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Editorial Introduction www.elsevier.com/locate/lingua

This special issue, *Prosody at the Grammatical Crossroads – Japanese and Beyond*, comprises six papers that address interface issues connected to prosody. Two important sub-themes found in the widely varying topics surrounding prosody are wh-interrogatives and Japanese language prosody, and they are reflected in the nature of the research project out of which this special issue was conceived. The contributors include the two co-PIs (Yoshihisa Kitagawa and Satoshi Tomioka) of the project *Wh-interrogatives at the Prosody–Syntax-Pragmatics Crossroads*, supported by the National Science Foundation, as well as those who have been associated with the project as consultants or as presenters at the *4th Workshop on Prosody, Syntax and Information* (WPSI 4), held at the University of Delaware in September, 2009.¹

The project began with an oft-mentioned dilemma that formal syntax faces. Generative syntactic theorizing relies heavily on grammaticality judgments by native speakers. Grammaticality judgments are often paraphrased as 'acceptability' judgments, and the perceived (semi-)equivalence of the two is a good illustration of the problem. How acceptable a given sentence is judged can be influenced by factors that are not syntactic in nature such as processing loads, discourse/contextual information, and prosody/intonation. The project was an attempt to integrate into formal syntax those aspects that are often pushed aside as peripheral matters.

We chose wh-interrogative sentences in Japanese as the main empirical domain of investigation, as they present themselves as an ideal ground for our research. Japanese employs all the popular grammatical strategies for encoding information structure: prosody/intonation, morphological marking (e.g., the topic marker *-wa*) and structural positioning (e.g., scrambling, right-dislocation). Ordinarily a wh-phrase is focused, with the rest of the sentence serving as the background against which the question is asked (cf. Krifka, 2001), and Japanese shows distinctive focus prosodic patterns which closely reflect such information structure (Deguchi and Kitagawa, 2002; Ishihara, 2003). Furthermore, while the interpretation of a wh-question stays more or less constant from language to language, its syntax shows a vast range of crosslinguistic variation—the most famous of which is the dichotomy between overt wh-movement and wh-in situ. Japanese presents a well-known case of the latter type. Finally, there have been some concrete cases of controversies within the Japanese wh-interrogative phenomena in which prosodic issues play a key role: the relevance of wh-island phenomena (cf. Nishigauchi, 1990; Watanabe, 1992; von Stechow, 1996; Deguchi and Kitagawa, 2002; Ishihara, 2003; Ihirotani, 2005) and the 'Intervention Effects' (Hoji, 1985; Beck, 1996; Beck, 2006; Beck and Kim, 1997; Tomioka, 2007). In other words, wh-questions present themselves as a showcase of various syntactic constraints which have helped us develop a restrictive theory of grammar. All these attributes make wh-interrogatives an apt target to investigate.

Japanese wh-interrogatives are the cornerstone of this special issue, but the range of topics covered here indicates that the research agenda has successfully expanded and become more inclusive without losing focus. Two papers are exclusively on Japanese wh-interrogatives (Kitagawa, Tamaoka and Tomioka, and Smith), and the most immediate extension of the topic of Japanese wh-interrogatives is the paper by Kuroda on wh-words (or indeterminates) used for non-interrogative purposes. Truckenbrodt's paper on focus in wh-questions deals with English and German data, as well as Japanese. Deprez, Syrett, and Kawahara's primary focus is on French wh-in situ. We believe that these papers offer

¹ We would like to thank the National Science Foundation, who provided us with financial support for the research reported here (NSF Research Grants, BCS-0650415, awarded to Indiana University, Principal Investigator: Yoshihisa Kitagawa and BCS-0650385, awarded to University of Delaware, Principal Investigator: Satoshi Tomioka). We would also like to thank Shigeto Kawahara for acting as an associate guest editor.

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some important crosslinguistic implications. Ito and Mester tackle more general issues of prosodic hierarchy based on Japanese data. In what follows, we provide a brief preview of each contribution.

Deprez, Syrett, and Kawahara present an experimental study on prosodic patterns of wh- and yes/no-interrogatives in French. It has been observed that wh-in situ questions in French are accompanied by a rising intonation similar to the yes/no-question pattern, and Cheng and Rooryk (2000) have argued that yes/no and wh-in situ questions in French are both licensed by the presence of an intonation morpheme [Q:] in COMP. Deprez, Syrett and Kawahara's production experiment reveals the following facts: (i) most but not all of their subjects produced a rising contour for wh-in situ sentences, (ii) even among those who produced such an intonation, the rise found in wh-in situ was smaller than the rise in yes-no questions, and (iii) in the wh-in situ sentences without a final rise, the wh-words received higher pitch accents. Since the final rise and the elevated high pitch negatively correlate with each other, the two patterns are likely to be variables of the prosody for wh-in situ in French. Their experimental results collectively suggest that Cheng and Rooryk's idea of an intonation morpheme is essentially on the right track but needs finer-grained modifications.

Ito and Mester first adopt their previous proposal that the prosodic subcategories "minor phrase" and "major phrase" need to be understood not as distinct categories existing in their own right, but as instances of a recursively deployed single type of basic category in prosody. Implementing this approach within a less strict version of Selkirk's (2009, 2011) "Match Theory," they then investigate the pitch accent system of Japanese. They argue that distinct surface contours of phrases consisting of various combinations of accented and unaccented words follow from the optimality-theoretic ranking of formal constraints imposed on prosody and those imposed on the prosody–syntax interface.

Kitagawa, Tamaoka, and Tomioka present an experimental study on prosodic effects in the so-called 'Intervention Effects' in Japanese wh-questions. They conducted an acceptability judgment experiment with two types of stimuli: visual-only stimuli and visual-stimuli accompanied by audio-stimuli in which focal prominence was not assigned to the interveners. They report that with lexically accented interveners, the ratings of the visual + audio stimuli were significantly higher than those of the visual-only stimuli, indicating that implicit prosody (= the default prosody that languages users assign) in intervention sentences contributes to lower acceptability. The results are compatible with an approach that regards Intervention Effects not as a reflex of grammaticality but rather as the amalgam of acceptability-lowering effects caused by diverse extragrammatical factors, such as information structural status of interveners (e.g., Tomioka, 2007; Eilam, 2011).

Kuroda's paper investigates the prosodic patterns of the 'wh-indeterminate' constructions (more generally known as 'wh-indefinites'), where wh-phrases are used for non-interrogative purposes. The starting point of the paper is Kitagawa and Deguchi's (2003) prosody-based reanalysis of wh-island effects in Tokyo Japanese, in which the domain of the compressed pitch after a wh-phrase plays a crucial role in determining the scope of the wh-phrase. This pitch compression is a part of what Kitagawa and Deguchi call Emphatic Prosody (EPd), and with the proper assignment of EPd, the "additional wh-effect" reported by Watanabe (1992) becomes an epiphenomenon under Kitagawa and Deguchi's analysis. Kuroda observes that, unlike an interrogative wh-phrase, a non-interrogative wh-phrase can trigger raised, flat prosody, which he calls Raising Prosody (RPd), where lexical accents are completely eliminated. He then reports the observation that the additional wh-effect involving RPd can also be eliminated by EPd, but it persists without EPd. Kuroda surmises that the additional wh-effect (which he calls the "Watanabe phenomenon") may be rooted deeply in the syntax of indeterminate constructions in general. While leaving further pursuit of the topic to future research, he concludes the paper by emphasizing the importance of the study of prosody in syntactic analysis, which he says is "indispensable even for identifying syntactic issues as such."

Smith's paper reports the findings from her experiments on the production and perception of wh-prosody in the Fukuoka dialect of Japanese. She confirms first that the characteristic wh-prosodic contour (which involves flat raised prosody reminiscent of Kuroda's RPd) and the relationship between wh-prosody and wh-scope identified in earlier impressionistic studies can be observed in the speech of linguistically naive young-adult speakers of this dialect. She notices at the same time that the wh-prosody and the prosody/scope relationship in question show variation both within and between speakers. In particular, the wh-prosody/scope relationship is not necessarily the same in perception and production even for the same speaker, which conforms to the previous findings from Tokyo Japanese.

Truckenbrodt puts forth the hypothesis that the feature [+wh], standardly assumed in many syntactic analyses of wh-questions, is dispensable and should be subsumed under the focus feature F. Starting with the observation that wh-phrases seem to universally carry the feature F, Truckenbrodt examines a range of constructions, including alternative questions, wh-questions in Japanese, echo questions, multiple wh-questions, and intervention effects. He then concludes that the focus feature on wh-phrases, which he calls 'Q-related F', can do all the work that the [+wh] feature is designed to perform, suggesting that there is no need to retain [+wh] as such in the grammar. His proposal renders support for the recent re-emergence of Hamblin's (1973) semantics of wh-interrogatives, in which the 'set' denotation of a wh-phrase can be directly connected to the Alternative Semantic treatment of a focused phrase (cf. Rooth, 1992).

Finally, we would like to say a few words on Shige-Yuki Kuroda, one of the most remarkable scholars in the field of linguistics, who left us much too soon in February, 2009. His contributions to the field of linguistics are too numerous and

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far-reaching to be properly contained in a short note like this. We only wish to express how privileged and honored we feel to include his paper, which he wrote at the onset of our NSF project, in this volume. Surprisingly, for someone who had truly diverse and interdisciplinary research interests, the paper was his first substantial work on sentence prosody. On the other hand, one might call the paper a signature Kuroda piece since it is on the topic he championed: wh-indeterminates in Japanese. When the project began, we were very excited to have him on board, but his declining health kept our collaboration much less extensive than we had hoped. We can only wonder what insight and innovations he would have added to the project had he lived to see its conclusion. On behalf of all of the contributors, we would like to dedicate this issue to the memory of Shige-Yuki Kuroda, a unique, creative thinker, an inspiring teacher, and most of all, a very good friend whose kindness and generosity we can never forget.

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Available online 20 December 2012

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