

Structuring expectation

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A perennial question for psycholinguistic theory is how comprehenders negotiate the uncertainty inherent in incremental language use. Current resource-allocation approaches advocate a direct relationship between the difficulty perceivers experience and how informative incoming linguistic material is given a current weighting of partial analyses - for example, how much incoming words disturb the comprehender's previous expectations about linguistic structure (Hale, 2003, Levy, 2008). It remains an open question what can contribute to the ordering of comprehenders' expectations, and by what mechanism.

In this talk I will examine three case studies in English and Chamorro sentence processing. Each study features the incremental construction of a grammatical dependency in which the pressure of an increasingly likely analysis is counteracted by the need to license marked features of DP, such as Number, Animacy, and Person. In the instances I'll discuss, comprehenders seem to "ignore" the statistical effect of incoming words when a marked syntactic feature is present (and when the intervening words form a syntactic adjunct, cf. Tutunjian & Boland, 2008). These experiments provide continued support for a theory of prediction in which expectations are affected not only by the conditional probability of an analysis but also by its utility in satisfying syntactic constraints and interpretive goals (Pritchett, 1992, Frazier & Clifton, 1995, Chater, Crocker, & Pickering, 1998).

Number. In the first case study, I consider the processing of English demonstrative DPs with prenominal modifiers. Plural determiners facilitate the recognition of agreement regardless of the number of modifiers that intervene; in contrast, when the determiner is singular, recognition of agreement is impaired for longer DPs. However, an analysis of the size distribution of demonstrative DPs suggests that singular DPs and not plural DPs should show faster and more accurate processing of the head noun.

Animacy. In the second case study, I tread into the thicket of relative clause processing. Relativized arguments are preferentially linked to subject gap positions when they are animate, and give rise to difficulty in object relative clauses; but when they are inanimate, this difficulty is absent. The statistical asymmetry between animate and inanimate arguments can be neutralized by adding a small clause-initial adjunct: corpus investigation and cloze tasks reveal that such adjuncts almost always occur with subject relative clauses regardless of animacy. However, reading time studies in our lab show that the animacy asymmetry persists even when these adjuncts are present.

Person. In the final case study, I focus on *wh*-dependency formation in Chamorro. In this language, a person-animacy hierarchy regulates how arguments are mapped to subject and object positions. In self-paced listening and preferential looking experiments, comprehenders are faster at interpreting *wh*-dependencies when the subject position is occupied by a 3rd person DP, which is more marked on the person-animacy hierarchy, than by a 2nd person pronoun. No such advantage obtains if the hierarchy is rendered inactive by use of a different agreement paradigm.