DOWNLOAD PDF PROCESSING CHINESE COMPOUNDS : A SURVEY OF THE LITERATURE JAMES MYERS.

Chapter 1 : CiteSeerX â€” 1Processing Chinese Compounds: A Survey of the Literature

1 Processing Chinese Compounds: A Survey of the Literature James Myers National Chung Cheng University, Taiwan Introduction Chinese is the poster child of compounding, the language to cite for an example of.

It shows the insights this work offers on natural language processing and the relation between language, mind, and memory. Compounding is an easy and effective way to create and transfer meanings. Compound words are segmentable into their constituent morphemes in much the same way as sentences can be divided into their constituent words: But compound sequences may also be independent lexical items that can be retrieved for production as single entities and whose idiosyncratic meanings are stored in the mind. Compound words reflect the properties both of linguistic representation in the mind and of grammatical processing. They thus offer opportunities for investigating key aspects of the mental operations involved in language: This book explores the nature of these opportunities, assesses what is known, and considers what may yet be discovered and how. Linguists and cognitive scientists at graduate level and above. Psycholinguists, neurolinguists, and linguists including researchers in: Graduate students in these fields. Some attention might be given to marketing in Chinese-speaking countries. The book includes a chapter by James Myers in Taiwan which presents the most current and complete synthesis of the psycholinguistic research on compounding in Chinese. Why Study Compound Processing? An Overview of the Issues 2. Compound Representation and Processing 4. Carlo Semenza and Sara Mondini: The Neuropsychology of Compound Words 5. Levy, Mira Goral, and Loraine K. Compounds in Bilinguals 7. Gagne and Thomas L. Implictions for the Mental Lexicon 8. He is the co-author, with M. She specializes in the psycho- and neurolinguistics of the mental lexicon from a cross-linguistic perspective. They are Editors of the journal The Mental Lexicon. There are no related titles available at this time. Special Features New insights into the most fundamental word formation processes Investigates the mental operations involved in language Unites work in psychology, linguistics, neuropsychology, language acquisition, and bilingualism Readable and accessible.

Chapter 2 : LINGUIST List Psycholinguistics: Libben & Jarema ()

Chinese is the poster child of compounding, the language to cite for an example of morphology without much affixation. This alone should make Chinese worthy of its own chapter in a book on compound processing, but another point in its favor is its notoriously unusual writing system; orthography, as.

Each chapter provides a reviewof the literature within a particular domain of compound processing: Each chapter isself-contained such that a student could easily choose one chapter for referencewithout reading the other chapters. Why study compound processing? An overview of the issues, Gary LibbenChapter 1 provides an overview of the issues that arise in the study ofcompounding. Compounding is an important area of research for anyone interestingin morphological processing because compounding is one of the most frequent androbust derivational processes found cross-linguistically. Further, studying howeach component of a compound is accessed sheds light on the nature of lexicalstorage and access. In this framework,compounds may be accessed either in their whole word representation, or in termsof each component constituent. Libben argues that this system has the greatestamount of flexibility for understanding novel compounds, while still allowingfor understanding of opaque compounds. Libben discusses the activation of opaquecompounds, arguing that these compound activate the whole word meaning, whichcompetes with each constituent meaning. Compound types, Wolfgang U. Dressler begins by addressing thequestion: The general prototypical definition of acompound is a formation of two independent words that are grammatically combinedto form a new word. This excludes phrases that are formed by combining lexicalitems with clitics, and is distinguished from syntactic phrases by separability. Another notableproperty of compounds is their productivity. Not only is compounding across-linguistically common process, but novel compounds can easily be formed. Dressler goes on to explore the internal structure of compounds, notably thehead. Dressler distinguishes between two types of compound based on thesemantic properties of the head: Within endocentric compounds, the head is typically the rightmostmember of the compound. Dressler also discusses transparency. The meaning of afully transparent compound can be found within the subset of meanings availableby combining the constituents of the compound. Thus, there are varying degreesof transparency: Dressler concludes by giving a list ofproperties of compounds with reference to their definitions within the chapter. Compound representation and processing: A cross-language perspective,Gonia JeremaThis chapter argues that a true understanding of compound processing can onlycome from studying compounds in a variety of languages. While the majority ofresearch on compounds has come from English, there is an increase in the numberof cross-linguistic studies on compound processing. This article summarizes thefindings, showing both cross-linguistic differences as well as apparentuniversals. The chapter is divided into cross-linguistic perspectives indifferent areas: Cross-linguistic studies have been crucial in determining the role ofheadedness, transparency and position in terms of decomposition of compounds. For example, the interaction of position in the string and headedness is besttested in languages that have both left-headed as well as right-headedcompounds. Studying languages with right-headed compounds makes it is impossibleto uncover this interaction. The lexical structure of compounds is also onlyfully understood by studying how constituents of compound are inflected in avariety of languages, with varying degrees of regularity in morphologicalinflection. Jarema also presents cross-linguistic elements of linking elementsin compounds. While English has no linking elements in compounds, otherlanguages contain phonological linking elements between each compoundconstituent. The question under study is whether these linking elements havesemantic content or not. Cross-linguistic study of Greek and Dutch linkingelements shows that the semantic content of linking elements is language-specific. They show how the study of patient data can be usedto shed light on fundamental questions in compound research: They present evidence that patient errors inproducing and interpreting compounds are consistent with a morphologicaldecomposition rather than an interpretation using analogy to other compounds. For example, Badecker cites errors in which a patient produces only asingle element of a compound rather than a complete

substitution. Additionally,patients who have no trouble with simple words will have trouble with compounds,suggesting that compounds are processed as morphologically complex Semenza etal. Understanding the nature of how compounds areacquired will provide insight into how compounds are represented. There areseveral issues that Nicholadis addresses in this chapter. The first iscross-linguistic differences in compound acquisition, which relates largely tothe differences not only in the distribution of compounds in the language, butalso the structure of the language in general. Nicholadis discusses errors thatare common cross-linguistically, such as word-order reversals and creating novelcompounds for lexical items that the child does not already have a word for. Another factor in the cross-linguistic study of the acquisition of compounds isthe frequency of compounds in the language and in child-directed speech. Themore productive compound processes are in a given language, the earliercompounds may appear. This relates to a question of when comprehension ofcompounds occurs versus production. While in general, comprehension precedesproduction, there is some evidence that for some children in some languages,production may precede comprehension. This may be due to the fact that earlyproductions of compounds are used to convey meanings for words that the childhas not yet learned, and are typically transparent. If the language has acompounding process that is not very productive, or includes a lot of compoundsthat are opaque, then it is possible to see some children Chapter 6: Approaches to understanding of compoundprocessing in bilinguals, Erika S. Levy, Mira Goral, and Loraine K. These issues include L2 compound processing,bilingual compound processing and language transfer. One of the major issues forresearch are what happens when the translation for one language does not matchthe other language. For example, if a compound in one language has a whole wordtranslation in the other, or if one element of a compound is opaque in onelanguage, but transparent in the other, there is a question of how the L2learner will store and translate the compounds in each language. Anotherquestion is whether bilinguals will make transfer errors producing compoundswith lexical items from L2 but in the syntactic manner of L1. There arequestions of whether opacity of the elements in the compound play a role, andclosely related the two languages are in terms of compound formation rules. Implications for the mental lexicon,Christina L. This chapter does not address the way in whichlexicalized compounds are stored, but the way in which speakers find meaning innovel compounds. In conceptual combination, compounds are processed by creatinga new concept out of the concepts represented by each of the independent parts. In this approach, real world knowledge is used to link the two componentsof the compound. Because the CARIN model usesconstructions, previous uses of compounds in particular constructions canpredict novel interpretations of a compound. For example chocolate is oftenfound in compounds with the MADE OF construction chocolate bunny, chocolatecroissant, etc. Thus, novel compounds with chocolate are likely to be to usethis same relation. The authors present how the CARIN model can be applied to lexicalizedcompounds and point out problems with alternative schema-based theories. The rest of the chapter is devoted to research inprocessing of Chinese compounds: Meyers concludes that theway in which Chinese compounds are processed depends heavily on the transparencyof the individual units, but largely on the mode of presentation: This makes the book easily accessible to anyonewho is new to compound research and is interested in finding a research projectthat is relevant to the issues current in the literature. The majority of thechapters are theory-neutral, which makes the book accessible to anyone who wantsan objective overview of how to study the issues, rather than arguments for oragainst particular theories. Because of the limited contribution of noveltheories and experiments, the direct impact that the book as a whole will makeon the field is likely to be minimal. However, this book may have an effect onthe types of novel research projects on compounds that are undertaken. While the book covers a great number of areas in compound research, there areseveral ways in which it feels that the editors neglected important areas ofresearch on compound processing. There was little mention of how therepresentation of compounds can inform us on linguistic theories, specificallythe interaction of phonology and morphology and morphology and syntax. Forexample, Martin notes that compounds in several languages includingEnglish and Turkish violate the general phonological principles in the language e. Further, there wasno mention of compounding in sign

languages, which is a common process acrosssign languages including American Sign Language Liddell Questionsabout the universals of representation and processing cannot be completelyaddressed if sign languages are ignored. The book does not present a unified theory of processing of compounds, whichmakes it easy to read as individual chapters in any order, but creates a lesssatisfying experience for the overall purpose of the book. With this in mind,there are several unifying themes that arise from the book: While Meyers made the attempt to tease apart the effects of visually-presentedand auditorily presented stimuli, this was not done in the other chapters. Inorder to fully understand the level of processing, phonological, morphological,etc. While both mayhave a dominant language, the effects of this dominance is likely to bedifferent depending on the age of acquisition. Further, not properly settingapart these populations is misguided because the issues of representation andprocessing are very different for these populations. L2 learning is concernedwith how the native language affects processing, while bilingual learning isconcerned with how both native languages interact. In all, The Representation and Processing of Compound Words is a goodintroduction to the issues that arise in doing research on compounds, and isinstructive in illustrating how studying compounds provides insight into thenature of lexical access and the lexicon. Lexical composition and the production of compounds: Evidencefrom errors in naming. Relation and priming during the interpretation of noun-nouncombinations. The influence of thematic relations on thecomprehension of modifier-noun combinations. Derivational rules in aphasia. Morphological representation as a correlation between form andmeaning. She received her Ph. Dfrom the Department of Cognitive Science at Johns Hopkins University in andspecializes in experimental and theoretical approaches to phonologicalrepresentations, focusing on vowel harmony.

Chapter 3 : The Representation and Processing of Compound Nouns | Learning English Together

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 Abstract Background Word frequency is the most important variable in language research. However, despite the growing interest in the Chinese language, there are only a few sources of word frequency measures available to researchers, and the quality is less than what researchers in other languages are used to. Methodology Following recent work by New, Brysbaert, and colleagues in English, French and Dutch, we assembled a database of word and character frequencies based on a corpus of film and television subtitles In line with what has been found in the other languages, the new word and character frequencies explain significantly more of the variance in Chinese word naming and lexical decision performance than measures based on written texts. Conclusions Our results confirm that word frequencies based on subtitles are a good estimate of daily language exposure and capture much of the variance in word processing efficiency. In addition, our database is the first to include information about the contextual diversity of the words and to provide good frequency estimates for multi-character words and the different syntactic roles in which the words are used. The word frequencies are freely available for research purposes. Introduction Research on the Chinese language is becoming an important theme in psycholinguistics. Not only is Chinese one of the most widely spoken languages in the world, it also differs in interesting ways from the alphabetic writing systems used in the Western world. Another characteristic of the Chinese writing system is that there are no spaces between the words. This is likely to have consequences for eye movement control in reading [2]. Finally, a Chinese character represents a syllable, which most of the time is a morpheme i. Research on the Chinese language requires reliable information about word characteristics, so that the stimulus materials can be manipulated and controlled properly. By far the most important word feature is word frequency. In this text, we first describe the frequency measures that are available for Chinese. Then, we describe the contribution a new frequency measure based on film subtitles is making in other languages and we present a similar database for Mandarin Chinese. Available sources of Chinese word frequencies A first way to find information about Chinese word frequencies is to look them up in published frequency-based dictionaries. Although this dictionary has been very useful, it is becoming increasingly outdated, as it is based on publications from the s to the s. A further limitation is the rather small size of the underlying corpus. This dictionary is based on a corpus of 25 millions characters, but unfortunately only provides information about the 10, most frequent words, making it less suited for low-frequency items. Most of other frequency-based dictionaries contain even less words. Core Vocabulary for Learners [6] only contains information about the 5, most frequently used words. A second source of word frequency information consists of frequency lists that have been compiled by linguists and official organizations [7] for an earlier review. Most of these lists are not publicly available, but can be obtained from the researchers. In Table 1 we summarize the most interesting lists we have encountered in our search. Table 1 Word frequency lists of Chinese. The Center for Chinese Linguistics CCL character frequency list, based on a corpus of Modern Chinese of million characters, published by Peking University for more information, see http: This is the corpus underlying A frequency dictionary of mandarin Chinese: Core vocabulary for learners [6]. The word frequencies themselves, however, are not yet publicly available. Word list YW 92, words reported by Sun et al. Open in a separate window When reading Table 1 , it is important to keep in mind that many corpora were meant to be representative for the language produced in Chinese speaking regions and not necessarily for the language daily heard and read by Chinese speaking people. In addition, some of these sources are copyright protected. One main problem with Chinese word frequencies is that Chinese words are not written separately, making the segmentation of the corpus into words labor-intensive if one wants to have information beyond

single character frequencies Chinese words can consist of one to four or even more characters. This situation is currently changing, due to the availability of automatic parsers and part-of-speech taggers, as we will see below. All in all, despite the existence of several frequency lists in Chinese, there are only three sources that provide easy access for individual researchers and other people interested in the Chinese language. The first is CCL http: Unfortunately, words have to be entered separately on the website. This database provides information about 2, single-character Chinese words including nouns, verbs, and adjectives [11]. Finally, there is the Lancaster Corpus of Mandarin Chinese http: Core vocabulary for learners [3] and for a larger set of 50, words upon request from the authors also released by Richard Xiao on http: Subtitles as a valid source of word frequencies Recent work by New, Brysbaert, and colleagues has indicated that film and television subtitles form a source of word frequencies that is more valid than the traditional books-based counts [12] â€" [14]. In particular, New et al. In addition, New et al. Brysbaert and New [12] showed that the French findings are valid for English as well. First, they collected a corpus of 50 million words coming from nearly 9, different films and television sitcoms. Then they correlated the resulting word frequencies with the word naming times and the lexical decision times from the Elexicon project [15]. Brysbaert and New [12] found that subtitle frequencies not only explained more of the variance in naming times and lexical decision times than the other measures, but in addition they observed that a corpus of 16â€"30 million words was enough to have good frequency estimates. They also found that a measure based on contextual diversity i. Encouraged by the above findings, we decided to compile a word and character frequency list based on Chinese subtitles. A potential problem in this work is that, unlike in most writing systems, there are no spaces between the words in Chinese. Therefore, word segmentation i. Fortunately, in the last decade automatic word segmentation programs have become available with a good output [for a review see 3]. These algorithms are trained on a tagged corpus i. It incorporates part-of-speech information PoS, i. This not only provides the correct segmentation for the vast majority of sentences, but also has the advantage that the most likely syntactic roles of the words are given, which makes it possible to additionally calculate PoS-dependent frequencies. The algorithm is expected to work well for film subtitles, because these subtitles are of a limited syntactic complexity most of them are short, simple sentences and because the program has the faculty to recognize out-of-vocabulary words such as foreign names, which often exist in subtitles but are rarely covered by regular vocabularies. The program was also used to parse the LCMC corpus. We further calculated the frequency of occurrence of the characters CHR , irrespective of whether they came from single-character words or from multi-character words. Character frequencies are interesting, because there is some evidence that characters in multi-character words contribute to the processing times of single-character words see below and because the word segmentation sometimes is ambiguous, with different readers making different interpretations, for instance in the context of compound words [21] â€" [23]. Something similar would exist in English, where some compounds are written as single words flowerpot, football, honeymoon and others not flower seeds, foot locker, honey hive. If there were no spaces as external cues, it would be difficult to know how best to split these words. Next to the word and character frequency measures i. This is defined as the number of films in which the word or character appears. Extensive analyses by Adelman et al. We did not calculate the CD measure for the PoS dependent frequencies, as to our knowledge this information has not yet been needed. All in all, five new frequency measures were calculated for Mandarin Chinese: Character frequency based on subtitles, character contextual diversity based on subtitles, word frequency based on subtitles, word contextual diversity based on subtitles, and word PoS-dependent word frequency based on subtitles. The three measures that go beyond the individual characters are particularly new and have been made possible due to the development of a reliable automatic PoS tagger. To check the usefulness of the new frequency measures relative to the existing ones, we used third-party behavioral data to examine how well the different indices predicted word processing times. We also ran a new small-scale study, specifically aimed at testing the relative merits of text-based and subtitle-based frequencies for two-character words. Materials and Methods Corpus collection Subtitle files are independent of the corresponding video files. They can either be extracted from existing DVDs or translated

from the movie itself or subtitles available in other languages. We got permission to download all the subtitle files from two of the biggest websites in China mainland providing subtitles in Simplified Chinese, by making use of GNU Wget a Web crawler. We only retained the subtitle files in text-based SRT format and excluded all files in VobSub format, because the latter are image-based and require an additional optical character recognition OCR process to convert them into text which certainly for Chinese characters is very error prone and needs to be proofread by humans. To avoid the inclusion of double files which could be the same file named differently or the same film translated by different people and to identify files with technical errors e. They were also properly coded, for instance to ensure that we knew which files belonged to the same film or television episode as one film or episode may be divided into several subtitle files. This left us with 6, different contexts 7, files , about half of them coming from movies and half from television series. CD measures, namely the number of different contexts in which a word appeared, were calculated based on this. For each subtitle file, the time zone information and other information not related to the film contents were removed e. The outcome of the analysis was a corpus of Calculation of the frequency measures For each file the output of ICTCLAS provided us with lines of words both single-character and multi-character words and their part-of-speech e. We introduced some basic cleaning by removing non-Chinese characters included in low-frequency sequences, except for person names. These are made available in three easy-to-use files. There were 5, different characters in the corpus. Figure 1 shows the lay-out of the information. The different columns are easy to interpret:

Chapter 4 : Old Chinese - Wikipedia

Myers J () () Processing Chinese compounds: A survey of the literature. In: Libben G, Jarema G, editors. The representation and processing of compound words.

Datura metel commonly used in TCM Hexing herbs Atropa sepcies, Hyoscyamus species, Mandrago officinarum common in Western herbal practice Sympathomimetic Ephedra species, Citrus aurantium bitter orange Salicylate poisoning Open in a separate window The problem of the inherent toxicity is compounded by the variation in content of the active ingredients found in these products. The chemical constituents in a plant are dependent on the soil they are grown in, rainfall and sunshine, the season of harvesting, the stage of the plant growth during harvest, diseases afflicting it, and the parts that were harvested. Even in finished products, such as pills and liquids, there can be large batch-to-batch variations in content, and this can result in toxicity. For example, a survey of ginseng products found up to times variation in content between different products. In another survey of Ephedra products, within the same product, up to ten times variation in active ingredients among batches was found [47 , 48]. Allergic reactions to dietary supplements and herbal medicines appear to be common and under-reported [49]. These reactions may present as mild reactions, such as pruritus and urticaria, to more severe reactions, such as angioedema and anaphylaxis. Patients may react to compounds inherent in the dietary supplements and herbal medicines, such as proteins found in animal products. Patients may also develop allergic reactions to compounds that were added into these products as intentional adulterants or contaminants. It is difficult to anticipate allergic reactions to these products unless previous allergies are known. Management of patient with toxicities Toxicities from dietary supplements and herbal medicines present unique management challenges. Patients may not inform their physicians about herbal supplement use because they do not perceive these products as medications. When toxicities arise, patients may not be aware that the dietary supplements or herbal products are causing the problems, so they continue to use the products. Such behaviors can hamper diagnosis or make the toxicities worse. Information about product content and dose may also be difficult to obtain. Labeling of these products can be inaccurate or incomplete. The quantity of content can be different from the label given the lack of quality assurance and labeling consistency. Multiple components within a product make identification of the offending agent difficult. Unsuspected adulterants or contaminations may make the presentation more confusing. Raw herbs, dried herbs, or herbs processed into powders or liquids may prove difficult or impossible to identify. Even when labeling is accurate or herbs can be identified, scientific and toxicological information regarding them may not be readily available from conventional resources. A study in the US of adverse effects from dietary supplements found that less than half of the products or ingredients were listed in the poison information software that is used in most US poison centers [50]. Nevertheless, the spectrum of toxicities from dietary supplements and herbal medicines is similar to that of toxicities from pharmaceuticals in that similar organ system effects or toxidromes can be expected. The approach to patients with toxicities from dietary supplements and herbal medicine is similar to the approach to patients with other forms of toxicities. Patients who present with unstable medical conditions, such as cardiac dysrhythmias or seizures, require immediate stabilization. Once they are stabilized, extended history taking, physical examination, and laboratory investigation can be done. Once the problem is identified, the use of the product can be stopped or altered, and appropriate therapy can be initiated. Ask specifically regarding use of such products 2. Secure sample for identification a. Actual herbs or product used b. Prescription or packaging a. Basic blood count, renal function, liver function, and electrocardiogram b. Heavy metal screening if suspected or if symptoms are non-specific c. Good resuscitative, symptomatic, and supportive care 5. Use antidote if appropriate 6. Instruct patients and family to stop using the product 7. Consider outpatient monitoring of renal function, liver function, and blood counts 8. Report case to regulating authority 9. Report unusual cases in the medical literature Open in a separate window Good resuscitative, symptomatic, and supportive care is paramount in these patients, as in all

patients with poisoning. In such circumstances, offending agents would most likely not be identified early, and even if identified, specific antidote treatment may not exist, making resuscitative, symptomatic, and supportive care more important. Some generalizations for management can be made. Patients who present early with toxic ingestion of dietary supplements or herbal products that can cause severe life-threatening effects, such as Aconitium species or colchicines, should undergo gastric lavage with adequate airway protection. Similarly, activated charcoal can be given in an acute overdose of toxic dietary supplements and herbal medicines if there is adequate airway protection. In patients with stimulant effects, agitation or seizures can be managed with benzodiazepines. In patients suffering from digoxin toxicity, digoxin antibody is expected to work, but a non-standard dose may be required. In patients with sodium channel effects wide QRS complexes, shock , sodium bicarbonate can be used, and class IB anti-arrhythmics such as lignocaine can be used if sodium bicarbonate fails. The local poison information centers can be good resources to assist with diagnostic or management issues. When obtaining history from patients suspected of suffering from dietary supplement or herbal medicine toxicities, it is important to remember that patients often do not volunteer information regarding the use of these products to their physicians. When suspected, physicians need to ask patients specifically if they were or currently are consuming such products. And these products include specialty teas for weight loss or calming effects. During physical examination, features suggestive of toxidromes should be looked for, such as pupils size, mucosa moisture, skin moisture, and bowel sounds. Features of organ toxicities should also be sought, especially signs of liver injuries or failure. Whenever possible, a sample of the actual product used by the patient should be secured; otherwise, prescription or packaging should be secured. If this is not possible, samples from where the patient actually obtained the product may be useful. If raw herbs were involved, obtain information about the parts used and how they were processed. These can be used to identify offending agents. Although immediate identification or analysis is often not possible, efforts should still be made to identify them later as some herbs and products can have long-term effects, such as hepatotoxicity or nephrotoxicity. If symptoms are non-specific or suggestive of heavy metal toxicities, a heavy metal screen may be useful. Analytical methods exist for herbal toxins, such as colchicines, tropane alkaloids anti-cholinergic , vinca alkaloids, and cardioactive glycosides[53]; however, the availability of these tests depends on local laboratories. When such analyses are indicated, it is essential to check with the local laboratory if the tests are available. The salicylate level should be available in most laboratories. For patients who can be discharged, they should be specifically instructed to stop using the dietary supplements or herbal medicines[22]. This discussion should involve family members as well, as they may be taking similar products or be supplying them to the patients. Consideration should also be given to referring patients for outpatient monitoring of liver function, renal function, and blood counts in a week or two, as toxicities in these organs may be delayed and not clinically apparent. Some authors and herbal practitioners advocate that patients using TCM should have their liver function monitored regularly as many herbs can cause hepatotoxicity [36]. The relevant regulating authorities should be informed of such events so that offending products can be investigated and if necessary taken off the market to prevent more people from being affected. The range of dietary supplements and herbal products are expanding rapidly, and medical and scientific knowledge of these products is still growing. Unusual cases should be reported to the medical literature to inform the medical community of potential problems [22]. Physicians trained in modern medicine may find themselves inadequately prepared for this task; the simplest option practiced by most physicians would then be to denounce all such products. However, such practice may alienate patients and their family members, especially among ethnic groups where herbal traditions are important. This would also cause the patients to be less willing to approach their physicians for help when adverse effects arise. Ko outlined some useful advice that can be used for patient education or discussion about dietary supplements and herbal medicines [54]. Some advice that can be easily committed to memory and applied in discussions is as follows: Dietary supplements and herbal medicines should be considered as medicines. Hence, dosage recommendation should be followed, and long-term therapy should be avoided. Obtain dietary supplements

and herbal medicines from reputable sources. The most reliable sources are large manufacturers, especially if they are located in countries that regulate these products like pharmaceuticals. This would reduce the chance that products may contain contaminants or adulterants. If obtaining herbs, consult an experienced herbal practitioner. In countries where herbalists or traditional healers are licensed legally, licensed practitioners should be consulted. If new symptoms developed during the use of these products, stop using the product and consult a physician. Vulnerable patients, such as women who are pregnant or nursing and young children, should avoid using herbal medicines or dietary supplements except folate and iron supplements if possible. Conclusion Dietary supplements and herbal medicines play an important role in the general health-care system of many developing countries worldwide and are gaining popularity rapidly in many developed countries. Most of these can be used safely if the public is given the right education and advice. Physicians need to be ready to discuss or advise patients with regards to their use. Adverse effects, such as allergy, drug interactions, heavy metal poisonings, reactions to adulterants or contaminants, and toxicities, can arise from the product itself. When these problems manifest, a rational approach in management emphasizing good resuscitation, symptomatic, and supportive care can be helpful. Clinical features may give clues about the offending agents. Physicians should consider following up these patients for delayed organ-toxic effects. His research interest include elderly mistreatment, resuscitation, all aspect of clinical toxicology especially plants and herbal poisoning and decision making in clinical medicine. Footnotes The views expressed in this paper are those of the author s and not those of the editors, editorial board or publisher. Hospital admissions due to adverse reactions to Chinese herbal medicines. J Trop Med Hyg. Toxicological problems resulting from exposure to traditional remedies and food supplements. National policy on traditional medicine and regulation of herbal medicines. Causes, epidemiology, and clinical evaluation of suspected herbal poisoning. J Toxicol Clin Toxicol. What is known about the safety of multivitamin-multimineral supplements for the generally healthy population? Theoretical basis for harm.

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Chapter 5 : éº¥å‚ - ç¶-åŸºç™¾ç§‘ï¼Œè‡ªç”±çš„ç™¾ç§‘å…¨æ›¸

This book presents new work on the psycholinguistics and neurolinguistics of compound words and shows the insights it offers on natural language processing and the relation between language, mind, and memory.

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Chapter 6 : Table of contents for The representation and processing of compound words

James Myers: Processing Chinese Compounds: A Survey of the Literature References Index There are no Instructor/Student Resources available at this time. Gary Libben is Professor of Linguistics and Director of the Centre for Comparative Psycholinguistics at the University of Alberta.

Introduction Food analysis is the discipline dealing with the development, application and study of analytical procedures for characterizing the properties of foods and their constituents. These analytical procedures are used to provide information about a wide variety of different characteristics of foods, including their composition, structure, physicochemical properties and sensory attributes. This information is critical to our rational understanding of the factors that determine the properties of foods, as well as to our ability to economically produce foods that are consistently safe, nutritious and desirable and for consumers to make informed choices about their diet. The objective of this course is to review the basic principles of the analytical procedures commonly used to analyze foods and to discuss their application to specific food components, e. The following questions will be addressed in this introductory section: Why do they analyze foods? What types of properties are measured? How does one choose an appropriate analytical technique for a particular food? Reasons for Analyzing Foods Foods are analyzed by scientists working in all of the major sectors of the food industry including food manufacturers, ingredient suppliers, analytical service laboratories, government laboratories, and University research laboratories. The various purposes that foods are analyzed are briefly discussed in this section. Government Regulations and Recommendations Government regulations and recommendations are designed to maintain the general quality of the food supply, to ensure the food industry provides consumers with foods that are wholesome and safe, to inform consumers about the nutritional composition of foods so that they can make knowledgeable choices about their diet, to enable fair competition amongst food companies, and to eliminate economic fraud. Each of these government agencies is responsible for regulating particular sectors of the food industry and publishes documents that contain detailed information about the regulations and recommendations pertaining to the foods produced within those sectors. These documents can be purchased from the government or obtained on-line from the appropriate website. Standards Government agencies have specified a number of voluntary and mandatory standards concerning the composition, quality, inspection, and labeling of specific food products. These regulations specify the type and amounts of ingredients that certain foods must contain if they are to be called by a particular name on the food label. For some foods there is a maximum or minimum concentration of a certain component that they must contain, e. Standards of quality have been defined for certain foods e. These standards state how full a container must be to avoid consumer deception, as well as specifying how the degree of fill is measured. A number of foods, including meat, dairy products and eggs, are graded according to their quality, e. There are clear definitions associated with these descriptors that products must conform to before they can be given the appropriate label. Specification of the grade of a food product on the label is voluntary, but many food manufacturers opt to do this because superior grade products can be sold for a higher price. The government has laboratories that food producers send their products too to be tested to receive the appropriate certification. This service is requested and paid for by the food producer. Nutritional Labeling In , the US government passed the Nutritional Labeling and Education Act NLEA , which revised the regulations pertaining to the nutritional labeling of foods, and made it mandatory for almost all food products to have standardized nutritional labels. One of the major reasons for introducing these regulations was so that consumers could make informed choices about their diet. Nutritional labels state the total calorific value of the food, as well as total fat, saturated fat, cholesterol, sodium, carbohydrate, dietary fiber, sugars, protein, vitamins, calcium and iron. The label may also contain certain FDA approved health claims based on links between specific food components and certain diseases e. The information provided on the label can be used by consumers to plan a nutritious and balanced diet, to avoid over consumption of food components linked with health problems, and

to encourage greater consumption of foods that are beneficial to health. Authenticity The price of certain foods is dictated by the quality of the ingredients that they contain. For example, a packet of premium coffee may claim that the coffee beans are from Columbia, or the label of an expensive wine may claim that it was produced in a certain region, using a certain type of grapes in a particular year. How do we verify these claims? There are many instances in the past where manufacturers have made false claims about the authenticity of their products in order to get a higher price. It is therefore important to have analytical techniques that can be used to test the authenticity of certain food components, to ensure that consumers are not the victims of economic fraud and that competition among food manufacturers is fair. Food Inspection and Grading The government has a Food Inspection and Grading Service that routinely analyses the properties of food products to ensure that they meet the appropriate laws and regulations. Hence, both government agencies and food manufacturers need analytical techniques to provide the appropriate information about food properties. The most important criteria for this type of test are often the accuracy of the measurements and the use of an official method. The government has recently carried out a survey of many of the official analytical techniques developed to analyze foods, and has specified which techniques must be used to analyze certain food components for labeling purposes. Techniques have been chosen which provide accurate and reliable results, but which are relatively simple and inexpensive to perform. Food Safety One of the most important reasons for analyzing foods from both the consumers and the manufacturers standpoint is to ensure that they are safe. It would be economically disastrous, as well as being rather unpleasant to consumers, if a food manufacturer sold a product that was harmful or toxic. A food may be considered to be unsafe because it contains harmful microorganisms e. It is therefore important that food manufacturers do everything they can to ensure that these harmful substances are not present, or that they are effectively eliminated before the food is consumed. In many situations it is important to use analytical techniques that have a high sensitivity, i. Food manufacturers and government laboratories routinely analyze food products to ensure that they do not contain harmful substances and that the food production facility is operating correctly. Quality control The food industry is highly competitive and food manufacturers are continually trying to increase their market-share and profits. To do this they must ensure that their products are of higher quality, less expensive, and more desirable than their competitors, whilst ensuring that they are safe and nutritious. To meet these rigorous standards food manufacturers need analytical techniques to analyze food materials before, during and after the manufacturing process to ensure that the final product meets the desired standards. In a food factory one starts with a number of different raw materials, processes them in a certain manner e. The food is then transported to a warehouse or retailer where it is sold for consumption. One of the most important concerns of the food manufacturer is to produce a final product that consistently has the same overall properties, i. When we purchase a particular food product we expect its properties to be the same or very similar to previous times, and not to vary from purchase-to-purchase. Ideally, a food manufacture wants to take the raw ingredients, process them in a certain way and produce a product with specific desirable properties. Unfortunately, the properties of the raw ingredients and the processing conditions vary from time to time which causes the properties of the final product to vary, often in an unpredictable way. How can food manufacturers control these variations? Firstly, they can understand the role that different food ingredients and processing operations play in determining the final properties of foods, so that they can rationally control the manufacturing process to produce a final product with consistent properties. This type of information can be established through research and development work see later. Secondly, they can monitor the properties of foods during production to ensure that they are meeting the specified requirements, and if a problem is detected during the production process, appropriate actions can be taken to maintain final product quality. Characterization of raw materials. Manufacturers measure the properties of incoming raw materials to ensure that they meet certain minimum standards of quality that have previously been defined by the manufacturer. If these standards are not met the manufacturer rejects the material. Even when a batch of raw materials has been accepted, variations in its properties might lead to changes in the properties of the final product. By analyzing the raw

materials it is often possible to predict their subsequent behavior during processing so that the processing conditions can be altered to produce a final product with the desired properties. For example, the color of potato chips depends on the concentration of reducing sugars in the potatoes that they are manufactured from: Thus it is necessary to have an analytical technique to measure the concentration of reducing sugars in the potatoes so that the frying conditions can be altered to produce the optimum colored potato chip. Monitoring of food properties during processing. It is advantageous for food manufacturers to be able to measure the properties of foods during processing. Thus, if any problem develops, then it can be quickly detected, and the process adjusted to compensate for it. This helps to improve the overall quality of a food and to reduce the amount of material and time wasted. For example, if a manufacturer were producing a salad dressing product, and the oil content became too high or too low they would want to adjust the processing conditions to eliminate this problem. Traditionally, samples are removed from the process and tested in a quality assurance laboratory. This procedure is often fairly time-consuming and means that some of the product is usually wasted before a particular problem becomes apparent. For this reason, there is an increasing tendency in the food industry to use analytical techniques which are capable of rapidly measuring the properties of foods on-line, without having to remove a sample from the process. These techniques allow problems to be determined much more quickly and therefore lead to improved product quality and less waste. The ideal criteria for an on-line technique is that it be capable of rapid and precise measurements, it is non-intrusive, it is nondestructive and that it can be automated. Characterization of final product. Once the product has been made it is important to analyze its properties to ensure that it meets the appropriate legal and labeling requirements, that it is safe, and that it is of high quality. It is also important to ensure that it retains its desirable properties up to the time when it is consumed. A system known as Hazard Analysis and Critical Control Point HACCP has been developed, whose aim is to systematically identify the ingredients or processes that may cause problems hazard analysis , assign locations critical control points within the manufacturing process where the properties of the food must be measured to ensure that safety and quality are maintained, and to specify the appropriate action to take if a problem is identified. The type of analytical technique required to carry out the analysis is often specified. In addition, the manufacturer must keep detailed documentation of the performance and results of these tests. HACCP was initially developed for safety testing of foods, but it or similar systems are also now being used to test food quality. Research and Development In recent years, there have been significant changes in the preferences of consumers for foods that are healthier, higher quality, lower cost and more exotic. Individual food manufacturers must respond rapidly to these changes in order to remain competitive within the food industry. To meet these demands food manufacturers often employ a number of scientists whose primary objective is to carry out research that will lead to the development of new products, the improvement of existing products and the reduction of manufacturing costs. Many scientists working in universities, government research laboratories and large food companies carry out basic research. Experiments are designed to provide information that leads to a better understanding of the role that different ingredients and processing operations play in determining the overall properties of foods. Research is mainly directed towards investigating the structure and interaction of food ingredients, and how they are effected by changes in environment, such as temperature, pressure and mechanical agitation. Basic research tends to be carried out on simple model systems with well-defined compositions and properties, rather than real foods with complex compositions and structures, so that the researchers can focus on particular aspects of the system. Scientists working for food companies or ingredient suppliers usually carry out product development. Food Scientists working in this area use their knowledge of food ingredients and processing operations to improve the properties of existing products or to develop new products. In practice, there is a great deal of overlap between basic research and product development, with the basic researchers providing information that can be used by the product developers to rationally optimize food composition and properties. In both fundamental research and product development analytical techniques are needed to characterize the overall properties of foods e. Most foods are compositionally complex materials made up of a wide variety of

different chemical constituents. Their composition can be specified in a number of different ways depending on the property that is of interest to the analyst and the type of analytical procedure used: Government regulations state that the concentration of certain food components must be stipulated on the nutritional label of most food products, and are usually reported as specific molecules e. Hence, two foods that have the same composition can have very different quality attributes if their constituents are organized differently. For example, a carton of ice cream taken from a refrigerator has a pleasant appearance and good taste, but if it is allowed to melt and then is placed back in the refrigerator its appearance and texture change dramatically and it would not be acceptable to a consumer. Thus, there has been an adverse influence on its quality, even though its chemical composition is unchanged, because of an alteration in the structural organization of the constituents caused by the melting of ice and fat crystals. Another familiar example is the change in egg white from a transparent viscous liquid to an optically opaque gel when it is heated in boiling water for a few minutes.

Chapter 7 : Dietary supplements and herbal medicine toxicitiesâ€”when to anticipate them and how to man

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Maximization psychology Herbert A. Further psychological research has identified individual differences between two cognitive styles: Maximizers tend to take longer making decisions due to the need to maximize performance across all variables and make tradeoffs carefully; they also tend to more often regret their decisions perhaps because they are more able than satisficers to recognise that a decision turned out to be sub-optimal. System 1 is a bottom-up, fast, and implicit system of decision-making, while system 2 is a top-down, slow, and explicit system of decision-making. In his analysis on styles and methods, Katsenelinboigen referred to the game of chess, saying that "chess does disclose various methods of operation, notably the creation of predisposition-methods which may be applicable to other, more complex systems. Both styles are utilized in the game of chess. According to Katsenelinboigen, the two styles reflect two basic approaches to uncertainty: The combinational style is characterized by: In defining the combinational style in chess, Katsenelinboigen wrote: The objective is implemented via a well-defined, and in some cases, unique sequence of moves aimed at reaching the set goal. As a rule, this sequence leaves no options for the opponent. This approach is the crux of the combination and the combinational style of play. In playing the positional style, the player must evaluate relational and material parameters as independent variables. The positional style gives the player the opportunity to develop a position until it becomes pregnant with a combination. The terminal points on these dimensions are: For example, someone who scored near the thinking, extroversion, sensing, and judgment ends of the dimensions would tend to have a logical, analytical, objective, critical, and empirical decision-making style. However, some psychologists say that the MBTI lacks reliability and validity and is poorly constructed. For example, Maris Martinsons has found that American, Japanese and Chinese business leaders each exhibit a distinctive national style of decision-making. Several brain structures, including the anterior cingulate cortex ACC , orbitofrontal cortex and the overlapping ventromedial prefrontal cortex are believed to be involved in decision-making processes. A neuroimaging study [44] found distinctive patterns of neural activation in these regions depending on whether decisions were made on the basis of perceived personal volition or following directions from someone else. Patients with damage to the ventromedial prefrontal cortex have difficulty making advantageous decisions. A study of a two-alternative forced choice task involving rhesus monkeys found that neurons in the parietal cortex not only represent the formation of a decision [46] but also signal the degree of certainty or "confidence" associated with the decision. Emotions in decision-making Emotion appears able to aid the decision-making process. The somatic marker hypothesis is a neurobiological theory of how decisions are made in the face of uncertain outcome. Barbey and colleagues provided evidence to help discover the neural mechanisms of emotional intelligence. Please help improve this article by adding citations to reliable sources. Unsourced material may be challenged and removed. May Learn how and when to remove this template message During their adolescent years, teens are known for their high-risk behaviors and rash decisions. Recent research[citation needed] has shown that there are differences in cognitive processes between adolescents and adults during decision-making. Researchers have concluded that differences in decision-making are not due to a lack of logic or reasoning, but more due to the immaturity of psychosocial capacities that influence decision-making. Examples of their undeveloped capacities which influence decision-making would be impulse control, emotion regulation, delayed gratification and resistance to peer pressure. In the past, researchers have thought that adolescent behavior was simply due to incompetency regarding decision-making. Currently, researchers have concluded that adults and adolescents are both competent decision-makers, not just adults. Recent research[citation needed] has shown that risk-taking behaviors in adolescents may be the product of interactions between the

socioemotional brain network and its cognitive-control network. The socioemotional part of the brain processes social and emotional stimuli and has been shown to be important in reward processing. The cognitive-control network assists in planning and self-regulation. Both of these sections of the brain change over the course of puberty. However, the socioemotional network changes quickly and abruptly, while the cognitive-control network changes more gradually. Because of this difference in change, the cognitive-control network, which usually regulates the socioemotional network, struggles to control the socioemotional network when psychosocial capacities are present. Because teens often gain a sense of reward from risk-taking behaviors, their repetition becomes ever more probable due to the reward experienced. In this, the process mirrors addiction. Teens can become addicted to risky behavior because they are in a high state of arousal and are rewarded for it not only by their own internal functions but also by their peers around them. Adults are generally better able to control their risk-taking because their cognitive-control system has matured enough to the point where it can control the socioemotional network, even in the context of high arousal or when psychosocial capacities are present. Also, adults are less likely to find themselves in situations that push them to do risky things. For example, teens are more likely to be around peers who peer pressure them into doing things, while adults are not as exposed to this sort of social setting.

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This book presents new work on the psycholinguistics and neurolinguistics of compound words. It shows the insights this work offers on natural language processing and the relation between language, mind, and memory.

Chapter 9 : SUBTLEX-CH: Chinese Word and Character Frequencies Based on Film Subtitles

Chinese Compound Processing in Sentences with Rapid Serial Visual Presentation by Guangting Wang A thesis submitted in partial fulfillment of the requirements for the degree of'.