

The Gradient Nature of Information Accessibility in English Noncanonical Word Order

Ye-eun Cho
Sungkyunkwan University
joyenn@skku.edu

This study investigates the gradient nature of information accessibility as reflected in English noncanonical word order (NWO) constructions through analyses of human discourse corpora and sentence processing. Previous studies on information structure have typically treated accessibility in categorical terms, such as given/new or topic/focus distinctions. However, in natural discourse, not only explicitly mentioned information but also inferentially linked information can vary in its degree of accessibility. Building on this perspective, the present study defines information accessibility as the degree to which information can be activated or inferred within discourse. It further examines how differences in accessibility are reflected in word order choices and sentence processing, as well as which mechanisms determine such gradience. To address these questions, the study integrates theories of information structure (Prince, 1981, 1992) and bridging inference (Clark, 1975).

The corpus analysis first examined the discourse status of sentence-initial elements in naturally occurring NWO constructions. Discourse status was annotated based on the notion of discourse status proposed in Prince (1992) and Birner (2004, 2006). The study extracted three NWO constructions (preposing, inversion, and *by*-phrase passives) from the British National Corpus (BNC). Sentence-initial elements were then annotated through a multi-layered scheme that included not only explicitly given information but also inferable information. Inferable information was further analyzed in terms of differences in accessibility associated with inferential complexity, divided into elaborating inferables and bridging inferables. Statistical analyses were conducted using Poisson generalized linear models. The results showed that sentence-initial positions in NWO constructions frequently contained not only explicitly given information but also inferentially accessible information. Moreover, the distribution differed according to the type of inference involved. These findings suggest that information accessibility varies continuously depending on discourse coherence and inferential complexity.

To further investigate whether such gradience is also reflected in human sentence processing, an acceptability judgment experiment was conducted. The experiment employed a 3×3 design crossing bridging relation types (mereological, frame-related, and inference-based relations) proposed by Schwarz-Friesel et al. (2007) and Irmer (2011) with three NWO constructions (preposing, inversion, and *by*-phrase passives). Participants rated the acceptability of each preceding discourse and NWO sentence, and the acceptability judgment scores were analyzed using linear mixed-effects models. The results revealed that human speakers generally showed higher acceptability ratings for relations involving lower inferential complexity. However, this effect was partially moderated by construction type. These findings indicate that information accessibility is shaped not only by inferential complexity but also by constructional constraints.

Taken together, this study empirically demonstrates that information accessibility in English NWO constructions is inherently gradient and emerges through the interaction among discourse coherence, inferential complexity, and constructional constraints. By integrating information structure and bridging inference within a unified framework, the study extends traditional categorical approaches to accessibility and contributes to a deeper understanding of the cognitive mechanisms underlying human discourse processing.

References

- Birner, Betty. (2004). Discourse functions at the periphery: Noncanonical word order in English. *ZAS Papers in Linguistics*, 35 (1), 41-62.
- Birner, Betty. (2006). Semantic and pragmatic contributions to information status. *Acta Linguistica Hafniensia*, 38 (1), 14-32.
- Clark, Herbert H. (1975). Bridging. In *Proceedings of the 1975 workshop on Theoretical issues in natural language processing* (pp. 169-174).
- Irmer, Matthias. (2011). *Bridging inferences: Constraining and resolving underspecification in discourse interpretation* (Vol. 11). Walter de Gruyter.
- Prince, Ellen F. (1981). *Toward a Taxonomy of Given/New Information*. In Peter Cole (Ed.), *Radical Pragmatics* (pp. 223-254). New York: Academic Press.
- Prince, Ellen F. (1992). The ZPG letter: Subjects, definiteness, and information-status. In *Discourse description: Diverse linguistic analyses of a fund - raising text* (pp. 295-326). John Benjamins Publishing Company.
- Schwarz-Friesel, Monika, Mareile Knees, and Manfred Consten. (2007). *Anaphors in Text: Cognitive, Formal and Applied Approaches to Anaphoric Reference* (Vol. 86). John Benjamins Publishing.