

# Features

*Perspectives on a Key Notion in Linguistics*

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## Towards a typology of grammatical features

*Anna Kibort*

### 4.1 Introduction<sup>1</sup>

Classification of linguistic elements according to their inflectional form is a key part of language description, formal syntactic theorizing, and most computational linguistic applications, and has its roots in ancient models. Matthews (1991: Chapter 10; summarized in Blevins 2006: 390) observes that classical grammars approach grammatical analysis essentially as a problem of classification: '[a]n utterance is divided into parts, which are assigned to word classes and then subclassified in terms of their "accidents" or properties.' Such properties, widely referred to as features or categories, express what is shared by different linguistic elements, as opposed to what is idiosyncratic. In contemporary linguistic practice, any such properties may be found labelled as 'morphosyntactic features'. However, if the term 'morphosyntactic' is to be understood strictly as 'relevant to both the morphological and the syntactic component of the language', we find on closer analysis that many such features are not relevant to syntax, though they often encode semantic distinctions.

For a feature, being 'relevant to syntax' requires involvement in either syntactic agreement or government. The features of gender, number, and person are typically involved in agreement, and the feature of case is typically involved in government. If so, these are indeed morphosyntactic features. Conversely, while in many languages the feature of tense encodes regular semantic distinctions, it is *not* required by syntax through the mechanisms

<sup>1</sup> The research reported in this chapter was undertaken within an ESRC-funded project (grant number RES-051-27-0122) entitled 'Grammatical features: a key to understanding language'. The support of the ESRC is gratefully acknowledged.

of either agreement or government. On this basis, if in a given language syntax is not sensitive to the tense value of the verb, in hypothesizing the syntactic rules for the language we do not have to involve tense.

This chapter investigates a range of linguistic features which can be recognized through inflectional morphology. It offers a typology of grammatical features – distinguishing between morphosyntactic, morphosemantic, and purely morphological features – as well as clear criteria for their identification. I begin by assuming that what we recognize as features are meanings or functions which are correlated with different forms of inflected words. Section 4.2 discusses some concepts which are essential for the proposed feature typology, including agreement and government, realization and assignment of a feature value, and systematic multirepresentation of a feature value. Section 4.3 describes the construction of a catalogue of possible feature realizations which provides the basis for defining feature types in Section 4.4. Namely, after identifying the feature and its value on an element, I ask where the feature is interpreted, and on this basis establish the method of the realization of this feature value on the element. By comparing and relating different methods by which feature values are realized on different elements, I arrive at a systematic catalogue of possible feature realizations. I then adopt a different perspective and compare features as superordinate categories rather than individual instances of feature realizations. I demonstrate that adopting this perspective allows us to define the three types of grammatical features – morphosyntactic, morphosemantic, and morphological – in terms of realization options available to their values. I also give a brief overview of possible morphosyntactic features which have been found in the world's languages. Section 4.5 contains a summary of the issues discussed in earlier sections, and a heuristic for recognizing feature types in a given language. In Section 4.6, I apply the criteria for recognizing feature types to a set of difficult data and present a case study of Kayardild, an extreme case-stacking language of Australia. Kayardild's case-like inflections have been put forward as possible candidates for agreement in case, tense, mood, and polarity. I examine the phenomena in question and conclude that some of them are better analysed as governed cases, and others as morphosemantic features rather than morphosyntactic features of agreement. Finally, in Section 4.7, I draw conclusions from the preceding discussion for the inventory of morphosyntactic features, and offer closing remarks in Section 4.8.

## 4.2 Essential concepts for a typology of grammatical features

In this section I set out some concepts which are essential for the proposed feature typology to assist with terminological clarity.

### 4.2.1 *Features and values*

In discussion of features, labels such as ‘gender’, ‘person’, or ‘tense’ are often used to refer both to the value of the feature and to the feature as a superordinate category. For example, the term ‘gender’ is used both for the particular classes of nouns (a language may have two or more genders) and for the whole grammatical category (a language may or may not have the category of gender). Similarly, we refer to an ‘inventory of features’ (categories, or features as such), while at the same time we talk about ‘feature checking’ or ‘unification of features’ in syntax (checking or unifying feature specifications, that is, features and their values). However, it is important to maintain the distinction between ‘features’ and their ‘values’ while attempting to construct a taxonomy or typology because the characteristics or behaviour of the feature as such will not be the same as the characteristics of a feature value.

The relationship between the concept of ‘gender’ and the concepts ‘masculine’, ‘feminine’, ‘neuter’, or between the concept ‘case’ and the concepts ‘nominative’, ‘accusative’, ‘genitive’, etc., has been referred to with the pairs of terms shown in Table 4.1 (based on Carstairs-McCarthy 1999: 266–267, expanded).

Following Zwicky (1985), I adopt the terms ‘feature’ and ‘value’. Although the concepts ‘masculine’, ‘feminine’, ‘neuter’; or the concepts ‘nominative’, ‘accusative’,

TABLE 4.1 Terms used to refer to features and values

	<b>superordinate</b>	<b>hyponym</b>
Matthews (1972: 162; 1991: 38–40)	category	property, feature
Wurzel (1984: 61)	Kategoriengefüge [complex of categories]	Kategorien [category]
Bybee (1985)	category	(inflectional) meaning
Zwicky (1985: 372ff.)	feature	value
Mel’čuk (1993a)	category	grammeme
Stump (2005: 50)	inflectional category	morphosyntactic property

‘genitive’, etc., are all ‘values’, further questions can be asked about the relationships among them. One question concerns the partitioning of the feature space in general between the available values (see, for example, attempts to arrive at definitions of feature values for an ontology of linguistic description);<sup>2</sup> another concerns the structuring within the values available for a particular feature in a particular language (see, for example, the structuring of gender values discussed in Corbett 1991, or the structuring of number values discussed in Corbett 2000).

In the construction of the catalogue of the different types of feature realization, I examine instances of feature values found on elements.

#### 4.2.2 *Features in the components of linguistic description*

A first classification of features that can be proposed is according to the component of linguistic description for which it is justified to use a particular feature: morphology, syntax, semantics, or phonology (see Corbett this volume, Section 2.2.1). A feature operating exclusively within one component, for example morphology, can be referred to as a ‘(purely) morphological feature’, and so on. The term ‘morphosyntactic feature’ implies that a feature operates across at least two components: morphology and syntax. Features recognized through inflectional morphology are often of this type – examples are gender or person. Typically, such features also correlate with semantic distinctions, so in fact they interface three components: morphology, syntax, and semantics. The aim of this chapter is to suggest a way of distinguishing between the different types of features that involve the morphological component. In Section 4.4.1, I offer definitions of a morphosyntactic, morpho-semantic, and morphological feature by referring to the realization options available to their values.

#### 4.2.3 *Agreement and government*

Both agreement and government are concepts that are necessary to describe inflectional morphology. They are both mechanisms which demand the realization of a feature value on an element in a clause or phrase. In agreement, as in *she*(SG) *runs*.SG, the target element (*runs*) carries ‘displaced’ grammatical information (SG), relevant to another element (*she*) (Moravcsik 1988: 90). In government, as in Polish *piszę książkę* ‘write.1SG book.ACC’, the governee element (*książkę*) carries grammatical information (ACC) expressing

<sup>2</sup> A good illustration is provided by definitions of gender and number values found in the current version of the General Ontology for Linguistic Description (GOLD); see [www.linguistics-ontology.org/gold.html](http://www.linguistics-ontology.org/gold.html).

the relationship it bears to another element (*piszę*), like a ‘brand mark’. Thus, in both agreement and government the demand for the specific feature value does not come from the target or the governee but from a ‘controller’ (in the case of agreement) or a ‘governor’ (in the case of government). In this way, agreement and government ‘share the characteristic of being syntactic relations of an asymmetric type’ (Corbett 2006: 8) with regard to the status of the elements which participate in the featural dependency.

However, while the feature value of the target of agreement is determined by the feature value of the controller, the feature value of the governee is determined just by the presence of the governor. Concurring with Zwicky (1992: 378) I assume that while a controller of agreement bears the feature value it requires of its target (the feature values are expected to ‘match’), a governor does not bear the feature value it requires of its governee. Therefore, while government is also asymmetric with regard to the possession of the feature specification by the elements, agreement, in contrast, is symmetric. Despite this general principle, note that agreement mismatches may occur for various reasons (see Corbett 2006: Chapter 5), a governor may have the relevant feature specification coincidentally,<sup>3</sup> and also that the presence of a feature value may be covert due to various limitations of inflectional morphology.

#### 4.2.4 *Systematic multirepresentation of a feature value*

Both agreement and government can apply to more than one element in the clause simultaneously, which may result in multiple occurrence of the same feature specification in the domain. In agreement, we find that an element may control a set of targets in the clause (and beyond). For example, in a language which has gender, a head noun may control agreement in gender with an attributive element, a predicate, a relative pronoun, and a personal pronoun. The Agreement Hierarchy (Corbett 1979; 2006: 206–237), which refers to the possible domains of agreement (that is, the controller together with its targets), captures the set of constraints on options available for agreement.

In government, we find that an element typically governs a constituent or unit consisting of one or more elements. The most familiar example of government of a feature over a unit is the assignment of case to (the elements within) a noun phrase. When a noun and its adjectival modifier are in the

<sup>3</sup> Corbett (2006: 8, fn. 10) notes that ‘[for] example, if we have a verb which governs the genitive, a participle formed from it may be in the genitive. The fact that this participle then governs the genitive is still a matter of it being present, and does not depend on its being in the genitive.’

same case, it is because the case value is imposed on both simultaneously. Corbett (2006: 133–135) discusses the possibility of viewing this type of feature multirepresentation as agreement and concludes that it ‘will not count as canonical agreement, if we take seriously the issue of asymmetry’. If one accepts the view of syntax which is based on the notion of constituency, when the noun and its modifier are a constituent ‘it follows that we have matching of features within the noun phrase resulting from government (rather than agreement in case)’.<sup>4</sup> Note that the same analysis holds for languages which allow more than one case to be stacked – this is an important point for the discussion of Kayardild examples in Section 4.6.

Apart from agreement and government, we find one other mechanism behind simultaneous inflectional marking of the same information on more than one element in the domain: semantic choice. A feature value may be selected for a constituent or an ‘informational unit’<sup>5</sup> – e.g. a noun phrase, verb phrase, verbal complex, or the clause – on the basis of semantics, and the inflectional morphology in a particular language may demand that the feature value is realized on several elements which are members of the constituent or unit. In this situation, multiple elements will be expressing the same value of a morphosemantic feature simultaneously. Examples of a semantically imposed feature value which may be realized on several elements simultaneously are: number, definiteness, or semantic case imposed on a noun phrase (see, for example, Givón 2001: 427), or a verbal feature imposed on (the elements making up) a verbal complex.

In all cases where a feature value is selected for and interpreted at the level of a constituent or informational unit, whether due to government or semantic choice, the ‘rule’ that determines which elements have to realize particular inflections is found in the lexicon in the form of a generalization over the relevant part of speech or a subclass within a part of speech.

It is also possible that simultaneous marking of the same information on more than one element in the clause could be due to a semantic or pragmatic

<sup>4</sup> A different conclusion follows for those who accept a dependency view of syntax and treat the noun as the head of the phrase with the adjective depending on the noun (see, for example, Mel’čuk 1993b: 329, 337). Corbett (2006: 133, 135) argues that this would still be less canonical agreement than, for example, agreement in gender because the imposed case value is not inherent to the noun; for those who take a constituency-based view of syntax, government of case over the noun phrase is a better analysis.

<sup>5</sup> Evans (2003: 217), discussing Pollard and Sag’s definition of agreement (1988: 237–238) in which they refer to ‘objects’, suggests instead using the term ‘informational entity’. He argues that in this way we can apply it also to situations where tense, aspect, or mood are involved, not just entities such as participants.



choice made for each element individually for the same semantic or pragmatic reason ('what's once true stays true'). In other words, the multirepresentation of a feature value in the clause could be due to coinciding individual semantics of the elements bearing the feature value. A clear example of this type of multirepresentation of a feature value would be a feature of respect whose marking could be justified semantically for every element on which it appears. Corbett (2006: 137) remarks: 'There are . . . languages where the existence of multiple honorifics suggests an agreement analysis, but where it is not clear that this is justified. It may be argued that each honorific is determined on pragmatic grounds (and that they agree only in the sense that they are being used in the same pragmatic circumstances).'

Finally, some instances of semantically justified multiple marking of information may, arguably, not even be an expression of a morphosemantic feature. This applies to phenomena such as the so-called 'negative concord', where, if the principal marker of information (negation) is there, it requires the presence of the second negation marker. Arguably, the phenomenon does not qualify to be a 'feature' because 'positive' polarity is not information that can be assigned to a value – it is, rather, simply lack of information.<sup>6</sup> Corbett (2006: 29) suggests that where the selection of additional information requires that it has to be repeated somewhere else in the clause, such instances can be termed 'concord'.<sup>7</sup>

The diagram shown in Figure 4.1 summarizes the defining distinctions between agreement and government, and illustrates how syntactic space may be mapped out with features recognized through their realizations on elements in a domain.

#### 4.2.5 *Assignment, interpretation, and realization of a feature value*

Finally, a terminological note is due on the term 'assignment'. This term is used commonly with reference to verbs which 'assign case' values. It is also used with reference to gender values, as in Corbett (1991), who discusses mechanisms for allotting nouns to different genders; namely, native speakers

<sup>6</sup> In order to determine whether such phenomena are indeed not features, or whether they are perhaps less canonical features, we would have to analyse them within a canonical framework. This work is in preparation.

<sup>7</sup> The term 'concord' is sometimes used interchangeably with 'agreement'. The view taken here is that it is worth reserving the term 'agreement' for the featural dependency that involves a controller and a target. Since Corbett (2006: 29) suggests reserving the term 'concord' for a strictly non-featural repetition of additional information in a clause, we are left with no term(s) to refer uniquely to the distributive marking of elements of the expansion of a phrase (whether dictated by government over a phrase or by semantic choice). However, I have not attempted to introduce new terms for the phenomena falling within this range.

		Status of elements involved	
		symmetric	asymmetric
Possession of the feature	symmetric	systematic multirepresentation	agreement
	asymmetric	(no features to manipulate)	government

FIGURE 4.1 Types of featural dependency in a domain

have the ability to ‘work out’ the gender of a noun, and models of this ability have been called ‘gender assignment systems’.

So far, the concept of ‘assignment of a feature value’ has not been commonly used outside these two situations, even though it might be useful as a general term to refer to the values of any feature. This idea is not adopted for this chapter, but if it were, the locus of ‘assignment’ of a feature value would correspond to what is referred to here as the locus of ‘interpretation’ of a feature value. This contrasts with the locus of ‘realization’ of a feature value, which is where we find the feature value expressed with a particular lexical item. Hence, a case value is ‘assigned’ to a constituent – which means that it is interpreted at a phrasal level – but it is ‘realized’ on particular elements (nouns, adjectives) which are members of the constituent.

Note that when a gender value is ‘assigned’ to a noun, its realization on that element is typically not overt (see also Section 4.4.3), although contextual realizations of gender values on targets of agreement with the controlling noun are overt.

### 4.3 Constructing a catalogue of possible feature realizations

In order to arrive at a morphosyntactic analysis of a clause such as (Polish):

- (1) kupił-em                      dwie                      ładne  
 buy(PST)-M.1SG      two(PL).NONVIR.ACC      pretty.NONVIR.PL.ACC  
 szklanki  
 glasses(NONVIR).PL.ACC  
 ‘I bought two pretty glasses.’

we have to know what inventory of features and values to draw from, that is, which semantic distinctions are grammaticalized as inflectional categories in the language, and how many value distinctions the language makes within each feature.

Establishing an inventory of features and values for a language can be a complex issue. An example of language in which justifying a feature requires careful analysis is Archi (Daghestanian), where the feature in question is person. This language has no phonologically distinct forms realizing person, nor does the standard description of Archi involve the feature person (only gender and number). However, agreement patterns in Archi indicate that this language does require us to recognize a person feature, even though it is a non-autonomous one (Chumakina, Kibort, and Corbett 2007).

There are also many arguments in the literature about the number of values for various features in different languages. Most problems with establishing the number of values arise either when there is conflation of forms realizing two different values (i.e. syncretism), or when different forms realize one and the same value (resulting in distinct inflectional classes, heteroclisis, or deponency).

In an inferential-realizational approach to inflectional morphology, which is adopted here after Stump (2001), the realizations of feature values are identified by establishing a paradigm correlating inflected forms with morphosyntactic properties. The cells in the paradigm of forms associated with a lexeme are regarded as pairings of a stem with a morphosyntactic property (or a morphosyntactic property set), to yield an inflected word form which is the realization of the pairing. Examples of how to establish the paradigm for case in Russian can be found in Zaliznjak (1973) and Comrie (1986), who discuss whether to recognize one or two genitive cases, and whether to distinguish prepositional case from the locative; for further discussion of the locative see Brown (2007). Examples of discussion regarding the paradigm for gender can be found in Schenker (1955), Zaliznjak (1964), and Corbett (1991: Chapter 6) who describes principles for determining the number of genders in a language.

In complex gender systems, with mismatches between the number of agreement classes of nouns and the number of inflectional forms on agreement targets (as in Romanian, which has three agreement classes and two target genders each in the singular and plural), Corbett (1991: 150ff.) argues that a distinction has to be made between controller genders and target genders. However, since target genders are only groupings that capture the pattern of syncretism in agreement forms across the set of targets, when

labelling Romanian gender values realized on elements it may be more appropriate to refer to the agreement classes of nouns.<sup>8</sup>

The gender system of Polish poses a different challenge with regard to the number of values, where subgenders ('animate', 'inanimate', and 'personal') have been proposed in addition to the main genders (Brown 1998). Corbett (1991: 163) argues that some agreement classes of nouns can be analysed as subgenders, rather than as full genders, when they control minimally different sets of agreement, that is, agreements differing for at most a small proportion of the morphosyntactic forms of any of the agreement targets. Thus, a subgender is an additional gender distinction within a minimal subset of the paradigm.<sup>9</sup>

Having established the inventory of values to draw from, and identified the feature and its value on the element we are analysing, we can compare the sources of feature specifications found on different elements and begin constructing a systematic catalogue of different types of feature realization. Paraphrasing Zwicky (1992: 369), I am going to find an appropriate place for the differently behaving feature values in an articulated framework of featural dependencies.

#### 4.3.1 *Contextually realized and inherently realized feature values*

Following Anderson's work on inflection types (1992: 82–83), Booij (1994, 1996) distinguishes two types of inflection: contextual – dictated by syntax (e.g. number agreement on Dutch verbs), and inherent – not required by the syntactic context, although it may have syntactic relevance (e.g. number on Dutch nouns, tense on verbs). Corbett suggests that the distinction can be applied to features in general, specifically that it 'concerns the feature in relation to where it is realized' (2006: 123). Therefore, a contextual feature is

<sup>8</sup> The controller genders in Romanian are usually called 'masculine' (for class I nouns), 'feminine' (for class II nouns), and the third, disputed gender (of class III nouns, which shares the singular form of inflection with class I nouns and the plural form of inflection with class II nouns) is sometimes called 'neuter' and sometimes 'ambigeneric'. The latter is a useful term provided it is used not to imply that there is no distinct gender but rather that the situation is different from the more common Indo-European three-gender system in that the third gender in Romanian is non-autonomous.

<sup>9</sup> Brown (1998) suggests that the difficult case of Polish masculine personal nouns (often labelled as 'virile' gender nouns) can be analysed as a main gender distinction if we recognize 'masculine personal' as one of the values of the main gender system, and three different values for the subgender of animacy: inanimate, animate, and person. The person subgender can then be analysed as fusing with masculine to create the new gender masculine personal (when it spreads to the nominative case, and from there to agreement targets which do not realize case). After careful consideration of gender agreement in all targets including numeral phrases, Przepiórkowski (2003) offers an alternative hierarchy of Polish genders which includes eleven genders.

one dictated by syntax, while an inherent feature is not required by the syntactic context (for the particular item), although it may have syntactic relevance.

Since both agreement and government are syntactic mechanisms that demand the realization of a feature value on an element in a domain, feature values determined through agreement and government can be regarded as being realized ‘contextually’. Such feature values can also be thought of as information that logically originates outside the element on which it is found. In contrast, an inherently realized feature value can be thought of as information that logically belongs to the element on which it is found. Thus, features found on controllers of agreement are inherent features, while features found on agreement targets and on governees are contextual features.

We can now construct a diagram representing the first few subdivisions within the catalogue of possible feature realizations. The diagram includes the inherent vs. contextual distinction, and within the contextual realization distinguishes between feature values determined through agreement and those determined through government (see Figure 4.2).

Examples of contextual features of agreement are: gender – on adjectives, verbs, pronouns; nominal number – on verbs, relative and personal pronouns; person – on verbs, and on nouns in possessive constructions; case – on adjectives in predicate nominal constructions; respect – (honorifics/politeness markers/special agreement) on verbs; and definiteness – (non-autonomous inflection, but possibly agreement effects) on adjectives (see below). An example of a contextual feature of government is ‘structural’ case on

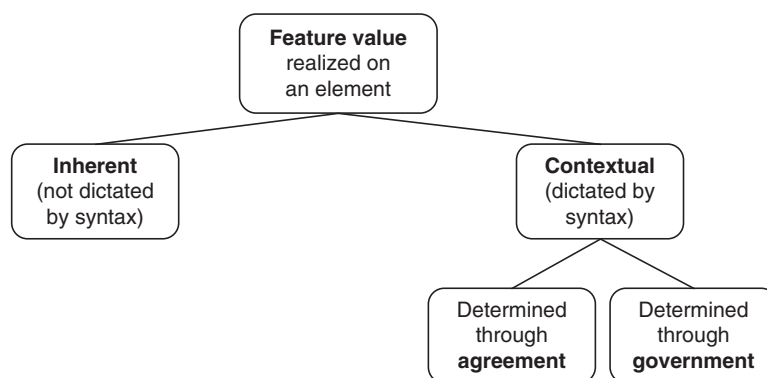


FIGURE 4.2 Inherent vs. contextual distinction in the catalogue of feature realization types

nouns or noun phrases. On the other hand, examples of inherently realized feature values are: gender and number values on nouns, person values on pronouns (and arguably nouns, too – though by default), and tense values on verbs.

The following illustrate the less common features of agreement:

*Case* – in Polish, the genitive case value on the predicate adjective matches the genitive case value of the quantified noun of the subject noun phrase (Dziwirek 1990: 147; Corbett 2006: 134):

- (2) Sześć        kobiet                był-o        smutnych.  
       six.NOM    woman.PL.GEN    was-N,3SG    sad.PL.GEN  
       ‘Six women were sad.’

*Respect* – languages which have agreement in respect include Muna (Austro-nesian), Maithili (Indo-Iranian), Tamil, and Bavarian German; the following illustrates the use of honorific agreement markers in Maithili (Stump and Yadav 1988; Corbett 2006: 137–138):

- (3) tohar                bāp                aelthun  
       your.MID\_HON    father.HON    came.3\_HON.2\_MID\_HON  
       ‘Your (mid-honorific) father (honorific) came.’

*Definiteness* – in German, definiteness of the determiner dictates the choice of the form of the following adjective (‘weak’ or ‘mixed’ inflection). We observe the correlation: definite articles co-occur in the noun phrase with adjectives bearing ‘weak’ inflection; indefinite articles (and some other elements such as possessive pronouns) co-occur with adjectives bearing ‘mixed’ inflection; and the absence of an article correlates with the presence of fully inflected adjectives (‘strong’ inflection) (cf. Corbett 2006: 95–96). Hence, it can be argued that we observe agreement effects (systematic covariance), though the exponence of definiteness on adjectives is non-autonomous.

Thus, a feature value can be realized contextually or inherently. When a feature value is realized contextually, its realization is determined by the syntactic rules of agreement or government. When a feature value is realized inherently, its realization follows only the rules specified by inflectional morphology which require a particular feature to be realized on a particular part of speech or a subclass within a part of speech. A gender assignment system, which classifies nouns into genders on the basis of their inherent formal or semantic properties, is a set of rules specifying the inherent realization of the values of gender.

#### 4.3.2 *Fixed vs. selected feature values*

A further question that can be asked about inherently realized feature values is whether the particular value is lexically supplied to the element, or whether it has been selected from a range of available values. The following example illustrates the distinction. Both gender and number values are inherently realized on nouns; they logically ‘belong to’ nouns (in the case of gender) or noun phrases (in the case of number) even when they are used to demand matching agreement on targets. But they are different in that a gender value is *typically* fixed for a particular noun, while a number value is *typically* not fixed but selected from a set of options.<sup>10</sup> (Counter-examples, that is instances of a selected gender value, are multiple-gender nouns such as *baby* which can be assigned any of the available English genders;<sup>11</sup> and instances of a fixed number value – pluralia tantum such as *scissors* or *dregs*).

Furthermore, since inherent feature values are ‘not dictated by syntax’, they can be found on any elements, not necessarily only on controllers of agreement. Examples include features such as tense, aspect, mood, evidentiality, voice, topic, focus, and other nominal and verbal features which can be expressed through inflectional morphology in various languages. For the majority of these features, the feature value found on the element is a value selected from a range of values available in the language. So, for example, an inflectional tense marker on a verb can be regarded as expressing an inherently realized value of the feature tense, selected from a range of options. Thus, the catalogue of the possible feature realizations can gain another subdivision: that between the fixed vs. selected distinction within inherent feature realization (see Figure 4.3).

#### 4.3.3 *Semantic vs. formal basis for the selection of a feature value*

Finally, one more distinction can be made within both types of inherently realized feature values, orthogonal to the realization method itself: the distinction between formal and semantic criteria for the selection of a feature value. The distinction between formal and semantic assignment of gender values was proposed by Corbett (1991) to account for the criteria according to which nouns can be allotted to genders. Corbett demonstrates that gender

<sup>10</sup> Note that, otherwise, gender and number seem to be more similar than other features, and that is probably why it may be difficult to define their values independently of each other. The difficulty of counting genders in some languages is almost always due to gender’s interaction with number.

<sup>11</sup> Note that in English the choice of gender is manifested only in agreement with pronouns.

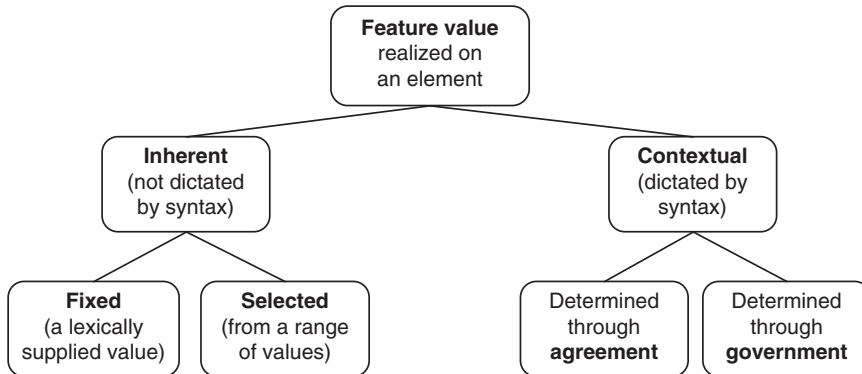


FIGURE 4.3 Fixed vs. selected distinction in the catalogue of feature realization types

assignment systems in languages can be semantic or semantic-and-formal – that is, the set of rules that determine the assignment of inherent gender values to nouns refers to the meaning of words, or a combination of the meaning of words and the form of words. There is always some semantic basis to gender classification in any language that has the feature of gender, though gender values can be semantically transparent to a greater or lesser extent.

Within any gender assignment system, the assignment of the gender value to a particular noun can be attributed either to the noun's meaning or to its form. Where the meaning and the form of the noun conflict in terms of gender assignment, semantic criteria may overrule formal considerations (e.g. Russian *djadja* 'uncle', or Polish *mężczyzna* 'man', *poeta* 'poet', etc., have a feminine form and masculine meaning, and they consistently trigger masculine agreement).

This distinction also proves useful when extended to other features, for example number. Among nouns with a fixed value of number, it can be argued that at least some (e.g. English singularia tantum *happiness*, *poverty*, and other abstract nouns) have their inherent number value assigned on a semantic basis. On the other hand, some others (e.g. English pluralia tantum *scissors*, *dregs*) are assigned their inherent (and fixed) number value on the basis of form.

In many other instances the formal and semantic criteria for the selection of the feature value coincide (e.g. *Mary* is formally singular and denotes a singular referent). Therefore, the distinction between the formal and the semantic basis for feature selection can be considered an optional subclassification within the catalogue of feature realization types (see Figure 4.4).



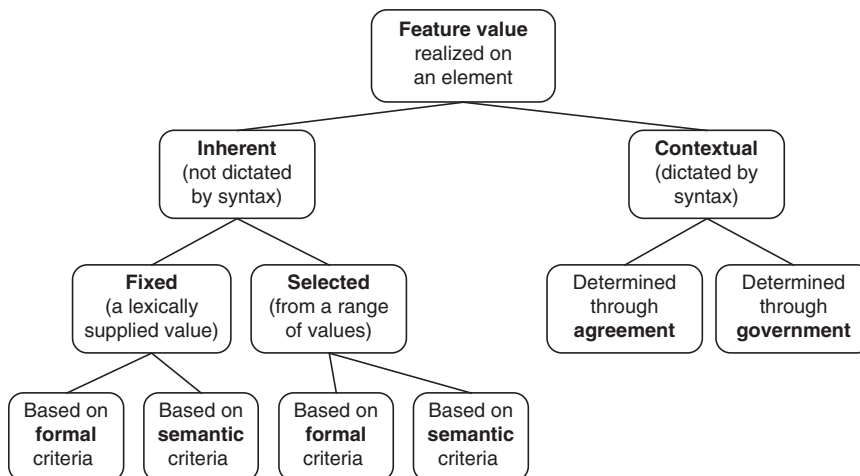


FIGURE 4.4 Semantic vs. formal distinction in the catalogue of feature realization types

4.3.3.1 *Semantic vs. syntactic agreement* The distinction between semantic vs. formal criteria in the selection of an inherent feature value for an element corresponds to a distinction proposed independently elsewhere, that of semantic vs. syntactic agreement.

We have seen that some controllers with a fixed feature value could be seen as embodying a mismatch between their form and their meaning (e.g. *scissors* or *measles*). However, if they trigger consistent agreement, we may conclude that their form–meaning mismatch is resolved pre-syntactically in favour of one of the values (either the formally determined or the semantically determined one). Hence, such mismatch is invisible to syntax. But there are controllers for which the mismatch is not resolved pre-syntactically. Instead, it is visible to syntax and is carried over to the domain of agreement: such controllers induce more than one type of agreement. Furthermore, there are controllers which trigger variable agreement with the same type of target, and controllers which trigger different agreements according to the type of target. Many complex and fascinating examples of variable agreement, and conditions which favour it, are described in Corbett (2006, also references therein to earlier work).

In his discussion of agreement controllers which induce more than one type of agreement, Corbett (2006: 155–160) refers to the traditional distinction between syntactic and semantic agreement:

In the most straightforward cases syntactic agreement (sometimes called ‘agreement *ad formam*’, ‘formal agreement’ or ‘grammatical agreement’) is agreement consistent with the form of the controller (*the committee has decided*). Semantic agreement (or ‘agreement *ad sensum*’, ‘notional agreement’, ‘logical agreement’ or ‘synesis’) is agreement consistent with its meaning (*the committee have decided*). (...) The terms syntactic and semantic agreement are used only when there is a potential choice. In many instances formal and semantic properties of the controller coincide and so agreement is both syntactically and semantically justified (...). I use the labels ‘syntactic agreement’ and ‘semantic agreement’ only when a mismatch gives rise to a potential choice. (Corbett 2006: 155)

Furthermore, Corbett acknowledges that different features may be involved, not just number. Thus, syntactic and semantic agreement are cover terms to describe contrasting agreement possibilities. Controllers which have such possibilities are referred to as ‘hybrid’ controllers. It has been observed that the availability of agreement options for their different targets, as well as speakers’ preferences in the choice of option, are consistent with the Agreement Hierarchy (Corbett 1979, 2006: 206–237).

It is important to emphasize that syntactic and semantic agreement are both instances of agreement. However, in situations when their outcomes would not coincide, syntactic agreement is regarded as more canonical, while semantic agreement is perceived as a ‘mismatch’ of formal feature values between the controller and the target (Corbett 2006: 24).

4.3.3.2 *Hybrid controllers of agreement* Typical examples of hybrid controllers are *committee*-type nouns in English which have a choice of agreement options in the predicate: *the committee has decided* – syntactic agreement of the predicate with the noun; or *the committee have decided* – semantic agreement of the predicate with the noun, common particularly in British English (Corbett 2006: 158, and references therein).

Another representative example, illustrating a choice of gender values, involves Russian nouns denoting professions, like *vrač* ‘doctor’. This noun (and many others in its class) has the morphology typical of a masculine noun, but can denote a male or a female. Therefore, when referring to a female referent, the noun can trigger either syntactic (masculine) or semantic (feminine) gender agreement in an attributive element, as well as a choice of syntactic (masculine) or semantic (feminine) agreement in the predicate. Corbett reports that in this context most speakers opt for syntactic agreement with an adjective, and for semantic agreement with the verb (2006: 158, and his earlier publications on gender).

For hybrid controllers, there is always a choice of the feature value to control agreement on the particular target. Therefore, I conclude that the feature value is selected from the available range, where the range includes the feature value based on formal criteria, and the feature value based on semantic criteria. The choice of the former results in syntactic agreement, while the latter gives semantic agreement. Note that elements (other than hybrid controllers of agreement) which have their feature value selected from a set of options tend to have the value selected on the basis of semantic criteria. This is true of most count nouns which are assigned an inherent number value, or of nouns for which one can select their inherent gender value (e.g. *baby*), or of many different types of elements that realize a value of a morphosemantic feature such as tense, aspect, mood, evidentiality, voice, topic, focus, and other nominal and verbal features expressed through inflectional morphology.

Recognizing the distinction between semantic and formal assignment can be useful for all features, not just those agreement features which participate in agreement mismatches. Furthermore, this distinction is indispensable when trying to explain agreement patterns (including mismatches) in a systematic way.

#### 4.4 A typology of grammatical features

The sections above complete the account of the ways in which a feature value, recognized through inflectional morphology, can be realized on a linguistic element. I now take a different perspective on features and compare features as superordinate categories. My aim is to distinguish between features which are relevant to syntax (morphosyntactic features) and those which are not (morphosemantic features). Also, I want to be able to relate purely morphological features to the other two types. In order to do this, I define a feature as follows: a **feature** is a set of values and the available options for their realization on linguistic elements.

The three types of grammatical features – morphosyntactic, morphosemantic, and morphological – can now be defined in terms of the realization options available to their values.

##### 4.4.1 *Defining morphosyntactic, morphosemantic, and morphological features*

A **morphosyntactic** feature is a feature whose values are involved in either government or agreement. Since agreement requires the presence of a controller which is specified for the feature value it imposes on the target, the values of a morphosyntactic feature may be contextual (when found on targets and governees) or inherent (when found on controllers of agreement). Hence, a morphosyntactic feature is a set of values which have available to

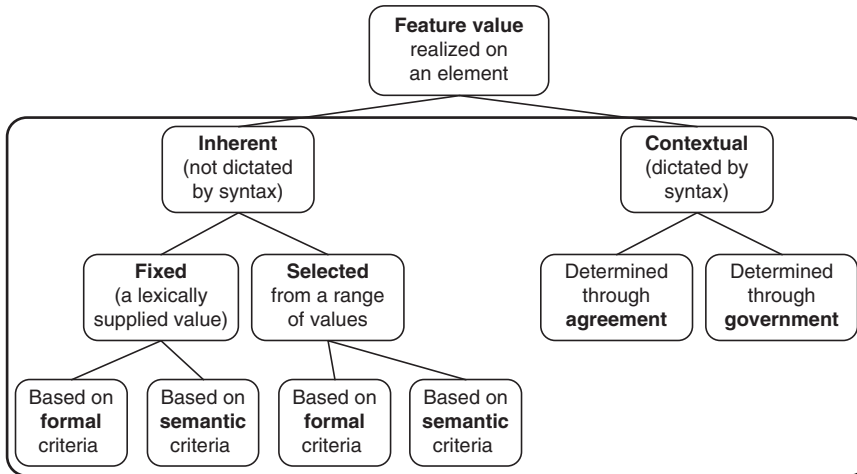


FIGURE 4.5 Realization options available to a morphosyntactic feature

them all of the options identified in the catalogue of realization types, as shown in Figure 4.5.

A **morphosemantic** feature is a feature whose values are not involved in agreement or government but are inherent only. That is, the elements on which the values are found are not controllers of agreement. Because it is not involved in either agreement or government, a morphosemantic feature is not relevant to syntax. Hence, a morphosemantic feature is a set of values which have the realization options shown in Figure 4.6 available to them.

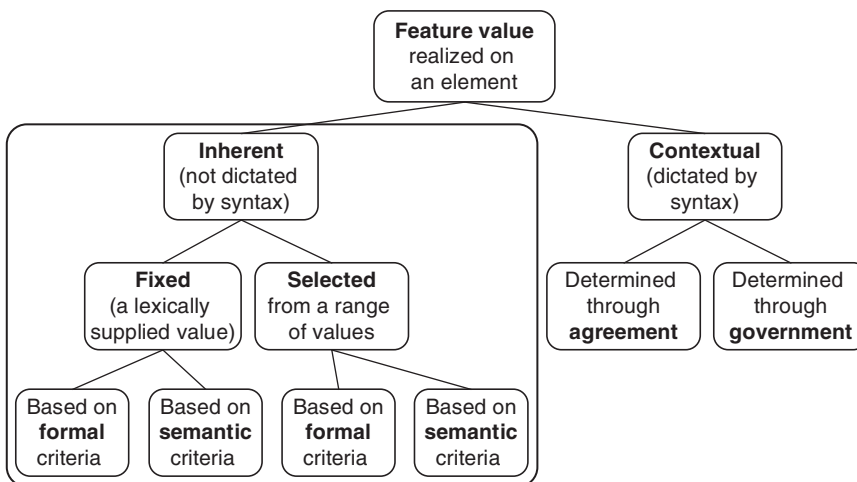


FIGURE 4.6 Realization options available to a morphosemantic feature

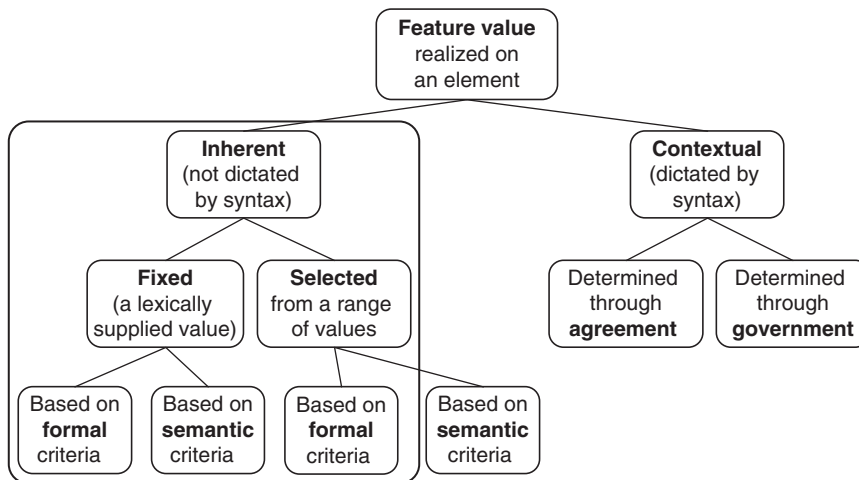


FIGURE 4.7 Realization options available to a morphological feature

Finally, a purely **morphological** feature is a feature whose values are not involved in agreement or government, and are inherent only. Furthermore, the values of a morphological feature do not co-vary with semantic functions (even though there may be instances of free formal variation between values of a morphological feature). Hence, a morphological feature is a set of values which have the realization options shown in Figure 4.7 available to them.

Morphological features have a role only in morphology (hence the possibility of hypothesising ‘morphology-free syntax’). An example of a morphological feature is inflectional class (a ‘declensional class’, or a ‘conjugation’). Morphological features can be arbitrary; they may have to be specified for individual lexical items, hence they are instances of lexical features. Alternatively, they may be predictable, to varying extents, from phonological and/or semantic correlations. That is, given the phonology or semantics of a given lexical item, it may be possible to assign its morphological feature value by an assignment rule, rather than having to specify it in the lexicon (Corbett 2006: 122–123; for more on morphological features, see Corbett and Baerman 2006).

#### 4.4.2 Identifying morphosyntactic features in a language

The definitions above correspond to canonical morphosyntactic, morpho-semantic, and morphological features. No feature in any natural language is expected to have values which are consistently realized in the permitted ways across all relevant elements. However, in a given language, we recognize the feature as morphosyntactic if its values are involved in either agreement or

TABLE 4.2 Morphosyntactic features

	participates in agreement	participates in government
number	✓	
gender	✓	
person	✓	
respect	✓	
case	✓	✓
definiteness	✓	

government for any set of elements. In turn, a morphosemantic feature in a given language is a feature which is inherent only; that is, there are no elements (word classes or lexemes) for which it is contextual.

In the search for possible morphosyntactic features, I have found at least one language (for each feature) in which the features shown in Table 4.2 can be morphosyntactic. However, while some of these are typical features of agreement or government and occur very commonly, others only rarely play a role in syntax. The map in Figure 4.8 shows how they share out the workload in syntax between them.

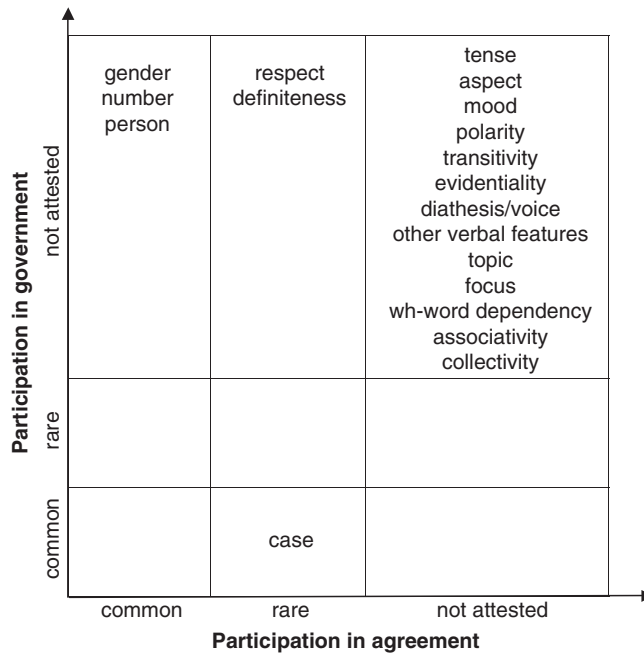


FIGURE 4.8 Participation of various semantic categories in the syntax

The categories which have not been found to participate in either agreement or government are often morphosemantic features.<sup>12</sup>

#### 4.4.3 *Gender and nominal classification*

Gender is perhaps the only feature whose values, when found on controllers of agreement (that is, the gender values inherently assigned to nouns), typically have no overt expression in the majority of languages which have the gender feature. There are languages where gender is marked on nouns of all or most noun classes (Bantu languages, also Berber, especially North Berber – Kabyle, Tashelhit, Tamazight) or on most nouns with the exception of nouns referring to humans (many Arawak languages of South America, e.g. Baniwa and Tariana; Alexandra Aikhenvald, personal communication). However, languages marking genders on nouns are a small minority. Perhaps the fact that gender values are not marked on nouns may be related to the fact that gender is also a feature in which the inherent assignment of the value is predominantly fixed – that is, typically (even though not necessarily), most nouns in languages that have the feature of gender have only one fixed value of gender. Furthermore, the inherent value of gender on the noun is assigned to it on the basis of some specific criterion, semantic or formal. Therefore, in fact, the gender of a noun in a gendered language need not even be specified in the noun's lexical entry, since it can be derived from other information – semantic, morphological, or phonological.

Because of these characteristics, the term 'gender' is most commonly used to refer to classes of nouns within a language which are 'reflected in the behaviour of associated words' (Hockett 1958: 231). This is also the definition adopted by Corbett (1991), who argues that in order to define gender we have to refer to the targets of agreement in gender, which allow us to justify the classification of nouns into genders. In the present typology, it has been possible to retain the special status of gender. However, the position of gender within the typology needs to be clarified in order to enable comparisons with other features.

As defined in Hockett (1958) and Corbett (1991), gender is exclusively a feature of agreement. Hence, the feature is referred to as 'gender' in a language

<sup>12</sup> More information, discussion, examples, and references pertaining to each feature can be found on the Grammatical Features website which has been created as an extension to the Features project ([www.features.surrey.ac.uk](http://www.features.surrey.ac.uk), mirrored at: [www.grammaticalfeatures.net](http://www.grammaticalfeatures.net)). At present, the website already contains articles totalling about 50,000 words plus extensive bibliography, but it is envisaged as a live and ever-growing resource which may, in time, become part of 'Web 2.0' with more direct participation of the community.

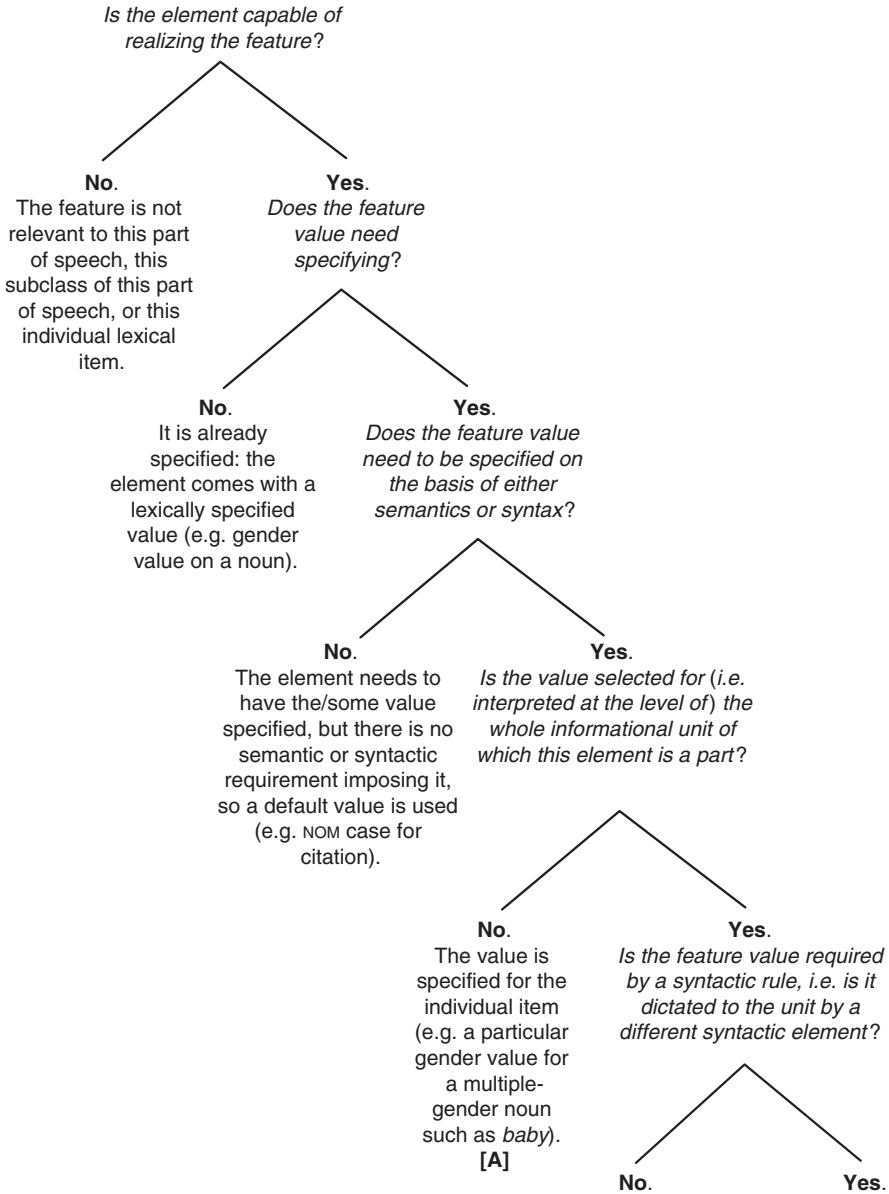
if it concerns the classification of the nominal inventory of the language, but only if the inherently assigned gender values found on nouns are matched by contextually realized gender values found on targets of agreement in gender. If a language has a system of nominal classification expressed through inflectional morphology, but the noun classes do not participate in agreement, the classification does not qualify as ‘gender’. With respect to syntax, the status of such a feature is similar to the status of tense in most of the familiar languages: an inflectionally marked feature such as tense expresses a semantic or formal distinction, but is not relevant to syntax for the purposes of agreement or government. Syntax does not need to know the value of an inflectional noun classifier or inflectionally marked tense. Therefore, the distinction between inflectional noun classification and gender is that, while the former can only be a morphosemantic feature, gender can only be a morphosyntactic feature.

#### 4.5 Agreement, government, and multirepresentation – summary

In a given language, morphosyntactic features are those features whose values participate in agreement or government. We identify a feature dependency as **agreement** when an element carries grammatical information relevant to another, and as **government** when an element carries grammatical information expressing the relationship it bears to another element. In contrast, morphosemantic features are those features whose values are never found to participate in agreement or government in the given language. Both agreement and government can apply to more than one element in the clause simultaneously, which may result in *multiple occurrence of the same feature specification in the domain*.

Apart from agreement and government, we may find inflectional marking of the same information simultaneously on more than one element in the domain due to **semantic choice**. We find that the same feature value may be realized distributively on the basis of semantics on several elements which are members of a constituent or an ‘**informational unit**’, e.g. a noun phrase, verb phrase, verbal complex, or the clause. In this situation, multiple elements express the same value of a morphosemantic feature simultaneously. It is also possible that simultaneous marking of the same information on more than one element in the clause could be due to a semantic or pragmatic *choice made for each element individually* for the same semantic or pragmatic reason (‘what’s once true stays true’). In this case, the multirepresentation of a feature value in the clause is due to coinciding individual semantics of the





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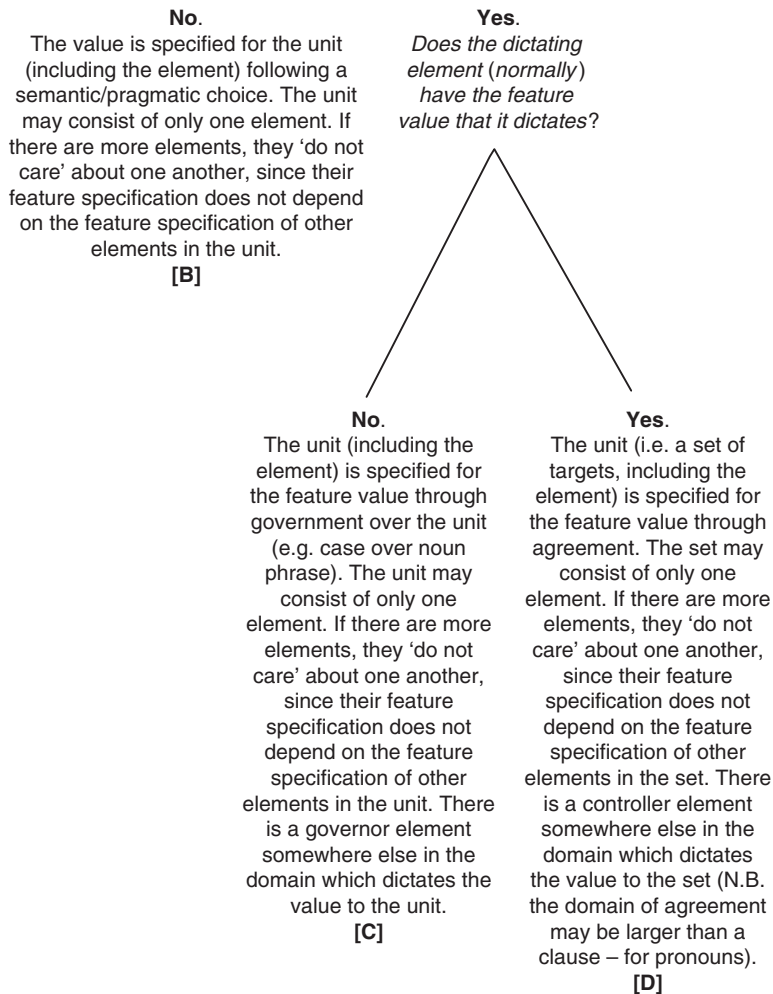


FIGURE 4.9 A decision tree about featural dependencies in a domain

*Notes:*

- Re **[A]**: Simultaneous realization of a feature value on multiple elements is due to coinciding individual semantics. If truly the same semantic choice is made for each element in the domain individually, it belongs here.
- Re **[B]**: Simultaneous realization of a feature value on multiple elements is due to semantic/pragmatic choice over the unit, not due to the semantics of the individual members of the unit. This includes the realization of semantic case distributively within a noun phrase, as well as instances of distributive realization of feature values at clause level (where the unit is a clause).
- Re **[C]**: Simultaneous realization of a feature value on multiple elements is due to government imposed by the governor over the unit of government. An example is the government of case over a noun phrase.
- Re **[D]**: Simultaneous realization of a feature value on multiple elements is due to agreement imposed by the controller over the set of targets (since 'multiple targets are the same as each other', Corbett 2006: 8).

elements realizing the feature value. (For more detailed discussion of systematic multirepresentation of a feature value in a domain, see Section 4.2.4.)

All possible distinctions in the sources of feature realizations on elements can be ordered along a decision tree about featural dependencies, representing the minimum set of questions that are relevant in the process of combining linguistic elements into phrases and clauses (see Figure 4.9). The first three questions in the tree are relevant to morphology only, and even though the answers in some instances may have some semantic basis, they are not determined by semantic or syntactic choice. The next two questions are relevant to semantics in that the answers to them depend on semantic (or pragmatic) choice. Finally, the last question is relevant to syntax, and both answers invoke a syntactic rule.

Note that Evans (2003: 217, fn. 15–16) refers to situations such as [A] and [B] as ‘informational equivalence’ where there is ‘no directionality’. This corresponds to my notion of ‘symmetry in the status of the elements involved in a featural dependency’, and ‘symmetry in the possession of the feature’ (Sections 4.3.3–4.3.4). In situations [C] and [D] there is ‘directionality’, which corresponds to Corbett’s (2006: 8) notion of agreement and government being ‘asymmetrical’, and to my notion of ‘asymmetry in the status of the elements involved in a featural dependency’.

It is also important to note that there may be instances of multirepresentation of a feature value which cannot be clearly identified as belonging to either situation [A] or [B]. Analysing respect by appealing to semantic justification at every element that marks it is perhaps the most convincing. However, certainly with some instances of respect, and probably with many instances of other morphosemantic features (such as tense, aspect, or mood), attempts to argue that the individual element makes sense semantically together with the particular feature value may involve an undue stretching of the semantic interpretation. We can also expect some tricky situations, as with multiple noun classifiers in Daly languages (Australia), which can be seen as the predecessors of agreement systems.<sup>13</sup>

This completes the outline of a heuristic for recognizing feature types in a language. We can expect that in many familiar instances of featural dependencies it will only confirm what is already fairly straightforward to recognize. However, we can also expect to find instances which are not straightforward and require careful consideration. In the following sections I revisit the difficult phenomena found in Kayardild (a highly endangered language

<sup>13</sup> I am grateful to Greville Corbett for providing this example.

from the Tangkic family, spoken in Queensland, Australia), in an attempt to classify them with respect to the distinctions identified above. The main objective of the analysis is to establish whether Kayardild does indeed have agreement in case and, even more unusually, whether it does have agreement in the verbal categories of tense, aspect, mood, and polarity (TAMP).

#### 4.6 Agreement, government, or semantic choice – the problem cases of Kayardild

Kayardild presents an extreme example of stacking case-like suffixes emanating from different syntactic levels, with some suffixes changing the word class of their host. Most of these case-like suffixes occur multiply in the clause, lending themselves to be considered agreement phenomena. A detailed description of Kayardild can be found in Evans's (1995) extensive grammar, while problems posed by Kayardild for widely accepted views of agreement are highlighted in Evans (2003). I begin with an overview of case phenomena in Kayardild drawing from Evans (1995), and in the following sections I discuss each type of the multirepresentation of a feature value in an attempt to establish whether it is dictated by **agreement** (as in situation [D] above), **government** (as in situation [C]), or **semantic choice** (as in situation [A] or [B]). My subsections 4.6.1–4.6.6 correspond to the subsections labelled in Evans (2003) as (a)–(f).<sup>14</sup>

Evans (1995: 101–121) identifies five types of functional domain in which Kayardild case-like suffixes operate. In the adnominal domain, a case relates one nominal phrase to another. In the relational domain, a case relates a core argument to the verb or a peripheral argument to the clause as a whole. In the modal domain, a case expresses the mood/tense/aspect of the clause. In the associating domain, a case links a nominal phrase with a nominalized verb. And, finally, in the complementizing domain, a case applies to a whole clause and indicates either that the clause is an argument of the matrix clause or that 'certain marked coreference relationships exist between matrix and subordinate clause' (Evans 1995: 101). Nominals have been found to take up to four cases, in the following order, with the last two types of suffix being mutually exclusive (Evans 1995: 101; see also end of Section 4.6.4 below for some further discussion of the associating and complementizing functions of the oblique case):

<sup>14</sup> With special thanks to Nicholas Evans for his timely reading of the Kayardild analysis presented here.

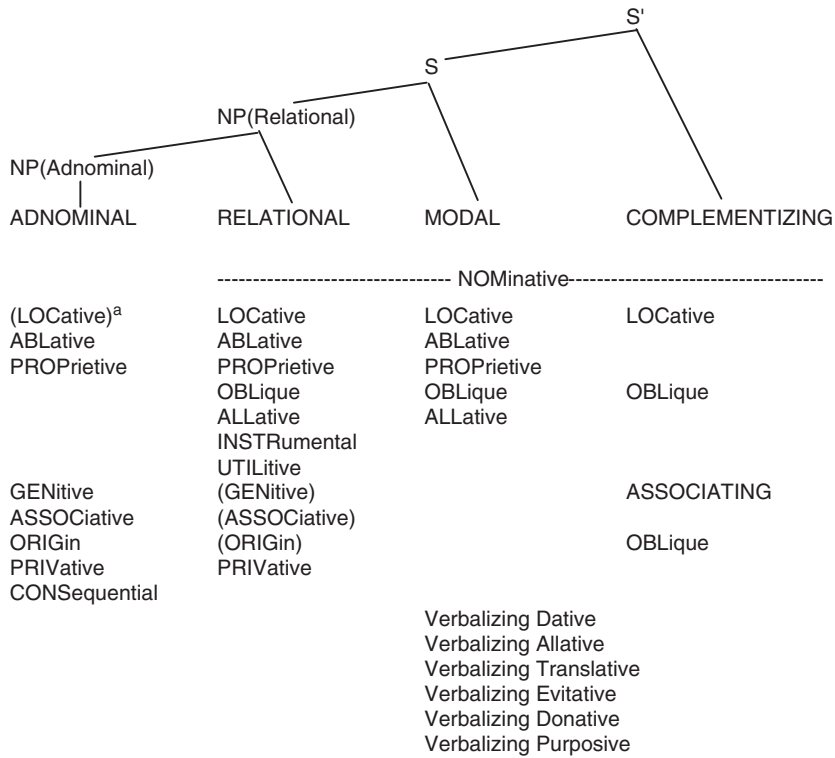


FIGURE 4.10 The range of functions performed by case-like suffixes in Kayardild

<sup>a</sup> Evans (1995: 102) notes that not every entry can be justified here (the reader is referred to Chapter 4 of his grammar for details). Unclear cases are in brackets (the three relational cases in brackets could be treated as either adnominal or relational; the LOCative may only be used adnominally if no other case suffix follows). Furthermore, '[t]he NOMinative is an "elsewhere case", in equipollent opposition to all other cases: it appears only where no relational, modal, associating or complementizing case is assigned.'

(4) stem + adnominal + relational + modal + associating/complementizing

Each of the five functional domains uses a subset of the common set of case suffixes (Evans 1995: 103). In Figure 4.10, I reproduce a diagram from Evans (1995: 102)<sup>15</sup> which summarizes the range of functions performed by each suffix and diagrammatically relates their morphological order to the syntactic

<sup>15</sup> In the original figure, Evans used the term 'verbal case', but in the (2003) paper he changed it to 'verbalizing case', in order to prevent a possible misconstrual of this type of case as a 'case marked on verbs', and to emphasize the way the case-like suffix changes the word class (i.e. part of speech membership) of its host (Evans 2003: 214, fn. 13).

level at which they operate. Verbalizing cases, which make up a different set of suffixes, are

partly complementary and partly parallel to the normal case system. Core syntactic functions are always marked by normal case, as are ‘static’ functions like the LOCative; so are all adnominal functions (which are also static). What may be broadly described as ‘dynamic’ functions, involving change over time (e.g. change of location, change of possession) tend to take verbal[izing] cases. Some dynamic functions, like the allative, ablative and purposive, take either, but the verbal[izing] case is gaining ground. (Evans 1995: 182)

Evans (1995: 103) summarizes the principles of the distribution of case marking in Kayardild in the following way:

In general case suffixes *appear on all words over which they have semantic or syntactic scope* [emphasis mine – A.K.]. Adnominal and relational cases are marked over entire NPs, and complementizing case over all words in a clause, including the verb [fn. 11: Particles and conjunctions, and pronominal subjects under certain conditions, are excepted (. . .)]. The distribution of modal case is basically all NPs except the subject and some NPs linked to it semantically or syntactically; associating case has a slightly larger domain.

#### 4.6.1 Multiple case marking

Among the different types of case-like marking in Kayardild, three types correspond the most closely to familiar types of cases: relational cases, adnominal cases, and verbalizing cases. Roughly, relational cases indicate the core arguments of the verb and some other thematic relations which are interpreted as being in a ‘static’ relationship to the verb; adnominal cases (also expressing a ‘static’ relationship) relate one nominal phrase to another; and verbalizing cases indicate thematic relations which are interpreted as being in a ‘dynamic’ relationship to the verb (see Section 4.6 above for a citation from Evans regarding the terms ‘static’ and ‘dynamic’).

All cases are obligatorily marked on all elements of the relevant noun phrases, and when two different cases are assigned to one element, they are stacked. Therefore, we have examples such as (Evans 2003: 207):

- (5) dan-kinaba-nguni    dangka-naba-nguni    mirra-nguni  
       this-ABL-INS        man-ABL-INS        good-INS  
       wagal-nguni  
       boomerang-INS  
       ‘with this man’s good boomerang’

where the ‘adnominal’ ablative case is not replaced by the following ‘relational’ instrumental case indicating a thematic relation at clause level.

On the view of case offered here (following Corbett 2006: 133–135), this type of case marking over noun phrases, whether it functions adnominally or relationally, can be treated as assignment of case over a constituent rather than as agreement in case with the head noun. Instances of Kayardild relational cases expressing core grammatical functions can presumably be treated as instances of government of case over a noun phrase (hence, situation [C]), while other cases (relational or adnominal) can be analysed as instances of assignment of case to a noun phrase for semantic reasons, i.e. semantic cases (hence, situation [B]). Verbalizing cases will fall under either of these analyses depending on their function in a particular clause.

Since the constituency view of syntax makes us see these case phenomena as expressing a relation of the whole noun phrase to the predicate or to another noun phrase, it is not necessary to look for a controller of the case value, and indeed there is no element here that would function as the controller of agreement in case.

#### 4.6.2 *Modal case*

Modal cases in Kayardild, formally identical to regular case inflections, are ‘tense-sensitive object markers’ (Evans 2003: 209, fn. 10) which participate in the expression of particular TAMP meanings. When the relevant TAMP meaning is selected, the modal case has to appear on all noun phrases (and all their component elements) except for the subject noun phrase, various types of secondary predicates on the subject, nouns denoting body parts of the subject, and noun phrases displaying other semantic links with the subject (such as proprietive noun phrases denoting ‘private goals’, etc.) (Evans 2003: 211).

Modal cases occur only when certain verbal categories are marked on the verb. The verbal categories are expressed on the verb as final inflections which attach to the verbal stem with or without further derivational suffixes (Evans 1995: 253–255). Evans (2003: 208) provides a table summarizing the meanings of the combinations of modal cases with verbal TAMP in Kayardild. In order to make my exposition easier, in Table 4.3 based on Evans’s, I have changed the order of columns<sup>16</sup> (otherwise preserving the content of the table):<sup>17</sup>

<sup>16</sup> The order of the columns in Evans (2003: 208) is: ‘modal case’, ‘semantic category’, and ‘corresponding verbal categories’.

<sup>17</sup> Additionally, Evans notes: ‘(i) Verbal categories listed in square brackets are relatively marked examples where the modal case is independently varied from the verbal TAMP for particular semantic effects. (ii) Modal case forms are cited in their canonical form’ (2003: 208).

TABLE 4.3 Combinations of modal cases with verbal TAMP in Kayardild

Verbal categories	Corresponding modal case	Semantic category
ACTual (Affirmative and Negative) IMMEDiate POTential (Affirmative and Negative) [giving ‘actual ability’ meaning] APPRehensive [giving ‘actually occurring undesirable event’ meaning]	LOCative {-kiya}	Instantiated
POTential (Affirmative and Negative) APPRehensive [giving ‘future undesirable’ meaning]	PROPriative {-kuru}	Future
PAST ALMOST PRECONDition	ABLative {-kinaba}	Prior
APPRehensive DESIDerative HORTative (Affirmative and Negative)	OBLique {-inja}	Emotive
DIRECted	ALLative {-kiring}	Inceptive
IMPerative (Affirmative and Negative) Continuative NOMinalization	Zero	—

In the following example from Evans (2003: 207), past tense verb inflection is used together with the modal ablative (glossed *M.ABL*) to express the semantic category labelled by Evans as ‘prior’:

- (6) *dangka-a burldi-jarra yarbuth-ina thabuju-karra-nguni-na*  
*man-NOM hit-PST bird-M.ABL brother-GEN-INS-M.ABL*  
*wangal-nguni-na*  
*boomerang-INS-M.ABL*  
 ‘The man hit the bird with brother’s boomerang.’

And in the following example (Evans 2003: 208), the ‘potential’ verb inflection is used together with the modal proprietive (glossed *M.PROP*) to express futurity or ability:

- (7) *dangka-a burldi-ju yarbuth-u thabuju-karra-ngun-u*  
*man-NOM hit-POT bird-M.PROP brother-GEN-INS-M.PROP*  
*wangal-ngun-u*  
*boomerang-INS-M.PROP*  
 ‘The man will/can hit the bird with brother’s boomerang.’



Although this covariation of TAMP marking on verbs and noun phrases has been considered a strong candidate for an agreement analysis (see Evans 2003, and references therein to Hale 1973, Klokeid 1976, and Hale 1998 on Lardil, also a Tangkic language), a closer look at the table of correspondences reveals that all but one modal cases and some verbal TAMP categories can be re-used in different combinations to yield different semantics. Evans (2003: 210) gives the following examples: holding the modal case constant at the modal proprietive, one can vary the verb's polarity into the negative potential (expressing 'will not/cannot'), or the apprehensive (expressing 'watch out or . . .'). Or, holding the verbal inflection constant at the potential, one can vary the modal case into the modal locative (expressing 'was able to', i.e. using the modal locative to 'locate', in actual modality, the ability denoted by the verbal potential inflection).

In my view, the fact that the covariation is not fixed but instead the inflections can (to some extent) be mixed and matched to achieve different meanings for the clause – each meaning expressing a particular value of TAMP – should preclude it from being analysed as agreement. As the alternative, Evans (2003: 209 fn. 10, 219–221) considers analysing the phenomenon as government of the noun phrases' case by the verbal inflection. This is prompted by the fact that the verbal inflections and the corresponding modal case inflections are not isomorphic, and by the investigation of the diachrony of this phenomenon: the current constructions originate from 'oblique constructions', that is, subordinate clauses under certain conditions where case was distributed over the clause under government. Problems with this analysis are the following: again, we do not find the expected fixed correspondence between the verbal categories and modal cases; instead, the selected combination of the categories depends on semantics; furthermore, as observed by Evans, 'we would need to relax our definition of government so that it is not seen as stemming just from lexical properties of the governor (. . .), but can also stem from inflectional values' (2003: 220). Weighing both options, Evans (2003: 221) concludes that, even though the construction appears to be a hybrid between agreement and government, it is easier to see it as the latter by opening the notion of government to allow it to be assigned by inflectional values (e.g. tense) rather than just lexical features (e.g. case frame).

Although without a theory of canonical government it is difficult to assess fully the option of analysing modal case in Kayardild as government, a yet different analysis appears to be plausible. Namely, it is widely accepted that tense, aspect, mood, and polarity are features of the clause, with a value of TAMP normally selected for the clause rather than for an individual element in the clause. Tense, aspect, mood, and polarity are typically morphosemantic

features, whose values correlate with different meanings and are dictated by semantic choice. Cross-linguistically, TAMP categories are frequently complex, combining values of the different features (e.g. tense plus aspect, or tense plus aspect plus mood, etc.) into portmanteaux, or distributing the available marking over the verbal complex in a ‘non-compositional’ way (see, for example, the discussion of periphrastic TAMP in Bulgarian, Popova this volume). It would not be unusual to claim that the TAMP category in Kayardild was expressed in a complex way, that is that two different markers were needed to express one TAMP value, one marker coming from the set of verbal suffixes, and another from the set of modal cases. Since TAMP is a feature of the clause, and since Kayardild has an evident tendency to mark feature values multiply (‘on all words over which they have semantic or syntactic scope’, Evans 2003: 103), here we once again see the selected value marked on more than one element in the clause in Kayardild.

Therefore, I suggest that the multirepresentation of the modal case component of the TAMP marking in Kayardild is due to the semantic choice of the particular TAMP value for the clause, and to the requirement that in Kayardild TAMP has to be marked on all elements of the syntactic verb phrase (that is, all elements within the syntactic verb phrase have to bear modal case). Hence, this situation falls in category [B] along with TAMP in Bulgarian.

#### 4.6.3 Complementizing case

Complementizing cases in Kayardild indicate various types of interclausal relation such as being a clausal complement, and they are also frequently triggered by ‘odd pivot’ conditions (that is, when the pivot shared between clauses is not subject of both) (Evans 2003: 211–213). Furthermore, clauses bearing complementizing case are frequently used independently as a result of ‘insubordination’, that is the (often conventionalized) ellipsis of the main clause (Evans 2003: 221, fn. 21; 2007). The following examples (from Evans 2003: 212) illustrate the use of complementizing oblique (glossed C.OBL) and complementizing locative (glossed C.LOC):

- (8) ngada            kurri-ja,            dangka-ntha            burldi-jarra-ntha  
 1SG.NOM          see-ACT            man-C.OBL            hit-PST-C.OBL  
 yarbutth-inaa-ntha            thabuju-karra-nguni-naa-ntha  
 bird-M.ABL-C.OBL            brother-GEN-INS-M.ABL-C.OBL  
 wangal-nguni-naa-nth  
 boomerang-INS-M.ABL-C.OBL  
 ‘I saw that the man had hit the bird with (my) brother’s boomerang.’

- (9) bilda kurri-ja, ngakulda bakiin-ki burldi-jarra-ya  
 3PL.NOM see-ACT 12PL.NOM all-C.LOC hit-PST-C.LOC  
 yarbutth-inaba-ya thabuju-karra-nguni-naba-ya  
 bird-M.ABL-C.LOC brother-GEN-INS-M.ABL-C.LOC  
 wungal-nguni-naba-y  
 boomerang-INS-M.ABL-C.LOC  
 ‘They saw that we all (including you) had hit the bird with brother’s  
 boomerang.’

Evans (2003: 212) notes that locative complementizing case is blocked from appearing on pronouns, which therefore default to the nominative (as can be seen in example (9)), but otherwise appears everywhere in the clause. The choice between the complementizing oblique and the complementizing locative (the only two complementizing cases available) is due to semantics: if the subject of the clausal complement is first person inclusive, the clause has to take the complementizing locative case, and in all other instances the clause takes the complementizing oblique. However, with second person subjects either case may be used, and the choice depends on ‘subtle factors of solidarity’, namely ‘C.LOC, with its first inclusive affinities, is used when the speaker wants to group him/herself with the addressee, while C.OBL is used when no such grouping is sought’ (Evans 1995: 493–495).

Complementizing case was originally due to agreement of an entire subordinate clause with a case-marked noun phrase antecedent in the main clause, but changes to the main clause case system have obscured this (Evans 1995: 543–549; 2003: 212, 221). In Evans’s assessment (2003: 225), this phenomenon receives the largest number of question marks in answer to whether it fulfils Corbett’s (2003, also 2006) criteria for canonical agreement. Synchronically, there is no controlling antecedent, and clauses marked for complementizing case can be used independently of the main clause. A government analysis is not plausible either, for three reasons: the possibility of the clauses being independent; the lack of governor in instances of complementizing case assigned under ‘odd pivot conditions’; and the fact that the choice of the complementizing case is driven by semantics.

In fact, complementizing cases in Kayardild appear to be analogous to instances of semantic cases, such as the instrumental case in familiar languages which is assigned to a unit (a noun phrase) on the basis of semantic choice. Complementizing cases are, similarly, assigned to a unit (a clause) with which the speaker chooses to express a statement (‘complementing information’) about some participant in the main clause or in the discourse (including an

omitted ‘understood’ participant). The choice of complementizing case value (oblique vs. locative) is clearly determined by semantics: it depends on the interpretation of the subject of the subordinate clause (and not on any features of the main clause). It has to be marked on all elements of the unit because this is how Kayardild distributes all inflectional information. Hence, I do not hesitate to propose that this phenomenon also falls in category [B].

#### 4.6.4 *Associating case*

Associating case is used in connection with nominalizations. The nominalizing suffix is one of two types of inflection in Kayardild that change the morphological word class of the element without changing its syntactic word class. Nominalized verbs are syntactically verbal, but they are morphologically nominal and take normal nominal case inflections (Evans 1995: 89–90). Nominalized verbs may head certain types of dependent clause, or – if they are used in a main clause – indicate continuous aspect (i.e. mark ongoing uncompleted actions).

All noun phrases in a clause headed by a nominalized verb (except the subject and a few noun phrase types linked with it, e.g. secondary predicates on the subject) have to carry an ‘associating oblique’ case (glossed A.OBL) after any other case suffix they may have (adnominal, relational, and/or modal) (Evans 2003: 213). Examples (from Evans 2003: 213) include:

- (10) ngada      yalawu-n-da      yakuri-nja      thabuju-karra-nguni-nja  
 1SG.NOM    catch-NMLZ-NOM    fish-A.OBL    brother-GEN-INS-A.OBL  
 mijil-nguni-nj  
 net-INS-A.OBL  
 ‘I am catching fish with brother’s net.’

- (11) ngada      kurri-jarra      bilwan-jina      [ yalawu-n-kina  
 1SG.NOM    see-PST      them-M.ABL      catch-NMLZ-M.ABL  
 yakuri-naa-ntha      thabuju-karra-nguni-naa-ntha  
 fish-M.ABL-A.OBL    brother-GEN-INS-M.ABL-A.OBL  
 mijil-nguni-naa-nth ]  
 net-INS-M.ABL-A.OBL  
 ‘I saw them catching fish with brother’s net.’

Again, the covariation of verbal nominalization and associating case makes the phenomenon available for consideration as agreement. However, as Evans (2003: 222) remarks, the information on the verb and the host noun phrase is ‘less obviously of the same type’ (the verb is specified as being nominalized, while elements of the noun phrase are specified as taking an associating

oblique); the inflection on the verb changes its morphological class form (to nominal), but the inflection on the noun phrase leaves its members unchanged in word class. In my view, while it might be marginally possible to see agreement just in the fact that the verb becomes (morphologically) a noun, and other (target) elements have to agree with it, the key question remains: what do the targets agree in? Kayardild has no gender and the proposed feature has no relation to any independent nominal classification that would need to be proposed for the language outside this construction. There is no plausible agreement feature that could be posited here for the elements to agree in.

Evans (2003: 222) suggests that associating case might be considered an instance of government, ‘being a relation between a verbal head and its object(s) and other dependents’; the noun phrase is required to carry an associating oblique ‘much in the same way that nominalized verbs in many languages govern the genitive, with the exception that the associating oblique is added on to other cases rather than simply replacing them’. Evans expresses concern about how to account for the process through which the associating case value is distributed through the whole noun phrase – however, as I already argued earlier, on a constituency view of syntax case is governed over a constituent, and it may impose the same feature value simultaneously on all members of the constituent. Therefore, associating case can indeed be analysed as government of case by the nominalized verb over the noun phrase it heads. Hence, it belongs in category [C].

The final question that can be posed with respect to associating case is whether it qualifies to be a feature at all, considering that it appears to have only one value: the associating oblique. In situations such as negative concord, it is reasonable to argue that the phenomenon does not qualify to be a feature because ‘positive’ polarity is not information that can be assigned to a value – it is, rather, simply lack of information (see Section 4.2.4 above). However, since the value of associating case is imposed by a syntactic rule, rather than being an optional semantic addition, we would want to recognize associating case as a morphosyntactic feature of government, even if the feature appeared to have only one value. Nevertheless, we also observe that the associating oblique is an additional function of the oblique case value which belongs to the set of two values: oblique and locative. Both values participate in the complementizing function, while only one value, the oblique, participates in the associating function. Therefore, despite being glossed here as a unique case (A.OBL), the associating oblique is really an oblique case (OBL) which can be used in an associating function in addition to its other uses.

#### 4.6.5 Multiple TAMP inflection on elements bearing verbalizing case

Multiple marking of elements with verbalizing case in Kayardild was already mentioned in Section 4.6.1. Verbalizing cases express a range of case-like meanings such as beneficiary, direction of motion, purpose, and so on (Evans 1995: 89), and I argued in 4.6.1 that they were best analysed as either instances of government of case over a noun phrase, or instances of choice of a semantic case value for a noun phrase. In this section I discuss a different aspect of the phenomenon of verbalizing case in Kayardild, namely the simultaneous marking of the TAMP category on all elements bearing verbalizing case.

Verbalizing cases are the other type of suffix in Kayardild (the first one being the nominalizing suffix) which changes the morphological word class of the element without changing its syntactic word class. Verbalizing cases attach to each member of the relevant noun phrase, thereby turning each element into a morphological verb. The elements bearing verbalizing case then take the full set of TAMP inflections identical to those found on verbs. They can also take the middle derivational morpheme used in passives and reflexives, and can undergo nominalization using the regular nominalizing suffix or the resultative nominalization. With these suffixes, the verbalized elements are morphologically indistinguishable from verbs, though they continue to occupy their original structural (syntactic) positions (in terms of the ordering within noun phrases) (Evans 2003: 214). The following are examples of clauses with a beneficiary noun phrase marked for verbalizing dative (glossed *v.DAT*) (Evans 2003: 215):

- (12) ngada      waa-jarra      wangarr-ina      ngijin-maru-tharra  
 1SG.NOM    sing-PST      song-M.ABL    my-V.DAT-PST  
 thabuju-maru-tharra  
 brother-V.DAT-PST  
 ‘I sang a song for my brother.’
- (13) ngada      waa-nangku      wangarr-u      ngijin-maru-nangku  
 1SG.NOM    sing-NEG.POT    song-M.PROP    my-V.DAT-NEG.POT  
 thabuju-maru-nangku  
 brother-V.DAT-NEG.POT  
 ‘I won’t sing a song for my brother.’

Multirepresentation of the TAMP inflection in clauses with verbalizing case in Kayardild has been regarded as another strong contender for an agreement phenomenon: agreement in TAMP (Evans 2003: 214–215, 222–223). However,

arguing against this analysis Evans (2003: 223) points out that the phenomenon ‘lacks directionality’ and that ‘the category is clausal rather than lexical. In other words, one cannot make a convincing case that the TAMP inflections, on nominals inflected for verbalizing case, are controlled by those on the verb, since an equally plausible account is that both verb and nominals simply reflect, in parallel, the clausal semantics of tense, aspect and mood.’ This means that, with respect to both the status of elements involved, as well as the possession of the feature value, the featural dependency is symmetrical rather than asymmetrical. Discussing the same phenomenon, Corbett confirms that the argument as to whether we have agreement in TAMP should run parallel to that concerning the assignment of case to (the elements within) a noun phrase; assuming we adopt the constituency approach to syntax, ‘if one believes that tense, aspect, mood and polarity are features of the clause, then marking of these features unusually on items other than on the verb is symmetrical marking and hence not (canonical) agreement’ (2006: 139).

Two further arguments corroborate this conclusion. First and more importantly, Evans (1995: 163–164) states that it is possible to omit the main verb in constructions involving verbalizing case. He remarks that this is also allowed with some normal cases, but is more frequent with verbalizing cases. He interprets this as ‘being due to the rich semantics of verbal[izing] cases, which often allows the main verb action to be inferred’. An example is (Evans 1995: 164):

- (14) ngada      dathin-kiiwa-thu      ngilirr-iiwa-thu  
 1SG.NOM      that-V.ALL-POT      cave-V.ALL-POT  
 ‘I will go to that cave.’

If such instances were to be analysed as agreement of the verbalized elements in TAMP, arguably there would be no controller with which the elements could agree. Second, while the categories of tense, aspect, mood, and polarity could plausibly function as features of agreement, the fact that elements bearing verbalizing case can also carry the same nominalization marker (which appears at the same locus as TAMP) as the verb raises the question of what feature that would be.

My conclusion is that the best analysis of multiple TAMP inflection on elements bearing verbalizing case in Kayardild is indeed to regard it as a clausal rather than lexical category, where a particular value of TAMP is selected for the clause following a semantic choice. The multirepresentation of TAMP inflection is due to the requirement that in Kayardild TAMP has to

be marked on all elements of the verbal complex, that is, on the main verb together with all other verbalized elements (which are morphologically verbs). (Compare this to the phenomenon discussed in 4.6.2, where all elements within a syntactic verb phrase have to bear modal case.) Hence, this situation falls in category [B].<sup>18</sup>

#### 4.6.6 Multiple TAMP inflection on elements in a verbal group/complex

Finally, Evans (2003: 215–216, 223–224) mentions one more potential site for agreement in Kayardild. This is a construction which involves a more familiar ‘verbal group’, that is, a sequence of serialized verbs consisting of an obligatory main verb plus up to two further verbs functioning as markers of associated motion, adverbial quantification and aspect. They appear in a fixed order in a single intonational group, and the meaning of the group may be non-compositional. In Kayardild, all verbs in a verbal group take identical values for TAMP, as in the following example (Evans 2003: 223, also cited and discussed in Corbett 2006: 140), where the two verbs of the verbal group match in tense:

- (15) niya            kuujuu-jarra    thaa-tharr  
       3SG.NOM    swim-PST        return-PST  
       ‘He went off for a swim.’

Note that the verb *thaa-tha* ‘return’ here means ‘go off and V’ rather than ‘V and return’; therefore (15) could be uttered in a situation when someone has gone off for a swim and not necessarily returned from the swimming yet. Evans emphasizes that the past tense ‘is used because of a rule that all words in a verbal group must agree in TAMP, not because it is independently locating “returning” in the past’ (2003: 223–224).

Examples like (15), of tense and other verbal features matching within a serial verb complex, are common in serial verb constructions, and the following

<sup>18</sup> Alternatively, a case might possibly be made for analysing this phenomenon (or at least some instances of this phenomenon) as situation of type [A], that is, a clause-level feature which is specified for the relevant elements one by one, each time with the same semantic justification. The phrase ‘[sing] [for-my] [for-brother]’ is a verbal group, with the elements other than the main verb bearing a verbalizing case. We may be able to say that negation is specified individually for each element to yield: ‘[not-sing]’, ‘[not-(do-something)-for-my]’, and ‘[not-(do-something)-for-brother]’. This stretches the semantic interpretation, but probably no more than some other examples of simultaneous marking that we may be tempted to consider to be situations of type [A]. More importantly, this points to the fact that, just as we do not have clear criteria (based on a canonical approach) to distinguish government from agreement, we also do not have any clear criteria to distinguish situation [A] from situation [B] when a feature value is multirepresented in a domain.



sentence illustrates the same phenomenon from Paama (Paamese) (Oceanic, a language of Vanuatu; Crowley 2002: 68):

- (16) ni-suvulu                      ni-hiitaa                      netano  
       1SG:DIST.FUT-climb.down    1SG:DIST.FUT-descend    down  
       ‘I will climb down.’

As suggested by Corbett (2006: 140), in examples such as (15) and (16) it is still possible to view the verbal group as a semantic and syntactic unit, and a TAMP value as being assigned to this unit. This is consistent with viewing a serial verb construction as ‘a sequence of verbs which act together as a single predicate without any overt marker of coordination, subordination, or syntactic dependency of any other sort. Serial verb constructions describe what is conceptualized as a single event’ (Aikhenvald 2006: 1, though see Baker and Harvey 2010 for discussion of serial verb constructions vs. co-verb constructions).

Therefore, I conclude that the matching of TAMP values in verbal groups, as in (15) and (16), is also better treated as an instance of simultaneous marking of the TAMP value within the verbal group, rather than an instance of agreement of non-head verbs in TAMP with the head verb. I consistently regard TAMP inflection as a clausal rather than lexical category, and view a particular value of TAMP as being selected for the clause following a semantic choice. The multirepresentation of TAMP inflection is due to the requirement that in Kayardild TAMP has to be marked on all elements of the verbal complex, that is, on the main verb together with other verbs in the verb group. As Evans (2003: 223) observes, this looks like a very similar phenomenon to that described in Section 4.6.5, ‘except that now it is agreement between straightforward verbs rather than between a verb and nominals whose inflections have converted them into morphological verbs’. (Also, compare this once again to the phenomenon discussed in Section 4.6.2, where all elements within a syntactic verb phrase have to bear modal case.) Hence, I propose that this phenomenon also falls in category [B].

Evans (2003: 223) emphasizes that the crucial difference between this phenomenon and TAMP multirepresented in clauses with verbalizing case is that, in some constructions with serial verbs, ‘one cannot derive the choice of TAMP inflection on certain non-head verbs directly from the clausal semantics’. Evans attributes this choice to direct agreement with the head verb, but still remarks that the multirepresentation of TAMP in this phenomenon is characterized by informational equivalence and lack of directionality (2003: 217, fn. 15, 218). In response, I repeat the following arguments against an

agreement analysis from the discussion of TAMP marking in clauses with verbalizing case: first, TAMP is a clausal not lexical category; and second, the possibility of multiple marking of nominalization in the verbal group suggests that the phenomenon is not agreement because nominalization could hardly be regarded as a feature of agreement.

In the scheme of featural dependencies proposed here, Evans's distinction between compositionality and non-compositionality of the verbal group can be expressed as the difference between situation [A] and situation [B], respectively. That is, any instances of simultaneous marking of a feature value on more than one element which can be justified individually at each element fall in category [A], while any instances of simultaneous marking of a feature value on more than one element which results from the semantic choice of a feature value for an informational or phrasal unit fall in category [B].

#### 4.7 Conclusions for the inventory of morphosyntactic features

All six phenomena of Kayardild discussed above have been considered candidates for agreement phenomena, even though they do not fulfil the criteria for canonical agreement. Since we do not yet have comparable criteria to identify and describe other types of featural dependencies (government, and semantically imposed features), I attempted to identify the space occupied by all these dependencies, and subsequently reanalysed the Kayardild phenomena using the criteria according to which this space is carved up by the dependencies. The intuition behind this decision was that, within the space of featural dependencies, the phenomena which may arguably be regarded as non-canonical agreement are perhaps better analysed as (more) canonical instances of a different featural dependency.

This new look at the problem cases of Kayardild has resulted in my suggestion that:

- (a) multiple case marking of relational, adnominal, and verbalizing cases are either instances of government of case over a noun phrase (category [C]), or instances of assignment of case to a noun phrase for semantic reasons (category [B]);
- (b) modal case is a component of the TAMP marking, with the particular TAMP value selected for the clause for semantic reasons (category [B]);
- (c) complementizing case is a type of semantic case specified for a clause for semantic reasons (category [B]);

- (d) associating case is a type of case governed by the nominalized verb over the nominal phrase it heads (category [C]);

In all four instances above, multirepresentation of a case value is due to the generalization in the lexicon that nominal elements have to realize all cases they are assigned (that is, in general, ‘case suffixes appear on all words over which they have semantic or syntactic scope’, Evans 1995: 103).

- (e) multiple TAMP inflection on elements bearing verbalizing case is due to a particular value of TAMP having been selected for the clause following a semantic choice, and to the requirement that TAMP be marked on all elements of the verbal complex (so, either category [B], or category [A] in those instances where the feature value can be semantically justified for every element individually);
- (f) multiple TAMP inflection on elements in a verbal group/complex is due to a particular value of TAMP having been selected for the clause following a semantic choice, and to the requirement that TAMP be marked on all elements of the verbal group (verbal complex) (so, typically, category [B], though it could be category [A] in those instances where the feature value can be semantically justified at every element individually).

These conclusions are consistent with a view of case as a relational feature that expresses a syntactic and/or semantic function of the constituent that carries the particular case value. So, as expected, in Kayardild we find structural (governed) cases and semantic (semantically imposed) cases. But we do not find agreement in case. Agreement in case is rare, and the best examples are found on predicate adjectives, as in the following sentence from Polish (cited in Dziwirek 1990: 147; see also Corbett 2006: 134). Here, the genitive case value on the predicate adjective matches the genitive case value of the quantified noun of the subject noun phrase (the following example is repeated from (2) in Section 4.3.1):

- (17) Sześć      kobiet                      był-o              smutnych.  
       six.NOM    woman.PL.GEN    was-N.3SG    sad.PL.GEN  
       ‘Six women were sad.’

Kayardild presents an extreme example of case stacking (as far as I am aware it is a record-breaker, allowing up to four case markers to be stacked)<sup>19</sup>, and the

<sup>19</sup> Furthermore, Evans suggests that, theoretically, more than four case inflections could occur, but he has no naturally occurring examples, nor has he been able to elicit any or have such made-up

best explanation for this multirepresentation of case in phrases must be that there is a generalization in the lexicon specifying that nominal elements in Kayardild have to realize all cases they are assigned.<sup>20</sup> Since I have argued that cases in Kayardild are assigned to whole constituents either by government or by semantic choice, there is no need to invoke agreement to account for multiple case marking in Kayardild.

Finally, I have also argued that the assignment of particular tense, aspect, mood, and polarity values in Kayardild is due solely to a semantic choice, and their multirepresentation in the clause or the informational unit (such as a verbal group) is also due to the fact that Kayardild marks feature values on all relevant elements. This conclusion is consistent with the widely held view that tense, aspect, mood, and polarity are features of the clause (rather than being interpreted at the level of lexical items). If this conclusion is accepted, we have to exclude tense, aspect, mood, and polarity from the inventory of morphosyntactic features since their analysis as possible features of agreement can no longer be supported.

Hence, on the basis of cross-linguistic evidence found so far, the only features which qualify for inclusion in the inventory of morphosyntactic features are:

- number (a common feature of agreement)
- gender (a common feature of agreement)
- person (a common feature of agreement)
- respect (a rare feature of agreement)
- case (a rare feature of agreement, and a common feature of government)
- definiteness (a rare morphosyntactic feature, probably of agreement, although this has not yet been established with certainty because we currently lack the criteria to describe [non-]canonical government).

#### 4.8 Closing remarks

Features are a central notion in linguistics, yet very often they are taken for granted, and linguists have not had a commonly agreed-upon inventory of

examples accepted; '[t]his is probably due to processing limitations rather than a strict grammatical constraint' (1995: 114).

<sup>20</sup> This does not exclude the possibility of there being exceptions to this general rule, for example regarding some subclasses of elements – for example, pronouns under certain conditions (e.g. as subjects of complement clauses or objects of imperatives) are excepted from case marking.

these basic units of description. The Features Project undertaken in Surrey began to construct such an inventory, focusing on morphosyntactic features. The analysis of feature realization types and considerations of symmetry may provide a new basis for formulating criteria with which to systematize features and establish appropriate inventories for linguists to build on.

## References

- Abney, Steven P. (1987). *The English Noun Phrase in Its Sentential Aspect*. PhD thesis, MIT, Cambridge, MA.
- Ackerman, Farrell and Gregory Stump (2004). 'Paradigms and periphrastic expressions', in Louisa Sadler and Andrew Spencer (eds) *Projecting Morphology* (Stanford Studies in Morphology and the Lexicon). Stanford, CA: CSLI Publications, 111–157.
- and Gert Webelhuth (forthcoming). 'Lexicalism, periphrasis and implicative morphology', in Bob Borsley and Kersti Börjars (eds) *Nontransformational Syntax: A Guide to Current Models*. Oxford: Blackwell.
- Adger, David (2003). *Core Syntax*. Oxford: Oxford University Press.
- (2006). 'Remarks on Minimalist feature theory and Move', *Journal of Linguistics* 42: 663–673.
- (2007). 'Three domains of finiteness: a Minimalist perspective', in Irina Nikolaeva (ed.) *Finiteness. Theoretical and Empirical Foundations*. Oxford: Oxford University Press, 23–58.
- and Daniel Harbour (2007). 'The syntax and syncretisms of the person case constraint', *Syntax* 10(1): 2–37.
- and Laurel Watkins (2009). *Mirrors and Microparameters: Phrase Structure beyond Free Word Order*. Cambridge: Cambridge University Press.
- and Gillian Ramchand (2005). 'Move and Merge: *wh*-dependencies revisited', *Linguistic Inquiry* 36: 161–194.
- and Peter Svenonius (2009). 'Features in Minimalist syntax', ms available as lingBuzz/000825. To appear in Cedric Boeckx (ed.) *The Oxford Handbook of Linguistic Minimalism*. Oxford: Oxford University Press.
- Afanasiev, Loredana, Patrick Blackburn, Ioanna Dimitriou, Bertrand Gaiffe, Evan Goris, Maarten Marx, and Maarten de Rijke (2005). 'PDL for ordered trees', *Journal of Applied Non-Classical Logic* 15(2): 115–135.
- Aikhenvald, Alexandra (2006). 'Serial verb constructions in typological perspective', in Alexandra Aikhenvald and Robert M. W. Dixon (eds) *Serial Verb Constructions: A Cross-Linguistic Typology*. Oxford: Oxford University Press, 1–68.
- Alexiadou, Artemis (2005). 'Possessors and (in)definiteness', *Lingua* 115(6): 787–819.
- Allegranza, Valerio (1998). 'Determiners as functors: NP structure in Italian', in Sergio Balari and Luca Dini (eds) *Romance in Head-Driven Phrase Structure Grammar*. Stanford, CA: CSLI Publications, 55–108.
- (2007). *The Signs of Determination*. Frankfurt am Main: Peter Lang.
- Anderson, Gregory D. S. (2006). *Auxiliary Verb Constructions*. Oxford: Oxford University Press.

- Anderson, Stephen R. (1992). *A-Morphous Morphology*. Cambridge: Cambridge University Press.
- Andrews, Avery D. (1996). 'Semantic case-stacking and inside-out unification', *Australian Journal of Linguistics* 16(1): 1–54.
- Archangeli, Diana (1984). *Underspecification in Yawelmani Phonology and Morphology*. PhD thesis, MIT, Cambridge, MA.
- Aristar Dry, Helen (2002). 'E-MELD: overview and update'. Paper presented at the International Workshop on Resources and Tools in Field Linguistics, Las Palmas, 26–27 May 2002. Available at: <http://linguistlist.org/emeld/documents/index.cfm>.
- Aronoff, Mark (1994). *Morphology by Itself: Stems and Inflectional Classes*. Cambridge, MA: MIT Press.
- Aronson, Howard I. (1968). *Bulgarian Inflectional Morphophonology*. The Hague: Mouton.
- Asudeh, Ash (2002). 'Richard III', in Mary Andronis, Erin Debenport, Anne Pycha, and Keiko Yoshimura (eds) *CLS 38: Papers from the 38th Regional Meeting of the Chicago Linguistic Society*. Chicago, IL: Chicago Linguistic Society, 18 pp.
- and Ida Toivonen (2006a). 'Symptomatic imperfections', *Journal of Linguistics* 42: 395–422.
- ——— (2006b). 'Response to David Adger's "Remarks on Minimalist feature theory and Move"', *Journal of Linguistics* 42: 675–686.
- Avery, Peter and William J. Idsardi (2001). 'Laryngeal dimensions, completion and enhancement', in T. Alan Hall (ed.) *Distinctive Feature Theory*. Berlin: Mouton de Gruyter, 41–70.
- Avgustinova, Tania (1994). 'On Bulgarian verbal clitics', *Journal of Slavic Linguistics* 2: 29–47.
- Baerman, Matthew, Dunstan Brown, and Greville G. Corbett (2005). *The Syntax–Morphology Interface: A Study of Syncretism*. Cambridge: Cambridge University Press.
- Baker, Brett and Mark Harvey (2010). 'Complex predicate formation', in Menigstu Amberber, Brett Baker, and Mark Harvey (eds) *Complex Predicates: Cross-Linguistic Perspectives on Event Structure*. Cambridge: Cambridge University Press.
- Barlow, Michael (1992). *A Situated Theory of Agreement*. New York: Garland. [Published version of (1988) PhD thesis, Stanford University.]
- Barwise, Jon and Robin Cooper (1981). 'Generalized quantifiers and natural language', *Linguistics and Philosophy* 4: 159–219.
- Béjar, Susana (2003). *Phi-Syntax: A Theory of Agreement*. PhD thesis, University of Toronto.
- Bender, Emily and Dan Flickinger (1999). 'Peripheral constructions and core phenomena: agreement in tag questions', in Gert Webelhuth, Jean-Pierre Koenig, and Andreas Kathol (eds) *Lexical and Constructional Aspects of Linguistic Explanation*. Stanford, CA: CSLI Publications, 199–214.
- Berman, Ruth (1985). 'The acquisition of Hebrew', in Dan I. Slobin (ed.) *The Cross-linguistic Study of Language Acquisition*. Hillsdale, NJ: Lawrence Erlbaum, 255–371.

- Bhatt, Rajesh (2005). 'Long distance agreement in Hindi-Urdu', *Natural Language and Linguistic Theory* 23(4): 757–807.
- Blackburn, Patrick and Claire Gardent (1995). 'A specification language for lexical functional grammars', in *Seventh Conference of the European Chapter of the Association for Computational Linguistics: Proceedings of the Conference*. Morristown, NJ: European Association for Computational Linguistics, 39–44.
- and Wilfried Meyer-Viol (1993). 'Talking about trees', in *Sixth Conference of the European Chapter of the Association for Computational Linguistics: Proceedings of the Conference*. Morristown, NJ: European Association for Computational Linguistics, 21–29.
- Maarten de Rijke, and Yde Venema (2001). *Modal Logic*. Cambridge: Cambridge University Press.
- Blake, Barry (1994). *Case*. Cambridge: Cambridge University Press.
- Blevins, James (2006). 'Features and feature structures', in Keith Brown (ed.) *Encyclopedia of Language and Linguistics. Second Edition. Volume 12*. Oxford: Elsevier, 390–393.
- (forthcoming). 'Periphrasis as syntactic exponence', in Farrell Ackerman, James Blevins, and Gregory Stump (eds) *Paradigms and Periphrasis*. Stanford, CA: CSLI Publications.
- Bobaljik, Jonathan (1995). *Morphosyntax: On the Syntax of Verbal Inflection*. PhD thesis, MIT, Cambridge, MA.
- Booij, Geert (1994). 'Against split morphology', in Geert Booij and Jaap van Marle (eds) *Yearbook of Morphology 1993*. Dordrecht: Kluwer Academic Publishers, 27–49.
- (1996). 'Inherent versus contextual inflection and the split morphology hypothesis', in Geert Booij and Jaap van Marle (eds) *Yearbook of Morphology 1995*. Dordrecht: Kluwer Academic Publishers, 1–15.
- Borer, Hagit (1999). 'Deconstructing the construct', in Kyle Johnson and Ian Roberts (eds) *Beyond Principles and Parameters*. Dordrecht: Kluwer Academic Publishers, 43–89.
- (2005). *Structuring Sense*. Oxford: Oxford University Press.
- (2009). 'Afro-Asiatic, Semitic: Hebrew [compounds]', in Rochelle Lieber and Pavol Stekauer (eds) *The Oxford Handbook of Compounding*. Oxford: Oxford University Press, 491–511.
- Börjars, Kersti, Nigel Vincent, and Carol Chapman (1997). 'Paradigms, periphrases and pronominal inflection', in Geert Booij and Jaap van Marle (eds) *Yearbook of Morphology 1996*. Dordrecht: Kluwer Academic Publishers, 155–180.
- Bos, Johan and Katja Markert (2005). 'Recognising textual entailment with logical inference techniques', in *Proceedings of Human Language Technology Conference and Conference on Empirical Methods in Natural Language Processing (HLT/EMNLP 2005)*, Vancouver, Canada, 6–8 October 2005. Association for Computational Linguistics, 628–635.
- Bošković, Željko (2001). *On the Nature of the Syntax–Phonology Interface: Cliticization and Related Phenomena*. Amsterdam: Elsevier.
- Bouma, Gosse, Rob Malouf, and Ivan A. Sag (2001). 'Satisfying constraints on extraction and adjunction', *Natural Language and Linguistic Theory* 19: 1–65.



- Brody, Michael (1997). 'Perfect chains', in Liliane Haegeman (ed.) *Elements of Grammar: Handbook of Generative Syntax*. Dordrecht: Kluwer Academic Publishers, 139–167.
- (2000). 'Mirror theory: syntactic representation in perfect syntax', *Linguistic Inquiry* 31(1): 29–56.
- Broe, Michael B. (1993). *Specification Theory: The Treatment of Redundancy in Generative Phonology*. PhD thesis, University of Edinburgh.
- Bronnenberg, Wim, Harry Bunt, Jan Landsbergen, Remko Scha, Wijnand Schoenmakers, and Eric van Utteren (1980). 'The question-answering system PHLIQAI', in Leonard Bolc (ed.) *Natural Language Question Answering Systems*. Munich and Vienna: Hanser; London: Macmillan, 217–305.
- Brown, Dunstan (1998). 'Defining "subgender": virile and devirilized nouns in Polish', *Lingua* 104: 187–233.
- (2007). 'Peripheral functions and overdifferentiation: the Russian second locative', *Russian Linguistics* 31(1): 61–76.
- Butt, Miriam, Tracy Holloway King, María-Eugenia Niño, and Frédérique Segond (1999). *A Grammar Writer's Cookbook*. Stanford, CA: CSLI Publications.
- Bybee, Joan (1985). *Morphology: A Study of the Relation between Meaning and Form*. Amsterdam: John Benjamins.
- (2002). 'Word frequency and context of use in the lexical diffusion of phonetically conditioned sound change', *Language Variation and Change* 14: 261–290.
- Cable, Seth (2007). 'Q-particles and the nature of wh-fronting', ms, MIT, Cambridge, MA.
- Caha, Pavel (2007). 'The shape of paradigms'. Paper presented at GLOW XXX, Tromsø, 11–14 April 2007.
- Caponigro, Ivano and Maria Polinsky (2008). 'Relatively speaking (in Circassian)', in Natasha Abner and Jason Bishop (eds) *Proceedings of the 27th West Coast Conference on Formal Linguistics (WCCFL 27)*. Somerville, MA: Cascadia Proceedings Project, 81–89.
- Carpenter, Bob (1992). *The Logic of Typed Feature Structures: With Applications to Unification Grammars, Logic Programs and Constraint Resolution*. Cambridge: Cambridge University Press.
- (2002). 'Constraint-based processing', in Lynn Nadel (ed.) *Encyclopedia of Cognitive Science I*. London: Nature Publishing Group, 800–804.
- Carstairs-McCarthy, Andrew (1999). 'Category and feature', in Geert Booij, Christian Lehmann, and Joachim Mugdan (eds) *Morphology: An International Handbook on Inflection and Word-Formation*. Berlin: Walter de Gruyter, 264–272.
- Chomsky, Noam (1965). *Aspects of the Theory of Syntax*. Cambridge, MA: MIT Press.
- (1970). 'Remarks on nominalization', in Roderick A. Jacobs and Peter S. Rosenbaum (eds) *Readings in English Transformational Grammar*. Waltham, MA: Ginn and Co., 184–221.
- (1993). 'A minimalist program for linguistic theory', in Kenneth Hale and Samuel Jay Keyser (eds) *The View from Building 20*. Cambridge, MA: MIT Press, 1–52.
- (1995). *The Minimalist Program*. Cambridge, MA: MIT Press.

- (2000). 'Minimalist inquiries: the framework', in Roger Martin, David Michaels, and Juan Uriagereka (eds) *Step by Step: Essays in Minimalist Syntax in Honor of Howard Lasnik*. Cambridge, MA: MIT Press, 89–155.
- (2001). 'Derivation by phase', in Michael Kenstowicz (ed.) *Ken Hale: A Life in Language*. Cambridge, MA: MIT Press, 1–52.
- (2008). 'On phases', in Robert Freidin, Carlos P. Otero, and Maria Luisa Zubizarreta (eds) *Foundational Issues in Linguistic Theory*. Cambridge, MA: MIT Press, 133–166.
- and Morris Halle (1968). *The Sound Pattern of English*. New York, NY: Harper and Row.
- Chumakina, Marina, Dunstan Brown, Harley Quilliam, and Greville G. Corbett (2007). *Slovar' arčinskogo jazyka (arčinsko-anglo-russkij)* [A dictionary of Archi: Archi-Russian-English]. Makhachkala: Delovoj Mir. Also available at: <http://www.smg.surrey.ac.uk/>.
- Anna Kibort, and Greville G. Corbett (2007). 'Determining a language's feature inventory: person in Archi', in Peter K. Austin and Andrew Simpson (eds) *Endangered Languages* (Linguistische Berichte, Sonderheft 14). Hamburg: Helmut Buske, 143–172.
- Chung, Sandra (1982). 'Unbounded dependencies in Chamorro grammar', *Linguistic Inquiry* 13: 39–77.
- (1998). *The Design of Agreement: Evidence from Chamorro*. Chicago, IL: University of Chicago Press.
- Chvany, Catherine V. (1986). 'Jakobson's fourth and fifth dimensions: on reconciling the cube model of case meanings with the two-dimensional matrices for case forms', in Richard D. Brecht and James Levine (eds) *Case in Slavic*. Columbus, OH: Slavica, 107–129.
- Cinque, Guglielmo (1999). *The Syntax of Adverbs*. Oxford: Oxford University Press.
- and Richard Kayne (2005). *The Oxford Handbook of Comparative Syntax*. Oxford: Oxford University Press.
- Clark, Eve V. (1993). *The Lexicon in Acquisition*. Cambridge: Cambridge University Press.
- Clements, George N. (1984). 'Binding domains in Kikuyu', *Studies in the Linguistic Sciences* 14: 37–56.
- (1985). 'The geometry of phonological features', *Phonology Yearbook* 2: 225–252.
- and Elizabeth V. Hume (1995). 'The internal organization of speech sounds', in John A. Goldsmith (ed.) *Handbook of Phonology*. Oxford: Blackwell, 245–306.
- Collins, Chris (2002). 'Eliminating labels', in Samuel D. Epstein and T. Daniel Seely (eds) *Derivation and Explanation in the Minimalist Program*. Oxford: Blackwell, 42–64.
- Colmerauer, Alain (1970). 'Les systèmes-q ou un formalisme pour analyser et synthétiser des phrases sur ordinateur'. Internal publication 43, Département d'informatique de l'Université de Montréal, September 1970.
- Comrie, Bernard (1986). 'On delimiting cases', in Richard D. Brecht and James S. Levine (eds) *Case in Slavic*. Columbus, OH: Slavica, 86–106.
- Martin Haspelmath, and Balthasar Bickel (2004). 'The Leipzig Glossing Rules'. Available at: <http://www.eva.mpg.de/lingua/resources/glossing-rules.php> [Revised 2008].

- Copetake, Ann (1992). 'The representation of lexical semantic information', PhD thesis, University of Sussex. Published (1993) as *Cognitive Science Research Paper* 280, University of Sussex.
- (1995). 'The representation of group denoting nouns in a lexical knowledge database', in Patrick Saint-Dizier and Evelyne Viegas (eds) *Computational Lexical Semantics*. Cambridge: Cambridge University Press, 207–230.
- (2002). *Implementing Typed Feature Structure Grammars* (CSLI Lecture Notes 110). Stanford, CA: CSLI Publications.
- Dan Flickinger, Ivan A. Sag, and Carl Pollard (2005). 'Minimal Recursion Semantics: an introduction', *Journal of Research on Language and Computation* 3(2–3): 281–332.
- Alex Lascarides, and Dan Flickinger (2001). 'An algebra for semantic construction in constraint-based grammars', in *Proceedings of the 39th Annual Meeting of the Association for Computational Linguistics (ACL 2001), Toulouse, France*. University of Pennsylvania, Philadelphia, PA: Association for Computational Linguistics. 8 pp.
- Corbett, Greville G. (1979). 'The agreement hierarchy', *Journal of Linguistics* 15: 203–224. Reprinted (2003) in Francis X. Katamba (ed.) *Morphology: Critical Concepts in Linguistics. IV: Morphology and Syntax*. London: Routledge, 48–70.
- (1987). 'The morphology/syntax interface: evidence from possessive adjectives in Slavonic', *Language* 63: 299–345.
- (1991). *Gender*. Cambridge: Cambridge University Press.
- (2000). *Number*. Cambridge: Cambridge University Press.
- (2006). *Agreement*. Cambridge: Cambridge University Press.
- (2007). 'Canonical typology, suppletion and possible words', *Language* 83: 8–42.
- (2008). 'Determining morphosyntactic feature values: the case of case', in Greville G. Corbett and Michael Noonan (eds) *Case and Grammatical Relations: Papers in Honor of Bernard Comrie* (Typological Studies in Language 81). Amsterdam: John Benjamins, 1–34.
- and Matthew Baerman (2006). 'Prolegomena to a typology of morphological features', *Morphology* 16: 231–246.
- and Richard J. Hayward (1987). 'Gender and number in Bayso', *Lingua* 73: 1–28.
- Craig, Colette (ed.) (1986). *Noun Classes and Categorization*. Amsterdam: John Benjamins.
- Crowley, Terry (1978). *The Middle Clarence Dialects of Banjalong*. Canberra: Australian Institute of Aboriginal Studies.
- (2002). *Serial Verbs in Oceanic: A Descriptive Typology*. Oxford: Oxford University Press.
- Dalrymple, Mary and Ronald M. Kaplan (2000). 'Feature indeterminacy and feature resolution', *Language* 76: 759–798.
- Daniels, Mike and Detmar Meurers (2004). 'GIDL: a grammar format for linearization-based HPSG', in Stefan Müller (ed.) *Proceedings of the HPSG-2004 Conference, Center for Computational Linguistics, Katholieke Universiteit Leuven*. Stanford, CA: CSLI Publications, 93–111.

- Danon, Gabi (2001). 'Syntactic definiteness in the grammar of Modern Hebrew', *Linguistics* 39(6): 1071–1116.
- (2002). 'The Hebrew object marker and semantic type', in Yehuda Falk (ed.) *Proceedings of IATL 17*. The Hebrew University of Jerusalem: The Israel Association for Theoretical Linguistics. 19 pp.
- (2006). 'Caseless nominals and the projection of DP', *Natural Language and Linguistic Theory* 24(4): 977–1008.
- (2008). 'Definiteness spreading in the Hebrew construct state', *Lingua* 118(7): 872–906.
- Deen, Kamil Ud (2005). *The Acquisition of Swahili*. Amsterdam: John Benjamins.
- (2006). 'Object agreement and specificity in early Swahili', *Journal of Child Language* 33: 223–246.
- DeLoache, Judy S. (1995). 'Early understanding and use of symbols', *Current Directions in Psychological Science* 4: 109–113.
- Demuth, Katherine (1988). 'Noun classes and agreement in Sesotho acquisition', in Michael Barlow and Charles Ferguson (eds) *Agreement in Natural Languages: Approaches, Theories and Descriptions*. Stanford, CA: CSLI Publications, 305–321.
- (1992). 'Acquisition of Sesotho', in Dan I. Slobin (ed.) *The Crosslinguistic Study of Language Acquisition. Volume 3*. Hillsdale, NJ: Lawrence Erlbaum, 557–638.
- (2000). 'Bantu noun class systems: loan word and acquisition evidence of semantic productivity', in Günter Senft (ed.) *Classification Systems*. Cambridge: Cambridge University Press, 270–292.
- (2003). 'The acquisition of Bantu languages', in Derek Nurse and Gerald Phillipson (eds) *The Bantu Languages*. Surrey: Curzon Press, 209–222.
- Dench, Alan and Nicholas Evans (1988). 'Multiple case-marking in Australian languages', *Australian Journal of Linguistics* 8(1): 1–47.
- Dickinson, Markus (2004). 'Polish numeral phrases and predicative modification', ms. To appear in *The Ohio State University Working Papers in Linguistics (OSUWPL)*, Columbus, OH. 22 pp.
- Diesing, Molly (1990). 'Verb movement and the subject position in Yiddish', *Natural Language and Linguistic Theory* 8: 41–79.
- Dixon, Robert M. W. (1972). *The Dyirbal Language of North Queensland*. Cambridge: Cambridge University Press.
- (1977). *A Grammar of Yidiny*. Cambridge: Cambridge University Press.
- (1980). *The Languages of Australia*. Cambridge: Cambridge University Press.
- (1982a). 'Problems in Dyirbal dialectology', in John Anderson (ed.) *Language Form and Linguistic Variation: Papers Dedicated to Angus McIntosh* (Current Issues in Linguistics 15). Amsterdam: John Benjamins, 43–74.
- (1982b). *Where Have All the Adjectives Gone? and Other Essays in Semantics and Syntax*. Berlin: Mouton de Gruyter.
- (1984). *Searching for Aboriginal Languages*. St. Lucia: University of Queensland Press.
- (1989). 'The Dyirbal kinship system', *Oceania* 59: 245–268.
- (1990). 'Compensating phonological changes: an example from the northern dialects of Dyirbal', *Lingua* 80: 1–34.

- Dixon, Robert M. W. and Grace Koch (1996). *Dyirbal Song Poetry: The Oral Literature of an Australian Rainforest People*. St. Lucia: University of Queensland Press.
- Dobrovie-Sorin, Carmen (2000). '(In)definiteness spread: from Romanian genitives to Hebrew construct state nominals', in Virginia Motapanyane (ed.) *Comparative Studies in Romanian Syntax*. Oxford: Elsevier, 177–226.
- (2003). 'From DPs to NPs: a bare phrase structure account of genitives', in Martine Coene and Yves D'hulst (eds) *From NP to DP. Volume 2: The Expression of Possession in Noun Phrases*. Amsterdam: John Benjamins, 75–120.
- Doner, John (1970). 'Tree acceptors and some of their applications', *Journal of Computer and System Sciences* 4: 406–451.
- Donohue, Mark (2003). 'Review of *The Design of Agreement: Evidence from Chamorro* by Sandra Chung', *Linguistic Typology* 7: 285–292.
- Dorais, Louis-Jacques (2003). *Inuit Uqausiqatigiit: Inuit Languages and Dialects* (second, revised edition). Iqaluit: Nunavut Arctic College.
- Dorian, Nancy (1980). *Language Death: The Life Cycle of a Scottish Gaelic Dialect*. Philadelphia, PA: University of Pennsylvania Press.
- Dowty, David and Pauline Jacobson (1988). 'Agreement as a semantic phenomenon', in Joyce Powers and Kenneth de Jong (eds) *Proceedings of the Fifth Eastern States Conference on Linguistics (ESCOL), University of Pennsylvania, Philadelphia, PA, September 30–October 2, 1988*. Columbus, OH: Ohio State University, 95–101.
- Dresher, B. Elan (2009). *The Contrastive Hierarchy in Phonology*. Cambridge: Cambridge University Press.
- and Keren Rice (2007). *Markedness and the Contrastive Hierarchy in Phonology*. Project description available at <http://www.chass.utoronto.ca/~contrast/>.
- and Xi Zhang (2005). 'Contrast and phonological activity in Manchu vowel systems', *Canadian Journal of Linguistics/Revue canadienne de linguistique* 50: 45–82.
- Dziwirek, Katarzyna (1990). 'Default agreement in Polish', in Katarzyna Dziwirek, Patrick Farrell and Errapel Mejías-Bikandi (eds) *Grammatical Relations: A Cross-Theoretical Perspective*. Stanford, CA: CSLI Publications, 147–161.
- Efere, Emmanuel Efereala (2001). 'The pitch system of the Bumo dialect of Izon', *University of British Columbia Working Papers in Linguistics* (Current Research on African Languages and Linguistics) 4: 115–259.
- Emonds, Joseph E. (1976). *A Transformational Approach to English Syntax: Root, Structure-Preserving, and Local Transformations*. New York, NY: Academic Press.
- (2000). *Lexicon and Grammar: The English Syntacticon*. Berlin: Mouton de Gruyter.
- Engelhardt, Miriam (2000). 'The projection of argument-taking nominals', *Natural Language and Linguistic Theory* 18(1): 41–88.
- Evans, Nicholas (1995). *A Grammar of Kayardild, with Historical-Comparative Notes on Tangkic*. Berlin: Mouton de Gruyter.
- (1997). 'Head classes and agreement classes in the Mayali dialect chain', in Mark Harvey and Nicholas Reid (eds) *Nominal Classification in Aboriginal Australia* (Studies in Language Companion Series 37). Amsterdam: John Benjamins, 105–46.

- (2003). 'Typologies of agreement: some problems from Kayardild', in Dunstan Brown, Greville G. Corbett, and Carole Tiberius (eds) *Agreement: A Typological Perspective*. Special issue of the *Transactions of the Philological Society* 101(2). Oxford: Blackwell, 203–234.
- (2007). 'Insubordination and its uses', in Irina Nikolaeva (ed.) *Finiteness: Theoretical and Empirical Foundations*. Oxford: Oxford University Press, 366–431.
- Falk, Yehuda (2006). 'Constituent structure and grammatical functions in the Hebrew action nominal', in Jane Grimshaw, Joan Maling, Chris Manning, Jane Simpson, and Annie Zaenen (eds) *Architectures, Rules, and Preferences: A Festschrift for Joan Bresnan*. Stanford, CA: CSLI Publications, 185–207.
- Farrar, Scott and D. Terence Langendoen (2003). 'A linguistic ontology for the Semantic Web', *GLOT International* 7(3): 97–100.
- Fassi Fehri, Abdelkader (1993). *Issues in the Structure of Arabic Clauses and Words*. Dordrecht: Kluwer Academic Publishers.
- (1999). 'Arabic modifying adjectives and DP structures', *Studia Linguistica* 53(2): 105–154.
- Faßke, Helmut (1981). *Grammatik der obersorbischen Schriftsprache der Gegenwart: Morphologie*. Bautzen: Domowina Verlag.
- Fitch, W. Tecumseh, Marc D. Hauser, and Noam Chomsky (2005). 'The evolution of the language faculty: clarifications and implications', *Cognition* 97(2): 179–210.
- Flemming, Edward (2004). 'Contrast and perceptual distinctiveness', in Bruce Hayes, Robert Kirchner, and Donca Steriade (eds) *Phonetically-Based Phonology*. Cambridge: Cambridge University Press, 232–276.
- Flickinger, Dan (2002). 'On building a more efficient grammar by exploiting types', in Stephan Oepen, Dan Flickinger, Jun-ichi Tsujii, and Hans Uszkoreit (eds) *Collaborative Language Engineering*. Stanford, CA: CSLI Publications, 1–17.
- and Emily M. Bender (2003). 'Compositional semantics in a multilingual grammar resource', in Emily M. Bender, Dan Flickinger, Frederik Fouvry, and Melanie Siegel (eds) *Proceedings of the Workshop on Ideas and Strategies for Multilingual Grammar Development, ESSLLI 2003, Vienna, Austria, 18–29 August 2003*. 33–42.
- Jan Tore Lønning, Helge Dyvik, Stephan Oepen, Francis Bond (2005). 'SEM-I rational MT – enriching deep grammars with a semantic interface for scalable Machine Translation', in *Proceedings of Machine Translation Summit X, Phuket, Thailand*, 165–172.
- Frampton, John and Samuel Gutmann (1999). 'Cyclic computation, a computationally efficient minimalist syntax', *Syntax* 2: 1–27.
- (2002). 'How sentences grow in the mind', ms, Northwestern University. Published as Frampton and Gutmann (2006).
- (2004). 'Crash-proof syntax', in Samuel D. Epstein and T. Daniel Seely (eds) *Derivation and Explanation in the Minimalist Program*. Oxford: Blackwell, 90–105.
- (2006). 'How sentences grow in the mind: agreement and selection in an efficient minimalist syntax', in Cedric Boeckx (ed.) *Agreement Systems*. Amsterdam: John Benjamins, 121–157.

- Frank, Robert (2002). *Phrase Structure Composition and Syntactic Dependencies*. Cambridge, MA: MIT Press.
- Franks, Steven (1995). *Parameters of Slavic Morphosyntax* (Oxford Studies in Comparative Syntax). New York, NY: Oxford University Press.
- and Tracy Holloway King (2000). *A Handbook of Slavic Clitics*. New York and Oxford: Oxford University Press.
- Fraser, Norman M. and Greville G. Corbett (1997). 'Defaults in Arapesh', *Lingua* 103: 25–57.
- Frisch, Stefan (1996). *Similarity and Frequency in Phonology*. PhD thesis, Northwestern University.
- Janet Pierrehumbert, and Michael B. Broe (2004). 'Similarity avoidance and the OCP', *Natural Language and Linguistic Theory* 22: 179–228.
- Gallistel, Charles R. (1990). *The Organization of Learning*. Cambridge, MA: MIT Press.
- Gärtner, Hans-Martin (2002). *Generalized Transformations and Beyond: Reflections on Minimalist Syntax*. Berlin: Akademie-Verlag.
- Gazdar, Gerald (1981). 'Unbounded dependencies and coordinate structure', *Linguistic Inquiry* 12: 155–84.
- (1982). 'Phrase structure grammar', in Pauline I. Jacobson and Geoffrey K. Pullum (eds), *The Nature of Syntactic Representation*. Dordrecht: Reidel, 131–186.
- Ewan Klein, Geoffrey K. Pullum, and Ivan A. Sag (1985). *Generalized Phrase Structure Grammar*. Oxford: Blackwell.
- and Chris Mellish (1989). *Natural Language Processing in Prolog: An Introduction to Computational Linguistics*. Wokingham: Addison-Wesley.
- Geoffrey K. Pullum, Bob Carpenter, Ewan Klein, Thomas E. Hukari, and Robert D. Levine (1988). 'Category structures', *Computational Linguistics* 14(1): 1–19.
- Gelman, Susan A. (2000). 'The role of essentialism in children's concepts', in Harvey Reese (ed.) *Advances in Child Development and Behavior. Volume 27*. San Diego, CA: Academic Press, 55–98.
- (2003). *The Essential Child: Origins of Essentialism in Everyday Thought*. New York, NY: Oxford University Press.
- and Paul Bloom (2000). 'Young children are sensitive to how an object was created when deciding what to name it', *Cognition* 76: 91–103.
- Gentner, Deidre and Laura Namy (1999). 'Comparison in the development of categories', *Cognitive Development* 14: 487–513.
- Gerdts, Donna B. and Thomas E. Hukari (2001). 'A-subjects and control in Halkomelem', in Dan Flickinger and Andreas Kathol (eds) *Proceedings of the 7th International Conference on Head-Driven Phrase Structure Grammar*. Stanford, CA: CSLI Publications, 100–123.
- Gerken, LouAnn, Rachel Wilson, and William Lewis (2005). 'Infants can use distributional cues to form syntactic categories', *Journal of Child Language* 32: 249–268.
- Ginzburg, Jonathan and Ivan A. Sag (2000). *Interrogative Investigations: The Form, Meaning, and Use of English Interrogatives*. Stanford, CA: CSLI Publications.
- Givón, Talmy (2001). *Syntax: An Introduction. Volume I*. Amsterdam: John Benjamins.

- Greenberg, Joseph H. (1963). 'Some universals of grammar with particular reference to the order of meaningful elements', in Joseph H. Greenberg (ed.) *Universals of Language*. Cambridge, MA: MIT Press, 73–113. [Paperback edition published (1966); page references to this edition.]
- Grimshaw, Jane (1979). 'Complement selection and the lexicon', *Linguistic Inquiry* 10: 279–326.
- (1991). 'Extended projections', ms, Brandeis University.
- Grosz, Barbara J. (1983). 'TEAM: a Transportable Natural-Language Interface System', in *Proceedings of the 1st Conference on Applied Natural Language Processing, Santa Monica, CA*, 39–45.
- Gvozdev, Aleksandr N. (1961). *Voprosy izučenija detskoj reči*. Moscow: Izdatelstvo Akademii Pedagogičeskix Nauk RSFRS.
- Hale, Ken (1973). 'Deep-surface canonical disparities in relation to analysis and change: an Australian example', in Thomas A. Sebeok (ed.) *Current Trends in Linguistics 8: Linguistics in Oceania*. The Hague: Mouton, 401–458.
- (1998). 'On endangered languages and the importance of linguistic diversity', in Lenore A. Grenoble and Lindsay J. Whaley (eds) *Endangered Languages: Language Loss and Community Response*. Cambridge: Cambridge University Press, 192–216.
- Hall, Daniel Currie (2007). *The Role and Representation of Contrast in Phonological Theory*. PhD thesis, University of Toronto.
- (2008). 'Prophylactic features and implicit contrast', in Peter Avery, B. Elan Dresher, and Keren Rice (eds) *Contrast in Phonology: Theory, Perception, Acquisition*. Berlin: Mouton de Gruyter, 35–54.
- Halle, Morris (1957). 'In defence of the number two', in Ernst Pulgram (ed.) *Studies Presented to Joshua Whatmough on His Sixtieth Birthday*. The Hague: Mouton, 65–72.
- (1959). *The Sound Pattern of Russian: A Linguistic and Acoustical Investigation*. The Hague: Mouton. Second printing (1971).
- Hansson, Gunnar Ólafur (2001). *Theoretical and Typological Issues in Consonant Harmony*. PhD thesis, University of California, Berkeley.
- Harbour, Daniel (2007). *Morphosemantic Number*. Dordrecht: Kluwer Academic Publishers.
- Harley, Heidi and Elizabeth Ritter (2002). 'Person and number in pronouns: a feature-geometric analysis', *Language* 78(3): 482–526.
- Harman, Gilbert (1963). 'Generative grammars without transformational rules: a defense of phrase structure', *Language* 39: 597–616.
- Harris, Zellig S. (1946). 'From morpheme to utterance', *Language* 22(3): 161–183.
- Harvey, Mark (1997). 'Nominal classification and gender in Aboriginal Australia', in Mark Harvey and Nicholas Reid (eds) *Nominal Classification and Gender in Aboriginal Australia*. Amsterdam: John Benjamins, 17–62.
- Haspelmath, Martin (2006). 'Against markedness (and what to replace it with)', *Journal of Linguistics* 42: 25–70.
- Hauser, Marc D., Noam Chomsky, and W. Tecumseh Fitch (2002). 'The faculty of language: what is it, who has it, and how did it evolve?' *Science* 298: 1569–1579.



- Hazout, Ilan (1991). *Verbal Nouns: Theta Theoretic Studies in Hebrew and Arabic*. PhD thesis, University of Massachusetts.
- (2000). 'Adjectival genitive constructions in Modern Hebrew: a case study in coanalysis', *The Linguistic Review* 17(1): 29–52.
- Heller, Daphna (2002). 'Possession as a lexical relation: evidence from the Hebrew construct state', in Line Mikkelsen and Christopher Potts (eds) *Proceedings of WCCFL 21*. Somerville, MA: Cascadilla Press, 127–140.
- Herd, Jonathon (2005). 'Loanword adaptation and the evaluation of similarity', *Toronto Working Papers in Linguistics* (Special Issue on *Similarity in Phonology*) 24: 65–116.
- Higgins, Francis R. (1979). *The Pseudo-Cleft Construction in English*. New York, NY: Garland.
- Hockett, Charles F. (1958). *A Course in Modern Linguistics*. New York, NY: Macmillan.
- Höhle, Tilman N. (1997). 'Vorangestellte Verben und Komplementierer sind eine Natürliche Klasse', in Christa Dürscheid, Karl-Heinz Ramers, and Monika Schwarz (eds) *Sprache im Fokus: Festschrift für Heinz Vater zum 65. Geburtstag*. Tübingen: Max Niemeyer, 107–120.
- Huddleston, Rodney, Geoffrey K. Pullum, et al. (2002). *The Cambridge Grammar of the English Language*. Cambridge: Cambridge University Press.
- Hudson Kam, Carla and Elissa Newport (2005). 'Regularizing unpredictable variation: the roles of adult and child learners in language formation and change', *Language Learning and Development* 1: 151–195.
- Hukari, Thomas E. and Robert D. Levine (1995). 'Adjunct extraction', *Journal of Linguistics* 31: 195–226.
- Iidiata, Daniel F. (2005). *What Bantu Child Speech Data Tells Us about the Controversial Semantics of Bantu Noun Class Systems* (LINCOS Studies in African Linguistics 67). Munich: LINCOS.
- Jackendoff, Ray S. (1977). *X-Bar Syntax: A Study of Phrase Structure*. Cambridge, MA: MIT Press.
- Jakobson, Roman (1958). 'Morfologičeskie nabljudenija nad slavjanskim sklonenijem (sostav russkix padežnyx form)', in *American Contributions to the Fourth International Congress of Slavists, Moscow, September 1958*. The Hague: Mouton, 127–156. Reprinted in Roman Jakobson (1971) *Selected Writings II*. The Hague: Mouton, 154–183. Translated (1984) as 'Morphological observations on Slavic declension (the structure of Russian case forms)', in Linda R. Waugh and Morris Halle (eds) *Roman Jakobson. Russian and Slavic Grammar: Studies 1931–1981*. Berlin: Mouton de Gruyter, 105–133.
- C. Gunnar Fant, and Morris Halle (1952). *Preliminaries to Speech Analysis: The Distinctive Features and Their Correlates*. Cambridge, MA: MIT Press.
- and Morris Halle (1956). *Fundamentals of Language*. The Hague: Mouton.
- and John Lotz (1949). 'Notes on the French phonemic pattern', *Word* 5: 151–158.
- Ji, Yonghai, Zhizhong Zhao, and Liyuan Bai (1989). *Xiandai Manyu Babaiju* [*Eight Hundred Sentences of the Modern Manchu*]. Beijing: Zhongyang Minzu Xueyuan Chubanshe.

- Johnson, David E. and Paul M. Postal (1980). *Arc Pair Grammar*. Princeton, NJ: Princeton University Press.
- Joshi, Aravind, Leon Levy, and Masako Takahashi (1975). 'Tree adjunct grammars', *Journal of Computer and System Sciences* 10(1): 136–163.
- Julien, Marit (2002). *Syntactic Heads and Word Formation*. New York, NY: Oxford University Press.
- Juszyk, Peter W., Angela Friederici, Joachim Wessels, Viktor Y. Svenkerud, and Anne M. Juszyk (1993). 'Infants' sensitivity to the sound patterns of native language words', *Journal of Memory and Language* 32: 402–420.
- Paul A. Luce, and Jan Charles-Luce (1994). 'Infants' sensitivity to phonotactic patterns in native language', *Journal of Memory and Language* 33: 630–645.
- Kajita, Masaru (1968). *A Generative-Transformational Study of Semi-Auxiliaries in Present-Day American English*. Tokyo: Sanseido.
- Kamp, Hans and Uwe Reyle (1993). *From Discourse to Logic*. Dordrecht: Kluwer Academic Publishers.
- Kapust, Waltraud (1998). *Universality in Noun Classification*. MA thesis, San Jose State University.
- Karmiloff-Smith, Annette (1979). *A Functional Approach to Child Language: A Study of Determiners and Reference*. Cambridge: Cambridge University Press.
- Katamba, Francis (2003). 'Bantu nominal morphology', in Derek Nurse and Gérard Philippson (eds) *The Bantu Languages*. New York, NY: Routledge, 103–120.
- Kathol, Andreas (2000). *Linear Syntax*. New York and Oxford: Oxford University Press.
- Katz, Jerrold J. and Jerry A. Fodor (1963). 'The structure of a semantic theory', *Language* 39: 170–210.
- and Paul M. Postal (1964). *An Integrated Theory of Linguistic Descriptions*. Cambridge, MA: MIT Press.
- Kaun, Abigail Rhoades (1995). *The Typology of Rounding Harmony: An Optimality Theoretic Approach*. PhD thesis, University of California, Los Angeles.
- Kay, Martin (1979). 'Functional grammar', in Christine Chiarello, John Kingston, Eve E. Sweetser, James Collins, Haruko Kawasaki, John Manley-Buser, Dorothy W. Marschak, Catherine O'Connor, David Shaul, Marta Tobey, Henry Thompson, and Katherine Turner (eds) *BLS 5: Proceedings of the Fifth Annual Meeting of the Berkeley Linguistics Society*. Berkeley, CA: Berkeley Linguistics Society, 142–158.
- Kay, Paul (2002). 'English subjectless tagged sentences', *Language* 78: 453–481.
- Kayne, Richard and Jean-Yves Pollock (1978). 'Stylistic inversion, successive cyclicity, and Move NP in French', *Linguistic Inquiry* 12: 93–133.
- Kean, Mary-Louise (1980). *The Theory of Markedness in Generative Grammar*. PhD thesis, MIT, Cambridge, MA. Reproduced by the Indiana University Linguistics Club, Bloomington, IN.
- Keenan, Edward L. (1987). 'A semantic definition of indefinite NP', in Eric J. Reuland and Alice G. B. ter Meulen (eds) *The Representation of (In)definiteness*. Cambridge, MA: MIT Press, 286–317.

- Kellman, Philip and Martha E. Arterberry (1998). *The Cradle of Knowledge: Development of Perception in Infancy*. Cambridge, MA: MIT Press.
- Kempe, Vera and Patricia Brooks (2001). 'The role of diminutives in Russian gender learning: can child-directed speech facilitate the acquisition of inflectional morphology?' *Language Learning* 51: 145–151.
- Natalija Mironova, and Olga Fedorova (2003). 'Diminutivization supports gender acquisition in Russian children', *Journal of Child Language* 30: 471–485.
- Kiparsky, Paul (1982). 'From cyclic to lexical phonology', in Harry van der Hulst and Norval Smith (eds) *The Structure of Phonological Representations. Part I*. Foris: Dordrecht, 131–176.
- (1985). 'Some consequences of Lexical Phonology', *Phonology Yearbook* 2: 85–138.
- (2001). 'Structural case in Finnish', *Lingua* 111: 315–376.
- Kiss, Tibor (1995). *Infinite Komplementation*. Tübingen: Max Niemeyer.
- Klokeid, Terry (1976). *Topics in Lardil Grammar*. PhD thesis, MIT, Cambridge, MA.
- Korn, David (1969). 'Types of labial vowel harmony in the Turkic languages', *Anthropological Linguistics* 11: 98–106.
- Kornai, András and Geoffrey K. Pullum (1990). 'The X-bar theory of phrase structure', *Language* 66: 24–50.
- Kracht, Marcus (1997). 'Inessential features', in Christian Retoré (ed.) *Logical Aspects of Computational Linguistics: First International Conference, LACL '96, Selected Papers* (Lecture Notes in Artificial Intelligence 1328). Berlin: Springer, 43–62.
- Krifka, Manfred (1987). 'Nominal reference and temporal constitution: towards a semantics of quantity', *FNS-Bericht 17, Forschungsstelle für natürlich-sprachliche Systeme*, Tübingen. Also in J. Groenendijk et al. (eds) *Proceedings of the 6th Amsterdam Colloquium, ITALL*, University of Amsterdam, 153–173. And in R. Bartsch, J. van Benthem, and P. van Emde Boas (eds) (1989) *Semantics and Contextual Expression*. Dordrecht: Foris, 75–115.
- Kroch, Anthony and Aravind Joshi (1987). 'Analyzing extraposition in a tree adjoining grammar', in Geoffrey Huck and Almerindo Ojeda (eds) *Discontinuous Constituency (Syntax and Semantics 20)*. New York, NY: Academic Press, 107–149.
- Kuhn, Jonas and Louisa Sadler (2007). 'Single conjunct agreement and the formal treatment of coordination in LFG', in Miriam Butt and Tracy Holloway King (eds) *Proceedings of the LFG07 Conference, Stanford University*. Stanford, CA: CSLI Publications. 302–322.
- Kunene, Euphrasia C. L. (1979). *The Acquisition of Siswati as a First Language: Morphological Study with Special Reference to Noun Classes and Some Agreement Markers*. PhD thesis, University of California, Los Angeles.
- Kuroda, Sige-Yuki (1967). *Yawelmani Phonology* (Research Monograph 43). Cambridge, MA: MIT Press.
- Laidig, Wyn D. and Carol J. Laidig (1990). 'Larike pronouns: duals and trials in a Central Moluccan language', *Oceanic Linguistics* 29: 87–109.
- Lakoff, George (1972). 'Foreword' in *Where the Rules Fail: A Student's Guide: An Unauthorized Appendix to M. K. Burt's 'From Deep to Surface Structure'*, prepared

- by Susan Andres et al., rewritten and edited by Ann Borkin with the assistance of David Peterson. Bloomington, IN: Indiana University Linguistics Club, ii–v.
- (1987). *Women, Fire, and Dangerous Things*. Chicago, IL: University of Chicago Press.
- Lascarides, Alex and Ann Copestake (1999). ‘Default representation in constraint-based frameworks’, *Computational Linguistics* 25: 55–105.
- Leech, Geoffrey and Andrew Wilson (main authors) (1996). *EAGLES: Recommendations for the Morphosyntactic Annotation of Corpora (EAGLES Document EAG–TCWG–MAC/R)*. Available online.
- Lenček, Rado L. (1972). ‘O zaznamovanosti in nevtalizaciji slovnične kategorije spola v slovenskem knjižnem jeziku’, *Slavistična revija* 20: 55–63.
- Levin, Magnus (2001). *Agreement with Collective Nouns in English* (Lund Studies in English 103). Stockholm: Almqvist & Wiksell.
- Levine, Robert D. and Thomas E. Hukari (2006). *The Unity of Unbounded Dependency Constructions*. Stanford, CA: CSLI Publications.
- Levy, Yonata (1983). ‘It’s frogs all the way down’, *Cognition* 15: 75–93.
- Libkin, Leonid (2004). *Elements of Finite Model Theory* (Texts in Theoretical Computer Science). New York, NY: Springer.
- Liljencrants, Johan and Björn Lindblom (1972). ‘Numerical simulation of vowel quality systems: the role of perceptual contrast’, *Language* 48: 839–862.
- Link, Godehard (1983). ‘The logical analysis of plurals and mass terms: a lattice-theoretical approach’, in Rainer Bäuerle, Christoph Schwarze, and Arnim von Stechow (eds) *Meaning, Use and Interpretation of Language*. Berlin: Walter de Gruyter, 302–323.
- Longobardi, Giuseppe (1996). *The Syntax of N-raising: A Minimalist Theory* (Uil OTS Working Papers). Utrecht: Research Institute for Language and Speech.
- Lyster, Roy (2006). ‘Predictability in French gender attribution: a corpus analysis’, *French Language Studies* 16: 69–92.
- Mackenzie, Sara (2005). ‘Similarity and contrast in consonant harmony systems’, *Toronto Working Papers in Linguistics* (Special Issue on *Similarity in Phonology*) 24: 169–182.
- (2009). *Contrast and Similarity in Consonant Harmony Processes*. PhD thesis, University of Toronto.
- Malouf, Robert (2000). ‘A head-driven account of long-distance case assignment’, in Ronnie Cann, Claire Grover, and Philip H. Miller (eds) *Grammatical Interfaces in HPSG*. Stanford, CA: CSLI Publications, 201–214.
- Mandler, Jean (2004). *The Foundations of Mind: Origins of Conceptual Thought*. Oxford: Oxford University Press.
- Marantz, Alec (1997). ‘No escape from syntax: don’t try morphological analysis in the privacy of your own lexicon’, in Alexis Dimitriadis, Laura Siegel, Clarissa Surek-Clark, and Alexander Williams (eds) *University of Pennsylvania Working Papers in Linguistics* 4(2): 201–225.
- Martinet, André (1964). *Elements of General Linguistics*. With a foreword by L. R. Palmer. Translated by Elisabeth Palmer. Chicago, IL: University of Chicago Press.

- Maslov, Jurij Sergeevič (1982). *Gramatika na bálgarskija ezik*. Sofia: Nauka i izkustvo.
- Matthews, Peter H. (1965). 'The inflectional component of a word-and-paradigm grammar', *Journal of Linguistics* 1: 139–171.
- (1972). *Inflectional Morphology: A Theoretical Study Based on Aspects of Latin Verb Conjugation*. Cambridge: Cambridge University Press.
- (1991). *Morphology. Second Edition*. Cambridge: Cambridge University Press.
- Matushansky, Ora (2006). 'Head movement in linguistic theory', *Linguistic Inquiry* 37(1): 69–109.
- McCloskey, James (1979). *Transformational Syntax and Model Theoretic Semantics: A Case Study in Modern Irish*. Dordrecht: Reidel.
- (1990). 'Resumptive pronouns, A'-binding, and levels of representation in Irish', in Randall Hendrick (ed.), *The Syntax of the Modern Celtic Languages (Syntax and Semantics 23)*. New York, NY: Academic Press, 199–248.
- McGinnis, Martha (2005). 'On markedness asymmetries in person and number', *Language* 81(3): 699–718.
- McNaughton, Robert and Seymour Papert (1971). *Counter-Free Automata*. Cambridge, MA: MIT Press.
- Mel'čuk, Igor (1993a). *Cours de morphologie générale. Volume I: Introduction et première partie: Le mot*. Montréal: Les Presses de l'Université de Montréal; Paris: CNRS Éditions.
- (1993b). 'Agreement, government, congruence', *Linguisticae Investigationes* 17: 307–372.
- Meurers, W. Detmar (1999). *Lexical Generalizations in the Syntax of German Non-Finite Constructions*. PhD thesis, Universität Tübingen. Published (2000) as Volume 145 in *Arbeitspapiere des SFB 340*.
- (2001). 'On expressing lexical generalizations in HPSG', *Nordic Journal of Linguistics* 24(2): 161–217.
- Meyer, Peter (1994). 'Grammatical categories and the methodology of linguistics: Review article on W. Andries van Helden (1993) *Case and Gender: Concept Formation Between Morphology and Syntax*', *Russian Linguistics* 18: 341–377.
- Mielke, Jeff (2008). *The Emergence of Distinctive Features*. Oxford: Oxford University Press.
- Mills, Anne E. (1985). 'The acquisition of German', in Dan I. Slobin (ed.) *The Crosslinguistic Study of Language Acquisition. Volume 1: The Data*. Hillsdale, NJ: Lawrence Erlbaum, 383–415.
- (1986). *The Acquisition of Gender: A Study of English and German*. New York, NY: Springer.
- Moravcsik, Edith A. (1988). 'Agreement and markedness', in Michael Barlow and Charles A. Ferguson (eds) *Agreement in Natural Language: Approaches, Theories, Descriptions*. Stanford, CA: CSLI Publications. 89–106.
- Moss, Lawrence S. and Hans-Jörg Tiede (2007). 'Applications of modal logic in linguistics', in Patrick Blackburn, Johan van Benthem, and Frank Wolter (eds) *Handbook of Modal Logic*. Amsterdam: Elsevier, 1031–1076.

- Müller, Stefan (2004). 'Continuous or discontinuous constituents? A comparison between syntactic analyses for constituent order and their processing systems', *Research on Language and Computation* 2(2): 209–257. (Special Issue on *Linguistic Theory and Grammar Implementation*).
- (2005). 'Zur Analyse der deutschen Satzstruktur', *Linguistische Berichte* 201: 3–39.
- Mylne, Tom (1995). 'Grammatical category and world view: Western colonization of the Dyrbal language', *Cognitive Linguistics* 6: 379–404.
- Namy, Laura and Deidre Gentner (2002). 'Making a silk purse out of two sows' ears: young children's use of comparison in category learning', *Journal of Experimental Psychology: General* 131: 5–15.
- Narayanan, Sridhar and Sanda Harabagiu (2004). 'Question answering based on semantic structures', in *Proceedings of the 20th International Conference on Computational Linguistics (COLING), Geneva, Switzerland, 22–29 August 2004*. 10 pp.
- Newman, Stanley (1944). *The Yokuts Language of California*. New York, NY: The Viking Fund Publications in Anthropology (No. 2).
- Newport, Elissa and Richard Aslin (2000). 'Innately constrained learning: blending old and new approaches to language acquisition', *Proceedings of the 24th Annual Boston University Conference on Language Development*. Somerville, MA: Cascadia Press.
- — (2004). 'Learning at a distance: I. Statistical learning of non-adjacent dependencies', *Cognitive Psychology* 48: 127–162.
- Nilsen, Øystein (2003). *Eliminating Positions*. PhD thesis, LOT, Utrecht Institute of Linguistics OTS.
- Noyer, Rolf (1992). *Features, Positions and Affixes in Autonomous Morphological Structure*. PhD thesis, MIT, Cambridge, MA.
- Nunberg, Geoffrey, Ivan A. Sag, and Thomas Wasow (1994). 'Idioms', *Language* 70(3): 491–538.
- Nunes, Jairo (1995). *The Copy Theory of Movement and Linearization of Chains in the Minimalist Program*. PhD thesis, University of Maryland.
- O'Grady, Geoff N. (1998). 'Toward a Proto-Pama-Nyungan stem list, Part I: Sets J<sub>1</sub>–J<sub>25</sub>', *Oceanic Linguistics* 37: 209–233.
- Ojeda, Almerindo (1993). *Linguistic Individuals* (CSLI Lecture notes 31). Stanford, CA: CSLI Publications.
- Ortmann, Albert (2000). 'Where plural refuses to agree: feature unification and morphological economy', *Acta Linguistica Hungarica* 47: 249–288.
- Palm, Adi (1999). 'Propositional tense logic for finite trees'. Paper presented at the *Sixth Meeting on Mathematics of Language*, University of Central Florida, Orlando, FL. Available at: <http://www.phil.uni-passau.de/linguistik/palm/papers/mol99.pdf>.
- Pašov, Petâr (1966). *Bâlgarskijat glagol. Klasifikacija. Vidoobrazuvane. Slovoobrazuvane*. Volume 1. Sofia: Nauka i izkustvo.
- (1994). *Praktičeska bâlgarska gramatika* (Second revised edition). Sofia: Prosveta.
- Pensalfini, Robert (2003). *A Grammar of Jingulu: An Aboriginal Language of the Northern Territory* (Pacific Linguistics 536). Canberra: Pacific Linguistics.

- Pesetsky, David and Esther Torrego (2001). 'T to C movement: causes and consequences', in Michael Kenstowicz (ed.) *Ken Hale: A Life in Language*. Cambridge, MA: MIT Press, 355–426.
- (2004). 'Tense, case and the nature of syntactic categories', in Jacqueline Guéron and Jacqueline Lecarme (eds) *The Syntax of Time*. Cambridge, MA: MIT Press, 495–538.
- (2007). 'The syntax of valuation and the interpretability of features', in Simin Karimi, Vida Samiian, and Wendy K. Wilkins (eds) *Phrasal and Clausal Architecture: Syntactic Derivation and Interpretation*. Amsterdam: John Benjamins, 262–294.
- Plaster, Keith and Maria Polinsky (2007). 'Women are not dangerous things: gender and categorization', *Harvard Working Papers in Linguistics* 12. 44 pp.
- Polinsky, Maria (2008). 'Gender under incomplete acquisition: heritage speakers' knowledge of noun categorization', *Heritage Language Journal* 6(1). 34 pp.
- and Ezra van Everbroeck (2003). 'Development of gender classifications: modeling the historical change from Latin to French', *Language* 79: 356–390.
- Pollard, Carl J. (1994). 'Toward a unified account of passive in German', in John Nerbonne, Klaus Netter, and Carl J. Pollard (eds) *German in Head-Driven Phrase Structure Grammar*. Stanford, CA: CSLI Publications, 273–296.
- and Ivan A. Sag (1987). *Information-Based Syntax and Semantics, Volume 1*. Stanford, CA: CSLI Publications.
- (1988). 'An information-based theory of agreement', in *CLS 24: Proceedings of the 24th Regional Meeting of the Chicago Linguistic Society. Parasession on Agreement*. Chicago, IL: Chicago Linguistic Society, 236–257.
- (1994). *Head-Driven Phrase Structure Grammar*. Chicago, IL: University of Chicago Press.
- Postal, Paul M. (1970). 'On coreferential complement subject deletion', *Linguistic Inquiry* 1: 439–500.
- Potsdam, Eric and Jeffrey T. Runner (2001). 'Richard returns: copy raising and its implications', in *CLS 37: Proceedings of the 37th Regional Meeting of the Chicago Linguistic Society*. Chicago, IL: Chicago Linguistic Society, 453–468.
- Preissler, Melissa and Susan Carey (2004). 'Do both pictures and words function as symbols for 18- and 24-month-old children?' *Journal of Cognition and Development* 5: 185–212.
- Prince, Alan and Paul Smolensky (2004). *Optimality Theory: Constraint Interaction in Generative Grammar*. Oxford: Blackwell.
- Przepiórkowski, Adam (1999). *Case Assignment and the Complement-Adjunct Dichotomy: A Non-Configurational Constraint-Based Approach*. PhD thesis, Universität Tübingen.
- (2003). 'A hierarchy of Polish genders', in Piotr Bański and Adam Przepiórkowski (eds) *Generative Linguistics in Poland: Morphosyntactic Investigations*. Warsaw: Instytut Podstaw Informatyki PAN, 109–122.
- (2004). *Korpus IPI PAN. Wersja wstępna/The IPI PAN Corpus: Preliminary Version*. Warsaw: Institute of Computer Science, Polish Academy of Sciences.
- Pulleyblank, Douglas (1986). *Tone in Lexical Phonology*. Dordrecht: Reidel.

- Pullum, Geoffrey K. and Barbara C. Scholz (2001). 'On the distinction between model-theoretic and generative-enumerative syntactic frameworks', in Philippe de Groote, Glyn Morrill, and Christian Retoré (eds) *Logical Aspects of Computational Linguistics: 4th International Conference* (Lecture Notes in Artificial Intelligence 2099). Berlin and New York: Springer, 17–43.
- (2005). 'Contrasting applications of logic in natural language syntactic description', in Petr Hajek, Luis Valdés-Villanueva, and Dag Westerståhl (eds) *Proceedings of the 13th International Congress of Logic, Methodology and Philosophy of Science*. London: KCL Publications, 481–503.
- and Arnold M. Zwicky (1988). 'The syntax–phonology interface', in Frederick J. Newmeyer (ed.) *Linguistics: The Cambridge Survey. Volume I, Linguistic Theory: Foundations*. Cambridge: Cambridge University Press, 255–280.
- Reape, Mike (1994). 'Domain union and word order variation in German', in John Nerbonne, Klaus Netter, and Carl J. Pollard (eds) *German in Head-Driven Phrase Structure Grammar*. Stanford, CA: CSLI Publications, 151–197.
- (1996). 'Getting things in order', in Harry C. Bunt and Arthur van Horck (eds) *Discontinuous Constituency*. Berlin and New York: Mouton de Gruyter, 209–253.
- Retoré, Christian and Edward Stabler (2004). 'Generative grammars and resource logics', *Research on Language and Computation* 2: 3–25.
- Řezáč, Milan (2004). *Elements of Cyclic Syntax: Agree and Merge*. PhD thesis, University of Toronto.
- Rizzi, Luigi (1997). 'The fine structure of the left periphery', in Liliane Haegeman (ed.) *Elements of Grammar: Handbook of Generative Syntax*. Dordrecht: Kluwer Academic Publishers, 281–337.
- Rogers, Andy (1974). 'A transderivational constraint on Richard?' in *CLS 10: Papers from the 10th Regional Meeting of the Chicago Linguistic Society*. Chicago, IL: Chicago Linguistic Society, 551–558.
- Rogers, James (1997). "'Grammarless" phrase structure grammar', *Linguistics and Philosophy* 20: 721–746.
- (1998). *A Descriptive Approach to Language-Theoretic Complexity*. Stanford, CA: CSLI Publications.
- Rose, Sharon and Rachel Walker (2004). 'A typology of consonant agreement as correspondence', *Language* 80: 475–531.
- Sadler, Louisa (2000). 'Noun phrase structure in Welsh', in Miriam Butt and Tracy Holloway King (eds) *Argument Realization*. Stanford, CA: CSLI Publications, 73–110.
- and Andrew Spencer (2001). 'Syntax as an exponent of morphological features', in Geert Booij and Jaap van Marle (eds) *Yearbook of Morphology 2000*. Dordrecht: Kluwer Academic Publishers, 71–96.
- Saffran, Jenny, Richard Aslin, and Elissa Newport (1996a). 'Statistical learning by 8-month-old infants', *Science* 274: 1926–1928.
- Saffran, Jenny, Elissa Newport, and Richard Aslin (1996b). 'Word segmentation – the role of distributional cues', *Journal of Memory and Language* 35: 606–621.



- Sag, Ivan A. (1997). 'English relative clause constructions', *Journal of Linguistics* 33(2): 431–484.
- (2001). 'Dimensions of natural language locality'. Paper presented at the *8th Annual Conference on Head-Driven Phrase Structure Grammar*, NTNU, Trondheim, Norway.
- (2007). 'Sign-Based Construction Grammar: an informal synopsis', ms, Stanford University.
- and Carl J. Pollard (1991). 'An integrated theory of complement control', *Language* 67: 63–113.
- Thomas Wasow, and Emily Bender (2003). *Syntactic Theory: A Formal Introduction*. Stanford, CA: CSLI Publications. [Second edition. First edition published as Sag and Wasow (1999).]
- Sailer, Manfred (2000). *Combinatorial Semantics and Idiomatic Expressions in Head-Driven Phrase Structure Grammar*. PhD thesis, Universität Tübingen.
- Sapir, Edward (1925). 'Sound patterns in language', *Language* 1: 37–51. Reprinted (1957) in Martin Joos (ed.) *Readings in Linguistics I*. Chicago, IL: University of Chicago Press, 19–25.
- Sauerland, Uli, Jan Andersen, and Kazuko Yatsushiro (2005). 'The plural is semantically unmarked', in Stephan Kepser and Marga Reis (eds) *Linguistic Evidence*. Berlin: Mouton de Gruyter, 413–434.
- Saussure, Ferdinand de (1916/1972). *Cours de linguistique générale*. Publié par Charles Bally et Albert Sechehaye; avec la collaboration d'Albert Riedlinger. Éd. critique préparée par Tullio de Mauro. Paris: Payot.
- (1986). *Course in General Linguistics*. Translation of Saussure (1972) by Roy Harris. La Salle, IL: Open Court.
- Scatton, Ernest A. (1984). *A Reference Grammar of Modern Bulgarian*. Columbus, OH: Slavica.
- Schenker, Alexander M. (1955). 'Gender categories in Polish', *Language* 31(3): 402–408.
- Schlenker, Philippe (2003). 'Indexicality, logophoricity, and plural pronouns', in Jacqueline Lecarme (ed.) *Research in Afroasiatic Grammar II (Selected Papers from the Fifth Conference on Afroasiatic Languages, Paris, 2000)* Amsterdam: John Benjamins, 409–428.
- Schmidt, Annette (1985). *Young People's Dyirbal: An Example of Language Death from Australia*. Cambridge: Cambridge University Press.
- Ševa, Nada, Vera Kempe, Patricia Brooks, Natalija Mironova, and Olga Fedorova (2007). 'Crosslinguistic evidence for the diminutive advantage: gender agreement in Russian and Serbian children', *Journal of Child Language* 34: 111–131.
- Shieber, Stuart M. (1986). *An Introduction to Unification-Based Approaches to Grammar* (CSLI lecture notes 4). Stanford, CA: CSLI Publications.
- Sichel, Ivy (2002). 'Phrasal movement in Hebrew adjectives and possessives', in Artemis Alexiadou, Elena Anagnostopoulou, Sjeff Barbiers, and Hans-Martin

- Gärtner (eds) *Dimensions of Movement: From Features to Remnants*. Amsterdam: John Benjamins, 297–339.
- Siloni, Tal (2001). 'Construct states at the PF interface', in Pierre Pica and Johan Rooryck (eds) *Linguistic Variation Yearbook. Volume 1*. Amsterdam: John Benjamins, 229–266.
- (2002). 'Adjectival constructs and inalienable constructions', in Jamal Ouhalla and Ur Shlonsky (eds) *Themes in Arabic and Hebrew Syntax*. Dordrecht: Kluwer Academic Publishers, 161–187.
- (2003). 'Prosodic case checking domain: the case of constructs', in Jacqueline Lecarme (ed.) *Research in Afroasiatic Grammar II*. Amsterdam: John Benjamins, 481–510.
- Slobin, Dan I. (1973). 'Cognitive prerequisites for the development of grammar', in Charles Ferguson and Dan I. Slobin (eds) *Studies of Child Language Development*. New York, NY: Holt, Rinehart and Winston, 175–208.
- Smoczyńska, Magdalena (1985). 'The acquisition of Polish', in Dan I. Slobin (ed.) *The Crosslinguistic Study of Language Acquisition. Volume 1: The Data*. Hillsdale, NJ: Lawrence Erlbaum, 595–685.
- Soehn, Jan-Philipp (2004). 'License to COLL', in Stefan Müller (ed.) *Proceedings of the HPSG-2004 Conference, Center for Computational Linguistics, Katholieke Universiteit Leuven*. Stanford, CA: CSLI Publications, 261–273.
- (2006). 'On idiom parts and their contexts', *Linguistik online* 27(2): 11–28.
- Spencer, Andrew (2003). 'Periphrastic paradigms in Bulgarian', in Uwe Junghanns and Luka Szucsich (eds) *Syntactic Structures and Morphological Information. Volume 7: Interface Explorations*. Berlin and New York: Mouton de Gruyter, 249–282.
- Stabler, Edward (1997). 'Derivational minimalism', in *LACL '96: Selected Papers from the First International Conference on Logical Aspects of Computational Linguistics, London, UK*. New York, NY: Springer, 68–95.
- (1998). 'Acquiring languages with movement', *Syntax* 2: 72–97.
- Stankov, Valentin (1969). *Bălgarskite glagolni vremena*. Sofia: Nauka i izkustvo.
- Stanley, Richard (1967). 'Redundancy rules in phonology', *Language* 43: 393–436.
- Starke, Michal (2001). *Move Dissolves into Merge*. PhD thesis, University of Geneva.
- Steedman, Mark (1996). *Surface Structure and Interpretation*. Cambridge, MA: MIT Press.
- (2000). *The Syntactic Process*. Cambridge, MA: MIT Press/Bradford Books.
- Steriade, Donca (1987). 'Redundant values', in Anna Bosch, Barbara Need, and Eric Schiller (eds) *CLS 23: Papers from the 23rd Annual Regional Meeting of the Chicago Linguistic Society. Part II: Parasession on Autosegmental and Metrical Phonology*. Chicago, IL: Chicago Linguistic Society, 339–362.
- Stockwell, Robert P., Paul Schachter, and Barbara Hall Partee (1973). *The Major Syntactic Structures of English*. New York: Holt, Rinehart and Winston.
- Stowell, Tim (1983). 'Subjects across categories', *The Linguistic Review* 2: 285–312.
- Straubing, Howard (1994). *Finite Automata, Formal Logic and Circuit Complexity*. Boston, MA: Birkhäuser.

- Stump, Gregory T. (2001). *Inflectional Morphology: A Theory of Paradigm Structure*. Cambridge: Cambridge University Press.
- (2005). ‘Word-formation and inflectional morphology’, in Pavol Štekauer and Rochelle Lieber (eds) *Handbook of Word-Formation* (Studies in Natural Language and Linguistic Theory 64). Dordrecht: Springer, 49–71.
- and Ramawater Yadav (1988). ‘Maithili verb agreement and the control agreement principle’, in Diane Brentari, Gary N. Larson, and Lynn A. MacLeod (eds) *CLS 24: Papers from the 24th Annual Regional Meeting of the Chicago Linguistic Society. Part II: Parasession on Agreement in Grammatical Theory*. Chicago, IL: Chicago Linguistic Society, 304–321.
- Suzman, Susan (1991). *Language Acquisition in Zulu*. PhD thesis, University of the Witwatersrand, Johannesburg.
- (1996). ‘Acquisition of noun class systems in related Bantu languages’, in Carolyn E. Johnson and John Gilbert (eds) *Children’s Language. Volume 9*. Hillsdale, NJ: Lawrence Erlbaum, 87–104.
- Svantesson, Jan-Olaf (1985). ‘Vowel harmony shift in Mongolian’, *Lingua* 67: 283–327.
- Svenonius, Peter (2002). ‘Icelandic case and the structure of events’, *Journal of Comparative Germanic Linguistics* 5: 197–225.
- (2004). ‘On the edge’, in David Adger, Cécile de Cat, and George Tsoulas (eds) *Peripheries: Syntactic Edges and Their Effects*. Dordrecht: Kluwer Academic Publishers, 259–287.
- (2007a). ‘Interpreting uninterpretable features’, *Linguistic Analysis* 33: 375–413.
- (2007b). ‘Projections of p’, ms available as lingBuzz/000484.
- Thráinsson, Höskuldur (1979). *On Complementation in Icelandic*. New York, NY: Garland.
- Tiede, Hans-Jörg (2008). ‘Inessential features, ineliminable features, and modal logics for model theoretic syntax’, *Journal of Logic, Language and Information* 17(2): 217–227.
- Tilkov, Dimităr, Stojan Stojanov, and Konstantin Popov (eds) (1983). *Gramatika na sâvremennija bâlgarski knižoven ezik. Morfologija*. Sofia: Izdatelstvo na Bâlgarskata Akademija na Naukite.
- Tomasello, Michael (1992). *First Verbs: A Case Study of Early Grammatical Development*. Cambridge: Cambridge University Press.
- Torrego, Esther (1984). ‘On inversion in Spanish and some of its effects’, *Linguistic Inquiry* 15: 103–129.
- Trubetzkoy, Nikolai S. (1939). *Grundzüge der Phonologie*. Göttingen: Vandenhoeck & Ruprecht. Translated by Christiane A. M. Baltaxe and published (1969) as *Principles of Phonology*. Berkeley, CA: University of California Press.
- Tucker, G. Richard, Wallace Lambert, and André Rigault (1977). *The French Speaker’s Skill with Grammatical Gender: An Example of Rule-Governed Behavior*. The Hague: Mouton.

- Van Eynde, Frank (1998). 'The Immediate Dominance Schemata of HPSG. A deconstruction and a reconstruction', in Peter-Arno Coppen, Hans van Halteren, and Lisanne Teunissen (eds) *Computational Linguistics in the Netherlands 1997. Selected Papers from the Eighth CLIN Meeting*. Amsterdam and Atlanta: Rodopi, 119–133.
- (2006). 'NP-internal agreement and the structure of the noun phrase', *Journal of Linguistics* 42(1): 139–186.
- (2007). 'The big mess construction', in Stefan Müller (ed.) *The Proceedings of the 14th International Conference on Head-Driven Phrase Structure Grammar, Stanford University*. Stanford, CA: CSLI Publications, 415–433.
- van Helden, W. Andries (1993). *Case and Gender: Concept Formation between Morphology and Syntax. Volumes 1–2*. (Studies in Slavic and General Linguistics 20). Amsterdam: Rodopi.
- Walker, Rachel (2001). 'Round licensing, harmony, and bisyllabic triggers in Altaic', *Natural Language and Linguistic Theory* 19: 827–878.
- Walsh, Michael (1993). 'Classifying the world in an Aboriginal language', in Michael Walsh and Colin Yallop (eds) *Language and Culture in Aboriginal Australia*. Canberra: Aboriginal Studies Press, 107–122.
- Warner, Anthony R. (1988). 'Feature percolation, unary features, and the coordination of English NPs', *Natural Language and Linguistic Theory* 6: 39–54.
- Wechsler, Stephen and Larisa Zlatić (2003). *The Many Faces of Agreement*. Stanford, CA: CSLI Publications.
- Weiss, Daniel and Elissa Newport (2006). 'Mechanisms underlying language acquisition: benefits from a comparative approach', *Infancy* 9: 241–257.
- Williamson, Kay (1965). *A Grammar of the Kolokuma Dialect of Ijo*. Cambridge: Cambridge University Press.
- Winter, Yoad (2005). 'On some problems of (in)definiteness within flexible semantics', *Lingua* 115(6): 767–786.
- Wintner, Shuly (2000). 'Definiteness in the Hebrew noun phrase', *Journal of Linguistics* 36: 319–363.
- Woisetschlaeger, Erich (1983). 'On the question of definiteness in "an old man's book"', *Linguistic Inquiry* 14(1): 137–154.
- Woods, William A., Ronald M. Kaplan, and Bonnie Nash-Webber (1972). *The Lunar Sciences Natural Language Information System: Final Report. BBN Report 2378*. Cambridge, MA: Bolt Beranek and Newman.
- Wurzel, Wolfgang Ullrich (1984). *Flexionsmorphologie und Natürlichkeit*. (Studia grammatica 21). Berlin: Akademie-Verlag. English translation (1989) *Inflectional Morphology and Naturalness*. Dordrecht: Kluwer Academic Publishers.
- Zaenen, Annie (1983). 'On syntactic binding', *Linguistic Inquiry* 14: 469–504.
- Zaliznjak, Andrej A. (1964). 'K voprosu o grammatičeskix kategorijax roda i oduševlennosti v sovremennom russkom jazyke', *Voprosy jazykoznanija* 4: 25–40.
- (1973). 'O ponimanii termina "padež" v lingvističeskix opisanijax', in Andrej A. Zaliznjak (ed.) *Problemy grammatičeskogo modelirovanija*. Moscow: Nauka, 53–87.

- Zec, Draga (1987). 'On obligatory control in clausal complements', in Masayo Iida, Stephen Wechsler, and Draga Zec (eds) *Working Papers in Grammatical Theory and Discourse Structure*. Stanford, CA: CSLI Publications, 139–168.
- Zeijlstra, Hedde (2008). 'On the syntactic flexibility of formal features', in Theresa Biberauer (ed.) *The Limits of Syntactic Variation*. Amsterdam: John Benjamins, 143–173.
- Zhang, Xi (1996). *Vowel Systems of the Manchu-Tungus Languages of China*. PhD thesis, University of Toronto.
- and B. Elan Dresher (1996). 'Labial harmony in Written Manchu', *Saksaha: A Review of Manchu Studies* 1: 13–24.
- Zhao, Jie (1989). *Xiandai Manyu Yanjiu* [*Studies on the Modern Manchu Language*]. Beijing: Minzu Chubanshe.
- Zubin, David and Klaus-Michael Köpcke (1986). 'Gender and folk taxonomy: the indexical relation between grammatical and lexical categorization', in Colette Craig (ed.) *Noun Classes and Categorization*. Amsterdam: John Benjamins, 139–180.
- Zwicky, Arnold M. (1985). 'How to describe inflection', in Mary Niepokuj, Mary Van Clay, Vassiliki Nikiforidou, and Deborah Feder (eds) *BLS 11: Proceedings of the Eleventh Annual Meeting of the Berkeley Linguistics Society*. Berkeley, CA: Berkeley Linguistics Society, 372–386.
- (1986a). 'German adjective agreement in GPSG', *Linguistics* 24: 957–990.
- (1986b). 'Imposed versus inherent feature specifications, and other multiple feature markings', in *The Indiana University Linguistics Club 20th Anniversary Volume*. Bloomington, IN: Indiana University Linguistics Club, 85–106.
- (1992). 'Jottings on adpositions, case inflections, government and agreement', in Diane Brentari, Gary N. Larson, and Lynn A. MacLeod (eds) *The Joy of Grammar: A Festschrift in Honor of James D. McCawley*. Amsterdam: John Benjamins, 369–383.
- (1996). 'Syntax and phonology', in Keith Brown and Jim Miller (eds) *Concise Encyclopedia of Syntactic Theories*. Oxford: Elsevier Science, 300–305.