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2 What is the conjoint/disjoint alternation? Parameters of crosslinguistic variation

1 Introduction

As mentioned in the introduction to this volume, there has been a growing interest in recent years in the phenomenon referred to as the conjoint/disjoint alternation (Creissels 1996; Ndayiragije 1999; Buell 2006, 2009; Van der Wal 2006, 2009, 2011; Halpert 2012). The fact that the title of this book refers to *the* conjoint/disjoint alternation suggests that this is a unified phenomenon, but the literature mentioned and the other chapters of this book show considerable variation in how the alternation manifests itself. The aim of the current chapter is to chart this Bantu-internal variation. The research questions for this comparative overview are thus, first, which properties have been associated with the alternation, and second, how these properties vary across Bantu languages. A third, more specific question is whether the alternation is primarily determined by focus or by constituency, i.e. whether the relation with information structure is direct or indirect. Before exploring the comparative properties and their variation, the rest of this introduction first discusses a working definition of the alternation, the terms that have been used in referring to it, and its geographical spread.

The alternation can informally be characterised as (otherwise interchangeable) verbal conjugations that differ in their relation with what follows the verb. Thus, in the following example from Makhuwa, the conjoint form (1a) indicates a close relation between the verb and the following element, and the disjoint form (1b) indicates a looser relation.

Makhuwa (P31, van der Wal 2011: 1735)[1]

(1) a. CJ *Nthíyáná*   *o-c-aalé*   *nramá*.
         1.woman   1SM-eat-PERF.CJ   3.rice
         'The woman ate RICE.'

     b. DJ *Nthíyáná*   *o-hoó-cá*   (*nráma*).
         1.woman   1SM-PERF.DJ-eat   3.rice
         'The woman ate RICE.'

More precisely, and based on the comparative study in this chapter, I propose the following working definition for the alternation, which will be considered in greater detail in the final section, but can be kept in mind throughout the following discussion.

(2) The conjoint/disjoint alternation is an alternation between verb forms that are formally distinguishable, that are associated with an information-structural difference in the interpretation of verb and/or following element and of which one form is not allowed in sentence-final position.

These properties can to some extent be seen in (1): the conjoint form cannot appear sentence-finally and the element following the verb is (part of) the focus, whereas the DJ form appears elsewhere and is allowed sentence-finally.

While the terms "conjoint" and "disjoint" were coined by Meeussen (1959) in his description of Kirundi, the phenomenon had been known under different names in Southern Bantu languages for much longer, e.g., Endemann (1876) for Sotho, Doke (1927) for Zulu and Warmelo (1937) for Venda. The labels that are used to refer to the alternation vary widely in these descriptive grammars, but the numerous terms can be categorised into the following five groups (cf. Güldemann 2003).

I. The first group refers to the form of the verbs: "short" vs. "long" or "abbreviated form" for the conjoint form. These terms are frequent in grammatical descriptions of the Nguni and Sotho-Tswana languages.

II. A second group takes the relation with the following element as the basis for the names. Here we find "conjoint/disjoint" or "conjunctive/disjunctive", but also "strong-bond/weak-bond", "stable/unstable", "independent/dependent" (e.g. Sharman 1956 for Bemba). A potentially confusing aspect of these terms is that for some authors the term 'strong' refers to the disjoint form (because it is strong enough to stand by itself and does not need a complement), whereas

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1 The Bantu languages are conventionally classified by a letter and a number, the letters referring to geographical zones, according to Guthrie's (1948) classification updated by Maho (2009).

for others 'strong' refers to the conjoint form (because there is a strong linkage between the conjoint verb form and the following element).

III. Some grammatical descriptions analyse the conjoint/disjoint forms as tenses distinguished with respect to time or aspect, such as 'continuous/simple' or a label for the disjoint form as 'progressive', 'present-present' or 'completive' (e.g. Ziervogel 1959 for Ndebele).

IV. Some terms have been coined based on the interpretation of the verb and/ or the following element, like 'emphatic/unemphatic', 'definite/indefinite' and 'verb-focal/noun-focal' (e.g. Odden 1996 for Kimatuumbi). However, the term 'focus' can also be confusing, referring sometimes to the disjoint form because focus on the verb is implied and sometimes to the conjoint form when focus on the following element is implied.

V. The final group uses neutral labels: 'II/I' or 'A/B' (e.g. Endemann 1876).

Although all of these labels have a motivation, at least within the grammar of the language for which they are used, none of them adequately reflect the full extent of the alternation within the Bantu languages that have the alternation. In fact, in most cases the labels cannot be taken to reflect the main properties of the alternation even within one language. In this chapter (and throughout this volume), the terms 'conjoint' (CJ) and 'disjoint' (DJ) are adopted simply because these seem to be the terms used in current research. Furthermore, the relatively neutral expression 'verb form' is used to refer to the alternating conjugated verbs. These can be seen as two forms occuring in the same tense that are in some way connected as a pair. That is, they form pairs in most languages, but see Section 5.2 for exceptions.[2]

With respect to the geographical spread, all the languages for which an alternation is reported are Eastern Bantu languages – see Hyman (this volume) for related phenomena that seem to be complementary in Western Bantu. The languages with a CJ/DJ alternation range from Haya (J20), Kirundi, Kinyarwanda, Ha (J60) in the north, and Sambaa (G23), Bemba (M40), Tonga (M60), Lozi (K21/S30), Matengo (N13), Ngindo, Ndengeleko, Kimatuumbi (P10), Makonde, Makwe (P20), Makhuwa and Chuwabo (P30) in the centre, down to Venda (S20), Tswana, Sotho (S30), Xhosa, Zulu, Swati, Ndebele (S40), Tshwa, Tsonga/Changana, Ronga (S50) and Chope (S60) in the south. These are coloured in the map in Figure 1.

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2 Alternatively one can view them as different tenses in the sense of the French *tiroir*. This means that the two related tenses belong to two paradigms which are restricted by different syntactic and interpretational properties (Schadeberg 2004).
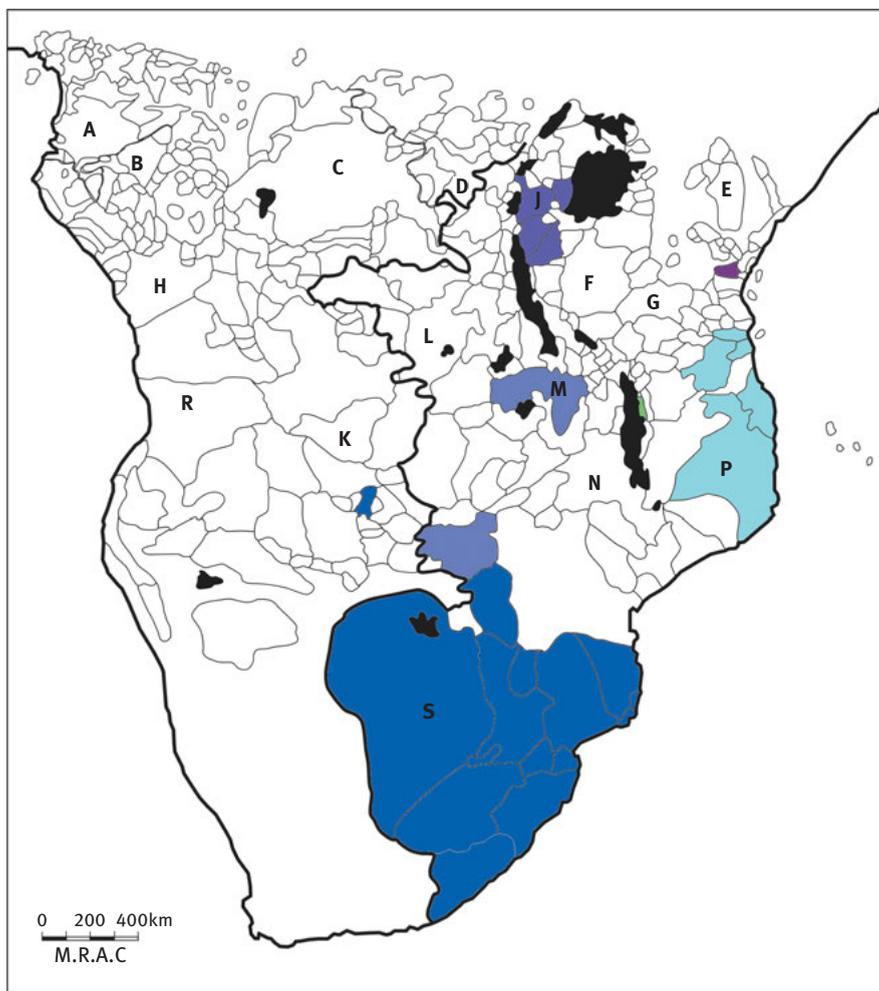
Figure 1: The geographical distribution of the cj/dj alternation

The remainder of this chapter is organised as follows. After setting out the parameters of variation in Section 2, each of the parameters is further discussed and illustrated in the subsequent sections: the distribution of the verb forms (Section 3), the formal properties of morphological and prosodic marking (Section 4), the tenses in which the alternation is found (Section 5) and the interpretational properties or association with focus on the verb and/or the element following it (Section 6). Section 7 mentions further extensions to the behaviour of the alternation for clausal complements and the nominal domain. Section 8 summarises and concludes.

2 Parameters of variation in the conjoint/disjoint alternation

In the same tradition as Marten et al. (2007), Marten and Kula (2012), Kavari et al. (2012), Marten and Van der Wal (2015), and further inspired by Güldemann's (2003: 328) recurrent properties of the CJ/DJ alternation, this chapter proposes 14 parameters that are relevant to the CJ/DJ alternation. These are mostly formulated as yes/no questions in order to register the constant and variable surface properties, which can then be used to deduce more fundamental parameters. The 14 parameters are subdivided into 4 areas: distribution, form, tenses, and interpretation, as in Table 1.

Table 1: Typological parameters of the conjoint/disjoint alternation.

Distribution

1. Is one form (CJ) restricted to non-sentence-final position in main affirmative clauses?
2. Is the other form (DJ) always final in its constituent?
   2a. If object marking is non-doubling: does a post-DJ object obligatorily occur with an object marker?
   2b. Is a post-DJ constituent obligatorily preceded by a prosodic break / pause?
   2c. Do clitics take a CJ form?

Form

3. Is the alternation marked by segmental morphology?
   3a. Is it marked by prefixes, suffixes, or both?
   3b. Is only the DJ form marked segmentally?
   3c. Is the alternation only marked segmentally in the present tense?
4. Is the alternation marked by tonal morphology?
5. Does phonological phrasing co-vary with the alternation?

Tenses

6. How many tenses participate in the alternation?
7. Do relative tenses have the alternation?
8. Do negative tenses have the alternation?
9. Is every CJ form paired with a DJ form in the same TAM?

Interpretation

10. Does focus require a particular verb form?
    10a. Does predicate-centred focus require the DJ form?
    10b. Do postverbal focused terms require the CJ form?
11. Does a particular verb form entail focus?
    11a. Does the DJ form entail predicate-centred focus?
    11b. Does the CJ form entail focus on an element following the verb?
12. Does the verb take the CJ form in thetic subject inversion?
13. Does the verb take the CJ form in VP focus?
14. Is there a dedicated postverbal focus position?

Table 2: Properties of 11 Bantu languages with the CJ/DJ alternation, where 1 = yes, 0 = no, and an empty cell represents a lack of (clear) data. A question mark indicates a strong suspicion but no clear confirmation.

	Kirundi	Kinyarwanda	Makhuwa	Matengo	Zulu	Tswana	Sotho	Bemba	Simákonde	Haya	Sambaa
1. One form restricted?	1	1	1	1	1	1	1	1	1	1	1
2. Other form always const-final?	0	1	0	?	1	1	1	0	1		0
2a. OM: post-V O in DJ dislocated?	0	1	n.a.	n.a.	1	1	1	n.a.	n.a.		n.a.
2b. Break: post-V O dislocated?	0	1	0	0	1	1		0	0		0
2c. Clitics take CJ form?	0	1	0	1	1	1	1	0	0		0
3. Segmental morph?	1	1	1	1	1	1	1	1	1	1	1
3a. Pre-/suffix?	prefix	prefix	both	both	both	prefix	prefix	both	both	prefix	both
3b. Only DJ marked?	1	1	0	0	0	1	1	0	0	1	0
3c. Only present tense?	0	0	0	0	0	1	1	0	0	1	0
4. Tonal morph?	1	1	1	0	0/1	1	1	1	1	1	
5. P-phrasing?	0	0	0	1	1	1	1	1	1	1	
6. How many tenses?	3 or 5	4+2	4	15	2+	1+12	1+12	10	3/4	3	
7. Relatives?	0	0	0	0	1	0	0	0	0	1	
8. Negatives?	0	0	1	0	1	1	1	0	0	0	
9. Cj always paired in same TAM?	1	1	1	0	1	1	1	1	1	1	1
10a. DJ = V foc?	0	0	0	0	0	0		0		0	0
10b. Vfoc = DJ?	1	1	1	1	1	1	1	1	1		

Table 2: Continued

	Kirundi	Kinyarwanda	Makhuwa	Matengo	Zulu	Tswana	Sotho	Bemba	Simákonde	Haya	Sambaa
11a. CJ = post-V foc?	1?	0	1	0	0	0		0			
11b. post-V foc = CJ?	1	1	1	0	1	1	1	1	1		0/1
12. VP focus = CJ?	0	1	1	1	1	1	1	0			0
13. Thetic VS = CJ?	0	1	0	0/1	1	1	0	1			
14. Dedicated position?	final	final?	IAV	IAV	IAV	0	0	IAV	IAV?		0

The parameter settings are primarily based on the following sources:

– Kirundi: Ndayiragije (1999), Nshemezimana & Bostoen (this volume), Ferdinand Mberamihigo p.c.
– Kinyarwanda: Kimenyi (1980), Ngoboka & Zeller (this volume)
– Makhuwa: own fieldwork
– Matengo: Yoneda (2009, this volume)
– Zulu: Buell (2005, 2006, 2009), Halpert (2012), Zeller (2012)
– Tswana: Creissels (1996, 2011, this volume)
– Northern Sotho: Zerbian (2006, p.c.)
– Bemba: Kula (this volume), Costa & Kula (2008), Sharman (1956)
– Simákonde: Manus (2007, this volume, p.c.)
– Haya: Hyman & Byarushengo (1984), Hyman (1999)
– Sambaa: Riedel (2009), Buell & Riedel (2008)

The first parameter – the finality restriction – turns out to be a defining and easily recognisable property.[3] For ease of reference, the other parameters refer to the form that is restricted to non-final position as 'conjoint' and the other form as 'disjoint', that is, conjoint and disjoint are for these parameters defined *only* with respect to their finality in order to avoid circularity in diagnosing the commonalities and variation in various languages that can be said to have the alternation.

These parameters are examined in 11 languages, the majority being examined in the other chapters of this volume, and additional languages that I had a reasonable amount of data for. Each parameter is discussed and illustrated in the following sections of this chapter, and the parameter settings for each of the 11 languages is summarised in Table 2.

3 Distribution

Parameters 1 and 2 refer to the distribution of the two forms, which is key to understanding the alternation. The first parameter establishes an opposition in sentence-finality between the alternating verb forms, and the second parameter diagnoses whether constituent-finality has an influence in the language.

3.1 Parameter 1: Sentence-finality

1. Is one form (CJ) restricted to non-sentence-final position in indicative non-relative clauses?

Between all the different languages with diverse conjugational systems, sentence-finality is a defining shared property: the CJ verb form can never occur sentence-finally in an affirmative main clause. This is the one property that holds for the CJ/DJ alternations in all languages under study. As discussed in the introduction to this volume, it is important to distinguish main from subordinate clauses, since the form of the relative or participial verb is in many languages isomorphic with the CJ form in main clauses. If there are no alternating relative verb forms, however, that particular form may of course occur sentence-finally in a relative clause. In this chapter, I define the CJ/DJ alternation *not* by the formal properties of the verb, but by their alternating verb forms. For clarity, in the first parameter I restrict the question to affirmative main clauses. Examples (3)-(6) illustrate the sentence-final restriction for a range of languages.

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3 See section 5 for the explicit mention of main affirmative clauses.

Sambaa (G23, Riedel 2009: 32)

(3) a. CJ *Ni-it-iye*   *kaya*.
          1SG.SM-go-PERF.CJ   16.home
          'I went home.'

     b. CJ * *Niitiye*.

     c. DJ *N-za-ita*.
          1SG.SM-PERF.DJ-go
          'I went.'

Ha (JD66, Harjula 2004: 167)

(4) a. CJ *Ba-rima*   *ibiharagi*.
          2SM-cultivate   8.beans
          'They cultivate beans.'

     b. CJ * *Barima*.

     c. DJ *Ba-ra-rima*   (*ibiharagi*).
          2SM-PRES.DJ-cultivate   8.beans
          'They cultivate/are cultivating (beans).'

Símákonde (P23, Manus 2007)

(5) a. CJ *Ngú-súmá*   *sílóólo*.
          1SG.SM-buy   7.mirror
          'I am buying a mirror.'

     b. CJ * *Ngúsúúmá*.

     c. DJ *Ni-nku-súúma*   *sílóólo*.
          1SG.SM-PRES.PROG-buy   7.mirror
          'I am buying/will buy a mirror.'

Xhosa (S41, Du Plessis and Visser 1992: 93)

(6) a. CJ *Umfazi*   *u-pheka*   *inyama*.
          1.woman   1SM-cook   9.meat
          'The woman is cooking meat.'

     b. CJ * *Umfazi upheka*.

     c. DJ *Umfazi*   *u-ya-pheka*.
          1.woman   1SM-PRES.DJ-cook
          'The woman is cooking.'

Whether the element following the CJ form is an argument or an adjunct is not of any influence, as long as some overt element follows the verb. This can for

example be a manner adverb as in (7a), a locative nominal adjunct as in (7b) or a prepositional phrase as in (7c). If it is an argument, it can be a primary or secondary object as in the examples above, or in some languages a subject (8); see further under parameter 14.

Makhuwa (P31, Van der Wal 2014: 49)

(7)   a.   CJ   *Eshímá*   *e-ruw-iy-é*   *tsiítsáale.*
                 9.shima   9SM-stir-PASS-PERF.CJ   like.that
                 '(the) Shima is cooked like that.'

    b.   CJ   *Ni-n-rúpá*   *wakhaámá-ni.*
                 1PL.SM-PRES.CJ-sleep   16.bed-LOC
                 'We sleep in a bed.'

    c.   CJ   *Ki-naan-alé*   *n'*   *iipulá.*
                 1SG.SM-wet-PERF.CJ   with   9.rain
                 'I got wet by the rain.' lit. 'I was wetted with rain.'

Kimatuumbi (P13, Odden 1984: 295)[4]

(8)   CJ   *Agonja*   *Mambóondo.*
          1SM.sleep   1.Mamboondo
          'Mamboondo is sleeping.'

Not only nominals but also following clauses can license a CJ verb form (see Section 7). Halpert (2012) shows for Zulu that complement clauses headed by the complementizer *ukuthi* can be preceded by the CJ form.

Zulu S42, Halpert 2012: 175)

(9)   CJ   *Ngi-cabanga*   [*ukuthi*   *uMlungisi*   *u-ya-bhukuda*   *manje*].
          1SG.SM-think   COMP   1.Mlungisi   1SM-PRES.DJ-swim   now
          'I think that Mlungisi is swimming now.'

For Makhuwa, I show in Van der Wal (2014) that complement clauses (11) as well as adverbial subordinate clauses (10) can license the use of a CJ verb form, although the two differ in their possible interpretations.

Makhuwa (Van der Wal 2014: 57, 60)

(10)   CJ   *Ákwáatú*   *a-n-réerá*   [*ya-khal'*   *oóríipa*].
          2.cats   2SM-PRES.CJ-be.good   2SM.SIT-stay   2.black
          'Cats are beautiful (only) if they're black.'

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4 The reverse, where the CJ form would be clause-final, is ungrammatical: * *Mamboondó agóonja* 'Mamboondo is sleeping' (Odden 1984: 295).

(11)   CJ   *Ki-n-tsúwéla*   [*wiírá   etthépó   tsi-hááná   mpwína*].
       1SG.SM-PRES.CJ-know   COMP   10.elephants   10SM-have   4.trunks
       'I know that elephants have trunks.'

In summary, the CJ verb form is restricted to a non-final position, but it seems that any following DP, PP or CP, whether argument or adjunct, is acceptable to make the verb non-final. It is interesting to note here that some lexical items display peculiar behaviour. More specifically, I found that in a number of different languages the adverb 'well' seems to be restricted to one verb form (which can be CJ or DJ, but there is never a choice), apparently independent of other properties of the language or the particular discourse situation. In Tswana, Kinyarwanda, Zulu (12) and Bemba it is reported as always following the CJ form, whereas in Makhuwa (13) and Sambaa it must be preceded by the DJ form. This remains as a puzzle for further research.

Zulu (S42, Leston Buell p.c.)

(12)   a.   CJ   [*Ngi-cul-a   kahle.*]
                 1SG.SM-sing-FV   well

       b.   DJ   * [*Ngi-ya-cul-a*]   *kahle.*
                 1SG.SM-PRES.DJ-sing-FV   well
                 'I sing well.'

Makhuwa (P31, Van der Wal 2009: 222)

(13)   a.   CJ   *O-n-tthává   tsayi?*
                 1SM-PRES.CJ-plait   how
                 'How does she plait?'

       b.   CJ   * *O-n-tthává   saána.*
                 1SM-PRES.CJ-plait   well

       c.   DJ   *O-náá-tthává   saána.*
                 1SM-PRES.DJ-plait   well
                 'She plaits well'

The second parameter regarding the distribution of the two verb forms concerns the non-restricted verb form, coined 'disjoint'.

3.2 Parameter 2: Constituent-finality

2. Is the other form (DJ) always final in its constituent?

This parameter aims to establish whether the distribution of the two forms is mainly determined by syntactic constraints, the alternative being a focus-based alternation (see Section 6). Van der Spuy (1993) and Buell (2006) convincingly argue for Zulu that the choice of the verb form depends on whether the verb is final in some constituent, which could be the IP (Buell 2006) or the vP (Adams 2010; Cheng and Downing 2012; Halpert 2012; Zeller 2012). When the verb is not final, i.e. when some element follows within the same constituent, the verb takes a CJ form, and when it is final, it takes a DJ form (14). Note that some element may still *linearly* follow the DJ verb form (like *izitshudeni* in 14b), but this element is *structurally* not in the right constituent (vP) to license a CJ verb form.

Zulu (S42, Van der Spuy 1993: 348, adapted)

(14) a. CJ [*Si-bon-e*   *izitshude:ni.*]$_{vP}$
              1PL.SM-see-PERF.CJ   students
              'We saw the students.'

      b. DJ [*Si-zi-bon-i:le*]$_{vP}$ *izitshude:ni.*
              1PL.SM-10OM-see-PERF.DJ   10.students
              'We saw them, the students.'

However, in order to know whether an object is dislocated, and whether the verb is thus final in its constituent,[5] some independent diagnostics are needed (see also Buell 2008). Two properties that are relatively easy to test concern object-marking and pauses:

2a. If object marking is non-doubling: does a post-DJ object obligatorily occur with an object marker?

2b. Is a post-DJ object obligatorily preceded by a prosodic break / pause?

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5 This diagnostic only takes V O sequences into account. It is, of course, possible to have a CJ form if another element still follows the verb within the right constituent (e.g. VOO). In (i), the benefactive *ubaba* 'father' is dislocated (and object marked on the verb), but since the theme *kudla kuni* 'what food' is still within the vP, the CJ form is used.

Zulu (S42, Buell 2009:168)

(i) CJ *U-m-phek-ela*   t$_i$ *kudla*   *kuni*   *ubaba$_i$*?
         2SG.SM-1OM-cook-APPL   15.food   15.what.kind   1.father
         'What kind of food are you cooking Father?'

These questions diagnose whether an object following the DJ verb form is outside of the relevant constituent, that is, whether it is (right) dislocated. In a language where object markers on the verb function as pronouns, the object marker is in complementary distribution with the coreferring DP (see Bresnan and Mchombo 1987 and much following work). If in a given language the object marker cannot 'double' a postverbal DP in the same domain, then the presence of the object marker signals that the following DP is dislocated. This in turn means that the verb is final and hence must take a DJ form. For several languages this bidirectional relation has been noticed between the form of the verb and the presence of the object marker: if a postverbal object is object-marked on the verb, the verb must take its DJ form, and reversely, if an object follows a DJ verb form, an object marker must be present on the verb (15b,d). The element following the verb can then never be object-marked on a CJ verb form (15a,c).

Tswana (S31, Creissels 1996: 112, 113)

(15)　a.　CJ　*Re-thúsá*　　　*Kítso.*
　　　　　　 1PL.SM-help　　 1.Kitso
　　　　　　 'We help Kitso.'

　　　b.　DJ　*Re-a-**mo**-thúsá*　　　*Kítso.*
　　　　　　 1PL.SM-DJ-1OM-help　　 1.Kitso
　　　　　　 'We help him, Kitso.'

　　　c.　CJ　* *Re-**mo**-thúsá Kítso.*

　　　d.　DJ　* *Re-a-thúsá Kítso.*

This correlation has been described for the Nguni languages, Sotho, Tswana, and Kirundi, since object marking in these languages is 'non-doubling'. The strict correlation between object marking and the DJ verb form (via dislocation) thus argues for an analysis of the alternation being based on the position of the verb in the constituent. In a language that does allow object marking of in situ objects, the test cannot be applied, since objects will be marked regardless of their position in a constituent, and hence nothing can be deduced about the position of the verb either. Two examples where object marking has a different function are Kimatuumbi and Makhuwa. In Kimatuumbi, the presence of an object marker referring to the full object after the verb indicates definiteness of that object (16).

Kimatuumbi (P13, Odden 2003: 544, glosses added)

(16)　a.　CJ　*Ni-nolya*　　　　*baandu　yiímbe.*
　　　　　　 1SG.SM-sharpen　　 2.people　knives
　　　　　　 'I'm sharpening knives for people'

b. CJ *Ni-**ba**-nólya*   *baandu*   *yiímbe.*
1SG.SM-2OM-sharpen   2.people   knives
'I'm sharpening knives for **the** people'

In Makhuwa, object marking does not have any obvious function: there are object markers only for 1st and 2nd person and for classes 1 and 2, which are obligatorily used when the object is in that class, independent of syntactic position, definiteness or animacy (17). In both of these languages, object marking is allowed with both CJ and DJ verb forms and there is no relation with dislocation or the alternation.

Makhuwa (P31, van der Wal 2009: 244)

(17) CJ *Ki-ni-**ḿ**-wéha*   *Hamísi /*   *namarokoló /* *nancoólo.*
         1SG.SM-PRES.CJ-1OM-look   1.Hamisi /   1.hare /   1.fish.hook
         'I see Hamisi / (a/the) hare / (a/the) fish hook'

      DJ *Ki-ná-**ḿ**-wéha*   *Hamísi /*   *namárókoló /* *nańcóólo.*
         1SG.SM-PRES.CJ-1OM-look   1.Hamisi /   1.hare /   1.fish.hook
         'I see Hamisi / (a/the) hare / (a/the) fish hook'

Similarly, parameter 2b diagnoses dislocation of the following object by testing whether the object DP needs to be separated from the verb by a pause. This is illustrated for Kinyarwanda, where an object following a DJ verb form must be preceded by a pause (and object-marked on the verb).

Kinyarwanda (JE61, Ngoboka & Zeller this volume)

(18) DJ *Abáana*   *baára*(ya)nyóoye*   *(,)*   *amatá*
         a-ba-áana   ba-á-ra-ya-nyo-ye   a-ma-tá
         AUG-2-child   2SM-REM-DJ-6.OM-drink-PERF AUG-6-milk
         'The children drank it, the milk.'

In summary, a strict correlation between the DJ verb form and dislocation (as diagnosed by non-doubling object marking and a necessary pause) suggests that the DJ verb form is always constituent-final, even if it is linearly followed by some argument or adverb. If the DJ verb form is always associated with being constituent-final (sentence-final necessarily being constituent-final), this forms a strong argument for a constituency-based analysis of the alternation. If the alternation is *not* determined by constituency, however, the question is what controls the choice for the one or the other verb form. In Section 6 we will see that the alternative is a focus-based analysis. This is also where parameter 2c (clitics following a CJ form) will be discussed. First, however, the crosslinguistic variation is presented with respect to the formal marking of the two alternating verb forms (Table 3).

Table 3: Distributional CJ/DJ parameters.

	Kirundi	Kinyarwanda	Makhuwa	Matengo	Zulu	Tswana	Sotho	Bemba	Símákonde	Haya	Sambaa
1. One form restricted?	1	1	1	1	1	1	1	1	1	1	1
2. Other form always const-final?	0	1	0	?	1	1	1	0	1		0
2a. OM: post-V O in DJ dislocated?	0	1	n.a.	n.a.	1	1	1	n.a.	n.a.		n.a.
2b. Break: post-V O dislocated?	0	1	0	0	1	1		0			0

4 Formal properties

The languages with a CJ/DJ alternation must all somehow make the alternation apparent, but the linguistic means to mark the alternating verb forms vary between and even within languages.[6] Since most Bantu languages use tone to make lexical and grammatical distinctions, tone can be analysed as a morpheme, that is, a minimal conventional association of a tonal pattern and an interpretation. It is not surprising, then, that the CJ/DJ alternation may be marked by segmental and/or tonal morphology, where the segmental marking can surface as a prefix or suffix. This section discusses the presence and shape of affixes, tonal alternations and phonological marking of phrase boundaries, which can all be related to the CJ/DJ alternation.

4.1 Parameter 3: segmental morphology

3. Is the alternation marked by segmental morphology?

Despite this being a fairly easy question, which can in most cases be answered on the basis of even superficial knowledge of the language, there are three factors that make it difficult to describe what marks the alternation. The first is that the morphological marking is always combined or fused with the tense-aspect morphology (pre- and suffixal), and therefore it is hard to indicate and demarcate one

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6 By 'marking' or 'marked' is meant that a verb form has some formal sign on it, not that it is a non-default counterpart of 'unmarked'.

specific morpheme that encodes the CJ or DJ nature of the verb form. A second point of potential confusion is that the DJ-marking morphology can be multifunctional, as Ngoboka and Zeller (this volume) demonstrate for the Kinyarwanda prefix *-ra-*, which is also used in progressive/future tenses. Finally, a third factor that blurs the picture is the fact that the marking varies from one pair of verb forms to the next; there is generally not one morpheme that marks the DJ form in both the present tense and the past perfective, for example. This is the reason for including three subquestions:

3a. Is the alternation marked by prefixes, suffixes, or both?

3b. Is only the DJ form marked segmentally?

3c. Is the alternation only marked segmentally in the present tense?

The variation in segmental marking across tenses is shown for Swati in (19): in the present tense the CJ form is not marked or has a zero morpheme and the DJ form has the prefix *-ya-* (19a,b), while in the perfective the CJ and DJ form differ in the suffix on the verb stem *-e* vs. *-ile* (19c,d).[7]

Swati (S43, Ziervogel and Mabuza 1976: 97,98)

(19)   a.   CJ   *Ngi-natsa...*
            1SG.SM-drink
            'I drink...'

       b.   DJ   *Ngi-ya-natsa.*
            1SG.SM-PRES.DJ-drink
            'I am drinking.'

       c.   CJ   *Ngi-nats-é...*
            1SG.SM-drink-PERF.CJ
            'I have drunk...'

       d.   DJ   *Ngi-nats-ile.*
            1SG.SM-drink-PERF.DJ
            'I have drunk.'

There appears to be a general pattern that the DJ form is always marked in some way, whereas the CJ form may be unmarked (Nshemezimana & Bostoen this volume, cf. Morimoto, this volume). This can be related to the hypothesised origin of the alternation where the DJ form originates in a periphrasis, as briefly discussed

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7 Larry Hyman (p.c.) expresses doubt as to whether the *-e/-ile* alternation should be treated as the same as the ∅*/-ya-* alternation, considering that it may also surface in relative clauses, for example (see parameter 7).

in Section 5.1. It is also why for the southern Bantu languages the DJ form has been called 'long' as opposed to the 'short' CJ form.

Furthermore, if the CJ form is marked, then the alternation has suffixes, and if the language marks any other tense than the present tense, it also has suffixal marking. These implicational relations are visible in table 5 further below.

Parameter 3c is relevant for languages such as Tswana, Sotho, Haya, and Bemba, where only the present tense shows the alternation in the segmental morphology – other tenses may mark it by tonal differences (see the next Section 4.2 and references mentioned there).

4.2 Parameter 4: tonal morphology

4. Is the alternation marked by tonal morphology?

In all languages under discussion there is at least one tense where the distinction is marked on the verb by segmental morphology, as shown in the examples above. In Tswana the alternation is also marked by a segmental morpheme -*a*-, but only in the present tense, as in (20a, b). However, Creissels (1996) shows that it is not only the present tense that distinguishes CJ and DJ forms. Although other tenses are not marked by a special affix, they do show a difference in the tonal pattern on the verb. The tonal pattern of the perfect CJ form in (20c) differs from that of the perfect DJ form in (20d). In other tenses, like the future, only the tone on the last syllable differs: in the CJ form in (20e) the verb stem ends in HL, whereas the DJ form in (20d) ends in HH.

Tswana (S31, Creissels 1996: 109, glosses added)

(20)   a. CJ *Dikgomó dí-fúla   kwa nokeng.*
                10.cows 10SM-graze at   river
                'The cows graze/are grazing at the river.'

       b. DJ *Dikgomó dí-á̱-fúla.*
                10.cows 10SM-PRES.DJ-graze
                'The cows are grazing.'

       c. CJ *Bá$_i$-tsamá-île lé   boné$_k$.*
                2SM-go-PERF with   2.PRO
                'They have gone with them.'

       d. DJ *Bá$_i$-tsáma-ile lé   boné$_i$.*
                2SM-go-PERF with   2.PRO
                'They too have gone.'

  e. cj *Ke-tlaa-bína̱* *lé* *ené.*
     1sg.sm-fut-dance with 1.pro
     'I shall dance with him/her.'

  f. dj *Ke-tlaa-bíná̱* *lé* *nná.*
     1sg.sm-fut-dance with 1sg.pro
     'I too shall dance.', 'I shall dance, me too.'

A further illustration of tonal morphology as a marker of cj/dj is found in Haya (Hyman and Byarushengo 1984; Hyman 1999). Hyman (1999) provides the following overview of tenses in Haya, where only the today past shows a segmental marking (*-a-* vs *-áa-* in (21)) and in other tenses the alternating forms are only distinguished by their tonal pattern, as shown in Table 4.

Haya (JE22, Hyman 1999: 160)

(21) a. cj *Y-a-kom-a* *Káto.*
     1sm-past1-tie 1.Kato
     'He tied Kato.'

  b. dj *Y-áá-mu-kôm-a.*
     1sm-past1.dj-1om-tie
     'He tied him.'

It is important to keep in mind that the tonal behaviour must be established per alternating tense, that is, the precise tonal patterns may vary between two tenses (say, the present cj & dj forms vs. the present perfective cj & dj). It can be particularly puzzling, as Creissels (this volume) notes for Tswana, 'that the tonal melodies that in some tenses characterize the DJ form may be very similar to those characterizing the CJ form in other tenses, and vice-versa'.

  Furthermore, it must be established whether the tonal alternations are indeed part of the alternation as such, or if they can be derived from general phonological rules, as Kula (this volume), Zeller et al. (this volume) and Creissels (1996), this volume) examine. For Bemba, Kula (this volume) concludes 'that the CJ-DJ alternation is not tonally encoded', contrasting this with systems where tone is indeed a morphological marking of the alternation: 'In this sense Tswana fundamentally differs from Bemba in that the surface tonology of all verbs in Bemba can be predicted directly from the general tone rules of the language, whereas this is not the case in Tswana where an independent tone pattern must be specified to apply in particular TAMs and therefore treated as encoding the CJ-DJ alternation'. Interestingly, Zeller et al. (this volume) propose that Zulu has an H-toned morpheme, marking the CJ form optionally in some tenses. A question is whether this tonal marking is independent from phonological phrasing, as discussed in the next section.

Table 4: Tonal reduction in Haya CJ/DJ tenses.

	DJ 'they tie'	**CJ 'they tie Kato'**
present habitual	ba-kóm-a	ba-kom-a káto
past 1	bá-á-kôm-a	ba-a-kom-a káto
past 2	ba-kom-íle	ba-kom-ile káto
past habitual	ba-a-kóm-ag-a	ba-a-kom-ag-a káto
future 1	ba-laa-kôm-a	ba-laa-kom-a káto
future 2	ba-li-kóm-a	ba-li-kom-a káto

4.3 Parameter 5: phonological phrasing

5. Does phonological phrasing co-vary with the alternation?

The closer (CJ) or looser (DJ) relation between the verb and what follows is often reflected in the phonological phrasing. Where phonological phrases are discernable, the CJ form is always phrased together with the following element, whereas the DJ form is in a phonological phrase by itself. The boundaries of these phonological phrases –or typically just the right boundary– are marked in the prosody, by lengthening and/or tonal alternations. However, not all languages indicate phonological phrase boundaries, and the languages that do mark them differ in the phonological processes involved. For example, right boundaries in Makonde are marked by lengthening of the penultimate syllable. In example (22) the right boundaries of phonological phrases are indicated by a vertical line. Only the verb in its DJ form appears at the right edge of a phonological phrase, and hence the penultimate syllable of the verb is lengthened (as indicated by the double vowel) in the DJ form in (22c), but not in the CJ form in (22a), where only the object is lengthened.

Makonde (P23, Kraal 2005: 235, glosses added)
(22) a. CJ *Tu-va-yangata   vayéeni|.*
            1PL.SM-2OM-help   2.guests
            'We help *the guests*.'

      b. DJ *Tu-na-va-yangaáta| vayeéni|.*
            1PL.SM-PRES.DJ-2OM-help   2.guests
            'We help the guests.'

Two issues are related to the prosodic marking of the CJ/DJ alternation and phonological phrases. The first is whether phonological phrasing is an independent strategy to mark the CJ/DJ alternation, as discussed in the introduction to this volume.

Table 5: Formal cj/dj parameters.

	Kirundi	Kinyarwanda	Makhuwa	Matengo	Zulu	Tswana	Sotho	Bemba	Simákonde	Haya	Sambaa
3. Segmental morph?	1	1	1	1	1	1	1	1	1	1	1
3a. Pre/suffix?	prefix	prefix	both	both	both	prefix	prefix	both	both	prefix	both
3b. Only dj marked?	1	1	0	0	0	1	1	0	0	1	0
3c. Only present tense?	0	0	0	0	0	1	1	0	0	1	0
4. Tonal morph?	1	1	0	0	0/1	1	1	1			
5. P-phrasing?	0	0	0	1	1	1	1	1	1	1	

If no morphological marking (tonal or segmental) were present in any tense, this would presumably just be seen as different phonological phrasing, rather than an alternation related to focus and/or constituency. Therefore, as seen in the working definition in (2), phrasing alone is not considered to be indicative of the alternation, although the alternation can be *reflected* in the phrasing. The same conclusion is also reached for Bemba (Kula this volume) and Zulu (Zeller et al. this volume).

The second issue is the mapping between phonological phrases and syntactic phrases. Cheng and Downing (2009) have shown that in Zulu, phonological phrase boundaries coincide with syntactic phrases. Hence, the phonological phrasing can for Zulu be used as a diagnostic to determine the position of the verb and the following elements, which is relevant to the discussion of whether the alternation is based on constituency or focus (see also Sections 3.2 and 6.7). The phonological phrasing can thus be hypothesised to be 'read off' the syntactic phrasing, just like the cj/dj alternation is in this constituency-based system (though see Halpert (this volume) on the mismatches between syntax and prosody). The settings for the parameters of formal marking are summarised in Table 5.

5 Tenses in which the alternation is found

In none of the languages do all tenses form cj/dj pairs; there is always a restriction on the occurrence of the alternation to a smaller number of tenses. If a language has cj and dj verb forms, they will be present in the affirmative indicative tenses, most often in the present tense. Languages thus differ in the number of tenses displaying the alternation, but also in the presence of the alternation in the negative and relative tenses and in other moods (although this is rare). Finally, not all languages have neat pairs where each cj form alternates with a corresponding dj form. The parameters relating to tenses thus consist of the following questions:
6. How many tenses participate in the alternation?

7. Do relative tenses have the alternation?
8. Do negative tenses have the alternation?
9. Is every CJ form paired with a DJ form in the same TAM?

5.1 Parameters 6–8: which tenses?

The number of tenses involved in the alternation is a point of much variation across the Bantu languages. In Venda, for example, the alternation is reported for the present tense only (Poulos 1990),[8] whereas Makhuwa has four CJ/DJ pairs in segmentally marked tenses. In Sotho, like in Tswana, only the present CJ and DJ tenses are marked segmentally, but 12 other CJ/DJ pairs are marked tonally in Southern Sotho (Letsh'eng 1995). While this variation can in itself already form interesting information, it is possibly even more revealing *which* tenses show the alternation.

An implicational hierarchy appears to emerge here: if a language displays the alternation in the 'marked' tenses (relative, participial, optative, negative tenses), it is also present in 'unmarked' affirmative indicative tenses. In the languages of zone P (Kimatuumbi, Makonde, Makwe, Makhuwa) the alternation is not present in the relative tenses, whereas the Nguni languages (S40) do distinguish CJ and DJ verb forms in the relative perfect (23).

Zulu (S42, Buell 2006: 20)

(23) a. CJ *Yi-mali*   *engi-m-nik-e*   *yona.*
          COP.AUG-9.money   REL.1SG.SM-1OM-give-PERF.CJ   9.PRO

      b. DJ *Yi-mali*   *engi-m-nik-ile-yo.*
          COP.AUG- 9.money   REL.1SG.SM-1OM-give-PERF.DJ-REL
          'It's the money that I gave him.'

In the same way, the distinction is restricted to affirmative tenses in most languages, but also available in some negative tenses in Zulu (Buell 2011) and Southern Sotho (24), where the distinction is marked tonally on the last syllable of the verb (also depending on the lexical tone of the verb).

Southern Sotho (S33, Letsh'eng 1995: 57, glosses added)

(24) a. CJ *Ha-kí-ja-búá*   *hahólo.*
          NEG-1SG.SM-PERF-talk   much
          'I haven't talked much.'

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8 A thorough tonal analysis of Venda verb forms would be welcome, though.

    b. DJ *Ha-kí-ja-búa.*
            NEG-1SG.SM-PERF-talk
            'I haven't talked.'

In Makhuwa there are two negative paradigms for the alternating tenses, of which the CJ form is not used often – the DJ form is the regular negative form. The present tense forms are illustrated in (25). Note that the CJ form is not analysable as a pseudocleft ('what he doesn't buy is what'), since the subject marker on the verb would then be in class 9.

Makhuwa (P31, Van der Wal 2009: 219)

(25)   a. CJ *O-hi-ń-thúma*   *esheeni?*
                 1SM-NEG-PRES-buy.CJ   9.what
                 'What doesn't he buy?'

        b. DJ *Kha-ń-thúma.*
                 NEG.1SM-PRES-buy.DJ
                 'He doesn't buy (it).'

The restriction to the 'basic' or less marked tenses (affirmative, non-special mood) requires some explanation. Three functional suggestions have been made with respect to the apparent incompatibility of CJ/DJ and non-basic TAM categories. The first is proposed by Hyman and Watters (1984) (see also Hyman 1999 and this volume), who state that negation and some TAM categories are inherently focal. For example, negation expresses focus on the polarity of the verb, and a progressive aspect focuses on the ongoing action (cf. Güldemann 2003). If the CJ/DJ alternation is also involved in focus marking (see Section 6), the inherently focal tenses or 'marked tenses' (Hyman 1999) cannot combine with the CJ/DJ alternation. A second suggestion (Thilo Schadeberg, p.c.) is that tenses are restricted in their semantic load, or in other words that each verb form 'can only express so much'. Some forms express temporal and aspectual meaning, some combine aspect and modality, and some conjugational categories contain temporal reference and information on the status of the discourse interpretation of a following element – but expressing all three would be 'too much'. Third and related is Givón's (1975) hypothesis that relatives and negatives represent a 'narrowing of focus' such that the object rather than the verb is always in focus and hence requiring the CJ form, which according to Givón represents 'complement focus' (see the discussion on formal or alternating definitions of the alternation in Section 1).

In addition, and possibly independent of these motivations, the diachronic development of the alternation has probably had an influence on the restriction in the number and sort of tenses that display the alternation (Van der Wal 2010 and the introduction to this volume). That is, if tenses are 'recruited' for use in the cj/dj alternation in the stage of renewal (when there are two forms to express the same tense (layering)), the number and types of tenses that show the alternation depends on which tenses tend to renew. As the affirmative and basic tenses are known to be more prone to renewal, it stands to reason that these are the tenses that are marked segmentally and participate in the cj/dj alternation.[9] This, however, is only one possible analysis, and the diachronic considerations of the alternation deserve more attention.

5.2 Parameter 9: is every cj form paired with a dj counterpart?

Since cj verb forms are more restricted in their distribution in the sentence, they are typically expected to be paired with a less restricted dj form. While this is the canonical situation, and all languages have at least one pair in the same TAM category, in some languages the pairs are not as straightforward.

For Makwe, Devos (2004) describes a tripartite conjugational system. Some tenses in Makwe belong to a pair (being cj or dj), some only occur as dj and some are cj/dj (neutral), being morphologically identical but occurring in contexts that are typical for the cj form as well as sentence-finally like the dj form. An overview is given in Table 6.

Example (26) illustrates the past imperfective cj and its dj counterpart (paired tense) and (27) shows the present progressive, which is a neutral tense (Devos 2004). The neutral cj/dj tenses *optionally* form a phonological phrase with the following word, depending on whether they are used 'as cj' or 'as dj'.

Makwe (G402, Devos 2004: 217)
(26)   a. cj *A-yúmá   vítáabu.|*
                1sm-buy 8.books
                'She was buying books.'

      b. dj *Á-ná-yúúma.|*
                1sm-pres.dj-buy
                'She was buying.'

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9 This also accounts for 1. the dj form having more pre-stem material, since it would have been derived from a grammaticalised periphrastic construction (see the complex forms in Ndengeleko (Ström 2013) and Shangaji (Devos, this volume)), and 2. the variation in marking across different tenses.

Table 6: Makwe conjugational system.

paired CJ/DJ	Present Imperfective, Present Perfective, Past Imperfective, Past Perfective, Counterfactual Conditional 2
neutral	Infinitive, Resumptive, Present Progressive, Imperative (without OM), Optative (without OM), Rel. Past Imperfective
disjoint only	Purposive Infinitive, Suppositional/Subsecutive, Counterfactual Conditional 1, Situative Progressive, Imperative (with OM), Optative (with OM), Subsecutive, all negative tenses; all relative tenses (except Rel. Past Imperfective)

(27) a. CJ *A-nku-yúmá   vítáabu.|*
              1SM-PROG-buy   8.books
              'She is buying books.'

      b. DJ *A-nku-yúúma| vitáabu.|*
              1SM-PROG-buy   8.books
              'She is buying books.'

However, Zeller et al. (this volume) rightly pose the question of 'whether any of the phonological properties we observe [...] should be interpreted as grammatical markers of the CJ/DJ alternation, or whether they simply follow from general phonological principles of the language' (see Section 4.3, also Kula this volume and Creissels 1996, this volume on this issue). It is thus debatable whether in Makwe the 'neutral' tenses should be seen as participating in the alternation, or whether their phonological phrasing can be explained by independent principles at the interface between syntax and phonology. The same question holds for Símákonde, see Manus (this volume). In favour of treating p-phrasing as an inherent part of the alternation, Maud Devos (p.c.) points out for Makwe that the choice between forming a single phrase or not is determined by exactly the same factors as the choice between a CJ and the corresponding DJ tense. One of the questions would indeed be why the independent phonological marking would not hold across all tenses, that is, why there are 'DJ only' tenses at all.

A particularly interesting case under this parameter is Matengo. So far, Matengo seems to be the only language that has 'CJ only' tenses, without an equivalent DJ counterpart, as shown in the overview in Table 7.

Table 7: Matengo conjugational system, indicative mood (Yoneda 2009).

CJ		DJ	
simple far past	SM-a-VB-aje		
		perfect past	SM-a-VB-iti
simple today past	SM-VB(-it)-áje		
		perfect present	SM-VB-ití
simple present	SM-VB-a		
simple future	SM-í-VB-aje	confirm future	SM-í-VB-a
simple go-future	SM-aká-VB-aje	confirm go-future	SM-aká-VB-a

The simple present tense in Matengo occurs only in the CJ form: it cannot appear sentence-finally, as shown in (28b) and (29b). In order to use this tense with an intransitive verb, one has to employ either a 'dummy object' after the verb, such as the cognate object *lihengu* 'work' in (28a), or a 'dummy verb' - *tenda* 'do' followed by the infinitive of the actual verb, as in (29a).

Matengo (N13, Yoneda 2009, and this volume)

(28)   a. CJ *Ju-henga   lihengu.*
                 1SM-work   5.work
                 'He works (work).'

        b. CJ * *Ju-henga.*
                 1SM-work

(29)   a. CJ *Maria   ju-tenda ku-pomulela.*
                 1.Maria 1SM-do   15-rest
                 'Maria is resting.'

        b. CJ * *Maria   ju-pomulela.*
                 1.Maria 1SM-rest

To sum up, although languages differ with respect to the number of tenses that display the alternation and the sort of tenses that alternate, an implicational relation seems to hold that if a language has the alternation in a non-basic tense, it also has it in one or more of the basic tenses. An additional point of variation is found in the crumbling system of Matengo CJ/DJ, where it is not even the case that CJ and DJ forms are always paired. This sparks further research questions on transitivity alternations in general and on the relative priority of TAM semantics, sentence-finality restrictions and interpretation (which are not addressed in this chapter, but see Yoneda this volume for some discussion). The settings for the tense parameters are summarised in Table 8.

Table 8: Tense CJ/DJ parameters, where '1+12' means 1 tense is marked segmentally and 12 tonally.

	Kirundi	Kinyarwanda	Makhuwa	Matengo	Zulu	Tswana	Sotho	Bemba	Símákonde	Haya	Sambaa
6. How many tenses?	3 or 5	4+2	4	15	2 +	1+12	1+12	10	3 or 4	1	3
7. Relatives?	0	0	0	0	1	0	0	0	0	0	0
8. Negatives?	0	0	1	0	1	1	1	0	0	0	0
9. CJ always paired in same TAM?	1	1	1	0	1	1	1	1	1	1	1

6 Interpretational properties

In general, it is very difficult to establish the precise difference in semantic or discursive interpretation between the CJ and the DJ verb form. This becomes apparent in the various grammar books of the languages that show the distinction. In some grammatical descriptions it is not even detected, in some it is treated as a mere variation, and sometimes one can find remarks like the following:

> Cole (1955: 444, on Tswana S31)
> "...different shades of significance, the long form being slightly more definite or emphatic, or expressive of continuous action."

> O'Neil (1969: 18, on Ndebele S44)
> "The student is advised to use the [DJ form] whenever in doubt as to which of the two forms is more correct. To define wherein the precise distinction between the two forms of the present tense consists, is almost impossible."

> Meeussen (1959: 216, on Kirundi JD62)
> "L'emploi et le sens des formes de conjoint et de disjoint devront être étudiés de plus près, de préférence par un grammairien du Burundi même, vu le caractère délicat de cette distinction." [The use and meaning of the conjoint and disjoint form should be studied more closely, preferably by a Burundian grammarian, considering the subtle character of this distinction.]

Indeed, the meaning and inferences conveyed and the proper contexts for use are complicated and hence difficult to describe and establish. Moreover, these also vary from language to language, as is shown in this section.

6.1 Tense-aspect semantics

In Matengo it is clear that the CJ/DJ forms may differ in TAM semantics (see Table 7). However, even in languages where the CJ and DJ verb forms function as pairs, in traditional grammar descriptions the difference is often described in terms of tense-aspect semantics. Such a difference is usually mentioned for the present tense, where the CJ form tends to be felt as more habitual or neutral, and the DJ form variously as a near future, immediate present, progressive or continuous, as is visible in the following citation and example (30).

> Hurel (1951: 137/139, on Kinyarwanda JD61)
> 'Présent de durée' [disjoint] "indique une action qui a lieu actuellement, mais avec une idée implicite de prolongation dans la suite.[...] Cependant cette forme est encore employée pour un futur très prochain..."
> 'Présent habituel' [conjoint] "indique une action qui se fait habituellement"
>
> [The disjoint form "refers to an action that currently takes places but with the implicit idea of continuation. [...] Yet this form is still used for an immediate future." The conjoint form "refers to an action that is habitually carried out."]

Ndebele (S44, Ziervogel 1959: 87)

(30)   a. CJ *ń-khámbha*   'I walk' ("simple aspect")

       b. DJ *ndí-yá-khámbha* 'I am walking' ("continuous aspect")

Furthermore, there is a diachronic relation between the forms in the alternation and the development to progressive aspect (Hyman and Watters 1984; Odden 1996; Güldemann 2003, cf. Morimoto this volume, Devos this volume, Odden 1996). Nevertheless, it is my impression that in most cases, these tense-aspect differences are not essential to the CJ/DJ distinction, but that they are used in the description simply because we are used to describe differences between tenses in temporal or aspectual terms. The tense-aspect differences reported for the CJ and DJ forms remain vague and ambivalent, and they tend to 'disappear' when used in contexts that are typical for the one or the other verb form. Question-answer combinations are one such case. Congruence is expected in temporal reference (and very often aspect) between the question and the answer, but whereas the question in (31) necessarily uses a CJ form, the answer can only be DJ.

Makhuwa (P31, Van der Wal 2009: 224)

(31)   a. CJ *Ashínúni*   *yiir-ál'*   *ésheeni?*
                 2.DIM.birds 2.SM.PAST.do-PERF.CJ 9.what
                 'What did the birds do?'

b. DJ *Ashínúní   yaahí-váva.*
    2.DIM.birds   2SM.PAST.PERF.DJ-fly
    'The birds flew.'

Furthermore, it is often the case that CJ and DJ correspond to one form in nega-
tion. This suggests that the CJ and DJ form are in the same temporal-aspectual
category. Buell (2005: 145) also argues against a tense-aspect difference between
the CJ and DJ forms in Zulu, and Kosch (1988) does the same for Northern Sotho.
If in general the CJ/DJ alternation does not encode a difference in tense-aspect
semantics, and assuming that variation in morphosyntax is never completely
functionless, there must be some other difference in interpretation between the
CJ and the DJ verb form.

6.2 Parameter 10: does focus require a particular verb form?

The alternation has often been described in terms of old/new information, focus,
expressiveness etc., as seen in the following descriptions of the interpretation of
the two forms.

> Van Eeden (1956: 245, on Zulu)
> (about DJ form) "wanneer die klem op die handeling, en net op die handeling val; vandaar
> dat dit 'n emfatiese of sterk tijdvorm genoem kan word" [The disjoint form is used "when
> the emphasis/stress falls on the action and just on the action; hence this can be called an
> emphatic or strong tense".]

> Bagein (1951, on Kirundi)
> (about the DJ form) "On retranche souvent la particule *-ra-* pour donner plus de vicacité."
> [One often omits the particle *-ra-* to give more liveliness.]

The various descriptions and analyses of the alternation suggest a relation
between on the one hand the DJ verb form and predicate-centred focus (i.e. focus
on the lexical value of the verb, on the TAM or the truth value), and on the other
hand the CJ verb form and focus on a postverbal element (cf. Buell's 2006 Verb
Focus Hypothesis and Postverbal Term Focus Hypothesis). The questions for
each individual language are whether these relations are direct or indirect, and
whether they are bidirectional (i.e. focus requiring a certain form vs. a certain
form always triggering a focus). Parameter 10 tests one direction:

10a.   Does predicate-centred focus require the DJ form?
10b.   Do postverbal focused terms require the CJ form?

Perhaps surprisingly, both these correlations hold in all languages, with the exception of Matengo. As Yoneda (this volume) shows, expressing the correct tense-aspect semantics takes precedence over choosing the most appropriate form in terms of focus, leading to the use of the DJ form with a postverbal focused element in some circumstances. In all other languages there is a clear (at least unidirectional) relation between term focus and a CJ verb form, as seen in answers to wh questions and terms modified by the focus particle 'only'. Many grammatical descriptions also note a restriction on the occurrence of inherently focused wh-elements, which are only allowed after a CJ verb form and ungrammatical after a DJ form, as illustrated in (32).

Swati (S43, Ziervogel and Mabuza 1976: 175, adapted)

(32)   a.   CJ   *Ba-bona-ni?*
                   2SM-see-what
                   'What do they see?'

        b.   DJ   * *Ba-ya-bona-ni*
                   2SM-PRES.DJ-see-what

Similarly, when the verb lexeme or the TAM are contrasted (what Güldemann 2009 refers to as state-of-affairs focus and operator focus), the DJ form is chosen consistently.

    The fact that a focused element takes a certain verb form does not show conclusively that the alternating verb forms inherently express or mark that focus (cf. Devos, this volume). The reverse correlation does not hold in all languages, and this is where the difference between a focus-based analysis versus a constituency-based analysis will become clear. The next three parameters address exactly that difference.

6.3 Parameter 11: does a particular verb form entail focus?

The other half of the relation with focus are the unidirectional questions for both verb forms as to whether they encode focus, specifically:

11a.   Does the DJ form entail predicate-centred focus?
11b.   Does the CJ form entail focus on an element following the verb?

Odden (1996) describes a combination of these two for Kimatuumbi. He calls the CJ form 'noun-focal', expressing focus on the element following the CJ verb form (33a), and the DJ form 'verb-focal', expressing focus on the verb (33b).

Kimatuumbi (P13, Odden 1996: 60, 61, glosses added)

(33) a. CJ *Ni-kata   kaámba.*
           1SG.SM-cut   rope
           'I am cutting ROPE (not something else).'

   b. DJ *Eendá-kaatá.*
           1SG.SM.PROG.DJ-cut
           'He is cutting.'

   c. DJ *Eendá-kaatá   kaámba.*
           1SG.SM.PROG.DJ-cut   rope
           'He is CUTTING rope (not doing something else to it).'

The two subparameters 11a and 11b can be studied separately, however. The correlation in 11a, DJ encoding predicate focus, has been mentioned for Zulu by several authors and is claimed for Kirundi by Nshemezimana & Bostoen (this volume), cf. Devos and van der Wal (2010) and Devos (this volume) for Shangaji. Güldemann (2003) suggests that the DJ form encodes predication focus in a large part of the southern CJ/DJ Bantu languages, where 'predication focus' can refer to a contrast on the lexical value of the verb, the tense/aspect or the truth/polarity. The DJ form in (34b) could thus not only be translated as 'he *reads* the letter' (implying that he does not write or burn it), but also as 'he does read the letter' (contrasting a possible earlier statement that he did not). The CJ form is said to not have a special interpretation and is analysed as the unmarked form by Güldemann.

Zulu (S42, Van Eeden 1956: 251, glosses added)

(34) a. CJ *U-funda   le   ncwadi.*
           1SM-read   9.DEM   9.letter
           'He reads this letter.'

   b. DJ *U-ya-yi-funda   le   ncwadi.*
           1SM-PRES.DJ-9OM-read   9.DEM   9.letter
           'He READS this letter.'

However, it does not seem to be the case that within a single language all instances of the DJ verb form are in focus, nor is it the case that crosslinguistically the DJ form clearly expresses focus on the verb. Considering the language-internal picture, Buell (2006) shows that a DJ form is sometimes required when the verb is clearly not in focus, as illustrated in (35) and (36).[10]

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10 Note, though, that the CJ form in this example may be required by the adverb 'well', as noted in Section 3.1.

Zulu (S42, Buell 2006: 20)

(35) DJ *A-ngi-dans-i*   *kahle,* *kodwa* *ngi-cul-a*   *kahle.*
        NEG-1SG.SM-dance-FV well   but   1SG.SM-sing-FV well
        'I don't dance well, but I sing well.'

(Buell 2011: 808–809)

(36) a. DJ *A-wu-gqok-ile*   *ngani?*
           NEG-2S-wear-PERF.DJ why

    b. CJ * *A-wu-gqok-e*   *ngani?*
           NEG-2S-wear-PERF.CJ why
           'Why aren't you dressed?'

Considering the crosslinguistic validity of 11a, Stucky (1985: 56) notes for Makhu-wa-Imithupi that the DJ form 'is simply used to indicate that the action took place'. In fact, in at least Matengo, Makwe and Kirundi, the DJ form is also used when the element following the verb, rather than the verb itself, forms the new information, for example in a thetic verb-subject sentence (37). Thetic sentences present the whole clause as new or non-topical, including the postverbal subject. Preceding this detopicalised subject, in Makwe a DJ verb form is used (37).

Makwe (G402, Devos 2004: 316)

(37) DJ *Aníúuma*   *nakádíímu.*
        1SM.PRES.PERF.come.out 1.giant
        'And so, Nakadimu leaves.'

This implies that while a focused verb needs to take a DJ form (parameter 10a), the reverse in parameter 11a shows variation: not all instances of the DJ form encode focus on the verb.[11]

    The same variation is found with respect to the other half of parameter 11, as in 11b: while focus on a postverbal element triggers the CJ form, it is not always the case that the CJ form encodes focus on an element following the verb. There is language-internal as well as crosslinguistic variation. A language that shows a consistent mapping between the CJ form and a focus interpretation is Makhuwa. Various tests show that the element following a CJ verb form is always (part of) the focus, and moreover, this is an exclusive type of focus (van der Wal 2011). This can be illustrated for the object *ntthu* 'person', which can receive an indefinite

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11 In this respect I disagree with Nshemezimana & Bostoen's (this volume) conclusion that the DJ morpheme in Kirundi is a marker of predicate focus.

non-specific interpretation ('someone') when preceded by a DJ verb form (38a), but not when preceded by a CJ verb form (38b). The CJ form in Makhuwa places the postverbal element in exclusive focus: at least some of the alternative object referents must be excluded. Since this is impossible for an indefinite non-specific DP ('anyone' cannot exclude referents), 'person' can only be interpreted as a generic, as in (38c).

Makhuwa (P31, Van der Wal 2011: 1740)

(38) a. DJ *Ko-ḿ-wéha*   *ńtthu.*
              1SG.SM.PERF.DJ-1OM-look   1.person
              'I saw someone.'

      b. CJ * *Ki-m-weh-alé*   *ntthú.*
              1SG.SM-1OM-look-PERF.CJ   1.person
              int: 'I saw someone.'

      c. CJ *Ki-m-weh-alé*   *ntthú,*   *nki-weh-álé*   *enáma.*
              1SG.SM-1OM-look-PERF.CJ   1.person   NEG.1SG-look-PERF 9.animal
              'I saw a person/human being, not an animal.'

Turning again to Zulu, Buell (2006) shows that the CJ form does not necessarily trigger focus on a postverbal term, as it is also used when the verb is followed by a resumptive pronoun, which cannot be focused (39).

Zulu (S42, Buell 2006: 18)

(39) CJ *Indawo* *lapho* [*ngi-cul-e*   *khona.*]
              9.place   there   1SG.SM-sing-PERF.CJ   there
              'The place where I sang.'

If even non-focusable clitics can satisfy the non-finality restriction of the CJ form (parameter 2c), then we can deduce that the alternation is sensitive to constituency, rather than focus (see also Halpert this volume on clitics in Zulu). This is the case in Kinyarwanda (40), but strikingly not in its neighbour Kirundi, where the CJ form requires a following element even if there is a clitic (41).

Kinyarwanda (JE61, Ngoboka & Zeller this volume)

(40) CJ *Twaányuzeyó.*
              Tu-á-nyúr-ye-yó.
              1PL.SM-REM-pass-PERF-LOC19
              'We passed there.'

Kirundi (JE62, Ernest Nshemezimana, p.c.)

(41)   a.   DJ   *Tw-a-a-c-íiye-yó.*
              1PL.SM-PR-DJ-come-PERF-LOC
              'We passed there.'

       b.   CJ   *Tw-aa-c-iiye-yó*   *(*mw'ijoro*).
              1PL.SM-PR-come-PERF-LOC   18.night
              'We passed there in the night.'

The evidence for parameter 10 suggests that there is a relation with focus, but the data bearing on parameter 11 suggest that there are two types of languages: one in which there is a direct correlation between focus and the form of the verb; and one in which the relation is indirect, and the form of the verb is determined by the syntax. This I refer to as a 'focus-based' vs. a 'constituency-based' alternation (see also Section 3.2). Further evidence for this distinction can be found in subject inversion and VP focus.

6.4 Parameter 12: subject inversion

12. Does the verb take a CJ form in thetic subject inversion?

If the alternation is determined by constituency, any element within the right constituent is expected to trigger the CJ verb form, regardless of whether it has a specific focused interpretation or not. This is the case in Sotho, where the element following the CJ form is not necessarily interpreted as narrow or contrastive focus. Example (42a) is a thetic sentence, presenting both the verb and the postverbal subject as one piece of (new) information. The subject is not topical, but it need not be narrowly focused either –although it can be, as in (42b).

Northern Sotho (S32, Zerbian 2006: 48, 60)

(42)   a.   CJ   *Go-bina*   *basadi.*
              17SM-dance   2.women
              'There are women dancing.'

       b.   CJ   *Go-binne*   *basadi*   *fela.*
              17SM-dance.PAST   2.women   only
              'Only women danced.'

In contrast, in focus-based languages the CJ form is expected to always trigger a narrow focus reading, not an underspecified 'non-topical' interpretation. Hence, in thetic sentences the DJ form is used in Makwe, as illustrated in (37) above.

A CJ form would be inappropriate in an out-of-the-blue context, as it would trigger focus on the postverbal subject only.

6.5 Parameter 13: VP focus

13. Does the verb take a CJ form in VP focus?

As expected under the hypothesis of focus-based vs. constituency-based variation, languages differ in whether they employ the CJ or DJ form when the whole verb phrase is in focus. In an answer to a wh question regarding the verb phrase ('what did he do?'), it is not just the object but the combination of object and verb that is focused. These answers often require a CJ form (43), but some languages use a DJ form (44).

Makhuwa (P31, Van der Wal 2011: 1743)

(43)   a.   CJ   *O-n-iír'   ésheeni?*
                      1SM-PRES.CJ-do   9.what
                      'What is she doing?'

        b.   CJ   *O-n-lép'   épapheló.*
                      1SM-PRES.CJ-write   9.letter
                      'She is writing a letter.'

        c.   DJ   *# O-náá-lépá   epaphélo.*
                      1SM-PRES.DJ-write   9.letter

Bemba (M42, Kula this volume)

(44)   a.   CJ   *Bushe baChocho bá-ˈcít-à   inshi?*
                      Q   2.Chocho   2SM-do-FV   what
                      'What does Chocho do?'

        b.   DJ   *Bá-lá-sáámbílíl-á.*
                      2SM-HAB.DJ-learn-FV
                      'She studies/goes to school.'

        c.   DJ   *Bá-lá-sáámbílíl-á   palicisano   na   pacibelushi.*
                      2SM-HAB.DJ-learn-FV   16.Friday   CONJ   16.Saturday
                      'She studies on Friday and Saturday.'

If the alternation in a certain language is hypothesised to be constituent-based, then only the CJ form is expected for a transitive predicate in this environment, since the verb is not constituent-final. If, on the other hand, the alternation is thought to be focus-based, the parameter can be interpreted in either of two ways:

we can reason that the object is still part of the VP focus, and therefore the CJ form should be used; or that it is no longer the postverbal element itself that is in focus, and that therefore the DJ form is used. This property thus only works unidirectionally: if the DJ form is used in transitive VP focus, the alternation is determined by focus, but if the CJ form is used, it can be focus-based or constituency-based.

6.6 Parameter 14: focus position

14. Is there a dedicated postverbal focus position?

The CJ/DJ alternation has interfaces not just with morphology and prosody, but also with word order. As explored in more detail by Gibson et al. (this volume), some Bantu languages have a dedicated postverbal position for focus, specifically the position Immediately After the Verb (IAV) or the clause-final position. This IAV focus position was first described (and named) by Watters (1979) for Aghem and in recent years has been described as such for other languages as well (e.g., Van der Wal 2009 for Makhuwa, Buell 2009 for Zulu, Yoneda 2011 for Matengo). In addition to the constraint that focused elements appear after a CJ verb form, the focused element appears immediately after the verb (45) and nothing may intervene between the verb and the focused element (which is the question word *esheeni* in (46)).

Bemba (M42, Costa and Kula 2008: 315)

(45) a. CJ *Tù-kà-byáálà   ínyànjè| mwííbàlà   màílò.|*
              1PL.SM-FUT-plant 9.maize   16.garden tomorrow
              'We will plant MAIZE in the garden tomorrow.'

      b. CJ *Tù-kà-byáálà   mwííbàlà| ínyànjé   màílò.|*
              1PL.SM-FUT-plant 16.garden 9.maize   tomorrow
              'We will plant maize IN THE GARDEN tomorrow.'

Makhuwa (P31, Van der Wal 2009: 225)

(46) a. CJ *O-n-koh-al'   éshéeni Apákhári?*
              2SG.SM-1OM-ask-PERF.CJ 9.what   1.Apakhari
              'What did you ask Apakhari?'

      b. CJ * *O-n-koh-alé   Apákhári   eshéeni?*
              2SG.SM-1OM-ask-PERF.CJ 1.Apakhari 9.what
              int. 'What did you ask Apakhari?'

However, Buell (2011) finds that in Zulu the question word *ngani* 'why' appears in IAV position but nevertheless follows a DJ verb form (see (36) above). Moreover,

Sotho and Tswana do not appear to have a dedicated focus position (Zerbian 2006; Creissels this volume), and in Kirundi the focus position is sentence-final (Nday-iragije 1999, and see Ngoboka & Zeller this volume for similar data from Kinyar-wanda), as illustrated in (47).

Kirundi (JD62, Sabimana 1986: 91)

(47)   a. DJ *Mudúga,*   *y-a-hâye*   *a-b-âna*   *i-gi-tabo.*
            Muduga   1SM-F.PAST-give   AUG-2-child   AUG-7-book
            'Muduga, he gave the children A BOOK.'

        b. CJ *Mudúga,*   *y-a-hâye*   *i-gi-tabo*   *a-b-âna.*
            Muduga   1SM-F.PAST-give   AUG-7-book   AUG-2-child
            'Muduga, he gave THE CHILDREN a book.'

Although the CJ/DJ alternation is linked to postverbal focus, and the IAV posi-tion is linked to postverbal focus as well, the CJ/DJ alternation is not neces-sarily conditioned by a focused IAV or other dedicated position, as Sotho and Tswana already show.

   The indirect relation is also shown in Zulu. If focused elements should occur in IAV position, they could just move there, possibly deviating from the canonical word order. However, Buell (2006, 2009) finds that there is a 'no-crossing' con-straint: focused elements cannot cross over an intervening element to appear in IAV position. Instead, the intervening element must be dislocated. This is illus-trated in (50). In the canonical word order the recipient object *ubaba* 'father' is in IAV (50a). When the theme object is questioned and hence focused, it should appear in IAV, but instead of simply switching the two objects (50b), the non-focal object *ubaba* must be dislocated and the object marker *-m-* referring to the dis-located object must be present on the verb (50c). In this way the focused theme remains in the right domain for a non-topical interpretation.

Zulu (S42, Buell 2009: 168, and p.c.)

(48)   a. CJ *U-phek-ela*   *ubaba*   *inyama.*
            2SG.SM-cook-APPL   1.father   9.meat
            'You are cooking Father some meat.'

        b. CJ * *U-phek-el-a*   *kudla*   *kuni]$_i$*   *ubaba* *t$_i$?]*
            2SG.SM-cook-APPL   15.food   15.what.kind   1.father
            int. 'What kind of food are you cooking Father?'

        c. CJ *U-m-phek-ela*   *t$_i$* *kudla*   *kuni]*   *ubaba$_i$?*
            2SG.SM-1OM-cook-APPL   15.food   15.what.kind   1.father
            'What kind of food are you cooking Father?'

An open question is to what extent word order and the CJ/DJ alternation influence and/or determine each other, and to what extent they are independent focus-marking strategies (cf. Gibson et al. this volume).

6.7 Focus-based or constituency-based

An important question concerning the interpretation is whether the association between (one or both forms of) the CJ/DJ alternation and a focus interpretation is direct or indirect. There are two points to be made here.

First, the fact that the CJ form often goes together with a focus interpretation of the following element does not mean that the CJ form *encodes* that interpretation; it could also be an inference or an indirect effect of the sentence construction (see Matić and Wedgwood 2013). The question is whether the interpretation is the main factor determining the distribution and use of the CJ and DJ verb forms or whether there is something else, which allows an indirect link to information structure. This is the second point, as already mentioned at various points above: the occurrence of the CJ and DJ verb forms can be directly determined by focus, or indirectly, instead having a correlation with constituency.

Especially for the Southern CJ/DJ Bantu languages, it has often been observed that the CJ and DJ verb form 'may in certain contexts differ in meaning but for the most part are used in different syntactical positions' (Ziervogel and Mabuza 1976: 174 on Swati). As mentioned in Section 3.2, Van der Spuy (1993) and others after him analyse the CJ/DJ alternation as determined purely by constituency: when the verb is final in the vP constituent, it takes the DJ form; when it is not final, i.e. some element follows within the vP, the verb takes a CJ form. This is visible in the right dislocation of elements following the DJ verb form (as diagnosed by the object marker and phonological phrasing), the use of the CJ verb form before non-focusable elements like resumptive pronouns and clitics, and the use of the CJ form in VP focus and in thetic VS order. The CJ/DJ alternation in Zulu is thus concluded to be constituent-based (as also confirmed by Halpert, this volume).

Quite the opposite is Makhuwa, where the alternation is focus-based: the element following the CJ form is (part of) exclusive focus, and the DJ form is used elsewhere. There is no evidence of dislocation of elements following the DJ form, and the DJ form is used with clitics in thetic VS order. Also, the ungrammaticality of non-exclusive elements in post-CJ position in Makhuwa (as in (38b) above and (49) below) remains unexplained in an analysis where constituency is the main factor in determining the form of the verb. See Van der Wal (2011) for details.

An interesting parallel example with 'even' further illustrates the difference between Zulu and Makhuwa as constituency-based vs. focus-based. The element

Table 9: Constituency-based (Zulu) and focus-based (Makhuwa) alternations.

	2a	2b	2c	10a	10b	11a	11b	12	13
Zulu	1	1	1	0	1	0	1	1	1
Makhuwa	n.a.	0	0	0	1	1	1	0	1

following the CJ verb form is interpreted as exclusive in Makhuwa and hence the particle 'even', which entails that nothing is excluded, cannot be used after a CJ form. In Zulu this is perfectly fine, because the CJ verb form is not final in the vP constituent.

Makhuwa (P31, Van der Wal 2009: 236)

(49) a. CJ *Ki-n-thotol-alé*   *hatá   Láúra.*
                1SG.SM-1OM-visit-PERF.CJ even   1.Laura
                int. 'I visited even Laura.'

      b. DJ *Ko-ń-thótólá*   *hatá   Láúra.*
                1SG.SM.PERF.DJ-1OM-visit even   1.Laura
                'I visited even Laura.'

Zulu (S42, Buell 2008: 45)

(50) a. CJ [*Ngi-bon-e*   *ngisho   n-oSipho.*]
                1SG.SM-see-PERF   even   and-1.Sipho

      b. DJ [*Ngi-m-bon-ile*]   *ngisho   n-oSipho.*
                1SG.SM-1.OM-see-PERF   even   and-1.Sipho
                'I even saw Sipho.'

The differences between these systems can be summarised as in Table 9.

From the data available for the 11 languages under study, it appears that there are 5 constituency-based languages (Zulu, Sotho, Tswana, Kinyarwanda,[12] Matengo), 4 focus-based languages (Makhuwa, Bemba, Kirundi and Sambaa) and 2 languages that cannot (yet) be diagnosed as one or the other type (Símákonde, Haya).

If the form of the verb is determined by the syntactic environment, that is, being positioned constituent-final or not, we can see the indirect relation with

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[12] The parameter settings of Kinyarwanda as discussed here are more in line with the alternation being constituency-driven, although Ngoboka & Zeller (this volume) point out problematic aspects for both a constituency-based and a focus-based analysis.

information structure. The non-topical interpretation is linked to the post-verbal domain (as proposed in Buell 2006, cf. Diesing 1992), and more specifically to the constituent containing the verb. This constituent is in turn linked to the form of the verb. Taken together, this means that both the CJ form and the focus interpretation are linked to the constituent containing the verb, and it also entails that when this constituent does not have any other material, the verb forms the information peak and can be interpreted as the focus of the sentence. In contrast, the use of the CJ form is directly linked to a focus interpretation in Makhuwa.

Concluding this section on the interpretational variation, there may be a slight temporal-aspectual difference between the verb forms, but the alternation is in all languages (also) linked to a difference in information structure. The (non-)topical or (non-)focal interpretation of the verb and/or the following element differ per language; similarly, having a dedicated position for focus in IAV or sentence-final position also varies cross-linguistically. This results in an overall variation in the direct or indirect relation between the use of the verb forms and the interpretation: in some languages the alternation is demonstrably dependent on constituency, rather than semantic-discursive meaning, whereas in others there are strong arguments to assume a direct relation between focus and the alternation.

	Kirundi	Kinyarwanda	Makhuwa	Matengo	Zulu	Tswana	Sotho	Bemba	Simákonde	Haya	Sambaa
10a. DJ = V foc?	0	0	0	0	0	0		0			0
10b. Vfoc = DJ?	1	1	1	1	1	1	1	1	1		
11a. CJ = post-V foc?	1?	0	1	0	0	0		0			
11b. post-V foc = CJ?	1	1	1	0	1	1	1	1	1		0/1
12. VP focus = CJ?	0	1	1	1	1	1		0			0
13. Thetic VS = CJ?	0	1	0	0/1	1	1	1	1			
14. Dedicated position?	final	final?	IAV	IAV	IAV	0	0	IAV	IAV?		0

7 Extensions

There are at least two possible parameters that could also be included in the typological overview of the CJ/DJ alternation: which form is used preceding a clause, and whether the alternation also occurs in the nominal domain. These were not

included for full discussion in this chapter, because for the majority of languages the data are simply lacking. Hence they are mentioned here only as extensions that should be included in further research.

7.1 Preceding a clause

The parameters for the CJ/DJ alternation have so far been illustrated for nominal phrases, be they arguments or adjuncts. However, as mentioned in Section 3.1, verbs can obviously also be followed by a clause, and when in the right tense, they need to take either the CJ or the DJ form. The initial questions that should be answered for this parameter are the following:

Parameter X: How does the alternation behave preceding a clause?
Xa. Which form is used before a complement clause?
Xb. Which form is used before an adverbial clause?
Xc. If both forms can be used, what is the difference in interpretation?

In Makhuwa, adverbial clauses form part of the information structure of the main clause, whereas the information-structural interpretation of complement clauses is unclear, whether they are preceded by a CJ or DJ form (van der Wal 2014).

Variation is also to be expected in different types of complement clauses, as Halpert (2012) shows for Zulu: a clause introduced by the complementiser *ukuthi* can be preceded by either form of the verb (depending on whether the CP is dislocated or not), whereas a clause introduced by the complementiser *sengathi* requires a CJ form (see also Halpert and Zeller 2015).

Zulu (S42, Halpert 2012: 178, 179)
(51) a. CJ *uMandla   u-bona*   [*ukuthi   ngi-ya-m-thanda.*]
           1.Mandla   1SM-see   that   1SG.SM-PRES.DJ-1OM-like
           'Mandla sees that I like him.'

     b. DJ *uMandla   u-ya-bona*   [*ukuthi   ngi-ya-m-thanda.*]
           1.Mandla   1SM-PRES.DJ-see   that   1SG.SM-PRES.DJ-1OM-like
           'Mandla sees that I like him.'

(52) a. CJ *uMandla   u-bona*   [*sengathi   ngi-ya-m-thanda.*]
           1.Mandla   1SM-see   as.if   1SG.SM-PRES.DJ-1OM-like
           'Mandla is of the opinion that I like him.' (implies that I don't)

   b. DJ   * *uMandla*   *u-ya-bona*   [*sengathi*   *ngi-ya-m-thanda.*]
            1.Mandla   1SM-PRES.DJ-see   as.if   1SG.SM-PRES.DJ-1OM-like

For Kirundi and Kinyarwanda, Nshemezimana & Bostoen (this volume) and
Ngoboka & Zeller (this volume) indicate a difference between subordinate clauses
introduced by *ko* (which allow only the CJ form) and quotative clauses introduced
by *ngo* (which can take either form). This could be a difference in true subordi-
nation vs. parataxis, since the quotative *ngo* introduces reported speech. See also
Güldemann (1996) for further discussion on subordinate clauses in Bantu.

7.2 The nominal domain

For Makonde (Kraal 2005; Manus 2007) and Makwe (Devos 2004) a CJ/DJ alterna-
tion is proposed to exist in the nominal domain as well (see also Creissels 2009
on Tswana). In both languages the right boundary of a phonological phrase is
indicated by lengthening of the penultimate syllable, and this p-phrasing pat-
terns with the CJ/DJ alternation. Just like the verb can be phrased either together
with the following object (conjoint) or separately (disjoint), the noun can also
be phrased with a following modifier, or not. In Símákonde, demonstratives
are obligatorily phrased with the noun (53), adjectives cannot phrase with the
noun (53b) and for possessives the phrasing is optional (53c,d).

Símákonde (P23, Manus 2007 and p.c.)

(53)   a. *síló̵ló*   *asiilá|*
         mirror   that
         'that mirror'

     b. *lyoônga|*   *líkúmeêne|*
         arrow   big
         'a big arrow'

     c. *muuko |*   *wáangu |*
         bag   my

     d. *mukó*   *waángu |*
         bag   my
         'my bag'

For Makwe, Devos (2004) describes a different pattern, but whether noun and
modifier phrase together or not is still 'to a large extent lexically determined'
by the modifier. However, there is a link with focus: the CJ modifiers, that are

obligatorily phrased together with the noun, all have some selective function, thereby indicating contrastive focus. Examples of CJ modifiers are 'only', 'which' and possessives. Only demonstratives have a choice to be phrased with the noun or not, and 'whether a p-phrase is formed or not depends on the way the speaker wants to present the information' (p.311). With the CJ phrasing in (54) the demonstrative induces an exclusive reading, which would be absent with a DJ phrasing.

Makwe (G402, Devos 2004: 311)

(54) *Ni-lembela   kítábúucí.* |
      1SG.SM-want   7.book:7.DEM.I
      'I want this book (not another one).'

While the differences with the verbal CJ/DJ alternation are evident, the similarities are striking. The same is true for Bemba, where p-phrasing in the noun phrase is also variable. Although Sharman and Meeussen (1955) argue that this is the same alternation as found in the verbal domain, Kula (this volume) shows that 'the patterning of nominals can be easily explained by the same tone rules/p-phrasing without postulating that the CJ/DJ alternation is also encoded in nominals'.

8 Conclusion

There is a large amount of crosslinguistic variation for the conjoint/disjoint alternation, which has been charted in 14 parameters, mentioning 2 possible extra parameters. The parametric settings found for 11 languages show that there are at least three constant factors: (i) all languages have a sentence-final restriction on one form (parameter 1); (ii) there is a correlation between focal elements requiring one or the other form (parameter 10); (iii) all languages have some morphological marking to make the alternation apparent. This is what motivates the working definition of the alternation, repeated below:

(55) The conjoint/disjoint alternation is an alternation between verb forms that are formally distinguishable, that are associated with an information-structural difference in the interpretation of verb and/or following element and of which one form is not allowed in sentence-final position.

Further research should reveal in which other languages we find a similar alternation, candidates being Yom (Fiedler this volume), Kikuyu (Morimoto this volume), Shangaji (Devos this volume), Aghem (Watters 1979; Hyman and Polinsky 2009; Hyman 2010), Majang (Joswig 2015), Doyayo (Elders 2006), Wolof (Creissels and Robert 1998; Robert 2000, 2010), Mauritian Creole (Van der Wal and Veenstra 2015), Igbo (and other Benue-Kwa languages, Manfredi 2005), Sinhala (Herring and

Paolillo 1995; Slade 2011), and Nigerian Benue-Congo languages such as Efik (Cook 2002), Gwari and Ejagam (Watters where distinct verb forms are used to indicate argument vs. verb phrase focus (Hyman and Watters 1984, cf. Gibson et al. this volume). It would be highly interesting to see the parameter settings for these and other languages, checking their patterns against the proposed definition.

Some of the parameters were shown to be useful as diagnostics distinguishing constituency-based systems from focus-based systems, which seems to be a general choice languages make. In the constituency-based languages, focus is indirectly associated with the alternation, and possibly with a dedicated focus position (although this is not necessary). This can further inform theories on the interface between syntax and information structure. Furthermore, the variation in mapping between syntax and prosody will also shed light on the interface between these two areas. Both are left for further research, but a possible way in may be to examine how the various focus and constituency marking strategies cooperate, and whether one has a more primary task in marking focus (see also the discussion in Yoneda this volume and Gibson et al. this volume).

Another interesting topic for further research is the diachronic development of the alternation (cf. Hyman this volume). Both Güldemann (2003) and Nurse (2008) suggest that the alternation could have been present in Proto-Bantu, since it would be unexpected for several languages to develop a system that is so much alike. Meeussen (1967: 109) also reconstructs *-da- as a Proto-Bantu morpheme for 'disjunct'. Güldemann (2003) proposes a development for the marker -a- or -ya- (and maybe -ra- is also related) from a disjoint focus marker to a progressive marker to a present tense morpheme. However, we have seen that the alternation is not marked by one morpheme across languages and across tenses. It is not just one verb form, but rather a system or a conjugational parameter (like aspect and evidentiality are). As such, it is difficult to establish the grammaticalisation path of the forms indicating the alternation and the development of the alternation itself, but comparative syntactic research may further elucidate the issue.

Abbreviations and symbols

High tones are indicated by an acute accent, low tones are unmarked. Numbers refer to noun classes, or to persons when followed by SG or PL.

	right boundary phonological phrase	APPL	applicative
*	ungrammatical	AUG	augment
		CJ	conjoint verb form
#	infelicitous	CONN	connective

COP	copula	PASS	passive
DEM	demonstrative	PERF	perfective
DIM	diminutive	PL	plural
DJ	disjoint verb form	POSS	possessive
FM	focus marker	PR	recent past
F.PAST	far past	PRES	present tense
FUT	future tense	PRO	pronoun
FV	final vowel	PROG	progressive
HAB	habitual	REL	relative
LOC	locative	REM	remote past tense
NEG	negation	SM	subject marker
OM	object marker		

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