Department of
Linguistics and Modern Languages
語言學及現代語言系

An Empirical Investigation on the Processing and the Interpretation of Mandarin Reflexives

Workshop 1

Prof. Chun-Chieh HSU
National Tsing Hua University

Date: August 11, 2021 (Wednesday)
Time: 1:00pm - 2:30pm
Venue: *Seminar will be conduced via ZOOM

Join the Zoom Meeting

Abstract

In this talk, I will report two studies that used experimental methods to investigate how Mandarin native speakers process and interpret reflexive anaphors. Study 1 examined the asymmetry between *ziji* and ta-*ziji* in Mandarin. Linguistic analyses show that *ziji* allows long-distance binding, whereas ta-*ziji* must be locally bound unless the closest accessible antecedent is non-human (Huang et al. 2009; Pan 1988, etc.). However, such widely-accepted asymmetry between *ziji* and ta-*ziji* has not been attested systematically, and it remains unclear how semantic/pragmatic cues may influence the interpretation of *ziji*/ta-*ziji*. We utilized both online self-paced reading task and offline multiple choice task to compare the processing and the interpretation of these two reflexives directly. Our findings suggest for a differential yet complex interplay between syntax and pragmatics in online and offline resolution of *ziji* and ta-*ziji*. Study 2 looked into how structural constraints and non-structural cues may affect the online processing of the poly-morphemic reflexive ta-*zjij* in Mandarin. While most previous studies have focused on the processing of *ziji* in Mandarin, very little was known about how Mandarin speakers process ta-*ziji* in real time. It has been argued that, unlike *ziji*, the interpretation of ta-*ziji* basically follows Binding Principle A and is more similar to English himself (Huang et al, 2009), but the semantic properties of the nouns can affect the binding domain of ta-*ziji* (Pan 1998). By adopting Sturt (2003)'s paradigm, we used eye-tracking method to examine whether Principle A is applied immediately during the online processing of ta-*ziji* and how semantic features like gender and noun type may influence the resolution of ta-*ziji*. Our findings suggest that Mandarin speakers apply Principle A in processing ta-*ziji* but only during the late processing stages, and that gender congruity and noun type do play a role in affecting the online resolution of reflexives.

Speaker

Chun-Chieh Hsu is Associate Professor in the Department of Foreign Languages and Literature at National Tsing Hua University in Taiwan. Her research has primarily concerned with how complex sentences are processed and acquired in Mandarin Chinese. She is particularly interested in using empirical methods to understand how various kinds of linguistic knowledge (competence) are being employed in people's usage of language (performance), including adult language comprehension and child language acquisition.

All are Welcome

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In Search of Brain Networks from Bench to Bedside - the Application of High Density EEG

Workshop 2

Mr. Weizhong HE
Magstim EGI

Date: August 11, 2021 (Wednesday)
Time: 2:30pm - 4:00pm
Venue: *Seminar will be conduced via ZOOM

Join the Zoom Meeting

Abstract

Increasing evidence suggests that brain functions are derived from highly specified and spatially segregated networks in the nervous system. Identifying normal and pathological functional networks from neurophysiological data has become one of the most promising fields. Using up to 256 electrodes evenly spaced over the entire scalp, cheeks, and back of the neck, HD EEG provides dense and even sampling, allowing researchers and clinicians to detect brain activities at high spatial resolution and further supporting the search of brain networks in the lab and at the bedside. The 60 minute presentation will be followed by a 10 minute Question and Answer session.

Speaker

Mr. He studied Biomedical Engineering at the Tianjin University, China, and is now the manager of Magstimegi in China. He has worked for EGI for over 8 years, and used to be in charge of the support of Asia. He is familiar with EEG knowledge and data processing skills.

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Psychological Research with Social Media Posts and Computational Text Analysis

Prof. Lee-Xing YANG
National Chengchi University, Taiwan

Workshop 3

Date: August 12, 2021 (Thursday)
Time: 1:00pm - 2:30pm
Venue: *Seminar will be conduced via ZOOM

Join the Zoom Meeting

Abstract

Nowadays people are used to sharing their lives, thinks, and emotions on social media, which in turn becomes a gigantic online database of human behaviors. A number of recent studies have shown that the posts on social media can be used to predict psychological attributes of humans (e.g., personality). Although these studies were conducted for different goals, the procedures of them can have a common three-stage form. The main purpose of this workshop is to introduce this three-stage procedure for studying the posts on social media: data collection (e.g., using the web scraper to collect the posts of interest), data preprocessing (e.g., removing irrelevant HTML codes and extracting keywords or topics), and data analysis (e.g., providing interpretations to the observed data with statistical models). Specifically, as the posts are all textual, the techniques of computational text analysis will be introduced. Text analysis can be very different in the fields of psychology and machine learning. In the first example, I will compare these two types of text analysis on detecting the gender differences in the relationship breakup posts. The results suggest that these two approaches of text analysis can be integrated to gain a more complete understanding of gender differences. In addition to extracting key words, text analysis can also be used to generate the topics of texts. In the second example, I will show that topic generation is a better solution to detect the gender differences in the relationship breakup posts than keyword extraction.

Speaker

My name is Lee-Xieng Yang and I am now an associate professor in the department of psychology of National Chengchi University in Taiwan. My research basically can be summarized as two parts. The first part includes cognitive psychology and mathematic psychology. Specifically, I am particularly interested in understanding how people learn categories and form concepts with laboratory experiments and mathematical models, such as neural network models and Bayesian models. In addition to the on-going studies on human categorization, recently, I also start to examine how to attenuate or eliminate the continued influence effect of misinformation (or fake news) in respect of the encoding and retrieval of memorized materials. The second part is more relevant to developing research methods for social media study. As most of the contents on social media are textual, developing the methods of text analysis becomes my main concern. Specifically, I put emphasis on applying the Dirichlet process in Bayesian methods to develop mixture models to summarize texts by representative topics. Recently, I also try to improve the sentiment analysis for texts via examining the possibility of using verbs together with adjectives to identify the sentiment of a text.

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Using EyeLink Eye Trackers for Psycholinguistic Research

Dr. Sam HUTTON
SR Research Ltd

Workshop 4

Date: August 12, 2021 (Thursday)
Time: 2:30pm - 4:00pm
Venue: *Seminar will be conduced via ZOOM

Join the Zoom Meeting

Abstract

Language Researchers have used eye tracking to inform their understanding of how people read and process language for decades, and psycholinguists have long been pioneers in the development of eye tracking technology, methodology, and techniques for analysing eye movement data. This presentation will describe the dominant eye tracking paradigms used by researchers studying both reading behavior and spoken language comprehension. Focusing on SR Research hardware and software, the presentation will cover the key concepts involved in implementing and analyzing reading tasks, including advanced "gaze-contingent" tasks such as the moving window/mask and boundary-crossing paradigms. The dominant eye tracking paradigm in language comprehension research is referred to as the “Visual World Task” and involves presenting participants with images that they view whilst listening to sentences. The pattern of gaze over time can provide important clues as to how the spoken language is being parsed in real time. The presentation will describe a range of Visual World tasks, and how the resulting "time series" data can be analyzed and interpreted. Another important trend in eye tracking research is the integration of gaze data with other biometric recordings, such as EEG. A range of synchronization and integration approaches will be discussed, along with recent important developments such as "fixation related potentials". The 60 minute presentation will be followed by a 30 minute Question and Answer session.

Speaker

Dr. Hutton studied Experimental Psychology at the University of Sussex, UK. His first encounter with an eye tracker was during his post-doctoral fellowship at Imperial College School of Medicine. He was based in the Neuro-ophthalmology unit for 6 years, and learned to use an ancient infrared eye tracking system to measure basic oculomotor function (prosaccades / antisaccades / smooth pursuit etc.) in patients with neuropsychiatric and neurological disorders. This experience led to a lifelong interest in oculomotor function and its relationship with cognition, and Dr. Hutton has been actively involved in eye tracking research in one way or another ever since. He has published over 50 papers on a wide range of topics - from the effects of nicotine on smooth pursuit, to the impact of implicit causes and consequences on gaze during spoken language processing. He currently works with SR Research, supporting EyeLink users across the world in a variety of ways. He takes a particular interest in issues involving eye tracking in clinical settings language research and pupillometry. He regularly teaches eye-tracking workshops on a wide range of topics, in which he tries to make sure that researchers don't make the same mistakes he did.

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