specific similarities between human languages and any exolanguages like those posited in the book.

The example of Jean-Marc Côté's postcards given at the beginning of this review, however, serves as a reminder that even some of the most oddly specific predictions can be accurate. Whether Hickey is right or wrong, in this case, only future (and, perhaps, applied mathematics) will tell.

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Andreas Kehl, *Adjunct islands in English: Theoretical perspectives and experimental evidence* (Studies in Generative Grammar **152**). Berlin & Boston: Walter de Gruyter, 2023. Pp. xv + 330.

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Syntactic dependencies constitute one of the core properties of human languages. Despite no competence-based limitations on the distance for dependency formation, there are certain domains, best known as islands, where extractions are apparently prohibited. One famous island is the adjunct. According to Huang's (1982) Condition on Extraction Domains (CED), adjuncts as nonproperly governed constituents are opaque for extractions, and the grammaticality judgment as such is categorical or binary; however, counterexamples with different degrees of acceptability are attested, and the status of adjuncts as prototypical strong islands has been challenged repeatedly. Unfortunately, most explorations of island constraints and their exceptions have been theory-oriented, primarily based on intuitive judgments and rarely testified by a

large number of unbiased informants. Thus, how to account for the acceptability gradience except for syntactic principles surfaces to be an important issue. Andreas Kehl's monograph *Adjunct Islands in English: Theoretical Perspectives and Experimental Evidence* is an excellent attempt primarily devoted to investigating additional factors that affect the acceptability asymmetries of *wh*-extractions from a subset of adjuncts in English, namely bare present participial adjuncts (BPPAs), from both theoretical and empirical perspectives. BPPAs are considered because they have been taken as evidence against the plausibility of syntactic constraints on adjuncts (Truswell 2007). Kehl has conducted a performance-based factorial study assessing various accounts of the transparency of adjuncts and extraction asymmetries. Essentially, the factorial acceptability model (FAM) proposed in this book strongly distinguishes the acceptability decreases caused by extractions from factors determining the acceptability of declarative BPPA constructions. This distinction is based on the insightful revelation that the acceptability contrasts in interrogatives pattern similarly with the contrasts in declaratives, indicating that the pattern is not due to features of the adjuncts themselves.

This monograph consists of six chapters in total. Chapter 1 introduces the phenomenon of apparently grammatical extractions from adjunct constituents and outlines the whole book. Chapter 2 primarily argues that BPPAs resemble depictive secondary predicates and shows that the apparent grammaticality after extraction can be largely captured by the syntactic and semantic licensing conditions on depictives. Chapter 3 reviews three major approaches to extraction from adjunct islands, claiming that independence approaches are more appealing than adjunct-internal gap-licensing accounts and various interaction accounts. Chapter 4 reports the robust experimental evidence for the independence approaches, as all experiments found reliable connections between acceptability differences in both declaratives and interrogatives. Chapter 5 proposes three generalizations for the gradual continuum of acceptability in declarative BPPA constructions independently of syntactic extractions, yielding a two-stage FAM; thus, locality does not need to be sensitive to nonstructural factors like aspectual classes or agentivity. Chapter 6 concludes the book. The details of each chapter are as follows.

Chapter 2 focuses on the syntactic analysis of BPPAs. They have three properties: (i) syntactic and semantic optionality, (ii) temporal overlapping or causal interpretation only, and (iii) sensitivity to aspectual properties of both matrix and embedded predicates. Kehl argues that these three properties, except the causal interpretation, can be well captured if BPPAs are analyzed as depictive secondary predicates rather than as reduced adverbial clauses or converb constructions. He further demonstrates that the causal interpretation poses no challenge to the depictive analysis of BPPAs, as the participle can be identified with an implicit cause position in the lexical semantics of the main verb through discourse-pragmatic means like event elaboration. In the final part of this chapter, the author examines the syntactic and semantic restrictions for depictive secondary predicates and hosting predicates. Surprisingly, the author reveals insightfully that these conditions mirror the reported data pattern for extraction from BPPAs. This analogy

of BPPAs to depictives leads to exploring independent syntactic and semantic factors controlling the grammaticality of *wh*-extractions from BPPAs.

Chapter 3 reviews in detail the existing (non-)syntactic approaches to extraction from adjunct islands and explores how these approaches affect the locality principle. The issue whether *wh*-extraction from BPPAs is sensitive to event-semantic factors like aspectual classes or agentivity determines how locality is formulated. That is, if the possibility for extraction depends on such nonstructural conditions, then the locality principle has to be adjusted to incorporate interpretational, nonstructural factors. There are three main approaches in the literature: the syntactic licensing of adjunct-internal gaps, interaction approaches, and independence accounts. First, the syntactic gap-licensing accounts use various minimalist toolkits like Agree, Spell-Out, and Phases to establish a gap site inside an adjunct without violating core syntactic principles. These proposals derive a binary distinction to accommodate the counterexamples to the CED; however, most of them are not fine-grained or remain implicit about when a specific adjunct is transparent or opaque. Second, the interaction approaches are more nuanced criteria about the removal/lifting of the adjunct's opacity. Put differently, they ask to what extent the factors, be they syntactic, semantic, information-structural, or pragmatic, affect grammaticality after various A'-extractions from adjuncts. These accounts are primarily approached from property-matching configurations between the matrix and adjunct predicates, such as aspectual classes, argument structure, or semantic relations. The barrier will be lifted when the specific criteria are met, and vice versa. However, these accounts are insufficient to account for the grammaticality gradience of various A'-extracted sentences in an uncontroversial way. Moreover, the sensitivity of extraction to nonsyntactic factors poses a challenge to the locality principle. Third, independence approaches (e.g. Brown 2017) claim a fundamental disassociation of semantic licensing conditions for the adjunct and syntactic licensing conditions of the adjunct-internal gap site, thus relocating the source of variation to the general semantic compatibility of the verb-adjunct complex rather than the application of extraction. Such division of labor between semantics and syntax is conceptually attractive, as the independence analysis prevents the violation of the autonomy of syntax.

Chapter 4 reports three experiments on the extraction variations based on a multifactorial model. Kehl begins by introducing two different acceptability models, namely the categorical (competence-based) model and the factorial (performance-based) model. The former incorporates strict or inviolable grammaticality constraints, and the latter incorporates several potentially multileveled factors and allows for gradience in acceptability.

Experimental study Series 1 yields three findings based on the event-structural approach (Truswell 2007) to transparent adjuncts: (i) The proposal that aspectual classes of both matrix and adjunct predicate influence the acceptability of extractions from BPPAs is partially supported; (ii) *wh*-extraction is not sensitive to the telicity of the matrix predicate; and (iii) the degree of adjunct integration matters but does not influence the strength of the extraction effect. Essentially, from these

experiments, the author shows that the acceptability of a construction with a participle adjunct predicate depends on the type of matrix predicate, regardless of whether extraction has taken place, thus fully compatible with the independence hypothesis. Series 2 is based on the grammatical verb type of the matrix predicate. The findings are as follows: (i) Transitive, unaccusative, and unergative matrix predicates all behave differently as predicted in interrogatives; and (ii) the same contrasts apply to the declarative counterparts as well, posing a challenge for Borgonovo & Neeleman (2000) and arguing again for the independence hypothesis. Series 3 investigates whether grammatical aspect in the form of progressive marking has an effect on the strength of *wh*-extraction for matrix predicates. The findings are as follows: (i) Manipulations of the outer aspect do not lead to a significant decrease in acceptability in either *get*-predicates or progressive achievement functioning as the matrix predicates; (ii) progressive-marked achievements are significantly less acceptable than achievements in the simple past, but this difference is identical in declaratives and interrogatives; and (iii) the potential argument structure difference between *get*-predicates and achievements does not modulate how strongly these predicate types react to *wh*-extraction.

The major conclusion drawn from these experiments is that the acceptability contrasts observed in interrogatives can be traced to identical contrasts in declaratives, conforming to the independence hypothesis; in other words, the six investigated factors show effects that apply independently of extraction from BPPAs, and the reduced acceptability caused by extraction is unrelated to the reduced acceptability caused by syntactic and semantic factors that are already operative in declaratives. More generally, many controversial extraction asymmetries are not the result of grammatical principles but of more general principles that are not directly related to the extraction.

Chapter 5 proceeds to explore factors yielding the observed acceptability contrasts without resorting to the aforementioned factors of *wh*-extraction. Based on Chapter 4, the author proposes a FAM for BPPA constructions, arguing that factors determining the acceptability in declaratives and the reduced acceptability caused by extraction are independent. Put differently, he ascribes the acceptability contrasts to the processing complexity (i.e. performance), not to formal grammatical principles (i.e. competence). The FAM consists of three generalizations about properties of the matrix predicate manipulating the acceptability in declarative BPPA constructions: The first two, the durativity generalization and the scalar change generalization, concern the semantic compatibility between matrix and adjunct predicates, stating that the acceptability of declarative BPPA constructions is higher when the matrix predicate encodes a durative subevent or scalar change. The third generalization is the transitivity generalization, claiming that the acceptability of declarative BPPA constructions is higher if the matrix predicate directly selects and theta-marks only one referentially distinct argument, prioritizing intransitives over transitives. In addition, extraction adds an extra decrease in the acceptability of the resulting interrogatives, which verifies the independence hypothesis. The failure to satisfy one or more of these generalizations incrementally lowers acceptability, which can be viewed as the effect of increased

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processing effort. The author presents the advantages of FAM over other explanations in the literature, tackles six potential challenges, and finally draws some similarities between BPPAs and past participle adjuncts.

Chapter 6 concludes the book and points out several questions for future research.

The book is well-organized and lucidly presented. Every chapter begins with the main research questions, proceeds with robust argumentation, and ends with fully fledged solutions. The multifactorial model proposed by the author can better explain the nuanced continuum of acceptability differences than previous approaches like the categorical model CED, which evaluates only one factor. This monograph conforms to the recent endeavors (e.g. Culicover et al. 2022) that attempt to reduce grammaticality judgment asymmetries in syntactic dependency formation phenomena to underlying differences in processing complexity. If this trend is on the right track, we may cast doubt on the conceptual necessity of long-standing constraints on extraction. It is worth noting that the recent wave of experimental syntax coupled with statistical analysis has given and will surely give us even more precise data to figure out some recalcitrant theoretical questions. For instance, as noted in the book, a quantified model with predictive factors is preferred in light of explanatory power, although not implemented due to the factors being manipulated with different populations. Finally, it should be pointed out that this book is devoted primarily to the *wh*-dependencies from BPPAs; thus, it remains to examine whether the conclusion can be extended to more adjunct types, more dependency-formation operations, and online processing methods.

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