Psycholinguistics expanding eastward

Nayoung Kwon

Konkuk University, Korea
nayoungkwon@konkuk.ac.kr

Throughout history, human beings have been fascinated by the mind, such that even the ancient Egyptians had a hieroglyph for “brain” in 1700 BC. However, the history of neuro/psycholinguistics is brief; this is partly because the idea of investigating mental states underlying language use is a relatively recent concept (Chomsky, 1959). It is also partly because the investigative nature of neuro/psycholinguistics requires intensive development of sophisticated scientific tools. Recently, however, the field has grown in both the scope of research topics and the languages studied, as discussed below.

The history of neuro/psycholinguistics in the linguistic society of Korea is also brief. I was first exposed to the field only in 2000, when I happened to encounter a paper by Janet Dean Fodor. In Korea at that time, neuro/psycholinguistics was virtually unknown and gained exposure only much later. Thus, as a starting PhD student, I was eager for upcoming training in various specialties of linguistics yet still unprepared for the fundamental idea underlying psycholinguistics: that one can predict and examine the mental processes involved in language use. However, careful, logical discussion of the processing models in Fodor’s paper intrigued and even fascinated me, despite my lack of training in the field at that time. That eye-opening experience led me to pursue the topic in greater detail. I read various ERP papers and was further astonished by the idea that the mental processes underlying language use can be directly examined based on physiological responses in the brain. It seemed obvious to me that neuro/psycholinguistics was full of potential and that psycholinguistic
investigations of Korean (as well as Japanese and Chinese) — languages relatively neglected in this field — could greatly advance our knowledge of cognition and language. Indeed, I was lucky enough to witness and participate in the development of neuro/psycholinguistics in the society of Korean linguistics.

Many early works in psycholinguistics were mainly based on Indo-European languages (e.g., English) and focused on syntactic processing. For example, a major topic of interest in the 1980’s and the early 1990’s was the psychological reality of an empty category. This was partly because syntactic theories do not agree on the inventory of and motivation for empty categories. For example, in Chomskyan generative transformational grammar, such as government binding theory and the minimalist program, empty categories are grammatically motivated. Therefore, NP-trace, $wh$-trace & variables, $pro$, and PRO are parts of the grammar (Chomsky 1981). On the other hand, lexicalist grammars (e.g., categorial grammar and some versions of functional syntax; cf. Pickering and Barry 1993) do not postulate empty categories as part of the grammar. In addition, the relationship between performance (the parser) and competence (the grammar) has garnered great interest in psycholinguistics (Berwick and Weinberg 1982; Bresnan and Kaplan 1984; Phillips 1996). Therefore, the disagreement over empty categories in theoretical linguistics led to a number of psycholinguistic investigations designed to determine the “psychological reality” of empty categories. However, the results have been mixed. While $wh$-trace has shown a robust gap effect (Swinney, Ford, Frauenfelder, and Bresnan 1988), NP-trace and PRO have shown relatively weak and delayed gap effects, if any (McElree and Bever 1989; Osterhout and Swinney 1993), and $pro$ is not even available for investigation in English or other well-studied Indo-European languages (cf. Haegeman 1990). Naturally, relative clause and $wh$-question sentences have been a frequent topic of investigation with their clear gap-related effects, and many psycholinguistic studies have focused on the processing of these sentences.

However, it is significant that Korean, Japanese, and Chinese have different linguistic features from well-studied Indo-European languages, and these distinctive features have motivated investigations of various aspects of language processing. For example, Korean, Japanese, and
Chinese differ from English in terms of surface configurations of \textit{wh}-question and relative clause sentences. That is, in contrast to English, where \textit{wh}-words are displaced to the beginning of \textit{wh}-questions, Korean, Japanese, and Chinese are \textit{wh}-in-situ languages in which no displacement occurs. Likewise, while relative clauses are post-nominal in English, they are pre-nominal in Korean, Japanese, and Chinese. Finally, \textit{pro}-drop is rampant in these East Asian languages, unlike in English, where an argument drop is prohibited. These diverse linguistic features across languages have inspired psycholinguistic study of processing patterns driven by language universals, irrespective of different surface features (Ueno & Kluender, 2009), allowing an evaluation of the processing models that have been postulated in the context of Indo-European languages (Kwon, Kluender, Kutas & Polinsky, 2013). Finally, investigation of interpretation biases and processing patterns of \textit{pro} in these East Asian languages has furthered our understanding of language processing, as investigation of \textit{pro} has been neglected until recently due to the lack of linguistic phenomena in many well-studied Indo-European languages as stated above (Kwon & Sturt, 2013; cf. Carminati, 2002). Thus, cross-linguistic psycholinguistic research is critically important and the recent shift in focus towards East Asian languages is a welcome change in the field.

On the other hand, the advancement of science and technology has brought about drastic changes in the field, allowing us to answer many questions that we could not before. For example, structural processing was previously a main focus of psycholinguistics, but the field has recently become more interdisciplinary and expansive, with topics ranging from the representation of language in the brain to the detailed time course of language comprehension and production, to the modelling of human language processing and acquisition. In addition, some studies have taken an atheoretical approach. Such views are not new but have recently garnered more attention. For example, language is affected by principles of general cognition (Van Berkum, Brown, Zwitserlood, Kooijman, & Hagoort, 2005), is perceived and produced by sensory-motor systems, and closely interacts with culture (Boroditsky, 2001). Thus, given the complexity of language, its processing and acquisition should be (and has been) investigated from
several angles. Likewise, it is critical that various aspects of language be examined based on cross-linguistic studies of a wide variety of languages, including non-Indo-European East Asian languages (cf. Kwon, Sturt, & Liu, 2017).

Given the increasing prominence of psycholinguistics in East Asian languages, Dr. Yuki Hirose and I gladly accepted the timely invitation of Dr. Shin Fukuda and the organizing committee of the 25th Japanese/Korean Linguistics Conference to host an East Asian psycholinguistics workshop as a J/K satellite workshop in 2017. Of course, the theme of this workshop, “recent developments,” was an easy decision as it reflected the current state of psycholinguistics. Seventeen studies were presented in the workshop, and they captured the recent changes in the field. In addition, Dr. Yuki Hirose and I decided to share four papers from the workshop with the Journal of Cognitive Science for publication in this special issue of the journal. These include a paper by So Young Lee on a computational parsing account of structural ambiguity in English and Korean, a paper by Masaki Sone and Yuki Hirose on the effects of lexical accent type on voicing when producing noun compounds, a paper by Jinah Kim and Ji Hyon Kim on implicit translation during L2 processing, and a paper by Hitomi Hirayama and Adrian Brasoveanu on experimental investigations of different ignorance expressions in Japanese. I would like to thank Dr. Chungmin Lee and the JCS staff for their help during the review and editing processes for this special issue.

Finally, I would also like to thank Dr. Shin Fukuda and the J/K 25 organizers for their efforts to bring all of us together for the East Asian Psycholinguistics workshop, Dr. Yuki Hirose and her students at the University of Tokyo, and students at the Center for Korean studies and the University of Hawaii, Manoa, for their support and assistance during the workshop.

**Acknowledgements:**

This was supported by the faculty research fund of Konkuk University in 2016.
References


