# REVIEWS

**Arguments as relations.** By JOHN BOWERS. (Linguistic inquiry monograph 58.) Cambridge, MA: MIT Press, 2010. Pp. xii, 239. ISBN 9780262514330. $25.

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We can get so comfortable with certain ideas that we forget why we hold them, until someone makes a proposal that turns things upside down: there is no D-structure, or control is raising, to mention two such proposals. John Bowers's proposal in this book fits into this category, literally turning some of our long-held views upside down. In sum, he argues that agents are merged very low, near the verb, with themes merged above them, and he explores the consequences of this idea.

B's proposal appears to run counter to the Aristotelian view of sentences as consisting of a subject and a predicate [VO] (cf. Baker's 2001 verb object constraint), yet predication remains at the core of his work (Bowers 1993, 2001). The locus of predication has moved around over time. Since the VP-internal subject hypothesis (VPISH), there have been two potential sites for predication, one involving merge positions, with agent as the subject of a transitive verb, and the other involving grammatical positions, with an EPP-determined subject for the sentence. Some have suggested that the subject-predicate relation might exist only within vP in some languages (e.g. Massam 2001a), whereas B here is suggesting that what remains of D-structure is a verbal root with an upwardly extending ordered string of uniformly introduced arguments, so predication takes place only at the higher level through Agree and/or EPP. His view of argument structure evokes nonconfigurationality, in which there is also no VP, yet unlike such analyses (e.g. Jelinek 1984), for B, phrasal arguments constitute the true arguments of the clause and they are strictly ordered according to grammatical principles.

B's work rests on two key points: first, that all argument structure is built through the ordered merging of functional heads, each taking a thematically specific argument in its specifier; and second, that the order of argument merge is universally fixed, with agents merging below themes. B's analysis of a basic transitive clause depends on his claim that the higher merged argument (theme) is local for the lower case relation (accusative from Voi (= Voice)), leaving the lower merged argument (agent) free to raise via EPP to PrP (Pr = Pred), and then undergo Agree with T (T = Tense), thus surfacing as the subject of the clause. His book is a set of arguments for this point of view, examining a range of constructions such as the passive (Ch. 2), affectee constructions (Ch. 3), applicative constructions (Ch. 4), and derived nominals (Ch. 5). The book also contains a brief appendix (Appendix A) that provides a compositional semantics for his analysis and another (Appendix B) that discusses the formal aspects of labeling and selection. In the rest of this review I outline each chapter of the book in turn, ending with some potential problems for B's view of argument structure.

In his introductory chapter, B presents an overview of his 'radically different idea' (1) in which all arguments and modifiers are introduced uniformly by functional heads in accordance with a UNIVERSAL ORDER OF MERGE (UOM). Primary arguments are Agent, Theme, and Affectee, which are merged in this order, opposite to the norm. In addition to these arguments, there are secondary arguments (e.g. Instruments), and modifiers (e.g. Manner), also merged in accordance with the UOM. B outlines and counters the reasons why agents are traditionally merged high. His view is post-government and binding, in that syntactic structures provide the lexical semantics of the sentence, rather than being projected from it (as in Borer 2005). His approach here brings to mind construction grammar, where a given meaning is rigidly associated with a particular syntactic configuration. In the final section of this chapter B argues, against Marantz (1984), that subject idioms do exist (e.g. *the lovebug bit NP*, cf. Postal 2004). This chapter ends with a brief overview of the UOM and works through sample derivations of transitive, intransitive, passive, locative,

and expletive sentences, using concepts of ordered merge, phases, linear correspondence, and locality to account for the various sentence types.

Ch. 2 presents the tour de force of this work, which is the analysis of the active/passive pair. It is a major advantage of B's analysis that it restores the classic active/passive transformation in a new and aesthetically pleasing way. The issue is as follows: in active sentences, the agent is high, whereas in passive sentences, the agent is low. Can the two be related transformationally? In standard theory a lowering analysis was proposed, but when lowering was ruled out, the relation between the active and the passive became nontransformational (Jaeggli 1986, Baker et al. 1989), disappointingly for those of us who early on had been dazzled by the passive transformation. With the VPISH, the surface height of the active agent is taken care of by grammatical movement, so the issue comes to rest on the merge position of the agent of a transitive vs. the agent in a passive *by*-phrase. An attempt was made by Collins (2005) to merge both agents in the same (high) position. B critiques this approach in some detail, and then proposes a transformational approach in which both agent types are merged in the same (low) position. The *by*-phrase remains low since it has its case, whereas the transitive agent undergoes movement to PrP and Agree with T, thus becoming the subject. There is clearly a satisfying beauty in this full circle approach.

In Ch. 3, B presents his analysis of affectee (Aff) arguments, which he considers the third primary argument type (after agents and themes). He distinguishes between Aff arguments and superficially similar goal arguments, accounting for a range of facts such as the inability of sentences like *John shipped the package to New York* to undergo dative shift. Historically the treatment of the dative alternation, too, has alternated between transformational and lexical analyses, and as with the passive, B's view allows for a relatively tidy transformational approach. Either the theme or the Aff argument in the merge structure of *John threw Mary the ball/the ball to Mary* is assigned an inherent case in its merge position, with the result that the other argument undergoes Agree with Voi, receiving accusative case and raising to object position, due to the EPP feature on Voi. In this chapter, B also treats possession and experiencers and tests his claims with Russian data, showing that his claim about the merge order of the various argument types is supported by Russian word order, and he further supports this with evidence from scope.

In Ch. 4, B treats applicative and incorporation constructions. The central claim here is that applicative morphemes are verbal heads that introduce arguments. If these morphemes introduce arguments with no case value, the fact that these arguments surface as accusative objects follows automatically, given B's proposed phrasal geometry, thus accounting for the key characteristics of applicative constructions. For noun incorporation, B considers that an alternate way for an argument-introducing head to satisfy its argument requirement is for an N to be adjoined to the head. Given that V head-raises through all of the various argument-licensing functional heads, the theme noun will end up adjoined to the verb. He supports this less restrictive view of incorporation by noting that agent incorporation is in fact possible (cf. Baker 1988), providing that the verb is passive (e.g. *These talks are student-sponsored*). Antipassives and causatives are also treated in this chapter.

In Ch. 5, B examines derived nominals, arguing that nominal and sentential structures share the same argument structure, but have different higher functional categories such as Nom in place of Pred and D in place of T. There is only one structural case, Gen, associated with D. B explains the fact that word order is the same in nominals as in sentences (even though there is no Voi with EPP to trigger the internal argument to move up) by developing an analysis of the preposition *of* as assigning case to a DP that has moved to Specifier of a Partitive head. This then allows the lower Agent to raise to receive the genitive case associated with D, just as the agent can raise over the accusative theme in a transitive clause. With these basic assumptions in place, B shows how the behavior of a range of nominal argument types can be derived, including possessive affectees and psych predicates. B closes with a look at nonevent nominals, arguing that derivational morphemes constitute overt material merged as heads of argument-licensing projections.

B presents a clever and pleasing analysis of a number of constructions in English and other languages. But the proof of the pudding is in the details, and there are a great many details in this

short book. While it is not possible to reiterate and critique all the arguments of the book, I present some of the key concepts that B relies on here, which might be open for debate. First, the view that all arguments are merged in specifiers of functional heads has grown naturally out of Kratzer's (1996) neo-Davidsonian analysis of external arguments, which has been extended by work on applicatives (e.g. Pylkkänen 2002), and it is supported by the evidence that at least some objects appear above the merge position of V (e.g. Basilico 1998). In some senses B's work takes only a small step of extending this view to all arguments. This step is a giant one, however, in the sense that it shifts entirely away from the concept of subject/predicate configurationality. It is not clear that the apparent primacy of the verb-object relation can be entirely dispensed with. Scholars working on VSO languages (including myself) have discovered that even in these languages there is evidence for a VP, that is, a deep [VO] constituent (e.g. McCloskey 1983). From my own perspective, several other questions arise. B's analysis of noun incorporation leaves out pseudo-incorporation cases where the incorporated element is not a head (Massam 2001b), which have been analyzed as involving a base-generated [VO] constituent. The arguments outlining agent incorporation and agent-V idioms are thought-provoking, but since they constitute a minority of cases, they may not be fully convincing to all scholars. In addition, B's analysis relies crucially in many places on verbal head movement, for example, to place the applicative head on the verb, and it is not clear that verbal head movement is instantiated in all languages (Travis 2006) or even in any language (Chomsky 2001). While B analyzes ergativity and antipassive constructions, it is not clear if this analysis can be extended to account for all ergative languages. In languages without passive constructions, there is no overt evidence for agents to be merged low, raising questions as to the universal appeal of B's view. In some cases his analysis depends on what might be argued to be stipulations; for example, if Voi has the value [–act] (that is, in passive sentences), then Pred must be lexically realized as *be* (25). B accounts for some of these by arguing that any other structure type would fail to converge, but such arguments are not always fully convincing.

B's work is compelling, though, in spite of the many questions it raises, or perhaps precisely because of these questions. In this book, he shows that taking this one more step toward considering arguments as relations is possible, and that if we dispense with a core idea, namely that agents are external arguments, new analyses open up for old problems such as passive and dative shift. Ironically, while being wholly radical, B's proposals remain very true to the original roots of the vision of transformational grammar. In summary, this is a book that pushes our thinking forward, and one that everyone should read before they next draw a tree that starts on the right and at the bottom with [VO].

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**Phases:** Developing the framework. Ed. by ÁNGEL J. GALLEGO. (Studies in generative grammar 109.) Berlin: De Gruyter Mouton, 2012. Pp. 445. ISBN 9783110264098. $140 (Hb).

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The notion of PHASE, introduced by Chomsky (2000, 2001), has a peculiar status in current linguistic theory: on the one hand, it is widely employed in a diverse range of studies in syntax, semantics, and (morpho)phonology; on the other hand, it is notoriously ill-understood and rarely defined explicitly. Ángel Gallego is to be applauded for his attempt to illuminate the murky state of affairs with this volume, whose goal, declared in the subtitle ('Developing the framework'), ought to be embraced by all researchers in theoretical linguistics. Given the number and length of the contributions included, they can only be discussed here in all brevity.

In a foreword to the volume, NOAM CHOMSKY traces the idea of derivational cyclicity back to early work in phonology. In this domain, as well as in current syntax, phases enforce STRICT CYCLICITY: 'for certain elements X constructed in the course of the derivation, further computation should not modify X' (4). Following his earlier work, Chomsky implements this intuition in terms of the phase-impenetrability condition (PIC), which dictates that upon completion of a phase P, the complement of the head of P is TRANSFERRED to the interfaces. Chomsky reiterates his assumption that tensed clauses (CPs) and transitive verb phrases ($v$*Ps) are phases in this sense, but not smaller objects (contra Müller 2011 and others). Chomsky takes cases of long-distance agreement to show that the PIC must not be too strong: transferred structure, while immune to MANIPULATION, remains VISIBLE to Agree. Transfer-induced opacity in this sense is largely redundant with Chomsky's (2007) own no-tampering condition, raising the question of what motivates successive-cyclic movement (Internal Merge 'out of' a phase should still be possible, after all). Equivalently, we might say that the PIC holds for the mapping components but not for narrow syntax (assuming that Agree operates within the latter, but see Bobaljik 2008). Notably, all other contributions adopt a stronger notion of phase impenetrability.

Gallego's extensive introduction to the volume provides a thorough overview of the development of phase theory, itself a direct descendant of the bounding nodes and barriers of earlier frameworks. Gallego discusses various empirical and conceptual arguments for phases that have been adduced, noting that they fail to provide a coherent picture. Allusions to 'computational complexity', though constantly repeated, have never been made precise. Defining phase heads in terms of uninterpretable φ-features (cf. Chomsky 2008) is at variance with proposals assuming phases other than CP and $v$*P, such as PP. At the same time, Gallego points out, attempts to define

phases extensionally, via their 'interface correlates', have never been fleshed out. And while Gallego confidently asserts that 'arguments to regard CP and $v$*P as cyclic objects are robust' (35), even this simple typology has been contested (den Dikken 2009).

The bulk of the subsequent contributions address syntactic consequences of phase theory. SAMUEL D. EPSTEIN, HISATSUGU KITAHARA, and T. DANIEL SEELY argue in 'Exploring phase-based implications regarding clausal architecture' that the derivational precedence of theta-role assignment over Case assignment can be derived from basic principles. In particular, NPs cannot be merged first in (nonthematic) Case positions and then raise to theta positions. In this case, the initial phase in which Case is assigned will crash: since the structure must be transferred immediately upon Case assignment (valuation), the first phase will necessarily violate the theta criterion (taken to be a subcase of the full interpretation principle). This violation, the authors argue, cannot be salvaged by operations at later cycles.

In 'Phase cycles in service of projection-free syntax', HIROKI NARITA argues that a label-free syntax with phases is conceptually and empirically superior to a theory employing conventions of 'projection', such as X-bar theory (see also Chomsky 2013). Narita proposes that Merge follows the H-$\alpha$ Schema, according to which for any Merge(X,Y), X must be an atomic lexical item. This requirement is met just in case X is drawn from the lexicon or else structurally reduced by Transfer of the head of X's complement. For instance, an external-argument DP can transfer its complement NP, effectively reducing it to D, which then merges with $v$*P; this turns the subject into an island. Narita's view of Transfer as literally removing structure from the workspace is crucially different from that adopted by Chomsky (foreword and 2013).

MIKI OBATA's paper, 'Feature-splitting Internal Merge and its implications for the elimination of A/A′-position types', explores the idea that movement to CP and TP splits the moved XP's features into two sets: φ-features attracted by T, and the complement feature set (e.g. [+WH]) attracted by C. A- and A′-movement are assumed to take place in parallel in this feature-splitting manner, recasting the A/A′-distinction in terms of features rather than positions (cf. Chomsky 2007). While Obata demonstrates some interesting consequences of this approach (e.g. an automatic ban on improper movement), one wonders how it can be made compatible with the general idea that Internal Merge yields multiple occurrences of a SINGLE object.

MARC D. RICHARDS's paper, 'On feature-inheritance, defective phases, and the movement–morphology connection', takes as its starting point the feature-inheritance system of Chomsky 2007, 2008. The inheritance logic entails that Transfer is instantaneous, that is, cannot wait until the next-higher phase head is merged (as in Chomsky 2001). The empirical domain Richards investigates is Scandinavian past-participle agreement, which correlates with overt displacement of the goal XP. Richards argues that the participial $v$-head in these constructions can bear agreement morphology, in which case it acts as a phase head. This in turn forces the complements of these defective $v$s to raise in order to escape the PIC, establishing a correlation between overt agreement and displacement that in effect recasts the Spec-head conception of agreement. Richards's proposal, which relies on a featural definition of phase heads, promises to be applicable to other domains in which such a correlation has been observed.

In 'The size of phases', JULIE ANNE LEGATE argues, contrary to her own previous work, that not all types of verb phrases constitute phases, but that instead only a subset of transitive $v$Ps induce Transfer. Building on the idea that phase heads are defined by uninterpretable features, Legate investigates properties of the Acehnese object-voice construction, which shows that transitive $v$ devoid of φ-features fails to show phasal properties. Reconstruction effects previously taken to identify phase edges are now argued to follow from a general requirement for Internal Merge to 'target every new label', removing successive cyclicity from the purview of phase theory. Combining Legate's findings with Chomsky's remarks about the transparency of phases for agreement leads to the potentially worrisome conclusion that phases have no detectable narrow-syntactic effects whatsoever.

Not so in ŽELJKO BOŠKOVIĆ's chapter, 'Phases in NPs and DPs'. Building on his prior work on the NP/DP parameter, Bošković assumes that languages divide into two groups: those without determiners, whose noun phrases are NPs, and those with determiners, whose noun phrases are

DPs. Two corollaries of this parametric choice that Bošković focuses on are the possibility of left-branch and adjunct extractions from noun phrases. For instance, a left-branch AP cannot be extracted from DP on the assumption that DP is a phase, which would require AP to first raise to the edge of DP; but this movement violates an antilocality constraint. Contrary to some earlier work of his, Bošković argues that NP is a phase as well, which permits an analogous explanation of a ban on extraction of genitive complements in NP languages.

IAN G. ROBERTS explores the connections between phases, head movement, and second-position effects, arguing that C's status as a phase head accounts for a variety of second-position effects, specifically clitic placement and V2. This unification is made possible by distributing features of C over several heads, specifically Fin and Force. Fin acts as a probe attracting clitics and finite verbs; Force attracts an initial constituent and, in V2, provides the final landing site for the verb. Roberts argues that a distributed phase head in this sense yields multiple heads of the same 'formal weight', thus defining a cartographic field as a sequence of structurally subjacent heads of equal formal weight. While this move amounts to little more than stipulating a kind of dual category for heads, Roberts's proposal is nonetheless an interesting attempt at reconciling phase theory with cartography.

Two papers address the role of phases in the 'PF-tract'. BRIDGET SAMUELS ('Consequences of phases for morpho-phonology') follows work by Tatjana Marvin, Alec Marantz, and others in assuming that categorizing heads (e.g. *n*, *v*, *a*) act as phase heads, providing a natural distinction between stem-level and word-level affixes, and restricting the morphological relations of their complements and 'outside' material such that interacting morphemes must be on adjacent cycles. Restating the strict cycle condition in terms of phase impenetrability, Samuels shows convincingly that various constraints on affixation, stress assignment, and contextual allomorphy can be explained by this phase-based account of morphological cyclicity. Focusing on the clausal level, YOSUKE SATO's contribution, 'Phonological interpretation by phase', argues for phase-based assignment of nuclear sentence stress. Stress assignment operates on the complements of phase heads *v*, C; the edges of the maximal projections inside these complements translate into edges of major phrases. Languages differ as to whether they select the left or the right edge of each type of spell-out domain (TP, VP) for stress assignment. Combining this simple directionality parameter with independent principles of phrasal phonology, Sato's model elegantly accounts for a range of facts. Highlighting an interesting tension emanating from phase theory, Sato observes that while his proposal crucially relies on cyclic Transfer, the system must nonetheless countenance certain GLOBAL adjustments across phases.

The remaining contributions explore deeper questions about the nature of phases. In 'Phases beyond explanatory adequacy', CEDRIC BOECKX argues that phases derive certain effects 'quite distinct from the traditional uses of the syntactic cycle' (45), while expressing skepticism about their relevance for locality. Phases are either such that the complement of a phase head bearing uninterpretable features is transferred, or else no feature valuation is involved. Boeckx attempts to relate these two types to notions of general cognition and discusses implications for the typology of lexical and functional categories. JUAN URIAGEREKA's paper, 'Phase periodicity', argues that phase edges and interiors alternate according to certain patterns, which he argues are pervasive in language. Uriagereka proposes that this 'phase periodicity' gives rise to phases as 'pockets of stability' in a 'dynamically frustrated' model, reconciling conflicting interface conditions (hierarchy vs. linearity). In 'Phases and semantics', WOLFRAM HINZEN takes issue with various traditional notions of formal semantics. Hinzen argues for a view of narrow syntax as essentially nondistinct from conceptual systems: CPs (propositions), *v*Ps (event specifications), and DPs (referential units) are grammatically determined phases of interpretation whose semantic properties (e.g. the referentiality of DPs) are a function of their internal composition, not specified by an autonomous 'thought system'.

As stated at the outset, Gallego is to be applauded for putting together this extensive volume, phase theory being as it is in need of urgent clarification (see Boeckx & Grohmann 2007, Kremers & Grewendorf 2009). Nonetheless, the book shows first and foremost that a lot of work remains to be done. Many authors echo Chomsky's conjectures about the role of phases in reducing

computational load or the principle of full interpretation driving feature valuation, but no attempt is made at substantiating these notions in a formally explicit way, despite the fact that this task is of paramount importance to research seeking to motivate a phase-theoretic framework. The papers also reveal a striking disagreement about what kinds of objects count as phases and about the adequate interpretation of the PIC; indeed, as Gallego observes in his introduction, this lack of agreement about even basic diagnostics for and effects of phases makes it difficult to compare the existing approaches. Overall, despite some shortcomings in the presentation (e.g. the apparently random order of papers without any thematic grouping and a number of typos), this volume provides a stimulating cross-section of a rich area of research working toward the still distant goal of a coherent phase-theoretic framework.

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**Tones and features:** Phonetic and phonological perspectives. Ed. by JOHN A. GOLD-SMITH, ELIZABETH HUME, and W. LEO WETZELS. (Studies in generative grammar 107.) Berlin: De Gruyter Mouton, 2010. Pp. xii, 369. ISBN 9783110246216. $140 (Hb).

Reviewed by D. ROBERT LADD, *University of Edinburgh*

This book is effectively a festschrift for the late Nick Clements. Strictly speaking, it is a collection of papers from a conference held in his honor, so unlike a conventional festschrift it is unusual in having a contribution from the dedicatee himself. (Two contributions, in fact: he appears as first author on one of the papers and as second author on another.) But it still suffers from the typical problems with any such volume, namely uneven quality and lack of clear focus. The title (inclusive of the subtitle) does a pretty good job of conveying the range of material contained in the book, and the editors have made a good attempt to draw out the common themes in their short preface. But it is clear that what really gives the book coherence is Nick Clements: this is a book of papers on topics that concerned him by people who admired him.

The papers are divided, as the title suggests, into two main groups. Part 1, 'The representation and nature of tone', consists of five papers, while Part 2, 'The representation and nature of phonological features', consists of nine. However, three of the papers in Part 1 could equally have been

included in Part 2—I return to these papers below—so the book is really more about features than it is about tone. Across the volume, the papers are about evenly divided between those that tackle a specific descriptive problem (e.g. 'Rhythm, quantity and tone in the Kinyarwanda verb' by JOHN GOLDSMITH and FIDÈLE MPIRANYA, or 'The representation of vowel features and vowel neutralization in Brazilian Portuguese (southern dialects)' by W. LEO WETZELS) and those that tackle big theoretical questions (e.g. 'Proposals for a representation of sounds based on their main acoustico-perceptual properties' by JACQUELINE VAISSIÈRE, or 'Autosegmental spreading in optimality theory' by JOHN J. MCCARTHY). They are also about evenly divided between papers based on experimental and/or instrumental phonetic data (e.g. 'Downstep and linguistic scaling in Dagara-Wulé' by ANNIE RIALLAND and PENOU-ACHILLE SOMÉ, or 'Language-independent bases of distinctive features' by RACHID RIDOUANE, G. N. CLEMENTS, and RAJESH KHATIWADA) and papers dealing with phonological patterns of contrast, alternation, and the like (e.g. 'Representation of complex segments in Bulgarian' by JERZY RUBACH, or 'Evaluating the effectiveness of unified feature theory and three other feature systems' by JEFF MIELKE, LYRA MAGLOUGHLIN, and ELIZABETH HUME). Given this variety, there seems little point in filling this review with a series of two-sentence summaries of each paper. Instead I want to discuss two groups of papers that seem worth considering together.

The first group is a set of three papers broadly in the spirit of laboratory phonology: 'Crossing the quantal boundaries of features: Subglottal resonances and Swabian diphthongs' by GRZEGORZ DOGIL, STEVEN M. LULICH, ANDREAS MADSACK, and WOLFGANG WOKUREK; 'Voice assimilation in French obstruents: Categorical or gradient?' by PIERRE A. HALLÉ and MARTINE ADDA-DECKER; and 'An acoustic study of the Korean fricatives /s, s'/: Implications for the features [spread glottis] and [tense]' by HYUNSOON KIM and CHAE-LIM PARK. All of these address specific questions based on feature theory on the basis of careful instrumental data from specific languages, and all contribute potentially lasting phonetic data to the literature.

Kim and Park's paper is a straightforward investigation of the acoustic details of the Korean fortis and lenis alveolar fricative phonemes, motivated by the proposal (Halle & Stevens 1971) that the distinction is based on different specifications of a universal [spread glottis] feature. In the light of recent evidence that the glottal opening appears similar for both sounds, Kim and Park present new data in support of the claim that the difference lies rather in the specification of the feature [tense]. It is harder to extract the take-home message from this paper than it should be, because there are a great many tables presenting data in more detail than usual; one might also wonder about the statistical analysis, which involves an enormous series of $t$-tests on specific subconditions rather than a single, larger, multifactor analysis. Still, the conclusion—that whatever is going on, it is not spread glottis—seems sound.

Hallé and Adda-Decker's paper addresses the nature of assimilation (specifically, voicing assimilation in French stops) and its implications for feature theory. It adds to the now fairly substantial body of evidence that the phonetic details of assimilation are incredibly complex and cannot simply be represented by one of a small number of patterns of feature spreading. It does not, however, provide support for a universal understanding of assimilation in terms of what Browman and Goldstein (e.g. 1989) have called 'gestural overlap', either. It appears, rather, that the assimilated stop retains certain categorical phonetic cues to its underlying phonological specification even while switching other phonetic cues—again, categorically—to the assimilated value. This fascinating paper provides a lot to think about for anyone who believes in a simple relationship between phonological abstractions and the physical realities of speech.

Dogil and colleagues build on the 'quantal' idea first put forth by Stevens (e.g. 1989). Stevens showed that the mapping from articulatory variation to acoustic variation is nonlinear: there are natural regions of stability (where articulatory variation has little effect on the acoustic output) and natural boundary regions (where small articulatory differences yield large acoustic discontinuities). He saw such quantal effects as providing an actual explanation for why universals of feature systems are the way they are. Dogil and colleagues clearly agree. Their paper is an acoustic investigation of a specific contrast in Swabian German, which is absent from Standard German, namely between two diphthongs often transcribed as /aj/ and /əj/. There has been some discussion

of the phonetic nature of this distinction in the literature; Geumann (1997) and Hiller (2003) suggest that fine details of timing are the key. Dogil and colleagues propose a different account. Stevens (1998) showed that acoustic discontinuities can result from the coupling between supraglottal resonances (formants) and subglottal resonances, which are characteristic of individual speakers and do not vary much, and Dogil and colleagues argue that these discontinuities are what distinguish the two diphthongs. The paper is too short to make a completely convincing case, but they are surely right that the timing-based descriptions 'must be revisited in light of our findings' (145).

The other group of papers worth treating as a group are the three that are placed in Part 1 (tone) but could just as well have been in Part 2 (features). All three deal with the general question of what kinds of features are involved in tone. Even the titles make it clear that there are some shared questions: the first paper in the book, by G. N. CLEMENTS, ALEXIS MICHAUD, and CÉDRIC PATIN, is called 'Do we need tone features?'; the third, by LARRY M. HYMAN, is called 'Do tones have features?'; and the fourth, by DAVID ODDEN, is entitled 'Features impinging on tone'. All of them, in different ways, acknowledge that there is some kind of problem analyzing tone in terms of features, and all try to understand why.

Clements and colleagues emphasize the fact that level tones are 'monodimensional', unlike the 'many intersecting phonetic parameters' that define consonant and vowel segments. They suggest that 'free combinability of multiple properties may be the condition *sine qua non* for a successful feature analysis' (20). Hyman suggests that '[t]one is different because of its greater diversity and autonomy compared to segmental phonology' (69). Both make it clear that they are trying to explain the absence of UNIVERSAL tone features. Clements and colleagues say: 'Given the monodimensional nature of level tones, it is difficult to see how a UNIVERSAL tone feature analysis could "emerge" from exposure to the data', and they explicitly note that they are 'not argu[ing] against LANGUAGE-PARTICULAR tone features, which are motivated in some languages' (20f., emphasis in original). Hyman says that '[b]ecause of its diversity tone is hard to reduce to a single set of features THAT WILL DO ALL TRICKS' and '[b]ecause of its autonomy, feature systems that have been proposed … are not reliable except perhaps at the phonetic level' (69, emphasis added). He approvingly cites Mazaudon, who says, 'It seems to me that tones are simply DIFFERENT from segments and should be treated differently in the phonology' (Mazaudon 1988:7, cited by Hyman on p. 73; emphasis in original).

There are certainly good reasons for treating tone as a somewhat unusual type of phonological element, but it is worth pointing out the logic involved in what these two papers are saying. It amounts to this: segmental features are universal; tone features seem not to be universal; therefore tones are different from segments. They do not question the major premise that segmental features are universal. Odden's paper is different. Right from the start he explicitly argues that 'the basic source of the problem of answering these questions [about tone features] lies in incorrect assumptions about the nature of features, specifically the assumption that there is a single set of predetermined features with a tight, universal mapping to phonetics' (81). He aligns himself with Hale and Reiss's 'Radical substance-free phonology' (Hale & Reiss 2008), according to which features are not 'phonetic descriptions' but rather 'formal substance-free descriptions of the computational patterning of phonemes in a language' (87). By way of concrete illustration, he discusses a case in which vowel height has phonological effects on tone that can be described in terms of a single (language-specific) feature that he calls [hi/raised]. In other words, there may indeed be tone features, but they are not universal parameters for multidimensional phonetic classification of segments.

It is obviously not possible to address such fundamental disagreement about basic assumptions in a short review. On the whole I agree with Odden that the conventional understanding of features is shot through with contradictions, which I discuss at length in the chapter on features and autosegments in Ladd 2014. But the idea that there is a universal set of features continues to motivate interesting and carefully focused phonetic research (including, in the present volume, the papers on [spread glottis] by Ridouane and colleagues and by Kim and Park). The findings of such papers will be valuable even if the idea of a universal phonetic feature set is eventually set aside.

The book is physically well produced, but the editorial standards could be higher. There are quite a few typos, and quite a few errors and omissions in the lists of bibliographical references at the end of each paper. For example, in the paper by Ridouane and colleagues, André-Pierre Benguerel's name is misspelled both times it appears in the body of the paper, and is missing from the list of references. Most of the errors cause no problem (even if you do not know German, if you are an accomplished spectrogram reader you can find the typos in the phonetic transcriptions in the caption to figure 3 on p. 145!). However, only an Icelandic speaker can unravel the error-ridden glosses on p. 272, where two different members of a reported minimal triple are glossed as 'small pot'. I have been unable to find out what the three cited forms really mean.

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**Ethnographic contributions to the study of endangered languages.** Ed. by TANIA GRANADILLO and HEIDI A. ORCUTT-GACHIRI. Tucson: University of Arizona Press, 2011. Pp. 248. ISBN 9780816526994. $55 (Hb).

Reviewed by SUSAN D. PENFIELD, *University of Arizona*

Efforts to save endangered languages have been driven by the realization that the existence of half of the world's nearly 7,000 languages is seriously threatened. The field of endangered language study has changed rapidly as the technological shaping of language documentation has evolved and as revitalization efforts are gaining strength. As the title suggests, this book highlights the contributions that ethnography and the field of linguistic anthropology can make to the study of endangered languages and pushes researchers to consider domains of study outside of strict linguistic description. This approach adds dimension to a field that was, early on, dominated by a focus on linguistic structure with outcomes evident in dictionaries, grammars, translated texts, and other language-specific materials. The use of sophisticated recording devices and digital tools now enhances linguistic description through digital documentation, database creation, and electronic archiving. While the study of language structure is a critical part of the endangered language field,

this book is in sync with recent trends that aim to situate languages within broader contexts in order to understand the forces that have and will contribute to the vitality of the language.

The book under review is a bit ahead of the curve and in line with even more recent work represented by Evans 2010, Austin & Sallabank 2011, and Thieberger 2011. These writings all offer a broadly encompassing look at endangered languages and are indicative of the evolving interdisciplinary approach to the subject.

To state this book's contribution in the simplest of terms, the authors remind us all that language does not exist in a vacuum. To document or revitalize an endangered language, without a nod to the forces that brought it to that place, is an incomplete study in many ways. The authors clearly caution researchers against emphasizing language structure over the sociohistorical context of endangerment (1). We, as readers, are reminded through the examples in this book that bringing in disciplines that differ in scope and theory enriches all of the investigative processes. The examples included are mostly focused on the contribution linguistic anthropology can make to language revitalization (language policy, planning, and maintenance), as defined in the classic writings by Fishman (1991, 2001), Hinton and Hale (2001), Hinton and colleagues (2002), Grenoble and Whaley (2006), and more recently by Spolsky (2012).

The foreword to the book, written by JANE HILL, sets the background, stressing the common plight endangered languages face as nation/state policies impact their ability to survive. Hill foreshadows the book's central arguments: (i) endangered languages, while shaped by similar forces, must be understood within the scope of their local realities, social history, and educational contexts, and (ii) linguistic anthropology demands long-term fieldwork and intensive community involvement.

The editors, Granadillo and Orcutt-Gachiri, both engaged in linguistic anthropological fieldwork at almost opposite ends of the earth. Granadillo has worked in her native Venezuela; Orcutt-Gachiri worked extensively in Kenya. This book grew out of a 2005 symposium presented at the meeting of the American Anthropological Association in Washington, DC. The aim of that symposium, and a central theme of this book, was to create awareness of the value of endangered languages and to analyze the sociohistorical contexts in which the languages come to be endangered. Several key questions that were raised are threaded throughout this book: (i) Which particular historical processes intersect with global processes to create the current linguistic situation? (ii) What drives the speakers not to pass on their languages? (iii) What is the assessment of the language's future path(s)? What factors will help to determine those paths? And (iv) What tools does linguistic anthropology offer for helping in efforts to revitalize languages? (2).

The book draws our attention to the fact that language endangerment is a process, resulting from many forces. To reverse this type of shift, the underlying causes need analysis. The strict documentation of present linguistic forms does not provide the broad scope and context that may shed light on the possibilities for the language. The editors make their main point in the following statement, 'Fundamentally, our work rests on the idea that languages are spoken by human beings and that it is what human beings are doing with language and how they use language to shape and respond to their life contexts that we want to study, not just the language itself' (2).

The book is divided into three parts. Part 1, 'Effects of education policies', begins with 'Language ideologies in the discourse of education that promote language shift in Kenya', in which HEIDI A. ORCUTT-GACHIRI posits that mother tongues in Kenya are marginalized by the educational discourses surrounding the dominant languages (Kiswahili and English) as she seeks to illuminate the language ideologies that promote language shift. OLGA KAZAKEVICH's paper, 'Education and its role in language endangerment in Siberia and the Far East', presents the argument that minority languages should be taught to the children of each community if preservation of these varieties is to be taken seriously. Kazakevich notes that, although there has been some encouragement for endangered languages in Siberia, the actual educational priorities do not support them. M. LYNN LANDWEER's chapter about Papua New Guinea tackles the question 'Is English education always detrimental to vernacular languages?', and concludes that formal education alone is not the cause of local language endangerment, arguing that the social context for language use is critical to understand.

Part 2, 'Effects of revitalization', features several chapters showing how revitalization processes also impact language shift. Here, PAULA MEYER, with JON MEZA CUERO, provides a nar-

rative account of revitalization activities in 'Indigenous language revitalization in Tecate, Baja California'. Set in the Kumeyaay village, this paper documents how efforts of language revitalization bring a community elder and his family refreshed indigenous identity through consciousness-raising and developing beginning lessons to reclaim the heritage language. Also in Part 2 is 'Territory, identity, and language among the Añun people (Venezuela)', in which author MARIE-FRANCE PATTE finds that a combination of factors contributed to the endangerment of the Añun language. She posits that a combined approach to revitalization—which integrates the understanding of the historical policies, resistance to assimilation, and adaptive qualities as revealed in oral narrative—are among the tools and perspectives provided by linguistic anthropology, and are as critical to reversing language shift as the strict processes of language learning. Patte argues that understanding the broader context leads to a better personal and social identity and solidifies the position of the community within the nation-state. The final chapter in Part 2 provides an entirely different and very diffuse endangered language situation in which MELISSA A. RINEHART discusses 'The agency of language ideologies in Miami Indian recovery'. Miami is an Algonquian language, traditionally located in the US Midwest, whose last speaker passed away in 1963. It has been the subject of a very intense revitalization effort beginning in 1995 by Daryl Baldwin (Miami) and linguist David Costa. Rinehart charts the sociohistorical context of language death and restoration, linking the problems related to conflicting language ideologies with the challenges presented to language programmers.

Part 3, 'Effects of sociohistorical processes', is rich with examples from this perspective. In 'Stolen life, preserved language: Life and death and endangered languages' (113–33), BARBARA HOFFMAN describes a West African context in which the comparison of two related endangered languages, Anyimere and Igo (spoken in Togo and Ghana), demonstrates the power of local leadership to slow the process of language death (113). TANIA GRANADILLO's paper, 'Kurripako and its speakers in Venezuela: A linguistic anthropological analysis of language endangerment', brings to light the contribution that linguistic anthropology plays in understanding language endangerment as she compares the response of two very different families that achieve language maintenance although their underlying ideologies are quite different. An entirely different language context is described by LARS VAN KARSTEDT in 'Language loss in a beautiful scenery: The case of Öömerang, a Frisian language in Northern Germany'. Öömerang is spoken on a German island located in the North Sea off of the German coast. Karstedt's chapter is a socioeconomic reflection of the factors that have marginalized this native language in which he concludes that the most impacted group economically is also the group that is most critical for language vitality, namely young families with children. MARK A. SICOLI describes language shift as it occurs in Zapotec villages in Mexico. In 'Agency and ideology and language shift and language maintenance', Sicoli studies the presence and effect of a monolingual-dominant language ideology in two separate villages, one more urbanized than the other, and offers specific case studies to support 'a concept of agency in which action is structured through historical social practices' (174). Finally, the chapter by HEIDI M. ALTMAN, 'Intersection: History, language and globalization in the North Carolina Cherokee communities', describes a North American indigenous culture, fraught with a history of pedagogical trials including boarding schools and oppressive language policies, now faced with both the challenges and opportunities offered by globalization. Revitalization projects, Altman claims, represent a unique opportunity for issues from the past and present to intersect. She notes, 'Strategies for language revitalization have come to reflect political, dialectal, and economic concerns that are continually evolving' (188).

The book contains an afterword by OFELIA ZEPEDA, professor of linguistics and a member of the Tohono O'odham nation. Her comments underscore the contribution of this book as part of both the documentation and description of language shift, which inform efforts toward revitalization. Zepeda highlights the fact that the authors' 'work covers myriad issues but also addresses the tremendous range of approaches indigenous communities of the world have either attempted or are currently in the process of applying for reviving or maintaining their language' (190).

*Ethnographic contributions to the study of endangered languages* provides a range of perspectives, moving the reader to understand the broader issues that impact all endangered languages through examples that display a wide range of local interpretations and challenges. There are no

obvious weaknesses in the book; the field could use more examples of the types included. This book is touching on the tip of the iceberg. The problems facing endangered language are many— very diffuse and very difficult to address. Still, there are many examples where positive change is taking place. The ethnographic contributions entailed speak to the commitment any researcher hopefully accepts when working within an endangered language context. Granadillo and Orcutt-Gachiri have made an important contribution to the study of endangered languages by offering specific examples, which embody all of the global issues of language endangerment, but which reveal the value of local solutions.

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**Documenting endangered languages:** Achievements and perspectives. Ed. by Geoffrey L. J. Haig, Nicole Nau, Stefan Schnell, and Claudia Wegener. (Trends in linguistics: Studies and monographs 240.) Berlin: De Gruyter Mouton, 2011. Pp. ix, 344. ISBN 9783110260021. $140 (Hb).

Reviewed by Dmitry Ganenkov, *Russian Academy of Sciences* and *Sholokhov Moscow University for the Humanities*

This volume is a tribute to Ulrike Mosel on the occasion of her retirement, and a sign of respect for her significant contribution to the field of language documentation. The volume is conceived of as a milestone, summing up experience, most important achievements, and future perspectives a decade after the launch of the language documentation program Dokumentation Bedrohter Sprachen (DoBeS) funded by the Volkswagen Foundation. The volume opens with a preface written by Geoffrey Haig and Nicole Nau that summarizes Ulrike Mosel's contributions to language documentation, in which the list of her publications is the best evidence.

In Ch. 1, 'Introduction: Documenting endangered languages before, during, and after the DoBeS programme', the editors of the volume outline the history of what is now called 'documentary linguistics', highlighting the most important innovations that distinguish it from its precursors, and provide an overview of the papers in the volume.

The first part of the book, 'Theoretical issues in language documentation', contains three chapters. In Ch. 2, 'Competing motivations for documenting endangered languages', FRANK SEIFART identifies four possible motivations for documenting endangered languages: (i) documentation to preserve human cultural heritage, (ii) documentation to enhance the empirical basis of linguistics, (iii) documentation by and for the speech community, and (iv) documentation to study language contact. Without being mutually exclusive, these motivations have specific requirements for the content and apparatus of language documentation, so that no language documentation 'in general' is possible, and priorities in each particular documentation project should be set.

Ch. 3, 'Evolving challenges in archiving and data infrastructures' by DAAN BROEDER, HAN SLOETJES, PAUL TRILSBEEK, DIETER VAN UYTVANCK, MENZO WINDHOUWER, and PETER WITTENBURG, provides a state-of-the-art overview of technical issues related to handling large amounts of data, including data formats, organization of data, versioning, access restrictions, legal and ethical issues of data archiving, tagging, and annotation tools, as well as access to archived resources.

In Ch. 4, 'Comparing corpora from endangered language projects: Explorations in language typology based on original texts', GEOFFREY HAIG, STEFAN SCHNELL, and CLAUDIA WEGENER advocate and promote the idea of typological investigations based on original textual data from endangered language documentation projects. They claim that the method of original text comparison should be an integral part of the typologist's toolkit and demonstrate the viability of the method by comparing how core arguments are realized in four languages from different families and geographical areas—Awetí (Tupí-Guaraní), Gorani (Iranian), Savosavo (Papuan isolate), and Vera'a (Oceanic). For the comparison, they apply a system of syntactic annotation, GRAID, developed by Geoffrey Haig and Stefan Schnell. They show that original texts from four different endangered languages are remarkably similar with respect to certain properties, such as the ratio of transitive to intransitive clauses, which is suggestive of the fact that monologic narratives, as a text type, have enough commonalities to make cross-language comparison feasible and meaningful. The proposed methodology is powerful enough to discover areas of cross-language variation and test hypotheses explaining this variation. The case study investigating the distribution of pronouns across different syntactic functions demonstrates this.

Documentation work always raises questions about the structure of the language being documented. Five case studies investigating various aspects of language structure are reported in the chapters of Part 2, 'Documenting language structure'. JOHN PETERSON's contribution in Ch. 5, ' "Words" in Kharia—Phonological, morpho-syntactic, and "orphographical" aspects', explores the notion of 'word' in the Munda language Kharia from the phonological and morphosyntactic points of view, showing that there is a class of clitics that attach to a host both in the phonology and the syntax. The author then describes an experiment that reveals the intuitions of native speakers with regard to such elements and shows that no single strategy is used by all participants, though the phonology seems to play a greater role in relation to other factors.

FLORIAN SIEGL, in Ch. 6, 'Aspect in Forest Enets and other Siberian indigenous languages—When grammaticography and lexicography meet different metalanguages', discusses the place of aspect in the grammar of Forest Enets, a Samoyedic language spoken in Siberia. In contrast to earlier descriptions of Samoyedic languages, recent descriptions force aspect systems of these languages to fit the aspectual framework based on and applied to Russian. In this paper, the comparison of aspect in Forest Enets with the Russian aspect system shows that the former operates quite differently and should not be descriptively equated with the Russian system. In a wider context, this illustrates an important methodological challenge for the description of endangered languages: the description of the grammatical categories of a (minority) language should not be influenced by the grammatical traditions practiced in dominating majority languages.

In Ch. 7, 'Documentary linguistics and prosodic evidence for the syntax of spoken language', CANDIDE SIMARD and EVA SCHULTZE-BERNDT claim that the syntactic description of spoken language needs to take into account the prosodic phenomena, and they provide an instructive example of how a corpus of spontaneous speech data collected during fieldwork can be used for investigating the syntax of spontaneous spoken language even in a lesser-known language. The

empirical part of the paper is based on fieldwork data collected from the Jaminung language of Australia. The authors discuss a number of prosodically coherent units spanning more than one intonation unit, and demonstrate that it is possible to distinguish different constructions such as reactivated topic vs. afterthought, and afterthought vs. discontinuous noun phrase, on the basis of prosodic evidence alone. More generally, they show that such an investigation of prosody also contributes to the typology of prosodic phenomena and their functions in the languages of the world.

KLAUS GEYER's 'Diphthongology meets language documentation: The Finnish experience' (Ch. 8) touches upon the issue of diphthong investigation, which proves to be very difficult and laborious in many languages. Noting that diphthongs are often a disregarded and unloved subject, the author establishes a set of criteria that would be helpful in dealing with them. After a brief discussion of basic questions of diphthongology, he examines the diphthongs in Finnish in order to exemplify how to work out an adequate description of a complex diphthong system. He concludes by bringing together the results from the general discussion of diphthongs and the findings from the examination of Finnish and by presenting an outline of 'the diphthong analysis and description tool', a number of criteria that may be useful for investigating diphthongs in a language documentation project.

Ch. 9, 'Retelling data: Working on transcription' by DAGMAR JUNG and NIKOLAUS P. HIMMEL-MANN, contributes to two topics in language documentation: the idea that fieldwork is a cooperative interaction between speakers and researchers, and the idea that the process of transcription may lead to the emergence of new linguistic varieties, for example, the creation of a written variety for the language that did not have it before. They document typical changes made by the speakers while transcribing oral texts, and argue that the transcription process itself should be documented as fully as practically feasible, since it may provide clues about the linguistic knowledge of speakers and the range of variation (not) allowed by speakers.

Part 3, 'Documenting the lexicon', comprises two chapters on dictionary making. In Ch. 10, 'The making of a multimedia encyclopaedic lexicon for and in endangered speech communities', GABRIELE CABLITZ focuses on the making of dictionaries as an essential and, in fact, central part of any documentation enterprise, and describes a project where the major objective was to motivate the speech community to actively participate in the process of creating a multimedia encyclopaedic lexicon, using a web-based lexicon tool. She discusses four aspects that distinguish the lexicographic work in this project: (i) the inclusion of multimedia archive files to visualize and contextualize word meaning, (ii) the inclusion of encyclopaedic information in lexicon entries, (iii) the use of vernacular language in documenting word meaning and encyclopaedic knowledge, and (iv) the creation of folk taxonomies and ethno-ontologies. Web-based possibilities of modern lexicon tools can in principle allow the online participation of the speech community in the creation of their lexicon. In the project described, however, this turned out to be difficult to achieve and created a number of problems. She concludes by stressing the role of lexical databases not only as a by-product of the documentation project, but also as an essential part of language documentation.

ANDREW PAWLEY, in Ch. 11, 'What does it take to make an ethnographic dictionary? On the treatment of fish and tree names in dictionaries of Oceanic languages', discusses a problem probably known to every fieldworker: is it possible to do a good general dictionary for a language that does not have any previous lexicographic work? He takes a number of dictionaries of Oceanic languages that he considers to be generally good and assesses them as to how they treat fish and tree names both in terms of inventory and definitions. It turns out that only a few of the dictionaries score relatively well in their coverage of the fish and tree lexicons, which, however, does not make them bad works overall. In order to achieve a good result, he concludes, a dictionary project requires researchers to have considerable expertise in various fields, be as fluent in the target language as possible, and, most importantly, have an enormous amount of time at their disposal.

Some of the most important components of language documentation projects are community involvement, participation, and assistance of native speakers. Various issues related to this aspect of language documentation are discussed in Part 4, 'Interaction with speech communities'. In Ch. 12, 'Language is power: The impact of fieldwork on community politics', EVEN HOVDHAUGEN

and Åsʜɪʟᴅ Nᴀᴇss present a conflict situation from their fieldwork experience and address political issues sometimes raised by the presence of an outside fieldworker in a (small) local community, viz., from whom should a documentation project obtain legal permission to carry out research and who owns the copyrights to materials produced through language documentation. They conclude that a familiarity with the structures of power and authority is essential for any documentation project, but pose further questions as to how the researchers should behave in cases when existing power structures are not enough to ensure the smooth course of the project, and someone from the local community claims to have the authority to grant permissions.

Cᴀᴛʀɪᴏɴᴀ Hʏsʟᴏᴘ Mᴀʟᴀᴜ's 'Sustaining Vurës: Making products of language documentation accessible to multiple audiences' in Ch. 13 raises an issue of making language documentation work accessible to a wide audience. She describes documentaries on several aspects of traditional knowledge produced within a language documentation project, and discusses how they can be used to support language and culture preservation. Although the films are not about the language in the first place, she shows how they serve their purpose as language awareness and maintenance tools: (i) they are entirely in Vurës, a language under documentation, (ii) there is an introductory text, which provides background on the language, where the language endangerment issue is stated to be the reason for documenting the language and producing the documentaries, and (iii) a number of dictionary entries are explicitly included in the films with the aim to highlight and provide definitions for certain key terms of traditional culture. It is demonstrated that the films not only supported linguistic and cultural identity of the Vurës language community, but were also of interest to other ethnic groups within Vanuatu, to researchers outside linguistics, and to a general audience.

In Ch. 14, 'Filming with native speaker commentary', Aɴɴᴀ Mᴀʀɢᴇᴛᴛs discusses the methodology of such means of data collection as commentaries accompanying video recordings. Although largely neglected until recently, such commentaries may provide valuable language data for a documentation project's corpus, especially in a situation with no (or little) chance to record linguistic data. She exemplifies potential benefit by discussing two types of commentaries—a monologic soccer match commentary and a conversational commentary of a children's canoe race—and shows that the commentaries help in providing richer linguistic data for the project and should be considered the norm rather than the exception for video recordings of nonlinguistic events.

As is clear from the above summary of the contributions, this volume is a valuable addition to the existing work on language documentation, covering a wide range of topics. Although the volume as a whole will be interesting to every documentary linguist, each of the contributions has its own readership, or, to be more precise, linguists will find different contributions more interesting and more relevant at different stages of their documentation enterprise. Ch. 2 is a necessary point of reference for anyone intending to embark on a language documentation project. Conflict situations like those described in Ch. 12 should serve as a warning to every researcher, and the questions posed in the chapter should be carefully reflected on during the planning stage of a documentation project. Various other aspects of community involvement are described in Chs. 10, 13, and 14. Many chapters will be useful when dealing with different specific aspects of the process of language documentation itself: working on transcription (Ch. 9), resolving the issue of word boundaries (Ch. 5), description of grammar (Chs. 6 and 8) and lexicon (Chs. 10 and 11), and modern documentation techniques (Chs. 10, 13, and 14), as well as technical aspects of the annotating and archiving of data collected during documentation projects (Ch. 3). Finally, Chs. 4 and 7 demonstrate a crucial point that the end of a documentation project is not the end of the research, but rather the opposite: the accumulation of large amounts of naturally occurring data should lead the linguist to a deeper understanding of the structure of the language, and make it possible to further pursue various aspects of crosslinguistic variation.

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**The handbook of Hispanic linguistics.** Ed. by José Ignacio Hualde, Antxon Olarrea, and Erin O'Rourke. (Blackwell handbooks in linguistics.) Malden, MA: Wiley-Blackwell, 2012. Pp. 875. ISBN 9781405198820. $199.95 (Hb).

Reviewed by Almeida Jacqueline Toribio, *The University of Texas at Austin*

The growing strength and advancement of the field of Hispanic linguistics cannot go unnoticed, as scientific investigations and curricular offerings expand in number and scope, attracting ever-wider audiences to the scholarly literature on Spanish linguistics. Thus, irrespective of one's position toward the proliferation and specialization of handbooks in linguistics, this installment in the commanding Wiley-Blackwell series—*The handbook of Hispanic linguistics*—is welcome and overdue; it will serve as indispensable reading for the seasoned researcher and imperative reference for the novice.

In their concise editors' note, José Ignacio Hualde, Antxon Olarrea, and Erin O'Rourke state their intention to offer a 'state-of-the-art' compendium in linguistic research on Spanish. And this they achieve: the collection comprises forty original chapters on all facets of the Spanish language, including its origins, evolution, structure, use, acquisition, and processing. The editors further state that the commissioned contributions were assessed by external referees and by the editors themselves. And, indeed, they were well vetted: the chapters are uniform in their near-faultless exposition of descriptive knowledge and their elaboration of analytical accomplishments and challenges in the field of Hispanic linguistics. The outcome of their efforts is further appreciated in the organization of the volume, as the works reflect a collaborative and dynamic style through cross-referenced material between chapters. Three of the chapters are prepared by the editors, and the remaining thirty-seven by a host of international scholars, many of whom are recognized leaders in their particular areas (among them, Ignacio Bosque, Josep Maria Brucart, Manuel Carreiras, Concepción Company Company, Albert Costa, Violeta Demonte, John Lipski, Silvina Montrul, and Nuria Sebastián-Gallés); others are rising researchers in this and allied fields (e.g. Jerid Francom, Miquel Simonet, and Rebeka Campos-Astorkiza).

The impressive cohort of forty-eight specialists has furnished an encyclopedic effort encapsulated in 863 pages (plus an index) that advances the literature in Spanish linguistics and the various subdisciplines represented. Their contributions are stand-alone chapters of comparable length, but they vary in depth of theoretical treatment and, hence, in clarity. A number of the submissions are appropriate for lay audiences and linguistics students at early stages of study, but other submissions call for greater expertise. The chapters by J. Clancy Clements, 'The Spanish-based creoles' (27–46), and Carmen Silva-Corvalán, 'Acquisition of Spanish in bilingual contexts' (783–801), stand out as offering straightforward and engaging readings on popular topics; and Bob de Jonge and Dorien Nieuwenhuijsen, in 'Forms of address' (247–62), and José Manuel Igoa, in 'Language impairments' (827–46), present nonexpert audiences with accessible discussions of questions of usage in normative and disordered speech, taking on themes that are often overlooked in similar compendia. Likewise, the chapters vary in purpose and impact. Some authors adopt a broad purview in contextualizing their appointed topics, as do Victoria Escandell-Vidal, who reviews the trends and developments in the independent study of sentence structure, meaning, and illocutionary force in 'Speech acts' (629–51), and María Carreira, who appraises in 'Heritage Spanish' (765–82) the growing subfield of heritage language studies in the United States. Still other chapters serve as forums for advanced argumentation, as is the case with José Camacho's '*Ser* and *estar*: The individual/stage-level distinction and aspectual predication' (453–75), which concludes with a proposal for the aspectual properties that determine the distribution of Spanish copular verbs.

Of course, individual readers could be of different minds as to the comprehensiveness of coverage of *The handbook of Hispanic linguistics*. While structural aspects of the language are thoroughly represented in this wide-ranging endeavor, readers interested in sociolinguistic, applied, and psycholinguistic perspectives get short shrift and should instead turn to *The handbook of Hispanic sociolinguistics* (Díaz-Campos 2011) or other sourcebooks in the Wiley-Blackwell series, in which treatises on Spanish are plentiful—*The handbook of bilingualism* (Bhatia & Ritchie

2006) and *The handbook of language teaching* (Long & Doughty 2009) are ready examples. Some readers might also sense what appears to be a general failure to recognize the paradigm shift in linguistics, as the vast majority of the commissioned works (especially those addressing matters of morphosyntactic structure) rehearse the findings of introspective research or target hypothetical monolingual data driven by theoretical concerns about the competence of the putative native speaker. In this respect, the chapters by David Eddington, 'Morphophonological alternations' (193–208), and Catherine Travis and Rena Torres Cacoullos, 'Discourse syntax' (653–72), are notable in informing theory by drawing on corpus data, as are the numerous chapters that reflect laboratory approaches to Spanish phonology, likely the imprint of the editors. Finally, the astute reader will take note of the underrepresentation of researchers who exemplify trajectories that are rooted in Latin America and the United States and that address themes in Hispanic linguistics by reference to the language behaviors of local populations—scholars such as Rodrigo Gutiérrez-Bravo, Arturo Hernández, Luis Ortiz López, Ricardo Otheguy, Liliana Sánchez, Mercedes Sedano, and Guadalupe Valdés, to name but a few.

In any case, despite its broad appeal, this handbook may not well serve all segments of its audience equally, as a large portion presupposes solid command of formal linguistics to fully grasp the information tendered; that is, those not wholly conversant in the relatively recent theoretical apparatus attendant to phonology, syntax, or semantics will find some of the chapters on language structure to be impenetrable. There are exceptions worth mentioning, including Soledad Varela's 'Derivation and compounding' (209–26) and Amaya Mendikoetxea's 'Passive and *se* constructions' (477–502), both of which offer detailed but comprehensible accounts. This state of affairs is unfortunate, since this is a title in the increasingly familiar series that has the potential to draw interest among readers with limited proficiency in linguistics and among practitioners in more applied fields. The shortcoming could have been mitigated by the inclusion of an introduction, outlining the reach of the handbook, and orienting the reader to some of the prevailing topics, concepts, and methods in inquiries on Spanish, and by the partitioning of the unwieldy array of chapters into four or five well-conceived sections, each initiated by an overview piece outlining the major developments and theoretical approaches to the data at issue, as is commonly done in other handbooks. As it stands, the present handbook contains only the forty chapters and an index. Those undeterred would do well to complement their reading with other issues in the authoritative series (e.g. Baltin & Collins 1991, Aronoff & Rees-Miller 2003, Goldsmith et al. 2011)

Nevertheless, *The handbook of Hispanic linguistics* will entice diverse readers, with its comprehensive synopses of the various themes, frameworks, and techniques available to the study of Spanish. Some of the contributions will invite new perspectives; for example, the chapters by Conxita Lleó and Miquel Simonet ('First language acquisition of Spanish sounds and prosody' (693–710) and 'The L2 acquisition of Spanish phonetics and phonology' (729–46), respectively) are exemplary in their complementary consideration of issues surrounding the acquisition of phonological systems in child Spanish and aspects of phonetic learning in adult second language Spanish speakers. In addition, a number of chapters prove of added utility in critically probing extant analyses and/or putting forth unresolved issues and objectives that will inspire future scholarship. Those entrenched in constraint-based phonological analyses are certain to value the directed discussion in Fernando Martínez-Gil's 'Main phonological processes' (111–31), and those wishing to embark on the study of the interface of syntax and informational content should consult Antxon Olarrea's 'Word order and information structure' (603–28) in guiding their work. In summary, there is much to recommend *The handbook of Hispanic linguistics* as another important publication in the Wiley-Blackwell series; anyone with interests in Spanish linguistics—indeed, in general linguistics—will find usefulness in it.

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**Semantics:** An international handbook of natural language meaning, vol. 1. Ed. by CLAUDIA MAIENBORN, KLAUS VON HEUSINGER, and PAUL PORTNER. (Handbooks of linguistics and communication science 33.1.) Berlin: De Gruyter Mouton, 2011. Pp. xv, 969. ISBN 9783110184709. $419 (Hb).

Reviewed by ARIEL COHEN, *Ben-Gurion University of the Negev*

This volume supplies the reader with a view to a variety of topics in semantics, from different and sometimes opposed points of view. The breadth of topics, and the depth of their treatment, is nothing short of staggering. The papers are divided into eight groups by subject matter, but this grouping actually hides a much richer tapestry of connections between them. It is clear that the authors of the individual chapters were encouraged to read and refer to other papers in the volume, and this dialogue between different chapters creates a rich, multidimensional treatment of important topics.

I cannot possibly review each and every one of the thirty-nine papers in the volume. But to illustrate the point, let me focus on a number of important topics in semantics, and comment on the way they are dealt with in different chapters.

Arguably the most fundamental issue in semantics is the notion of truth and its implementation in some form of formal logic. This topic is touched upon in almost every chapter, but is covered in some depth in at least five. Ch. 10, 'The influence of logic on semantics' by ALBERT NEWEN and BERNHARD SCHRÖDER, provides a historical overview of the development of the major ideas on logic and its application to the semantics of natural language. This approach eases the reader into the more formal and technical issues, providing clear motivation for every move. The paper would therefore be quite accessible even to readers with little acquaintance with formal logic. It also provides excellent background material to the first chapter of the book, 'Meaning in linguistics', written by the editors. The chapter develops the notions of truth-conditional semantics in some detail, and does an excellent job of dealing with ontology, the semantics-pragmatics interface, and semantic relations.

After finishing this chapter, readers may want to turn to Ch. 14, 'Formal methods in semantics' by ALICE G. B. TER MEULEN. Like Ch. 10, it begins with a historical overview, but this time it is aimed at readers who are well familiar with the logical notions. This paper continues with the development of the logical dichotomy between proof theory and model theory, and the linguistic applications of both. It concludes with insightful comments on the possible convergence of these semantic methods with the syntactic research on language.

An example of an extension of truth-conditional semantics is Ch. 34, 'Event semantics' by CLAUDIA MAIENBORN. Maienborn follows the development of the idea from Donald Davidson, through the neo-Davidsonian approach to Angelika Kratzer's I(ndividual)-level/S(tage)-level

predicates distinction. Maienborn makes it clear how each approach differs from traditional truth-conditional semantics, and how it is similar, and also the similarities and differences between the theories of event semantics themselves.

Ch. 11, 'Formal semantics and representationalism' by RUTH KEMPSON, contrasts formal semantics, which treats syntactic representations as mere vehicles on the way to meaning, with representationalism, according to which the structure of the representation is crucial to capturing the meaning of language. This interesting paper is exactly the sort of discussion one would expect to see in a handbook such as this: it provides an overview of the topic from a particular point of view (representationalism), showing where it diverges from the more common view and why. In addition to Ch. 11, the volume contains at least three more papers that concern representationalism, from different points of view.

Ch. 17, 'Frameworks of lexical decomposition of verbs' by STEFAN ENGELBERG, makes an effort to tie this problem to work on formal semantics, but the somewhat disheartening picture that emerges is that such cooperation is sorely lacking. A notable exception is David Dowty, who tried to incorporate the insights of generative semantics with formal semantics; but although his project was quite successful, there does not seem to have been any follow-up within formal semantics, and all work cited in the paper that builds on his ideas is in different, representationalist frameworks. This chapter actually serves as an excellent overview of such approaches, while others discuss specific representations.

Ch. 30, 'Conceptual semantics' by RAY JACKENDOFF, draws a sharp distinction between conceptual semantics and truth-conditional semantics, in that the former does not distinguish between semantics, pragmatics, and world knowledge. The two share the desirable properties of being compositional and accounting for inference, but conceptual semantics, additionally, requires its categories to correspond to human categorization, and its semantic representation to be learnable and connected to perception, action, and nonlinguistic thought.

Ch. 29, 'Frame semantics' by JEAN-MARK GAWRON, discusses a theory presented as a superior alternative to lexical decomposition for primarily two reasons: (i) it provides for a richer representation of meaning (e.g. the subtle differences between *ground* and *land* are explained by the argument that they are understood in contextual frames of air travel and sea travel, respectively), and (ii) it reduces lexical ambiguity by positing one meaning that is interpreted differently in different frames.

Ch. 29 is far from the only one that discusses ambiguity. Ambiguity and related phenomena of underspecification and polysemy receive thorough discussions from various points of view. Ch. 23, 'Ambiguity and vagueness: An overview' by CHRISTOPHER KENNEDY, highlights the similarities and differences between indeterminacy, ambiguity, and vagueness. Of particular note is the section describing how these notions are not merely of interest in themselves, but how they, especially ambiguity, have also been used to make claims about semantic theory, ranging from analyses of specific constructions to foundational claims.

Ch. 24, 'Semantic underspecification' by MARKUS EGG, discusses at length the motivation for positing underspecified representations. Two desirable properties of such representations—expressiveness and compactness—are highlighted; but it is emphasized that one comes at the expense of the other, so that there is a trade-off between them.

Ch. 15, 'The application of experimental methods in semantics' by OLIVER BOTT, SAM FEATHERSTON, JANINA RADÓ, and BRITTA STOLTERFOHT, describes in depth a particular example of experimental research in semantics: the investigation of quantifier scope. The question is whether quantifier scope is ambiguous or underspecified. The chapter proposes an experimental approach: if, when subjects encounter a sentence that can have more than one scope relation, subjects experience processing difficulties, this would indicate ambiguity; otherwise, the results would provide evidence for an underspecified representation. This paper provides a good overview of the issues involved, and gives the reader a real feel for what doing experimental semantics is all about.

Polysemy is a nagging problem for semantic theories: one would want to account for it, while avoiding multiple ambiguities. Two chapters, at least, touch on this issue. Ch. 28, by JOHN R. TAYLOR, shows the relevance of 'Prototype theory' to the problem of polysemy. The claim is that a

polysemous word has one 'prototypical' sense, which the other senses are derived from by modifying a feature of that sense. Ch. 31, 'Two-level semantics: Semantic form and conceptual structure' by Ewald Lang and Claudia Maienborn, uses the distinction between semantic form and conceptual structure employed by two-level semantics to make a similar claim: a polysemous word has only one sense in semantic form; however, it may have multiple senses in conceptual structure.

The question of multiplicity of senses naturally leads to a discussion of sense and reference. Ch. 8, 'Meaning in pre-19th century thought' by Stephan Meier-Oeser, concentrates on the Western history of semantics. It focuses almost exclusively on the problem of reference: do words refer to things or thoughts? The chapter is very clearly presented, and it clarifies many very fine distinctions among theories. Significantly, it connects ancient theories with more modern ones, and shows their relevance to semantic thinking.

Moving forward in time, Gottlob Frege's theory of sense and reference is singled out for a chapter all its own, Ch. 3, '(Frege on) sense and reference' by Mark Textor. While the basic ideas of Frege are essentially known to any semanticist, Ch. 3 provides much more detail, and presents it in a way accessible to nonphilosophers. It would have been good, however, to expand the brief remark on Richard Montague and discuss in greater detail which parts of Frege's legacy are still alive and influence current semantic work.

Ch. 4, 'Reference: Foundational issues', begins with Frege and continues with a meticulous discussion of the study of reference in the twentieth century. In particular, it deals very effectively with the semantic contribution of definite descriptions: is it reference only or also sense? There is also a brief discussion of indefinites, although, perhaps surprisingly, specific indefinites are not mentioned.

Frege is also widely credited with the first modern formulation of compositionality, but the notion does not stop with him, and several chapters develop compositionality in various directions. People often treat compositionality as a single concept. Ch. 6, 'Compositionality' by Peter Pagin and Dag Westerståhl, demonstrates that there are, in fact, many varieties of compositionality, and shows which phenomena are relevant to demonstrating which type of compositionality. No less important is the identification of phenomena that are often confused with compositionality, but that are, in fact, orthogonal to it, like recursion.

Other chapters take the desirability of compositionality as given, and use it to evaluate various semantic theories. Commendably, authors are aware of the multiple notions of compositionality and are thus able to avoid the gross oversimplification of a binary classification of theories into compositional or noncompositional. Still, Stefan Engelberg, in Ch. 17, 'Frameworks of lexical decomposition of verbs', points out that some theories, such as two-level semantics (Ch. 31), may be more strongly compositional than others, such as conceptual semantics (Ch. 30).

The greatest challenge to a compositional account of language is usually considered to consist in the phenomenon of idioms. They can sometimes be ungrammatical, and not even constitute a syntactic unit. They are therefore considered to be frozen expressions, but, as Ch. 20, 'Idioms and collocations' by Christiane Fellbaum, points out, many idioms contain metaphors and are therefore partly compositional, for example, *It's a jungle out there*. The chapter concludes that what characterizes idioms is not lack of compositionality, but the fact that they are used to provide prefabricated encodings of often complex messages.

Something that is missing in all of these chapters is a discussion of why compositionality is important. Why would we care if natural language is compositional? Does it tell us something about the nature of language or mind? Is compositionality something that happens to be species-specific or logically entailed?

I could continue with many other important semantic topics, demonstrating how they are illuminated by different points of view and discussed by various chapters, in ways that are orthogonal to the thematic divisions explicit in the book. This is the main strength of this book, and, if used appropriately, it would be an extremely useful and comprehensive reference to anyone interested in semantics.

There is unfortunately one obstacle to the appropriate use of this volume, however, as the book suffers from one technical, yet extremely important, omission: the lack of an index. This book is

presumably not meant to be read cover to cover, but to provide a reference work to students and researchers who need information on particular topics in semantics. An index is a useful addition to any reference work, but in a book such as this, it is a MUST.

It is precisely because a major strength of this book is the fact that the same topic is covered by different chapters, from diverse points of view, that a way to access these relevant sections is necessary. The editors did as good a job as they could of trying to group together papers in related topics, but, as the few examples given above demonstrate, the thematic relatedness of chapters is multidimensional and cannot be captured by a simple hierarchy. For example, Ch. 15 is grouped together with other chapters on methodology, and rightly so; but a reader who is interested in ambiguity would be unlikely to access it, and would lose the important insight offered in it.

To conclude, this book is an extraordinary treasure trove of information about semantics, but the lack of an index makes this information less accessible than it deserves to be.

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**Total reduplication:** The areal linguistics of a potential universal. By THOMAS STOLZ, CORNELIA STROH, and AINA URDZE. (Studia typologica 8.) Bremen: Akademie, 2011. Pp. 620. ISBN 9783050051734. €128.

Reviewed by ANNE ZRIBI-HERTZ, *Université Paris-8*

The project that led to this volume was triggered by previous research (Stolz 2004) revealing total reduplication (TR) as a characteristic feature of the Circum-Mediterranean area, shared by such genetically different languages as Turkish, Hebrew, Maltese, Greek, Italian, and Basque. This result turned out to be at odds with Rubino's (2005a,b) claim that TR is globally absent from Europe (with a few exceptions). Finding that TR is also attested in various other European languages, Thomas Stolz, Cornelia Stroh, and Aina Urdze (SS&U) decided to embark on a systematic areal study of TR on the Old Continent.

The general picture that emerges from their research is that TR is a phenomenon of its own, that TR-languages are, as a whole, the norm, and TR-avoiders the exception, and that contrary to Rubino's (2005a,b) claims, TR is a widespread phenomenon in Europe, with TR-languages located in the south and east, and TR-avoiders in the north and center. European TR-constructions are shown to share the formal and semantic properties of the TR-constructions found in countries bordering Europe to the east and south. This areal distribution suggests that European TR-languages are part of larger, intercontinental isoglosses.

The book is subdivided into four parts. Part A, 'How to approach total reduplication', is a general advanced course on reduplication, which after a brief introduction (section 1) surveys (section 2) contemporary general textbooks and specialized literature on the chosen topic, and proposes an explicit definition of TR: a prototypical instance is characterized as involving two identical, complete, adjacent occurrences of a meaningful expression, whose doubling conveys some specific linguistic function. The identity criterion crucially involves both phonological AND categorial identity (this excludes cognate objects from TR, for example). TR is distinguished from partial reduplication (where completeness does not obtain) and from repetition (a mere, unrestricted, stylistic device). TR is also distinguished from the accidental adjacency of two identical words brought about by syntactic recursivity. Section 3, 'History', surveys theories of reduplication since the beginning of the nineteenth century. Section 4, 'Universal vs. areal', discusses the universal character of TR assumed by Moravcsik (1978) and introduces the view that TR is a 'potential' rather than 'absolute' universal. Section 5 discusses the linguistic functions of TR (e.g. intensification, diminution, number, distributivity, reciprocity, indefiniteness), their respective statuses with respect to the grammar vs. discourse dichotomy, and the issue of iconicity (here the authors adopt Stolz's (2007) model, according to which TR generally signals a deviation with respect to some norm).

Part B, 'Total reduplication: The Maltese experience', presents a detailed description of TR in Maltese, based on an array of written corpora. TR in this language is shown to target adjectives, adverbs, verbs (finite or nonfinite, mostly imperfective and intransitive), and cardinals. The functions of TR are claimed to include intensification, absoluteness, secondary predication, adverbialization, duration, the prolative, the distributive, and lexicalization.

Part C, 'Total reduplication: The European perspective', presents an in-depth areal study of European languages with respect to TR, which disconfirms Rubino's (2005a,b) claim that Europe is the only region of the globe that is practically TR-free. According to Rubino, the only TR-languages of Europe are Abkhaz, Armenian, Georgian, Hungarian, and Turkish. SS&U lay out their quantitative methodology, centrally based on the comparative scrutiny of multilingual translations of Saint-Exupéry's *Petit prince* and J. K. Rowling's *Harry Potter and the philosopher's stone*.

Quantitative results show that TR is productively attested in Europe not only in the five languages acknowledged by Rubino, but also in many others. Within Europe, TR is less frequent in Indo-European than in non-Indo-European languages. However, neither Indo-European nor non-Indo-European languages behave homogeneously with respect to TR. Some Indo-European languages are TR-avoiders (e.g. Germanic, Slavic), while some have productive TR (e.g. Corsican, Albanian). The same heterogeneity is found in the non-Indo-European group, where TR is active in, for example, Azeri and Turkish but not in Kazakh, among others. Since the status of TR in a given language cannot be predicted on the sole basis of its genetic affiliation, SS&U explore an areal perspective illustrated by various interesting isoglossic maps showing that there are two major groups of TR-languages in Europe, one running vertically on the eastern fringe, and one running horizontally in the south, while TR-avoiders are located in the center and northwest.

A qualitative survey brings out recurrent crosslinguistic restrictions on TR and grammatical functions of TR: thus, TR (i) preferably targets one-word constituents; (ii) commonly targets adjectives, adverbs, nouns, verbs, cardinals, and quantifiers, but not, for example, proper names or auxiliaries; (iii) prototypically targets disyllables containing a consonantal onset and coda; and (iv) may target number-inflected nouns or adjectives, but not nouns specified for definiteness, nor adjectives inflected for the comparative or superlative. Most of the crosslinguistic functions of TR are those attested in Maltese. There is no specifically European unitary variety of TR.

Part D, 'What does TR teach us?', is a concluding chapter that discusses miscellaneous theoretical issues and recapitulates the main results. A side observation is that a low rate of asyndetic constructions (TR) in a language tends to correlate with a high rate of syndetic constructions, such as *from door to door* and *one by one*, where the reiterated material is separated by an overt link. SS&U discard the assumption that TR is a form of covert coordination, and inconclusively discuss the diachronic paths that may lead to the emergence of TR. A small section bears on the formal analysis of TR: should it be derived via parallel insertion or via a copying rule? SS&U seem inclined toward the copy hypothesis, but essentially leave this issue open.

The last pages before the final recap discuss the interplay of grammar and style in the frequency rate of TR, and emphasize the general tendency of European normative grammarians to regard TR as a deviation from standard grammars. A bonus shot of statistics shows how the creative use of TR in Andrea Camilleri's mystery novels gives them the Sicilian flavor much appreciated by his readers.

This book will undoubtedly be a useful reference for whoever wants to work on reiterative strings in any language. It can also be read as an introductory textbook on areal linguistics. It contains much bibliographical and historical information on reduplication, and a set of fascinating isoglossic maps of Europe and beyond. Perhaps because of its impressive THOROUGHNESS, however, it is analytical to the extreme and anything but reader-friendly. Every single thought ever jotted down by the three authors during the several years that their research lasted seems to have been stuffed somewhere into this massive single-spaced, 620-page-long monograph. For some reason, quotations from works written in German and French are assumed to be transparent for all readers, and hence left untranslated. Within the chapters (especially in Parts A, C, and D), sections seem to be organized a bit at random rather than according to a logical plan. It would have

been helpful if each section had started with an outline of its goals, internal structure, and main results.

The book is so full of data, assumptions, and counterassumptions that it is also a gold mine of issues open to discussion. A small sample of problems to consider follows. (i) There might be a contradiction between the definition of TR as a linguistic 'phenomenon' and the acknowledgment that TR constructions are massively heterogeneous in their forms and functions. (ii) The definition of TR itself may be disputed from different theoretical perspectives. For instance, whoever assumes that linguistic structure may involve empty slots and/or that the surface linear sequence of words and phrases may result from movement cannot give credit to the adjacency criterion defining TR. In Haitian, for instance, intensive reiteration of some lexical items is productive, but reiterated lexemes triggering contrastive effects are generally moved away from their 'reduplicand' by focus raising (see Harbour 2008, Glaude & Zribi-Hertz 2012). Under SS&U's restricted definition, Haitian would therefore look like an 'intensive TR-AVOIDER', an awkward result from a descriptive and typological viewpoint. (iii) The categorial criterion (stating that the two instances of the reduplicated item should belong to the same category) is implicitly based on the DISPUTABLE idea that categorial features are inherent to lexemes prior to syntactic insertion (see Kayne 2009 for elements of discussion). (iv) The assumption that TR generally signals 'a deviation with respect to a norm' is challenged by various examples discussed by Aboh, Smith, and Zribi-Hertz (2012b) involving, for example, VV construed as resultative or as past tense. (v) Some examples regarded by SS&U as typical cases of TR are actually open to debate: in particular, sequences of adjectives or adverbs such as 'straight + straight = very upright' or 'slowly + slowly = very slowly', which intuitively trigger 'intensive' readings, might be of the same nature as the *salad-salad* examples discussed by Ghomeishi and colleagues (2004), which may involve any sort of open-class lexemes, are freely available in, for example, English and French, and are analyzed by Glaude and Zribi-Hertz (2012) as regular modification structures triggering a RE-STRICTION from which the intensive effect arises. Although the frequency of such examples is likely to be low in formal registers of English or French (a stylistic issue brought up by SS&U), they are quite productive in these languages—both of them TR-avoiders according to the authors. Under Glaude and Zribi-Hertz's analysis, such examples would furthermore qualify as instances of 'recursivity', rather than 'TR' constructions as defined by SS&U, which would raise problems for SS&U's definition and statistics. (vi) As regards the copy vs. parallel insertion issue, the parallel insertion assumption boils down to denying that TR should result from any specific grammatical mechanism. The generalized-copy preference expressed by SS&U is therefore consistent with their definition of TR as a grammatical phenomenon. But it might be challenged by various data, for example, the Hebrew, Haitian, and Sao Tomé examples discussed respectively by Cohen (2012), Glaude and Zribi-Hertz (2012), and Schang (2012), which lead these authors to favor the parallel insertion over the copy analysis. Should these authors be correct in their assumptions, and SS&U also be correct in opting for a copy analysis of other types of constructions, this could undermine the authors' global approach to TR and their resulting quantitative assessments.

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**Sociolinguistic typology:** Social determinants of linguistic complexity. By PETER TRUDGILL. Oxford: Oxford University Press, 2011. Pp. 288. ISBN 9780199604357. $35.

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In this book Peter Trudgill tells the story of what he has been wondering about most of his academic career: to what extent do 'different types of human society produce different types of language and, if this is the case, what [does] this mean for the future typology of human languages' (viii)? T is a master linguist and a consummate storyteller, making this book not only a culminating piece of scholarship but also a page-turner. You get a hint at the magnitude of the story he wants to tell when you see that his book is dedicated to William Labov and the sheer number of famous researchers that are thanked for contributing to its telling (xii–xiii). T has synthesized a linguistic treasure trove—data from all over the globe and an amalgamation of insights from sociolinguistics, dialectology, historical linguistics, and typology.

T's story begins with an overview of innumerable 'Social correlates of linguistic structures' (xv). From the thirty Sami words for types of snow through the honorifics of Korean, the directional prefixes of Tibeto-Burman and the lexicon of British carpenters, readers are led through a dizzying array of correlations between language phenomena and climate, geography, and culture. The relationship between a language's lexis and grammar and its social circumstances is strong. But curiously, there are also many examples where there is no correlation at all. T proposes to 'get a grip' on this dilemma by looking at other aspects of human societies that may offer insight. Here begins the exploration of what factors 'might be promising to look at in our search for explanations for why certain languages select certain structures and not others' (1).

T naturally turns to the sociolinguistic literature where it is well known that sociocultural phenomena are critically linked to linguistic change, transmission, diffusion, incrementation, and lifespan change (Labov 1972, 2007). Cataclysmic events and economic upheavals accelerate the rate of linguistic change. Different levels of language structure change at different rates. Change in phonology and in features that are pragmatically sensitive proceed relatively rapidly. In contrast, grammatical features can remain stable for centuries. Yet some languages and dialects change faster than others. Why? In fact, there is good evidence to argue that linguistic change is strongly influenced by: (i) the relative degree of contact vs. isolation of a speech community, and (ii) the relative social stability vs. instability of a community. In low-contact, socially stable circumstances, change proceeds slowly, in fact very slowly. Language change is also influenced by contact, which leads to simplification in linguistic phenomena and processes such as regularization, increasing lexical and morphological transparency, and loss of redundancy. Yet complexifi-

cation may also occur under the same circumstances, such as when there is transfer of features from one language to another, borrowing, and the like. This leads to a conundrum: 'what are the circumstances in which contact leads to simplification, and what are the circumstances when it leads to complexification' (33)? T argues that there is a solution to this paradox because there are different types of contact, which in turn impact the way language learning and acquisition evolve within the speech community; that is, who are the people in contact with each other, adults or children (see e.g. Kerswill 1996)? Complexification develops in low-contact situations where there is long-term transmission from parent to child, there are shared norms, and change proceeds down an uninterrupted path. Simplification arises in high-contact situations where there is a significant history of the language having been acquired by adult nonnative speakers, and individuals may not have much in common. There is yet another factor implicated in language change—community size. When a population is relatively small, tight social networks can 'push through, enforce, and sustain linguistic changes which would have a much smaller chance of success in larger, more fluid communities' (103). In high-contact communities, leveling and the loss of arbitrary distinctions develop in order to accommodate communication among adult learners.

Synthesizing across these determinants of linguistic complexity, five defining typological social characteristics can be identified: type of social networks (tight vs. loose), nature of the language contact situation (high-contact vs. isolated), population size, amount of communally shared information, and the relative stability of social norms, with a pivotal role played by their interaction. The three main diagnostics yield six community types, reproduced in Table 1 below.

|         | 1     | 2     | 3     | 4     | 5     | 6     |
|---------|-------|-------|-------|-------|-------|-------|
| SIZE    | small | small | small | small | large | large |
| NETWORK | tight | tight | loose | loose | loose | loose |
| CONTACT | low   | high  | low   | high  | low   | high  |

TABLE 1. Community types.

T argues that 'if we look hard enough, we will probably be able to find representatives of all six possible combinations' (148). There is a global trend, however, toward urbanization, with a concomitant demise of small isolated communities, that is, types 1 and 3, and while type 2 places are currently abundant, that is, small towns in regular contact with urban centers, many of these are becoming increasingly loosely networked and the nature of contact generally is in profound transition, which is exactly why an impending gloom settles into the story at about this point (167). T is arguing that complexity in language, as evident in pronoun hierarchies, grammatical gender, inflectional morphology, polysynthesis, evidentials, and so on can only arise over long periods of time in speech communities that are small, socially intimate, and that have remained isolated from others. If this is the case, then where in the world will we find such places in the years to come?

In the epilogue the reader comes face to face with the most depressing thought for a linguist— not only are many of the world languages endangered but the ones that will be left for linguists to study are going to be 'a single historically atypical type' (188): high-contact, loosely networked, and large. To put it another way, our communities are becoming increasingly facebooked, #hashtagged, and global with no conceivable opportunity for the type of communally shared unimpeded longitudinal change that T thinks is the only way to get complex linguistic phenomena.

T is purposefully being provocative when he says 'we had better hurry' (188) if we want to document the typology of languages in the world today. This larger message is definitely unsettling. I spent most of the book thinking 'he cannot possibly be right!', but the proof must be in the proverbial pudding. As clearly stated at the beginning, 'the book is speculative' (xii), yet its ideas are eminently questionable and testable. For example, T tends to argue categorically but it may be the case that the phenomena he discusses were (and are) a lot more variable in reality, which could add a whole other level of sophistication to the typological enterprise. Moreover, his definition of terms is often nebulous. For example, he argues that the development of complexity 'depends on lengthy periods with relatively little interruption' (151) and uses terms such as 'large'

and 'small' in a relative way without defining what these mean. Granted, this is because he cannot actually be sure about these things (x). But still one wonders how long 'lengthy' is, what the relevant thresholds of size might be, and what the puzzling nature of complexity is more generally. Moreover, there is also the well-known fact that linguistic change keeps pace with sociocultural change. If sociocultural change speeds up (as it seems to be doing) and multiplex, socially cohesive, web-based networks emerge, so too should the speed and nuance of linguistic development. And while intricate morphological paradigms and inflectional schemas have receded from English, the plethora of contemporary discourse-pragmatic markers is adding a whole new type of complexity to the system. Moreover, in other parts of the grammar, such as the strong verbs, we know that both regularization and irregularization processes occur in tandem and, in this case, continue to the present day. Interesting new insights will also be gained by considering how the linguistic mechanisms of change in progress will play out across sociolinguistic types, in varying ecological settings (e.g. Mufwene 2001), and across the lifespan (e.g. Sankoff & Blondeau 2007). Finally, because there is a general absence of syntactic phenomena from T's discussion by his own admission (153), one wonders why and what additional insights syntax might offer since we know that syntactic phenomena can originate in discourse (e.g. Sankoff & Brown 1976).

By the end of the book it is only the POSSIBLE future loss of linguistic complexity that T suggests we may someday regret. Readers gripped by this message will undoubtedly be spurred to action, whether to prove T right or wrong. I would not be surprised if there were significant counterexamples to his argument, and it is possible that new types of complex linguistic phenomena will arise as the social typology of human groups evolves. I am thinking, for example, of the types of phenomena that can develop within religious communities, mining camps, and oil rigs, or the de facto segregation of ethnic groups, the extreme intimacy of the very small group on the International Space Station or future seed communities on Mars, which may revamp community types 1–4. At the very least, as readers engage with his potent wonderings, T will surely not regret the flurry of research his book will generate.

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