. This book provides a critical investigation of syntactic change and the factors that influence it. Converging empirical and theoretical considerations have suggested that apparent instances of syntactic change may be attributable to factors outside syntax proper, such as morphology or information structure. Some even go so far as to propose that there is no such thing as syntactic change, and that all such change in fact takes place in the lexicon or in the phonological component. In this volume, international scholars examine these proposals, drawing on detailed case studies from Germanic, Romance, Chinese, Egyptian, Finnic, Hungarian, and Sámi. They aim to answer such questions as: Can syntactic change arise without an external impetus? How can we tell whether a given change is caused by information-structural or morphological factors? What can 'microsyntactic' investigations of changes in individual lexical items tell us about the bigger picture? How universal are the clausal and nominal templates ('cartography'), and to what extent is syntactic structure more generally subject to universal constraints? The book will be of interest to all linguists working on syntactic variation and change, and especially those who believe that historical linguistics and linguistic theory can, and should, inform one another. Övdalian is spoken in central Sweden by about 2000 speakers. Traditionally categorized as a dialect of Swedish, it has not received much international attention. However, Övdalian is typologically closer to Faroese or Icelandic than it is to Swedish, and since it has been spoken in relative isolation for about 1000 years, a number of interesting linguistic archaisms have been preserved and innovations have developed. This volume provides seven papers about Övdalian morphology and syntax. The papers, all based on extensive fieldwork, cover topics such as verb movement, subject doubling, wh-words and case in Övdalian. Constituting the first comprehensive linguistic description of Övdalian in English, this volume is of interest for linguists in the fields of Scandinavian and Germanic linguistics, and also historical linguists will be thrilled by some of the presented data. The data and the analyses presented here furthermore challenge our view of the morphosyntax of the Scandinavian languages in some cases – as could be expected when a new language enters the linguistic arena. Software Engineering Techniques Applied to Agricultural Systems presents cutting-edge software engineering techniques for designing and implementing better agricultural software systems based on the object-oriented paradigm and the Unified Modeling Language (UML). The book is divided in two parts: the first part presents concepts of the object-oriented paradigm and the UML notation of these concepts, and the second part provides a number of examples of applications that use the material presented in the first part. The examples presented illustrate

the techniques discussed, focusing on how to construct better models using objects and UML diagrams. More advanced concepts such as distributed systems and examples of how to build these systems are presented in the last chapter of the book. The book presents a step-by-step approach for modeling agricultural systems, starting with a conceptual diagram representing elements of the system and their relationships. Furthermore, diagrams such as sequential and collaboration diagrams are used to explain the dynamic and static aspects of the software system. A broad coverage of German syntax, providing an in-depth look at object-verb sentence formation in comparison with other languages. Studies of Japanese syntax have played a central role in the long history of Japanese linguistics spanning more than 250 years in Japan and abroad. More recently, Japanese has been among the languages most intensely studied within modern linguistic theories such as Generative Grammar and Cognitive/Functional Linguistics over the past fifty years. This volume presents a comprehensive survey of Japanese syntax from these three research strands, namely studies based on the traditional research methods developed in Japan, those from broader functional perspectives, and those couched in the generative linguistics framework. The twenty-four studies contained in this volume are characterized by a detailed analysis of a grammatical phenomenon with broader implications to general linguistics, making the volume attractive to both specialists of Japanese and those interested in learning about the impact of Japanese syntax to the general study of language. Each chapter is authored by a leading authority on the topic. Broad issues covered include sentence types (declarative, imperative, etc.) and their interactions with grammatical verbal categories (modality, polarity, politeness, etc.), grammatical relations (topic, subject, etc.), transitivity, nominalizations, grammaticalization, word order (subject, scrambling, numeral quantifier, configurationality), case marking (ga/no conversion, morphology and syntax), modification (adjectives, relative clause), and structure and interpretation (modality, negation, prosody, ellipsis). Chapter titles Introduction Chapter 1. Basic structures of sentences and grammatical categories, Yoshio Nitta, Kansai University of Foreign Studies Chapter 2: Transitivity, Wesley Jacobsen, Harvard University Chapter 3: Topic and subject, Takashi Masuoka, Kobe City University of Foreign Studies Chapter 4: Toritate: Focusing and defocusing of words, phrases, and clauses, Hisashi Noda, National Institute for Japanese Language and Linguistics Chapter 5: The layered structure of the sentence, Isao Iori, Hitotsubashi University Chapter 6. Functional syntax, Ken-Ichi Takami, Gakushuin University; and Susumu Kuno, Harvard University Chapter 7: Locative alternation, Seizi Iwata, Osaka City University Chapter 8: Nominalizations, Masayoshi Shibatani, Rice University Chapter 9: The morphosyntax of grammaticalization, Heiko Narrog, Tohoku University Chapter 10: Modality, Nobuko Hasegawa, Kanda University of International Studies Chapter 11: The passive voice, Tomoko Ishizuka, Tama University Chapter 12: Case marking, Hideki Kishimoto, Kobe University Chapter 13: Interfacing syntax with sounds and meanings, Yoshihisa Kitagawa, Indiana University Chapter 14: Subject, Masatoshi Koizumi, Tohoku University Chapter 15: Numeral quantifiers, Shigeru Miyagawa, MIT Chapter 16: Relative clauses, Yoichi Miyamoto, Osaka University Chapter 17: Expressions that contain negation, Nobuaki Nishioka, Kyushu University Chapter 18: Ga/No conversion, Masao Ochi, Osaka University Chapter 19: Ellipsis, Mamoru Saito, Nanzan University Chapter 20: Syntax and argument structure, Natsuko Tsujimura, Indiana University Chapter 21: Attributive modification, Akira Watanabe, University of Tokyo Chapter 22: Scrambling, Noriko Yoshimura, Shizuoka Prefectural University If you're familiar with functional programming basics and want to gain a much deeper understanding, this in-depth guide takes you beyond syntax and demonstrates how you need to think in a new way. Software architect Neal Ford shows intermediate to advanced developers how functional coding allows you to step back a level of abstraction so you can see your programming problem with greater clarity. Each chapter shows you various examples of functional thinking, using numerous code examples from Java 8 and other JVM languages that include functional capabilities. This book may bend your mind, but you'll come away with a much better grasp of functional programming concepts. Understand why many imperative languages are adding functional capabilities Compare functional and imperative solutions to common problems Examine ways to cede control of routine chores to the runtime Learn how memoization and laziness eliminate hand-crafted solutions Explore functional approaches to design patterns and code reuse View real-world examples of functional thinking with Java 8, and in functional architectures and web frameworks Learn the pros

and cons of living in a paradigmatically richer world If you're new to functional programming, check out Josh Backfield's book Becoming Functional. This unique book provides a comprehensive introduction to the most popular syntax-based statistical machine translation models, filling a gap in the current literature for researchers and developers in human language technologies. While phrase-based models have previously dominated the field, syntax-based approaches have proved a popular alternative, as they elegantly solve many of the shortcomings of phrase-based models. The heart of this book is a detailed introduction to decoding for syntax-based models. The book begins with an overview of synchronous-context free grammar (SCFG) and synchronous tree-substitution grammar (STSG) along with their associated statistical models. It also describes how three popular instantiations (Hiero, SAMT, and GHKM) are learned from parallel corpora. It introduces and details hypergraphs and associated general algorithms, as well as algorithms for decoding with both tree and string input. Special attention is given to efficiency, including search approximations such as beam search and cube pruning, data structures, and parsing algorithms. The book consistently highlights the strengths (and limitations) of syntax-based approaches, including their ability to generalize phrase-based translation units, their modeling of specific linguistic phenomena, and their function of structuring the search space.