

Rezensionen

Matthew Baerman, Greville G. Corbett & Dunstan Brown (eds.), *Defective paradigms: Missing forms and what they tell us*. Oxford: Oxford University Press (for the British Academy), 2010

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The volume grew out of a conference on morphological defectiveness held in 2008 and brings together a diverse array of investigations into this fascinating topic. Defectiveness refers to the phenomenon in which certain lexemes have certain forms that are missing, apparently for no good reason. A well-known example is the past tense form of the English verb *forego*, which is non-existent for many speakers (**forewent*, **foregoed*) despite the fact that nothing seems to be semantically or syntactically wrong with such a form. In light of the fact that speakers are able to produce with certainty inflected forms of pseudo-words or words they have never encountered before, the absence of certain inflected forms becomes all the more puzzling. In some cases, the otherwise pervasive productiveness of morphology breaks down and the papers in the present volume aim to deepen our understanding of the how's and why's of these breakdowns. While defectiveness in morphology has been noted quite some time ago (cf. Halle 1973, Hetzron 1975), it has received surprisingly little attention until quite recently. Halle (1973), for example, adopts a defeatist position, according to which each paradigmatic gap is the idiosyncratic effect of piecemeal lexical stipulations. Upon closer inspection, however, gaps are considerably more systematic than such an analysis leads one to expect, often occurring in exactly the same spot throughout the language. For instance, all Russian nouns that are defective lack the genitive plural form, and all defective verbs lack the first singular. Regularities of this kind have sparked a growing interest in the reasons that underlie gaps (e.g., Albright 2003, Pertsova 2005, Sims 2006). Drawing together previous accounts, bringing to light novel evidence and generalizations, and illuminating the phenomenon from new theoretical perspectives, the present collection of papers constitutes a most welcome and very valuable addition to this growing body of research. Despite the breadth of topics approached in the volume, ranging from mainly descriptive papers to highly theoretical ones, most authors relate their word to that of the other contributors, which creates an impression of coherence and interaction. Moreover, there are recurring patterns that show up in the majority of papers, the most striking of which is the observation that gaps tend to occur in exactly the same paradigmatic cells across lexemes and mimic the distribution of other morphological changes like stem allomorphy.

Matthew Baerman & Greville G. Corbett's introduction *Defectiveness: Typology and Diachrony* does a good job of introducing various facets of defectiveness and distinguishing the concept underlying the papers in the book from other phenomena that are superficially similar. A crucial prerequisite for defectiveness in the sense employed in the book is that it cannot be attributed to independent syntactic or semantic factors. In other words, the book

approaches defectivity from a morphological perspective. The introduction provides some well-known and lesser-known examples, a basic analytic distinction between defectiveness of morphological forms, morphosyntactic features and the mapping between the two, and also introduces some potential diachronic sources of defectivity.

Stephen R. Anderson's contribution *Failing One's Obligations: Defectiveness in Rumantsch Reflexes of DEBÈRE* focuses on the verb *dueir* 'should' in the Romance language Surmiran, which lacks an apparently heterogeneous set of forms. Anderson demonstrates that *dueir* is defective in precisely the cells in which other verbs exhibit stem allomorphy or suppletion. Moreover, these are configurations in which stress predictably falls on the stem. Anderson's analysis of these facts is based on the idea that only certain vowels are compatible with stress. Consequently, if stress falls on the stem, a stem allomorph has to be selected that allows such stress placement. What renders *dueir* defective is that there is no such allomorph so that a factually inviolable constraint on surface forms is invariably violated. To model this analysis in the framework of Optimality Theory, Anderson invokes *neutralization* (cf., e.g., Legendre et al. 1998, Baković & Keer 2001 for an application of neutralization to syntax). In cases where there is no legitimate output form for *dueir*, the morphology is taken to resort to the corresponding forms of the minimally different lexeme *stueir* 'must, should,' which is suppletive and hence compatible with stress placement on the stem. This treatment differs from all other papers in the collection in that it does not assume that defectiveness necessarily results in morphological ineffability. Rather, morphology copes with defectiveness by producing an inflected form of a distinct lexeme. A second consequence of this account is that defectiveness emerges, analytically at least, as the default. The verb *stueir* is non-defective only because it contains two lexically stipulated stems. In the absence of one such stipulation, defectivity results.

In their paper *Defectiveness as Stem Suppletion in French and Spanish Verbs* Gilles Boyé & Patricia Cabredo Hofherr observe that patterns of defectivity in French and Spanish verbs mirror patterns of stem suppletion. According to their analysis, certain verbs may lack stems, leading to defectiveness of all forms that are built on the basis of those stems. Boyé & Cabredo Hofherr invoke the concept of a *stem space* containing default implicative relations between stems. For regular verbs, these relations allow one to deduce the form of all stems from one which is lexically specified. In the case of suppletion, a verb's stem space contains a lexical specification for more than one stem, thus overwriting the default implications. Extending this reasoning, the authors contend that gaps are the result of a lexical stipulation to the effect that certain stems are non-existent for some verbs. A second aspect of the paper is the proposal that there are at least three sources of defectiveness: The first source, *form indeterminacy*, arises in verbs with a phonological shape that renders the default implications within the stem space inapplicable. If these verbs in addition also lack a lexical specification for their stem forms, there is no way to deduce the form of some stem, leading to defectivity of all forms based on that stem. The second type of defectiveness, *form avoidance*, is found in verb forms that are compatible with more than one morphological realization, both of which are avoided for linguistic or non-linguistic reasons. The third type, *form gaps*, contains verbs whose defectiveness cannot be attributed to any independent property and thus appears entirely arbitrary. Unfortunately, the two parts of the paper—the analytic claims about gaps in the stem space on the one hand, and the those about the three types of defectiveness—leave an impression of segregation. In particular, it remains unclear how they relate to each other. Although the paper identifies three types of defectiveness, it puts forth only a single, uniform analysis. As an example, the authors cite Spanish *abolir* 'abolish' as an instance of form avoidance, whereby more than one output form is licit. The stem space of *abolir* as provided in the paper, however, simply contains a lexically stipulated gap, just as in other alleged types of defectivity.

Andra Kalnača & Ilze Lokmane's *Defective Paradigms of Reflexive Nouns and Participles in Latvian* considers defectiveness in the paradigms of reflexive nouns and participles in Latvian. According to the authors' description, reflexive nouns and past participles have gaps in the dative and locative as well as in the instrumental plural. Reflexive present participles in addition lack the nominative, vocative and genitive in the singular. Unlike other papers in the volume, the authors do not identify an independent correlate of patterns of defectivity. Rather, it is depicted as completely arbitrary. The gaps in the reflexive paradigms are filled by the corresponding non-reflexive forms, or by some other form existing in the same paradigm. According to the analysis in the paper, the reflexive paradigms contain gaps, about which speakers feel "confused" (pp. 59, 63, 66), leading one to use a 'wrong' form. It should be pointed out, however, that the alleged gaps are a property of the analysis rather than the empirical facts per se. On the surface, all reflexive paradigms are non-defective and merely instantiate syncretism with non-reflexive forms. While the authors treat defectiveness as the source of some cases of syncretism (cf. Müller 2011, who treats all instances of syncretism as arising from gaps), other instances—e.g., syncretism between nominative and vocative or nominative and accusative—are not analyzed in such a way. Unfortunately, the authors do not offer a rationale for this analytical split. What is more, to the extent that a 'wrong' form is used in these cases, the data may be analyzed as deponency (Baerman et al. 2007) rather than gaps plus concomitant morphological compensation. Thus, in spite of the authors' contention that the Latvian paradigms under consideration exhibit gaps, the study contains little evidence that they do, at least on an empirical level.

John Löwenadler's paper *Relative Acceptability of Missing Adjective Forms in Swedish* is a brief version of Löwenadler (2010), which investigates the fact that certain adjectives in Swedish lack neuter forms. Löwenadler employs phonological constraints on morphological surface forms that block productivity and thereby give rise to defectiveness. The paper reports the results of a rating experiment, according to which defective forms exhibit different degrees of degradedness. To account for this finding Löwenadler suggests that the phonological surface filters are ranked. While all of them invariably obstruct productivity, their actual impact on the acceptability of a form depends on their position in the ranking. This ranking is accompanied by a set of auxiliary assumptions, such as a word's entrenchment, foreignness and the like. Interestingly, there are a number of adjectives whose neuter form violates some of the constraints but which nevertheless are not defective. Examples are *solid* 'solid,' *röt* 'red,' and *sött* 'sweet,' all of which violate a constraint against vowel shortening in the neuter form. To account for the non-defectiveness of these adjectives, the author submits that their neuter forms are indeed not derived by productive morphological processes, but conventionalized. Moreover, Löwenadler suggests that such conventionalization, and thus overwriting of a gap, is possible only if there is enough 'communicative motivation' for a neuter form to exist. I see two problems with such an approach. First, as Löwenadler acknowledges, Swedish morphology contains processes of dental assimilation and vowel shortening. The neuter form *rött* [rœt] of the stem *röd* [rœ:d] 'red' appears to be the result of assimilation of the stem-final plosive to the neuter suffix *-t* plus shortening of the stem vowel. In other words, the neuter forms of these adjectives conform to independently motivated phonological processes in the language. However, this remains a coincidence if these forms are not produced by general morphological operations but lexicalized, as the analysis in the paper forces the author to assume. Second, the concept of 'communicative motivation,' which conditions whether certain adjectives have gaps in the neuter form or not is not substantiated. To give just one example, it is far from self-evident why there is sufficient motivation for a neuter form of *solid* [sœ'li:d] 'solid' (neuter: [sœ'lit]) but not for the neuter form of *morbid* [mœr'bi:d] 'morbid' (i.e., *[mœr'bit]). In the absence of an independent measure of 'communicative motivation' the concept runs the risk of being little more than a restatement of the fact that certain adjectives are defective while others are not.

The paper *Defective Verbal Paradigms in Hungarian—Description and Experimental Study* by Ágnes Lukács, Péter Rebrus & Miklós Törkenczy investigates the distribution of defectiveness in the verbal paradigms of Hungarian. The authors demonstrate that defectiveness arises if stems that invariably end in a consonant cluster that is illicit in coda position are followed by an affix which necessarily starts with a consonant (such as **háml-hat* ‘peel-MODAL’). If either the stem allows vowel epenthesis to break up the final cluster or the affix has a vowel-initial allomorph, no gap occurs. The authors conclude that gaps are due to an inviolable phonotactic surface constraint against certain consonant clusters. This empirical generalization is corroborated by a rating experiment. The authors note, however, that not all verbal gaps may be attributed to a phonotactic constraint. Some verbs that end in a consonant cluster which is allowed in coda position may, but need not, give rise to gaps. Thus, while *burjánz* ‘proliferate’ is defective (i.e. **burjánz-hat*), *vonz* ‘attract’ is not. The authors mention in passing (p. 86) that defective configurations may be expressed periphrastically but do not elaborate on that. The implicit assumption appears to be that periphrastic expressions are creatures of their own and do not affect an analysis of morphological gaps. This view is, however, contested and periphrastic expressions have been suggested to be the product of the same mechanisms as non-periphrastic ones (cf. Embick & Marantz 2008 for discussion within Distributed Morphology and Ackerman & Stump 2004 for an analysis in Paradigm Function Morphology). The situation here mirrors that of comparative forms in English. The claim that, e.g., *interesting* lacks a comparative is true only for the set of non-periphrastic forms. Once periphrastic forms are factored in, the impression of a gap disappears. The same situation might hold of the Hungarian verbs discussed in the paper but the reader is not given enough information to judge.

In *On Morphomic Defectiveness: Evidence from the Romance Languages of the Iberian Peninsula* Martin Maiden & Paul O’Neill undertake a critical reassessment of Albright’s (2003) claim that defectiveness in Spanish is due to speakers’ uncertainty about a morphological surface form. According to this view, the verb *abolir* ‘abolish’ lacks, e.g., a first singular form because there is not enough information to determine whether this form would be **abolo* or **abuelo*. Maiden & O’Neill notice, however, that in Spanish and Portuguese there are gaps in cells that are completely predictable. For example, there is no uncertainty that the first plural present subjunctive of *abolir* would have to be **abolamos*; nevertheless, this form is ungrammatical. Furthermore, the authors argue that non-defective cells of defective verbs are aberrant in that they do not undergo otherwise systematic and predictable root allomorphy. Maiden & O’Neill conclude that uncertainty about surface forms is neither a sufficient nor a necessary condition for defectiveness. They go on to propose that defectiveness does correlate with morphomic patterns of stem allomorphy. The authors appeal to two widely observed patterns of stem suppletion, which they term the ‘L-pattern’ and the ‘N-pattern.’ Gaps in verbal paradigms either exhibit the L-pattern (e.g., *pacer* ‘graze’) or the union of the N- and the L-pattern (e.g., *abolir* ‘abolish’). Further evidence for the relevance of morphomic patterning comes from first conjugation verbs, which never display stem allomorphy and hence no N- or L-pattern. As the paper notes, this class also does not contain defective verbs. Although the authors do not provide an account for why certain verbs are defective, they argue convincingly that these gaps must be tackled at a level more abstract than morphological surface forms as defectiveness is sensitive to a general and recurring morphological pattern that also conditions stem allomorphy. Another observation in the paper, alluded to above, is that “defective verbs of learned origin never show any kind of allomorphy” (p. 109) in that they prevent otherwise expected root allomorphy in their non-defective cells. The authors suggest that defectivity and the suppression of root allomorphy are two means to achieve the same end, namely to maintain a uniform stem form throughout the paradigm. In all cells in which allomorphy might potentially occur, it is overwritten by either regularization or defectiveness.

In *The Search for Regularity in Irregularity: Defectiveness and its Implications for our Knowledge of Words* Marianne Mithun draws together data from Central Alaskan Yup'ik and the Iroquoian language Mohawk to argue that regularly inflected word forms must be lexically stored to at least some extent. According to this argument, if all inflected word forms were produced by general rules, defectiveness should not come about. The description of the empirical facts that the argument is based on is somewhat wanting, however. In particular, it is not at all clear that the data discussed in the paper do indeed instantiate gaps. To give just one example, Mithun provides the case of possessed nouns, which bear a portmanteau morpheme marking both the number of the nominal as well as agreement with the possessor. 'My papers (plural)' would be rendered *kalika-nka* 'paper-1SG/PL.' For 'my two papers' Mithun's informant replies "My two. That's hard. It just jumps to plural. There is no dual." (p. 129) and provides the form *kalika-nka malruk* 'paper-1SG/PL two.' Mithun takes this to show that there is a gap here. However, the discussion in the paper does not make it unambiguously clear that this is the right conclusion to draw. After all, the speaker does produce a morphological form for the dual, albeit one that is homophonous to a plural form. Mithun does not present evidence that more is going on than run-of-the-mill syncretism between non-defective cells. The informant's reaction may be taken to simply indicate that there is no designated morphological dual form, as the task at hand was one of paradigm elicitation. This situation is representative of the additional data Mithun provides. In all cases there is a licit form, albeit one that is syncretic with some other form. Apart from this issue regarding the interpretation of the empirical facts, the paper's conclusion in favor of lexical storage of regular word forms is insufficiently developed. That the mere existence of gaps is not incompatible with a rule-based production of regular word forms is demonstrated by the papers by Anderson, Löwenadler, and Lukács et al., who invoke phonotactic constraints against certain surface forms, as well as Boyé & Cabredo Hofherr and Stump, who stipulate gaps at some point in the morphological algorithm. It is also not evidently true of predictability-based approaches to the acquisition of gaps like Sims & Daland (2008). It seems fair, then, to say that the existence of paradigmatic gaps does not all by itself lead to the conclusion that whole word forms are stored. Further elaboration of the argument would have made it more comprehensible.

Milan Rezac's *Ineffability Through Modularity: Gaps in the French Clitic Cluster* presents a meticulous study of illicit clitic combinations in French. The paper argues that certain gaps are visible to syntax and hence may be repaired by resorting to designated syntactic structures which are ungrammatical otherwise, while other gaps are morphological in nature and invisible to syntax. This state of affairs is taken to support the view of *morphophonology-free syntax*, according to which syntax and morphophonology are modular and separate. Specifically, Rezac argues that the gaps in French clitic clusters invalidate globalist approaches to morphosyntax, which predict that morphological gaps should license syntactic repairs, contrary to fact. Empirically, Rezac demonstrates that the Person Case Constraint, which rules out combinations of 3rd dative and non-3rd accusative clitics, gives rise to syntactic gaps, as it is repaired by an otherwise ungrammatical usage of full pronouns. Based on evidence from floating quantifiers, Rezac argues that this emergence of full pronouns is indeed syntactic. Other impossible combinations of clitics do not license such syntactic repairs. These, Rezac concludes, are morphological and hence detached from syntax. Rezac continues to identify a number of sources for this latter type of gap. Some arise due to a morphological version of the Obligatory Contour Principle (e.g., **en en* 'GEN GEN,' **me leur* 'me.DAT them.DAT'). Others appear to be at least partly conditioned by phonotactics (e.g., **lui y* [(l)qii] 'him.DAT LOC'). Several gaps are analyzed as the result of processing or parsing difficulties, where a locative clitic may be misparsed as a dative due to similarity in their underlying featural make-up. Finally, Rezac purports that certain combinations of locative and genitive clitics are ill-formed because they are not linearizable. The paper notes two more gaps, for which no explanation is advanced (combinations of neuter clitics with others and mediopassive *se* plus dative clitics).

Gregory Stump's paper *Interactions between Defectiveness and Syncretism* investigates how gaps may relate to syncretism, drawing on evidence from various stages of Sanskrit and Prākṛit. Stump identifies three interactions: (i) defectiveness overwriting syncretism, (ii) syncretism overwriting defectiveness, (iii) syncretism determining the domain of defectiveness. To illustrate these concepts, consider a hypothetical paradigm constituted by some feature with the values A, B, C and a second feature with the values D, E, resulting in six paradigm cells. Suppose furthermore that the cells {A,D} and {B,E} are syncretic. If all and only cells bearing the feature value E are defective, several logical possibilities arise. First, all the cells {A,E}, {B,E}, and {C,E} may be defective. In this case, defectiveness destroys the syncretism between {A,D} and {B,E} as the latter is defective while the former is not. Second, only {A,E} and {C,E} are defective, while {B,E} remains syncretic with {A,D}. Here the syncretism between the two cells overwrites the defectiveness of cells bearing the feature E. Finally, defectiveness may coincide with the syncretism. In this case both {A,D} and {B,E} are defective so that the domain of defectivity follows the syncretism pattern. To account for the three modes of interactions between defectiveness and syncretism he identifies, Stump develops an analysis in Paradigm Function Morphology, distinguishing between *content paradigms* and *form paradigms*. Content paradigms comprise morphosyntactic feature combinations; form paradigms contain morphological surface forms. According to Stumps' analysis, defectiveness arises if the Paradigm Function is not definable for some input. If only certain cells of a content paradigms are definable, defectiveness will cut through patterns of syncretism, resulting in (i). If, by contrast, definability is stated over cells of form paradigms, defectiveness patterns with syncretism, either by applying only to cells which are not syncretic (i.e. (ii) above) or only to cells which are ((iii) above). The evidence brought forth for the interactions between defectivity and syncretism discussed by Stump is, by necessity, indirect. The argument presupposes that some cell ({B,E} in the example above) is defective at some level of representation and syncretic at some other level. Evidently, this state of affairs may not be directly observed but only deduced. Stump focuses on system-wide patterns of syncretism, which hold for a large number of items and are thus independent of the particular exponents and lexemes. For example, all declensional paradigms in Sanskrit exhibit syncretism between the nominative and the accusative in the dual. Stump presupposes that this pattern also holds of the pronoun ENA, in spite of the fact that ENA lacks nominative forms. This is, of course, by no means a necessary conclusion. It does, however, strike me as a reasonable one.

Regarding the difference between defectivity of content paradigms and form paradigms outlined in the volume's introduction as well as Stumps' paper, it is noteworthy that the majority of papers in the present volume situate defectiveness at the level of the form paradigm. Anderson, Boyé & Cabredo Hofherr, Löwenadler, Lukács et al., Maiden & O'Neill, Rezac and Stump describe cases of defectiveness that are the result of properties of morphology, either because the resulting representation would violate a phonotactic constraint (Löwenadler, Lukács et al., Rezac), or because defectiveness is found to conform to other exclusively morphological patterns (Boyé & Cabredo Hofherr, Maiden & O'Neill, Stump) or because of the absence of some required morphological form (Anderson, Boyé & Cabredo Hofherr). Defectiveness at the level of morphosyntactic features is alluded to only in Rezac's and Stump's papers. In the remaining two papers of the volume (Kalnača & Lokmane and Mithun) defectiveness appears to be arbitrary, correlating with neither a class of morphosyntactic features nor morphology-internal properties. Incidentally, these are the two papers where the description does not make it unambiguously clear that it is defectivity, rather than plain syncretism, that is at stake.

The prevalence of form-based patterns of defectivity is remarkable as it corroborates previous work indicating that the distribution of gaps is by no means arbitrary and obeys independently motivated phonological wellformedness requirements and more general

morphological patterns of, e.g., stem allomorphy. The papers in the volume thus provide a wealth of information about the empirical properties of gaps that will certainly prove very valuable in future studies of the phenomenon.

Most papers in the volume that make suggestions as to how paradigmatic gaps may come about concur that they are at least in part the result of some extrinsic stipulation on morphology. This is especially obvious for the articles by Boyé & Cabredo Hofherr and Stump, which explicitly stipulate gaps by either the non-existence of some stem or the non-definedness of the paradigm function for some inputs. It is also true for the papers that point out the role of phonotactic constraints on paradigmatic gaps (Löwenadler, Lukács et al., Rezac) as it is clear in each case that not all cases of defectiveness can be attributed to such a constraint, or conversely, that certain existing output forms violate the alleged constraint as well. These views thus adhere to Baerman & Corbett's claim that "any coherent model of inflectional morphology assumes that there will be productive, default mechanisms that permit the generation of a paradigm from any stem whatsoever" (p. 2) so that special restrictions are necessary to build defectiveness into these systems.

While this is a reasonable position, I would like to draw attention to a line of research that tackles the problem from the opposite direction but is not represented in the book. This type of analysis aims to account for gaps by only making use of principles that are independently motivated by data not exhibiting gaps. Examples are Citko (2005) and especially Kratzer (2009). While these two authors work within Distributed Morphology, a parallel reasoning seems fully compatible with word-and-paradigm approaches like Paradigm Function Morphology as laid out in Stump (2001) or Network Morphology (Corbett & Fraser 1993, Evans et al. 2001) as well. The underlying intuition is that the principles that determine how morphology realizes syntax already give rise to undefinedness for certain inputs without having to explicitly stipulate such undefinedness. In Distributed Morphology, for example, it is a commonplace assumption that morphology inserts the most specific exponent fulfilling the Subset Principle for some input. This has the straightforward effect that there is no such exponent if either no marker fulfills the Subset Principle or if there are several markers that are equally specific (e.g., by containing the same number of features). In such cases, morphological insertion simply breaks down, failing to produce an output and thus resulting in a gap. As for Stump (2001), two stipulations ensure that the Paradigm Function is well-defined for all licit inputs: first, the *Identity Function Default* makes sure that there is at least one applicable rule in each rule block for every input; second, the *Pāṇinian Determinism Hypothesis* states that "[c]ompetition among members of the same rule block is in all cases resolved by Pāṇini's principle" (p. 23), guaranteeing that competition is always resolvable. Interestingly, if these stipulations are abandoned, the realization function is not necessarily defined for all inputs in the same ways as mentioned for Distributed Morphology above. Thus, instead of stipulating that the Paradigm Function is in principle always defined and then imposing additional stipulations to the effect that it may be not defined in certain cases, it seems a viable alternative to dispense with the starting assumption that competition is always resolvable. Under such an approach, paradigmatic gaps are not taken to be intruders into an otherwise flawless system but natural consequences of the way the system itself is set up.

In sum, the volume provides insightful and highly welcome contributions to the ongoing study of paradigmatic gaps. The articles document recurring patterns in diverse languages and, for the most part, propose intriguing and thought-provoking analyses, many of which share core insights.

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