The Application Of Semantic Field Theory To English

This book describes methodologies for developing semantic applications. Semantic applications are software applications which explicitly or implicitly use the semantics, i.e. the meaning of a domain terminology, in order to improve usability, correctness, and completeness. An example is semantic search, where synonyms and related terms are used for enriching the results of a simple text-based search. Ontologies, thesauri or controlled vocabularies are the centerpiece of semantic applications. The book includes technological and architectural best practices for corporate use. The authors are experts from industry and academia with experience in developing semantic applications. This text is designed for undergraduate and graduate students interested in contemporary English, especially those whose primary area of interest is English as a second language. Focus is placed exclusively on English data, providing an empirical explication of the structure of the language. Although the notion of meaning has always been at the core of translation, the invariance of meaning has, partly due to practical constraints, rarely been challenged in Corpus-based Translation Studies. In answer to this, the aim of this book is to question the invariance of meaning in

translated texts: if translation scholars agree on the fact that translated language is different from non-translated language with respect to a number of grammatical and lexical aspects, would it be possible to identify differences between translated and non-translated language on the semantic level too? More specifically, this books tries to formulate an answer to the following three questions: (i) how can semantic differences in translated vs non-translated language be investigated in a corpus-based study?, (ii) are there any differences on the semantic level between translated and non-translated language? and (iii) if there are differences on the semantic level, can we ascribe them to any of the (universal) tendencies of translation? In this book, I establish a way to visually explore semantic similarity on the basis of representations of translated and non-translated semantic fields. A technique for the comparison of semantic fields of translated and non-translated language called SMM++ (based on Helge Dyvik's Semantic Mirrors method) is developed, yielding statistics-based visualizations of semantic fields. The SMM++ is presented via the case of inchoativity in Dutch (beginnen [to begin]). By comparing the visualizations of the semantic fields on different levels (translated Dutch with French as a source language, with English as a source language and non-translated Dutch) I further explore whether the differences between translated

and non-translated fields of inchoativity in Dutch can be linked to any of the well-known universals of translation. The main results of this study are explained on the basis of two cognitively inspired frameworks: Halverson's Gravitational Pull Hypothesis and Paradis' neurolinguistic theory of bilingualism.

Provides an account of the syntactic, semantic and pragmatic properties of modal adverbs of certainty in English. This book relies on three types of data: monolingual corpora, translation corpora and informant testing. It explores the semantic field of certainty as realised by English adverbs.

Semantics

A semantic analysis of the lexical field watercraft

Metaphor

Semantic Structures

Semantic Applications

In spite of the vast literature on modality in English, very little research has been done on modal adverbs as a group. While there are studies of individual adverbs, the semantic and pragmatic relations between them have been left largely unexplored. This book takes a close look at the whole field of modal certainty as expressed by adverbs in English. On the basis of corpus data the most frequent adverbs

of certainty, including certainly, indeed, and no doubt, are examined from the point of view of their syntactic, semantic and pragmatic characteristics. The corpus used is the International Corpus of English - Great Britain, supplemented by data from other present-day English corpora, and questionnaires testing native speakers' intuitions on fine-grained similarities and differences between closely related adverbs. The methodology also includes the study of cross-linguistic equivalents as indicators of semantic-pragmatic relations between adverbs. Translation corpora yield correspondences in Swedish, Dutch, French and German. A detailed study of those correspondences adds useful information for setting up a semantic-pragmatic profile of each adverb, showing where their meanings overlap and where the boundaries are. The concept of semantic maps is relied on for plotting these relations. The book not only provides a thorough empirical study of English adverbs expressing certainty, it also contributes to a better theoretical understanding of the

complexity of modal certainty, how it is related to speakers' goals and to other semantic areas. It is the first in-depth study of this kind, combining rich information on English as well as opening up perspectives for further empirical and theoretical research into modality.

In this extraordinary new work, Dr. Backhouse undertakes a semantic study of taste terms in modern spoken Japanese. Through an investigation of the range of vocabulary available for the description of taste qualities, and their interrelationship in terms of meaning, Dr. Backhouse presents a sensitive elucidation of the structure of Japanese taste terms, which has significant implications for anthropological linguistics. He explores important semantic issues, such as the relationship between evaluative and descriptive meaning, the intralinguistic mechanisms at work in metaphor, and draws illuminating connections between the lexical field of color and that of taste.

Studies in the Lexical Field of Expectation presents a classification

by conceptual field of the vocabulary expressing the ideas in the semantic field of Expectation. The field divides into eleven categories including Surprise, Disappointment, Hope, Fear, Caution, Courage, and Rashness. The categories, subcategories of the field and the lexical items are ordered hierarchically and each sense is followed by its dates of usage. The book discusses the method and methodology of constructing the classification examining the delimitation of the field, the choice of headwords, the process of classifying the materials, and the use and presentation of grammatical information within a semantic classification. The proportions of loan words and native terms within each conceptual group are investigated and it examines the patterns of accessions and obsolescences across the centuries from Old English to the present day. With this book, the promise of the Semantic Web -- in which machines can find, share, and combine data on the Web -- is not just a technical possibility, but a practical reality

Programming the Semantic Web demonstrates several ways to implement semantic web applications, using current and emerging standards and technologies. You'll learn how to incorporate existing data sources into semantically aware applications and publish rich semantic data. Each chapter walks you through a single piece of semantic technology and explains how you can use it to solve real problems. Whether you're writing a simple mashup or maintaining a high-performance enterprise solution,Programming the Semantic Web provides a standard, flexible approach for integrating and future-proofing systems and data. This book will help you: Learn how the Semantic Web allows new and unexpected uses of data to emerge Understand how semantic technologies promote data portability with a simple, abstract model for knowledge representation Become familiar with semantic standards, such as the Resource Description Framework (RDF) and the Web Ontology Language (OWL) Make use of semantic programming techniques to both enrich and simplify

current web applications
Techniques in Teaching Vocabulary
Frames, Fields, and Contrasts
Innovations, Developments, and
Applications of Semantic Web and
Information Systems
A Linguistic Introduction
Fuzzy Logic and the Semantic Web
This volume applies semantic and lexical theory to
language teaching and language learning.
In the last few years, there has been an increased
advancement and evolution in semantic web and
information systems in a variety of fields. The
integration of these approaches to ontology
engineering, sophisticated methods and algorithms
for open linked data extraction, and advanced
decision-making creates new opportunities for a
bright future. Innovations, Developments, and
Applications of Semantic Web and Information
Systems is a critical scholarly resource that
discusses integrated methods of research and
analytics in information technology. Featuring
coverage on a broad range of topics, such as
cognitive computing, artificial intelligence,
machine learning, data analysis, and algorithms,
this book is geared towards researchers,
academicians, and professionals seeking current
information on semantic web and information
systems.

TRENDS IN LINGUISTICS is a series of books that open new perspectives in our understanding of language. The series publishes state-of-the-art work on core areas of linguistics across theoretical frameworks as well as studies that provide new insights by building bridges to neighbouring fields such as neuroscience and cognitive science. TRENDS IN LINGUISTICS considers itself a forum for cutting-edge research based on solid empirical data on language in its various manifestations, including sign languages. It regards linguistic variation in its synchronic and diachronic dimensions as well as in its social contexts as important sources of insight for a better understanding of the design of linguistic systems and the ecology and evolution of language. TRENDS IN LINGUISTICS publishes monographs and outstanding dissertations as well as edited volumes, which provide the opportunity to address controversial topics from different empirical and theoretical viewpoints. High quality standards are ensured through anonymous reviewing.

These are exciting times in the fields of Fuzzy Logic and the Semantic Web, and this book will add to the excitement, as it is the first volume to focus on the growing connections between these two fields. This book is expected to be a valuable aid to anyone considering the application of Fuzzy Logic to the Semantic Web, because it contains a number

of detailed accounts of these combined fields, written by leading authors in several countries. The Fuzzy Logic field has been maturing for forty years. These years have witnessed a tremendous growth in the number and variety of applications, with a real-world impact across a wide variety of domains with humanlike behavior and reasoning. And we believe that in the coming years, the Semantic Web will be major field of applications of Fuzzy Logic. This book, the first in the new series Capturing Intelligence, shows the positive role Fuzzy Logic, and more generally Soft Computing, can play in the development of the Semantic Web, filling a gap and facing a new challenge. It covers concepts, tools, techniques and applications exhibiting the usefulness, and the necessity, for using Fuzzy Logic in the Semantic Web. It finally opens the road to new systems with a high Web IQ. Most of today's Web content is suitable for human consumption. The Semantic Web is presented as an extension of the current web in which information is given well-defined meaning, better enabling computers and people to work in cooperation. For example, within the Semantic Web, computers will understand the meaning of semantic data on a web page by following links to specified ontologies. But while the Semantic Web vision and research attracts attention, as long as it will be used two-valued-based logical methods no progress will be expected

in handling ill-structured, uncertain or imprecise information encountered in real world knowledge. Fuzzy Logic and associated concepts and techniques (more generally, Soft Computing), has certainly a positive role to play in the development of the Semantic Web. Fuzzy Logic will not supposed to be the basis for the Semantic Web but its related concepts and techniques will certainly reinforce the systems classically developed within W3C. In fact, Fuzzy Logic cannot be ignored in order to bridge the gap between human-understandable soft logic and machine-readable hard logic. None of the usual logical requirements can be guaranteed: there is no centrally defined format for data, no guarantee of truth for assertions made, no guarantee of consistency. To support these arguments, this book shows how components of the Semantic Web (like XML, RDF, Description Logics, Conceptual Graphs, Ontologies) can be covered, with in each case a Fuzzy Logic focus. First volume to focus on the growing connections between Fuzzy Logic and the Semantic Web Keynote chapter by Lotfi Zadeh The Semantic Web is presently expected to be a major field of applications of Fuzzy Logic It fills a gap and faces a new challenge in the development of the Semantic Web It opens the road to new systems with a high Web IQ Contributed chapters by Fuzzy Logic leading experts
Semantic Fields and Lexical Structure

Word Meaning and Syntax

Historical Semantics - Historical Word-Formation

The Development and Assessment of the Semantic Fields Model of Visual Salience

The Five Clocks

MetaphorIts Cognitive Force and Linguistic StructureOxford University Press
This book describes and analyzes all published, unpublished and in-progress studies of Old English semantic fields. Thirty-seven fields - such as gloom, nobility, sea and weapon terms - are examined for anyone interested in Anglo-Saxon England from virtually any perspective. The work also describes historical patterns in this area of scholarship and correlates related activity in modern literary criticism and semantics. It helps established scholars and beginners alike to know what has been written about a particular semantic field or segment of the Old English vocabulary and where to find the studies. It shows attempts by scholars over the decades to discover both basic definitions and lost nuances of the Old English, especially poetic, vocabulary and to refine our understanding of how the Anglo-Saxons perceived the world around them. We get a glimpse of a very rich vocabulary and increasingly skillful attempts by scholars to appreciate the intricacy and depth of Anglo-Saxon expression.
Seminar paper from the year 2008 in the subject English Language and Literature

Studies - Linguistics, grade: 1,0, University of Flensburg (Institut für Anglistik und Amerikanistik), course: Semantics, language: English, abstract: Vehicles are part of our everyday life. They help us transporting goods, traveling and are part of our free time activities. This leads to many different types of vehicles, many lexemes and therefore a large lexical field. In this paper I will have a closer look at the semantic field vehicle. I will concentrate on vehicles that move on solid ground. Starting by analyzing the sense relations within the semantic field, synonymous, hyponymic, meronymic, polysemous, and homonymous relations will be the key aspects of my analysis. Furthermore, I will have a look at the prototype theory and the Goodness-Of-Exemplar-Rating in connection to the lexical field vehicle. The purpose of this book is to provide a comprehensive philosophical theory which explains the cognitive contribution of metaphor. The argument is illustrated with analysis of metaphors from literature, philosophy, science, and everyday language. A semantic analysis of the lexical field "vehicle" Lexical Semantics: Semantic Fields and Collocations New Essays in Semantic and Lexical Organization The Structure of Modern English Meaning and cognition

As technology becomes increasingly intelligent, various factors within the field of data science are seeing significant transformation. Process analysis is one area that is undergoing substantial development due to the implementation of semantic reasoning and web technologies. The congruence of these two systems has created various applications and developments in data processing and analysis across several professional fields. Applications and Developments in Semantic Process Mining is an essential reference source that discusses the improvement of process mining algorithms through the implementation of semantic modeling and representation. Featuring research on topics such as domain ontologies, fuzzy modeling, and information extraction, the book takes into account the different stages of process mining and its application in real time and then expounds the classical process mining techniques to semantical preparation of the extracted models for further analysis and querying at a more abstract level. The book provides a wide-ranging idea of the application and development of semantic process mining that is expected to be beneficial and used by professionals, software and data engineers, software developers, IT experts, business owners and entrepreneurs, and process analysts. Toward the end of the 20th century, there is both a dissatisfaction with existing formal semantic theories and a wish to preserve insights from other semantic traditions. Cognitive semantics, the latest of the major trends which have dominated the century, attempts to do this by focusing on meaning as a cognitive phenomenon. This book provides different perspectives on meaning as a cognitive phenomenon. Jens Allwood presents an approach where meaning is analyzed in terms of context sensitive cognitive operations. Peter

Gärdenfors examines the relationship between cognitive semantics and standard formal extensional and intensional semantics. Peter Harder discusses the relation between functionalism and cognitive semantics. Sören Sjöström and +ke Viberg extend a cognitive semantic approach to new empirical domains like vision and physical contact. Elisabeth Engberg Pedersen extends the use of cognitive semantics even further in order to analyze deaf sign language and, finally, Kenneth Holmqvist and Jordan Zlatev discuss two different possibilities of implementing a cognitive semantic approach using computer programs. The variety of perspectives on cognitive semantics make this book suitable as course material.

The application of semantic technology to the field of biodiversity represents a promising new technique for improved sharing, reuse, and analysis of biodiversity data. This domain has many unique needs that require special consideration and innovation. This book contains the latest ideas from top researchers in the field of biodiversity informatics working to apply semantics to biodiversity data. It includes chapters on applications in phylogenetics, biogeography, and taxonomy, and discussions on the generation of ontologies for biology and using ontologies to link data types. This publication is at the forefront of research into the application of semantic web technology in this domain.

Seminar paper from the year 2011 in the subject English Language and Literature Studies - Linguistics, grade: 1,0, University of Würzburg, language: English, abstract: This term paper will focus on an aspect of lexical semantics: interrelations of word meanings on a paradigmatic, as well as

on a syntagmatic level. Starting with paradigmatic word relations, the paper will cover the topic of semantic fields first, describing the history of how this aspect was introduced to semantics and explaining the theoretical background behind the topic. Furthermore the development of different theories from the first structuralist approaches in the 1930s to the more recent approaches of cognitive semantics and the frame theory will be outlined. In the second part, the paper will cover the topic of syntagmatic relations of word meanings, namely collocations. The term will be defined and examples will be mentioned, before dealing with the important concepts of 'statistically significant' and 'institutionalized collocations'. Finally there will be a demarcation to the phenomenon of idioms, before the term paper finishes with a conclusion about the whole topic.

17th International Conference on Conceptual Structures, ICCS 2009, Moscow, Russia, July 26-31, 2009, Proceedings

An Analysis of the Semantic Field of the German Particles "überhaupt" and "eigentlich"

An Application of Modern Semantic Theory to Word-studies in the Hebrew Bible, as Illustrated by the Semantic Field of 'aγel in Ezekiel

Semantic Web Technologies and Legal Scholarly Publishing

Semantic differences in translation

This book provides pedagogical suggestions for both teachers and learners.

This work deals with the applications of Semantic Publishing technologies in the legal domain, i.e., the use of Semantic Web technologies to address issues related to the Legal Scholarly Publishing. Research in the field of Law has a long tradition in the application of semantic

technologies, such as Semantic Web and Linked Data, to real-world scenarios. This book investigates and proposes solutions for three main issues that Semantic Publishing needs to address within the context of the Legal Scholarly Publishing: the need of tools for linking document text to a formal representation of its meaning; the lack of complete metadata schemas for describing documents according to the publishing vocabulary and the absence of effective tools and user interfaces for easily acting on semantic publishing models and theories. In particular, this work introduces EARMARK, a markup meta language that allows one to create markup documents without the structural and semantic limits imposed by markup languages such as XML. EARMARK is a platform to link the content layer of a document with its intended formal semantics and it can be used with the Semantic Publishing and Referencing (SPAR) Ontologies, another topic in this book. SPAR Ontologies are a collection of formal models providing an upper semantic layer for describing the publishing domain. Using EARMARK as a foundation for SPAR descriptions opens up to a semantic characterisation of all the aspects of a document and of its parts. Finally, four user-friendly tools are introduced: LODE, KC-Viz, Graffoo and Gaffe. They were expressly developed to facilitate the interaction of publishers and domain experts with Semantic Publishing technologies by shielding such users from the underlying formalisms and semantic models of such technologies.

Semantic Structures is a large-scale study of conceptual structure and its lexical and syntactic expression in

English that builds on the system of Conceptual Semantics described in Ray Jackendoff's earlier books Semantics and Cognition and Consciousness and the Computational Mind. Jackendoff summarizes the relevant arguments in his two previous books, setting out the basic parameters for the formalization of meaning, and comparing his mentalistic approach with Fodor's Language of Thought hypothesis. He then takes up the Problem of Meaning, extending the range of semantic fields encompassed by the Conceptual Semantics formalism, and the Problem of Correspondence, formalizing the relation between semantic and syntactic structure. Both of these problems must be fully addressed in order to develop a general theory of language that is concerned with syntax and semantics and their points of connection. Few books on lexical semantics present such a comprehensive analysis of such a wide range of phenomena from a unified perspective. Besides discussing the conceptual structures of hundreds of words and constructions, Jackendoff extends and deepens the theory to come to grips with such crucial issues as roles and marking; arguments, modifiers, and adjuncts; binding and control; and the thematic linking hierarchy.

This volume discusses methodological issues in conducting elicitation on semantic topics in a fieldwork situation. In twelve chapters discussing 11 language families from four continents, authors draw on their own fieldwork experience, pairing explicit methodological proposals with concrete examples of their use in the field. Several chapters cover issues specific to semantic

topics such as modality, comparison, tense and aspect, and definiteness, while others focus on elicitation techniques more generally, addressing methodological issues such as the creation of elicitation plans, the choice of language in which to conduct elicitation, and the status of translation tasks. Together, the chapters of this volume demonstrate that elicitation on semantic topics, when conducted following sound methodologies, can and does produce reliable results. Given the high number of languages currently classified as endangered, conducting one-on-one fieldwork with native speaker consultants is critical for gathering new empirical findings that bear on linguistic theory.

Programming the Semantic Web

Approaches to the Interface

Application of Semantic Technology in Biodiversity Science

The Lexical Field of Taste

Learning Vocabulary in Another Language

Seminar paper from the year 2008 in the subject English Language and Literature Studies - Linguistics, grade: sehr gut, University of Flensburg (Institut für Anglistik und Amerikanistik), course: Project Work Linguistics, language: English, abstract: There are a number of different types of lexical relations which can be analyzed in a semantic field. One lexeme can be in a number of these relations, therefore, the lexicon can be described as a network of words, rather than a list similar to a dictionary. The lexical field is a key

principle the lexicon is organized by. One of these lexical fields is watercraft. As a continuation of my paper "A semantic analyses of the lexical field vehicles" and because of my interest in sailing, I decided to analyze in my project work the lexical field watercraft. I will start by analyzing synonymous, hyponymic, meronymic, polysemous, and homonymous relations in chapter 2. After this analysis of sense relations, I will continue my research with a closer look at prototype theory. For this purpose I will do a Goodness-of-Exemplar survey with a group of 50 participants. Following a general look at prototype theory in the lexical field of watercraft, I will analyze the results of the survey. Because there are a lot of technical terms involved in this lexical field, the reader can find a list of translations and explanations of various lexemes in the appendix.

This book examines the nature of the interface between word meaning and syntax, one of the most controversial and elusive issues in contemporary linguistics. It approaches the interface from both sides of the relation, and surveys a range of views on the mapping between them, with an emphasis on lexical approaches to argument structure. Stephen Wechsler begins by analysing the fundamental problem of word meaning, with discussions of vagueness and polysemy, complemented with a look at the roles of world knowledge and normative aspects of word

meaning. He then surveys the argument-taking properties of verbs and other predicators, and presents key theories of lexical semantic structure. Later chapters provide a description of formal theories and frameworks for capturing the mapping from word meaning to syntactic structure, as well as arguments in favour of a lexicalist approach to argument structure. The book will interest scholars of theoretical linguistics, particularly in the fields of syntax and lexical semantics, as well as those interested in psycholinguistics and philosophy of language.

This book provides a sound basis for teaching vocabulary, and answers such questions as which English words students need to learn most, and why some words are easier to learn than others.

This book constitutes the refereed proceedings of the 17th International Conference on Conceptual Structures, ICCS 2009, which took place in Moscow, Russia, on July 26-31, 2009. The 18 papers presented together with 5 invited contributions were carefully reviewed and selected from approximately 50 submissions. Originally centered around research on knowledge representation and reasoning with conceptual graphs, over the years ICCS has broadened its scope to include innovations from a wider range of theories and related practices, among them other forms of graph-based formalisms like RDF or existential graphs,

formal concept analysis, semantic Web technologies, ontologies, concept mapping and more.
Its Cognitive Force and Linguistic Structure Methodologies in Semantic Fieldwork Theory and Application : [proceedings] Semantic Mechanisms of Humor Vocabulary, Semantics, and Language Education
*Recently, there has been a surge of interest in the lexicon. The demand for a fuller and more adequate understanding of lexical meaning required by developments in computational linguistics, artificial intelligence, and cognitive science has stimulated a refocused interest in linguistics, psychology, and philosophy. Different disciplines have studied lexical structure from their own vantage points, and because scholars have only intermittently communicated across disciplines, there has been little recognition that there is a common subject matter. The conference on which this volume is based brought together interested thinkers across the disciplines of linguistics, philosophy, psychology, and computer science to exchange ideas, discuss a range of questions and approaches to the topic, consider alternative research strategies and methodologies, and formulate interdisciplinary hypotheses concerning lexical organization. The essay subjects discussed include: * alternative and complementary conceptions of the structure of the lexicon, * the nature of semantic relations and of polysemy, * the relation between meanings, concepts, and lexical organization, * critiques of truth-semantics and referential theories of meaning, * computational accounts of lexical information and structure, and * the advantages of thinking of the lexicon as ordered. GOAL This is the funniest book I have ever written - and the ambiguity here is deliberate. Much of this book is about deliberate ambiguity, described as unambiguously as possible, so the previous sentence is probably the fIrst, last, and only deliberately ambiguous sentence in the book. Deliberate ambiguity will be shown to underlie much, if not all, of verbal humor. Some of its forms are simple*

enough to be perceived as deliberately ambiguous on the surface; in others, the ambiguity results from a deep semantic analysis. Deep semantic analysis is the core of this approach to humor. The book is the fIrst ever application of modem linguistic theory to the study of humor and it puts forward a formal semantic theory of verbal humor. The goal of the theory is to formulate the necessary and sufficient conditions, in purely semantic terms, for a text to be funny. In other words, if a formal semantic analysis of a text yields a certain set of semantic proptrties which the text possesses, then the text is recognized as a joke. As any modem linguistic theory, this semantic theory of humor attempts to match a natural intuitive ability which the native speaker has, in this particular case, the ability to perceive a text as funny, i. e. , to distinguish a joke from a non-joke.

The present thesis describes the development and assessment of the Semantic Fields Model of visual salience. The Semantic Fields model provides estimates of visual salience in relation to goal-oriented Web site search tasks. The development and assessment of this model is reported over seven studies that are presented in two journal articles and two peer-reviewed conference papers. In Paper 1 (N=50), pupil dilation is validated as a measure of cognitive load for use in later studies. While it has been found previously that a participant's pupil dilation will be larger during more complex tasks, these experiments have not generally been conducted under the environmental condition of light radiated from a computer monitor. The findings of this experiment indicate that computer monitor radiance in our experimental setting did not interfere with the ability to discriminate successfully between task-related pupil dilation. Paper 2 (N=49) introduces the Semantic Fields model for estimating the visual salience of different areas displayed on a Web page. Latent Semantic Analysis and the Touchstone Applied Science Associates (TASA) corpus were used to calculate Semantic Field values for any (x, y) coordinate point on a Web page based on the structure of that Web page. These Semantic Field values were then used to estimate eye-tracking data that was collected from participants' goal-oriented search tasks on a total

of 1842 Web pages. Semantic Field values were found to predict the participants' eye-tracking data. In Paper 3 (N=100), four studies are present in which improvements are made to the semantic component of the Semantic Fields model. Estimates of textual similarity generated from six semantic models were compared to human ratings of paragraph similarity on two datasets. Results suggest that when single paragraphs are compared, simple non-reductive models (word overlap and vector space) can provide better similarity estimates than more complex models (Latent Semantic Analysis, Topic Model, Sparse Non-negative Matrix Factorization, and the Constructed Semantics Model). Various methods of corpus creation were explored to facilitate the semantic models' similarity estimates. Removing numeric and single characters, and also truncating document length improved performance. Automated construction of smaller Wikipedia-based corpora proved to be very effective even improving upon the performance of corpora that had been chosen for the domain. Model performance was further improved by augmenting corpora with dataset stimulus paragraphs. In Paper 4 (N=49), ten models are compared in their ability to predict eye-tracking data that was collected from participants' goal-oriented search tasks on a total of 1809 Web pages. Forming the basis of six of these models, three semantic models and two corpus types are compared as semantic components for the Semantic Fields model. Latent Semantic Analysis, Sparse Non-Negative Matrix Factorization, vector space, and word overlap were used to generate similarity comparisons of goal and Web page text in the semantic component of the Semantic Fields model. Vector space was consistently the best performing semantic model in this study. Two types of corpora or knowledge-bases were used to inform the semantic models, the well known TASA corpus and other corpora that were constructed from the Wikipedia encyclopedia. In all cases the Wikipedia corpora out performed the TASA corpora. The non-corpus based Semantic Fields model that incorporated word overlap performed more poorly at these tasks. Three display-based models were also included as a point of comparison to evaluate the

effectiveness of the Semantic Fields models. In all cases the corpus-based Semantic Fields models outperformed the solely display-based models when predicting the participants' eye-tracking data. Both final destination pages and pupil data (dilation) indicated that participants' were actively performing goal-oriented search tasks. Based on this research, it is concluded that the Semantic Fields model provided useful estimates of visual salience during participants' goal-oriented search of Web sites.

Semantic fields are lexically coherent – the words they contain co-occur in texts. In this book the authors introduce and define semantic domains, a computational model for lexical semantics inspired by the theory of semantic fields. Semantic domains allow us to exploit domain features for texts, terms and concepts, and they can significantly boost the performance of natural-language processing systems. Semantic domains can be derived from existing lexical resources or can be acquired from corpora in an unsupervised manner. They also have the property of interlinguality, and they can be used to relate terms in different languages in multilingual application scenarios. The authors give a comprehensive explanation of the computational model, with detailed chapters on semantic domains, domain models, and applications of the technique in text categorization, word sense disambiguation, and cross-language text categorization. This book is suitable for researchers and graduate students in computational linguistics.
Conceptual Structures: Leveraging Semantic Technologies
Methodology, Technology, Corporate Use
Applications and Developments in Semantic Process Mining
A Semantic Study of Japanese Taste Terms
The Semantic Field of Modal Certainty