Successive cyclicity and the “double-V2” rule in Mòcheno and Dinka.

In this article I discuss a series of novel data showing that extraction in the Germanic dialect Mòcheno spoken in the Fersina valley in Trentino, Northern Italy, must proceed cyclically through both phase edges (Chomsky 2001 et seq., den Dikken 2009), replicating for Germanic all the effects on word order found in the Nilo-Saharan language Dinka spoken in South Sudan (van Urk/Richards 2013). Unlike claims that have been made about Dinka, I propose that in Mòcheno the transparency of extraction is not due to the presence of an EPP feature on v^0 and C^0, but to the presence of a “double-V2” mechanism involving a head of the high periphery (Rizzi 1997, Benincà 2001) and a head of the vP periphery (Jayaseelan 2001, Belletti 2004) and to movement of one XP to FocusP. I show that all extractions involving a focus must proceed through both FocusPs in CP and in the vP periphery. FocusP must, therefore, be considered the edge of both phases. I also demonstrate that topics can never move through the CP or the *v*P edges. When they appear in CP, they are shown to be extracted as a remnant within *v*P, as proposed for standard German by Müller (2004). The analysis proposed will be shown to account for all the asymmetries observed in short and long extraction between topics and foci in Mòcheno, and, between adjuncts and arguments in Dinka.

1. Introduction[1]

In a recent paper, van Urk and Richards (2013) discuss the data on the Nilo-Saharan language Dinka showing that long distance extraction proceeds cyclically through the edge of every phase, thus confirming the hypotheses of Chomsky (2001 et seq.), Den Dikken (2009), Rackowsky and Richards (2005). They claim that the cyclicity of movement is remarkably transparent in Dinka, a V2 language at the CP level, due to the presence of an EPP feature associated with v^0 which can be satisfied by a moved XP (leading to OV syntax) or by an extracted XP (leading to VO syntax).

The aim of this article is to compare the data from Dinka with those from Mòcheno[2], which has been independently claimed (Cognola 2008, 2010, 2013a, forthcoming) to instantiate a "double-V2" mechanism[3] involving both the higher and the lower phase. Crucially, the "double-V2" mechanism of Mòcheno has been theorised on the basis of the presence of the same phenomena reported for Dinka, i.e. the distribution of OV/VO word orders in relation to the extracted constituent. Given the similar findings reached independently for Dinka and Mòcheno, a comparison between these two languages seems to be particularly important to our understanding of the properties of (long-distance) movement and might shed new light on the central theoretical issue raised by the Dinka and Mòcheno data, i.e. why the cyclicity of movement is transparent in some

1 I would like to thank Michelle Sheehan for drawing my attention to Dinka and for encouraging me to write this article, and Theresa Biberauer, for discussing several aspects of this paper and for reading and commenting on a draft version. Many thanks to Coppe van Urk for clarifying some points about the Dinka data, to my main informant from Palù and to the 45 speakers who took part in the fieldwork in the Fersina valley in the summer of 2011. I also thank Rachel Murphy for editing the English of the pape. All shortcomings are my own. This work is part of the [XXX] project financed by XXXXXXXX.

2 Mòcheno is a Germanic dialect spoken by around 580 people (Alber 2010) in three villages (Palù/Palai, Fierozzo/Vlarotz and Roveda/Oachlait) of the Fersina valley (Trentino, Northern Italy).

3 This label was first used by Theresa Biberauer.

languages, but not in others. This is not a trivial issue, since cyclicity is assumed to be a universal property of movement, which proceeds through all intervening phase edges even in those languages in which this is not immediately visible.

Both van Urk and Richards (2013), in the case of Dinka, and Cognola (2008, 2010, 2013a, forthcoming), in the case of Mòcheno, have claimed that the core property responsible for the transparency of movement is the "double-V2" mechanism, which involves both the higher and the lower phase. Van Urk and Richards (2013) suggest that the EPP feature is associated with C^0 and v^0, whereas Cognola (2008, 2010, 2013a, forthcoming) proposes that it is associated with the lower head of the high periphery (Rizzi 1997, Benincà 2001 a.o.) and of the vP periphery (Jayaseelan 2001, Belletti 2004, Poletto 2006)[4].

In this article, I provide further evidence from Mòcheno for the latter hypothesis, i.e. that i) the "double-V2" mechanism involves the two peripheries in both phases, and ii) cyclicity effects result from the interaction between one FP with discourse-features of the high periphery and of the vP periphery and the satisfaction of the EPP feature associated with the lowest heads of both peripheries.

4 The theoretical issue of whether the "double-V2" mechanism involves C^0 and v^0 or two heads of the high left periphery and of the *v*P periphery is not a minor point, particularly in regard to the status of the lower EPP feature. The claim that C^0 and v^0 can be associated with an identical EPP feature responsible for a "double V2" mechanism implies that the higher EPP feature is connected to an A' position (C), whereas the lower one is associated with an A-position (v). On the other hand, the idea that the EPP feature responsible for V2 is always a property of a head of a periphery implies that in both phases A' positions are involved. The two hypotheses clarly make crucially different predictions about the nature of the V2 phenomenon in the two phases and about its interactions with the semantic/pragmatic component associated with the V2 rule. In van Urk and Richards's (2013) analysis it is implied that the lower EPP feature is a purely formal requirement, since it is associated with an A-position, whereas the higher EPP feature is associated with an A'-position. Therefore, semantic/pragmatic effects are only expected to take place in the higher phase in Dinka, where XP fronting might be triggered by topic/focus features, and not in the lower one. Cognola's (2008, 2010, 2013a, forthcoming) analysis, on the contrary, predicts semantic/pragmatic effects to take place in both phases.

The theory of V2 that I adopt here is that of Müller (2004), who shows that the V2 effect in German (and in Germanic in general) results from the leftward movement of vP to C^0 and VP to T^0 for EPP reasons, and not from head movement followed by XP fronting to the Spec of the head hosting the finite verb, as in den Besten 1983 (cf. discussion in Holmberg (forthcoming)). This analysis implies that the EPP feature associated with the lowest CP head is not technically satisfied by the fronted XP, but by a remnant containing that constituent and the finite verb. For Mòcheno I suggest that the mechanism of satisfaction of the two EPP features is identical to that proposed for other Germanic languages, but that the VP moves to the lowest Spec of the vP periphery, and not to TP. *v*P is assumed to move to C^0, as in all other V2 languages. However, this parametric difference between German(ic) and Mòcheno alone does not account for the remarkable transparency of extraction and for the asymmetries between extracted topics and foci found in the latter language, and summarised in (1)[5].

(1) a. Topics and foci can appear in CP;

b. foci, but not topics, can appear in the vP periphery (OV syntax);

c. topics can either appear in CP or in VO syntax;

5 The generalizations proposed in this article are set forth on the basis of the most intensive data collection ever made for Mòcheno. The fieldwork involved 45 speakers (a significant proportion of the Mòcheno-speaking population, 10%), selected according to three main criteria assumed to greatly influence variation: i) age, ii) gender and iii) farm of residence (Togni 1990). A total of 45 people, all considered excellent speakers within the community, were interviewed: 15 from each municipality of the valley, divided according to their age, with 5 young speakers (under 30), 5 middle-aged (between 30 and 60) and 5 elderly (over 60) for each variety. The consultants were asked to both translate sentences from Italian into Mòcheno and to give grammaticality judgements on a series of alternatives. The informants were interviewed by myself in their homes or in the Institute for the Promotion of the Mòcheno language and culture in Palù del Fersina/Palai and each interview lasted about one hour. The results have been checked by a control group of three speakers, one of each variety. The data collected in this fieldwork are used in the first part of the article, that dedicated to short extraction, whereas the data on long extraction are taken from a pilot study with one single informant from Palù (the informant who collaborated with Cognola forthcoming).

d. in sentences with a long-extracted topic or focus, embedded topicalization is ruled out;

e. in sentences with a long-extracted focus, but not with a long-extracted topic, OV is blocked.

I suggest that the asymmetries between topics and foci in Mòcheno in (1) derive from the fact that these constituents do not move in the same way, in particular they do not move to CP in the same way, contrary to what happens in German(ic). The empirical data indicate that foci "shape" the syntax of Mòcheno by interfering with the distribution of embedded topicalization and OV/VO syntax, and I propose that this is due to the fact that foci i) can move independently, i.e. they can undergo A'-scrambling[6], and ii) move cyclically through the phase edges (here, therefore, I slightly modify Müller's 2004 theory). Topics, on the other hand, do interfere with the higher phase (1d), but do not interfere with the lower one, and this I claim is due to the fact that they are incapable of scramble[7] in Mòcheno, and when they appear in CP, they are moved there within the *v*P (as in Müller 2004). I claim that the split in the way in which XPs move to CP is the second condition responsible for the high level of transparency of movement displayed by Mòcheno.

The account proposed for Mòcheno contributes to our unstanding of *how* syntactic movement proceeds, by providing further evidence supporting the hypothesis that movement proceeds cyclically through the edges of both phases. Moreover, it

6 For an analysis of A-scrambling in Mòcheno, cf. Cognola (2013b). For an overview on scrambling in Germanic, cf. Hinterhölzl 2006, Neeleman and van de Koot (2008) and references cited there.
7 This means that A' scrambling can only involve foci and not topics in Mòcheno.

contributes to our understanding of *why* movement is cyclical by showing that there is a clear correlation between the possibility of being extracted through the lower phase, A'-scrambling and the information-status of XPs. For the case of Mòcheno, we have clear evidence that the edge of the lower phase is lowFocusP, and that any extracted focus must move through any intervening focus position of the higher and lower phase. In Mòcheno, therefore, cyclicity is a mechanism for ruling out the presence of two foci in the same sentence, and this is why cyclicity involves foci and not topics.

Giving an answer to whether the analysis proposed for Mòcheno can be valid for other languages is something that goes beyond the scopes of this work. However, in the paper I will carry out a detailed comparison between Mòcheno and Dinka, showing that the two languages are identical in all relevant respects, with the only difference that Dinka displays an asymmetry in extraction between adjuncts and objects, which replicates that between topics and foci in Mòcheno.

The article is organised in the following way. In section 2, I examine the syntax of the lower phase, by focusing on the data supporting the hypothesis of the presence of a low EPP feature in Dinka and Mòcheno, which manifests itself in both languages in the distribution of OV and VO word orders. In section 3, I compare long wh- extraction in Dinka and Mòcheno, showing that in both languages any long-extracted XP targets the edge of the higher phase, whereas only the a subset of XPs is extracted through the vP periphery. In section 4, I sum up the results reached in the paper and propose a way to reconcile the few asymmetries observed between Mòcheno and Dinka.

2. On the presence of a low EPP feature

2.1 Dinka

Van Urk/Richards (2013:14ff) show that in the double-object construction in Dinka, a Nilo-Saharan V2 language[8], one of the two objects must precede the verb, in a position they claim to be Spec,*v*P. Their hypothesis is that one of the objects must precede the verb in obedience to a low V2 rule, because v^0 is associated with an EPP feature, fully comparable with that of C^0 responsible for the canonical V2 effect.

(2) a. [$_{\text{Spec CP}}$ ɣɛ̀n cí [$_{\text{Spec vP}}$ Ayén] yiḛ̱n kitàp̱

I PRF. Ayen give book

b.* [$_{\text{Spec CP}}$ ɣɛ̀n cí [$_{\text{Spec vP}}$ _____] yiḛ̱n kitàp̱ Ayén

I PRF. give book Ayen

'I gave Ayen a book'

c. [$_{\text{Spec CP}}$ ɣɛ̀n cí [$_{\text{Spec vP}}$ kitàp̱] yiḛ̱n Ayén

I PRF. book give Ayen

d.* [$_{\text{Spec CP}}$ ɣɛ̀n cí [$_{\text{Spec vP}}$_____] yiḛ̱n Ayén kitàp̱

I PRF. give Ayen book

'I gave a book to Ayen'

In Dinka the EPP feature associated with v^0 can only be satisfied by the direct and the indirect objects, and not by all constituents. Adjuncts and subjects are never able to satisfy the low EPP feature, although they can appear in CP. This is exemplified in (3 from Van Urk/Richards 2013:13,25).

8 The aim of this article is to compare Mòcheno and Dinka in some relevant areas of their syntax and not to give a complete description of the grammar of both languages. Therefore, I refer the reader to van Urk and Richards's (2013) and references cited there for evidence supporting the claim that Dinka is V2 at the CP level. For a general overview of the Mòcheno grammar, cf. Rowley (2003).

(3) a. [$_{\text{Spec CP}}$ Wɔ̀ cí [$_{\text{Spec vP}}$ _____] kɛ̀t dòm-íc

we PRF sing garden-in

b.* [$_{\text{Spec CP}}$ Wɔ̀ cí [$_{\text{Spec vP}}$ dòm-íc] kɛ̀t

we PRF garden-in sing

'We sang in the garden'

c. Rɔ̀k a-bíi Cán aléth ɣɔ̀c Bòl

town 3SG-FUT.NS Can.GEN clothes buy.DTR Bol

'Can bought Bol clothes at the town'

As exemplified in (4, from Van Urk/Richards 2013:15), in wh-main interrogative clauses involving the extraction of an object, Spec,*v*P is not available for any other object, i.e. VO word order is obligatory. Their claim is that extraction has taken place through Spec,vP, leaving it empty. The EPP feature associated with v^0 is satisfied by the wh-element and superficial VO word order is obligatory.

(4) a. [$_{\text{Spec CP}}$ Yeŋà cíi mòc [$_{\text{Spec vP}}$ ~~Yeŋà~~] yiɛ̱n kitə̀p?

who PRF.NS man give book

b.* [$_{\text{Spec CP}}$ Yeŋà cíi mòc [$_{\text{Spec vP}}$ ktə̀p] yiɛ̱n?

who PRF.NS man book give

'Who did the man give the book to?'

c. [$_{\text{Spec CP}}$ Yeŋǫ̱ cíi mòc [$_{\text{Spec vP}}$ ~~Yeŋǫ̱~~] yiɛ̱n Ayén?

what PRF.NS man give Ayen

d.*[$_{\text{Spec CP}}$ Yeŋǫ̱ cíi mòc [$_{\text{Spec vP}}$ Ayén] yiɛ̱n?

what PRF.NS man Ayen give

‘What did the man give Ayen?’

The effect found with wh- extracted verb arguments is not found with the extraction of adjunct wh- elements. As shown in (5a,c from an Urk/Richards (2013:22) and (5b,d) pers. comm. of Coppe van Urk), when the extracted wh-element is an adjunct, it does not move through Spec,vP, which must therefore host an object (OV word order).

(5) a. [$_{\text{Spec CP}}$ Yétenô cíi yín [$_{\text{Spec vP}}$ thǫ̈k] ɣòoc?
where PRF.NS you goat buy.tr

b.*[$_{\text{Spec CP}}$ Yétenô cíi yín [$_{\text{Spec vP}}$ _____] ɣòoc thǫ̈k?
where PRF.NS you buy.tr goat

‘Where did you buy a goat?’

c. [$_{\text{Spec CP}}$ Yeŋǫ́ cíi yín [$_{\text{Spec vP}}$ kǫ̀or] nǫ̀k?
what PRF.NS you lion kill

d.*[$_{\text{Spec CP}}$ Yeŋǫ́ cíi yín [$_{\text{Spec vP}}$ _____] nǫ̀k kǫ̀or?
what PRF.NS you kill lion

‘What did you kill a lion with?’

Summing up, Van Urk/Richards (2013) propose that both C^0 and v^0 are associated with an EPP feature in Dinka. Focusing on the low EPP feature, they show that direct and indirect objects always satisfy the low EPP, i.e they can appear in Spec,vP and precede the lexical verb (OV) and move through Spec,vP when they are wh-extracted (EPP is satisfied in passing). Adjuncts and subjects are never able to satisfy the low EPP feature, i.e. they must follow the finite verb (VO) and when they are wh-extracted, OV syntax is possible (i.e. they cannot satisfy the low EPP in passing). The EPP feature on C^0, on the

other hand, can be satisfied by all fronted XPs[9].

In the following section, I show that Mòcheno behaves in a very similar way to Dinka, i.e. it instantiates a “double-V2” rule in both higher and lower phases, which manifests itself in the same distribution of XPs in relation to the past participle (OV vs VO) just described for Dinka.

2.2 Mòcheno

Cognola (2008, 2010, forthcoming) independently shows that a “double-V2” mechanism must be theorised to account for the distribution of OV/VO word orders in the German dialect Mòcheno. The empirical manifestations of the phenomenon are the same as those reported for Dinka and discussed in 2,1, i.e. the distribution of XPs in relation to the lexical verb is dependent on the satisfaction of a low EPP feature, which can also be satisfied in passing by a fronted XP. Interestingly, Mòcheno has been shown to be a “relaxed” V2 language in both phases (Cognola 2013a, forthcoming), i.e. a language in which not all constituents can satisfy the EPP features, exactly like Dinka[10]. Unlike Dinka, however, the distinction is not between arguments vs adjuncts, but between foci vs topics: the former, but not the latter, are always able to satisfy both high

9 In the light of these facts, Dinka seems to instantiate a non-strict V2 system at the vP level, since non all constituents “count” (Joiutteau 2010) for V2, since only direct and indirect objects are able to satisfy the low EPP feature. As mentioned by Van Urk/Richards (2013: fn 1), Dinka also seems to be a “relaxed” V2 at the CP level, since V3 word orders are possible unlike in strict V2 languages, such as German and Dutch (den Besten 1983). This fact makes the comparison between Dinka and Mòcheno even more interesting, given that this latter language has been shown to be a “relaxed” V2 language at the CP and the *v*P levels (Cognola 2008, 2010, 2013a, forthcoming).

10 As discussed in the introduction, I adopt Müller's (2004) theory of V2, which implies that the XP appearing in CP (V2) or in the vP periphery (OV) does not technically satisfy the EPP feature, which is satisfied by the moved vP or by the moved VP. Since this theoretical shift is not motivated yet, I stick to Cognola's (2013a, forthcoming) and van Urk and Richards's (2013) terminology, especially for the sake of clarity when making comparisons with the Dinka data.

and low EPP features[11]. The effects of the "double-V2" rule on the lower phase are illustrated below based on the study by Cognola (forthcoming) and using new data collected in a recent field work.

2.2.1 Operators must always satisfy the lowEPP feature

Cognola (forthcoming:111f) shows that new-information foci, identified through the wh-interrogative clause test (cf. Belletti (2004) and Cruschina (2006)), must appear in OV syntax in Mòcheno, in a position that I claim is Spec,*v*P (cf. fn. 8).

(6) a. Bos hòs=o kaft en de boteig?
what has=SUBJ-CL.2.SG bought in the shop
'What did you buy in the shop?'

b. [$_{\text{Spec CP}}$ I hòn [$_{\text{Spec vP}}$ a puach] kaft
I have a book bought

c.# [$_{\text{Spec CP}}$ I hòn [$_{\text{Spec vP}}$ _____] kaft a puach
I have bought a book
'I bought a book'

As shown in (7a,b from Cognola forthcoming:117), operators must also satisfy the low EPP when they are extracted. The examples illustrate that a wh- extracted argument forces VO syntax, which I take as clear evidence that it has moved through Spec,*v*P on its way to CP, blocking the possibility of moving any other XP to that position[12].

11 This asymmetry between topics and foci in relation to the satisfaction of the EPP feature responsible for V2 seems to be a general characteristic of the relaxed type of V2 instantiated by Mòcheno, which is very close to that found in Old Romance languages (Benincà 2006), Rhaetoromance (Poletto 2002), Old English (Roberts 1997) and Kashmiri (Bhatt: 107ff cited by Holmberg forthcoming:4).
12 The same effect on OV/VO is also found with an extracted focus, cf. Cognola (forthcoming).

(7) a. [$_{Spec\ CP}$ Ber hòt [$_{Spec\ vP}$ ~~ber~~] kaft s puach?

who has bought the book

b.*[$_{Spec\ CP}$ Ber hòt [$_{Spec\ vP}$ s puach] kaft?

who has the book bought

'Who bought the book?'

c. [$_{Spec\ CP}$ En bem hòt=se [$_{Spec\ vP}$ ~~en bem~~] kaft de zaitung?

to whom has=SUBJ-CL.3.SG.M bought the newspaper

d.* [$_{Spec\ CP}$ En bem hòt=se [$_{Spec\ vP}$ de zaitung] kaft?

to whom has=SUBJ-CL.3.SG.M the newspaper bought

'Whom did she bought the newspaper?'

The same effects illustrated in (6) and (7) are found with all constituents (subject, objects, adverbs, adverbial PPs), as long as they are foci. This is shown in (8, 8d,e from Cognola forthcoming:118) using an adverb[13].

(8) a. Bo hòs=o pakemmp der Mario?

where have=SUBJ-CL.2.SG met the Mario

'When did you meet Mario?'

b. [$_{Spec\ CP}$ I hòn=en [$_{Spec\ vP}$ gester] pakemmp

I have-him yesterday met

c.# [$_{Spec\ CP}$ I hòn=en [$_{Spec\ vP}$ _____] pakemmp gester

I have-him met yesterday

13 In the light of this fact, the OV/VO label must be understood in a broader sense in Mòcheno, since it does not refer simply to the direct object, but to any XP, which can either precede or follow the lexical verb, according to whether it is a focus or a topic.

‘I met him yesterday’

d. [$_{\text{Spec CP}}$ Bo hòs=o [$_{\text{Spec vP}}$ ~~bo~~] pakemmp der Mario?

where have=SUBJ-CL.2.SG met the Mario

‘Where did you meet Mario?’

e.*[$_{\text{Spec CP}}$ Bo hòs=o [$_{\text{Spec vP}}$ der Mario] pakemmp?

where have=SUBJ-CL.2.SG the Mario met

Summing up, Cognola (forthcoming) shows that operators (new-information foci and wh-elements) are always able to satisfy the low EPP feature associated with v^0 in Mòcheno. The interaction between high and low EPP shapes the structure of Mòcheno sentences, since OV word orders are obligatory when the new-information focus appears in the lower portion of the clause and VO is obligatory when the focus is moved to CP.

In recent fieldwork (cf. fn 2), I replicated the study on the Palù dialect conducted by Cognola (2008, 2010, forthcoming) for all varieties of Mòcheno. I tested the syntax of new-information foci in a dialogue replicating the examples in (6) and informants were asked to judge the grammaticality of the alternative they had not produced. The prediction was that OV syntax would be highly favoured by the direct object being a new-information focus. In Table 1, I sum up the results of this test. The data clearly indicate that there is no preference for OV syntax when the direct object is a new-information focus, contrary to Cognola's (forthcoming) findings. Almost all speakers stick to VO syntax in production, and in the grammaticality judgement task almost all of them judged both OV and VO word orders to be grammatical. Especially in the Palù

dialect, the two word orders seem to be in free distribution.

Table 1

OV/VO word order in main declarative clauses in which the direct object is new-information focus

Variety	OV word order		VO word order	
	Translation	Judgement	Translation	Judgement
Palù/Palai en Bersntòl	4/13	12/13 (92%)	10/14	14/14
Fierozzo/Vlaroz	1/15	10/15 (66%)	14/15	15/15
Roveda/Oachlait	1/15	10/15 (66%)	13/15	15/15
Total:	6/43	32/43	37/44	44/44
Percentage:	13%	74%	84%	100%

The data in Table 1 indicate that there seems to be no correlation between the new-information status of the direct object and its syntactic position. This conclusion is reinforced by the data on the distribution of the direct object in out-of-the-blue sentences, in which the direct object does not have any special information-structural features[14]. As summarised in Table 2, the majority of informants use VO syntax in the translation task and judge OV to be an equally valid alternative, replicating the numbers discussed in Table 1 for sentences involving a new-information focus.

Table 2

OV/VO word order in out-of-the-blue main declarative clauses

Variety	OV word order		VO word order	
	Translation	Judgement	Translation	Judgement
Palù/Palai en Bersntòl	4/15	14/15	8/12	12/12

14 I asked the informants to translate the Italian sentence *Mario ha sempre pulito bene la casa*, "Mario has always cleaned the house well" and to judge the grammaticality of the alternative (either OV or VO) that they had not produced.

Fierozzo/Vlaroz	0/15	10/15	15/15	15/15
Roveda/Oachlait	3/12	12/14	9/10	10/10
Total:	7/42	36/44	32/37	37/37
Percentage:	16%	81%	86%	100%

The quantitative data collected in my fieldwork seem to indicate that Cognola's (forthcoming) claim that new-information foci must appear in OV syntax is wrong, since there is no sign of any relevant effects of information structure on the syntax of verb arguments. XPs can appear in both OV and VO syntax irrespective of their information status and the two word orders are apparently optional for the majority of informants.

However, this conclusion is challenged by the data on the distribution of OV/VO word orders in wh-main interrogative clauses. Cognola's (forthcoming) prediction is that VO must be highly favoured in wh-interrogative clauses, given that any extracted wh-element must satisfy the low EPP feature, thus blocking any further movement to Spec,*v*P[15]. As can be seen in Table 3, wh-main interrogative clauses behave as expected, i.e. wh-extraction clearly has an effect on the distribution of word orders. VO word order is used by 2/45 informants, and it is considered grammatical by 21/42 informants (50%), i.e. at chance-level percentage. This contrasts sharply with the data on main declarative clauses discussed in Tables 1 and 2, where the two word orders seem to be in free distribution.

Table 3

15 I asked informants to translate the sentence “When did you buy the book?” into Mòcheno and to judge the alternative (OV or VO) that they had not produced.

OV/VO word order in main wh-interrogative clauses

Variety	OV word order		VO word order	
	Translation	Judgement	Translation	Judgement
Palù/Palai en Bersntòl	1/8	8/14	13/14	14/14
Fierozzo/Vlaroz	0/7	7/15	15/15	15/15
Roveda/Oachlait	1/6	6/13	13/14	14/14
Total:	2/21 – 2/45	21/42	41/43	43/43
Percentage:	9% - 4%	50%	95%	100%

In this section I have shown, using Cognola's (forthcoming) data, that the distribution of XPs in relation to the past participle in Mòcheno seems to be ruled by the presence of a low EPP feature which can be satisfied by extracted operators (VO syntax is obligatory) and by new-information foci. The recently collected data fully confirm Cognola's (forthcoming) analysis of wh-main interrogative clauses, but not that of sentences in which the direct object is a new-information focus. Before drawing any conclusions about this, I will first examine the syntax of topics.

2.2.2. Topics never satisfy the low EPP feature: Cognola (forthcoming)

Cognola (forthcoming) shows that in Mòcheno main clauses, the OV position is always ruled out for topics, i.e. D-linked (Pesetzky 1987) constituents which can either be accessible or non-accessible in the context (Reinhart 1981, Chafe 1986, Frascarelli/Hinterhölzl, 2007, López 2009, Cruschina 2010). Topics in Mòcheno must appear i) in the high left periphery, or ii) in VO syntax depending on the position of the sentence focus, as expected within the “double-V2” hypothesis. When a focus is fronted, the topic must appear in VO syntax; when the new-information focus appears

before the lexical verb (OV), the topic must appear either after the past participle (VO) or in the high left periphery. This articulation of the distribution of topics and foci in relation to the "double-V2" mechanism indicates that the syntax of topics is dependent on that of operators, which follows from the fact that topics do not actually satisfy EPP. Cognola (forthcoming: 117) shows that when the direct object is an accessible topic, it must appear in the left periphery (9b)[16]. Both OV and VO positions are ruled out for topics (9c-e).

(9) a. Benn hòt=er kaft s puach?

'When did he buy the book?'

b. S puach hòt=er [$_{\text{Spec vP}}$ gester] kaft

the book has=SUBJ-CL.3.SG.M yesterday bought

'The book, he bought yesterday'

c. #Er hòt s puach gester kaft

he has the book yesterday bought

d. #Er hòt gester s puach kaft

he has yesterday the book bought

e. #Er hòt gester kaft s puach

he has yesterday bought the book

I asked the informant who took part in Cognola's (forthcoming) study whether the sentences would improve if the topic alone appeared in OV syntax: as shown in (10), the sentences are still not felicitous[17].

16 The same behaviour is shared by non-accessible topics, cf. Cognola (forthcoming).

17 The same grammaticality judgements have been given on sentences in which a new-information focus

(10) a. Benn hòt=er kaft s puach?

'When did he buy the book?'

b.#Er hòt [Spec vP s puach] kaft gester

he has the book bought yesterday

c.#Gester hòt=er [Spec vP s puach] kaft

yesterday has=SUBJ-CL.3.SG.M the book bought

The data discussed in this subsection indicate that topics are never able to satisfy the low EPP feature in Mòcheno, i.e. they are always rules out of the OV position.

2.2.3 Topics can never satisfy low EPP: the new data

In the a recent fieldwork, I tested the syntax of topics, focusing on Cognola's (forthcoming) generalizations discussed in 2.2.2. I replicated the test for the syntax of accessible topics in (9) and (10) and asked informants to answer the interrogative clause in (9a) spontaneously[18]. They produced four types of sentences, whose structure is given in (11). Only (11a,b) are compatible with Cognola's theory.

(11) a. [Spec CP topic [aux verb [Spec vP new-information focus [past participle]]]]

b. [Spec CP new-information focus [aux verb [Spec vP ~~new-information focus~~ [past participle [topic]]]]]

c. [Spec CP topic [aux verb [Spec vP ~~topic~~ [past participle [focus]]]]]

d. [Spec CP new-information focus [aux verb [Spec vP topic [past participle]]]]

As shown in the first and the second column of Table 4, the great majority (63%) of

and a non-accessible topics are involved.

18 In the recent fieldwork I also considered the syntactic behaviour of non-accessible topics, which are shown to behave in the same way as accessible topics (cf. XXX). Due to space limitations, here I only discuss the results of the test on accessible topics.

word orders are those predicted by Cognola, i.e. those in which the new-information focus satisfies the low EPP feature either *in-situ* or through movement on its way to CP (11a,b). Note that 5 out of the 7 speakers from Palù who produced (11a), rejected VO as a grammatical position for the new-information focus. A very small percentage of speakers (3/36) produced sentences in which the fronted focus coexisted with a topic in OV syntax (11c). Finally, 10/36 speakers, all from Roveda and Fierozzo, allowed a fronted topic to satisfy the low EPP feature (11d).

Table 4

Syntax of accessible topics in production: Part I

	(11a) topic- aux- focus-lex verb	(11b) focus – aux – lex verb - topic	(11c) focus- aux – topic – lex verb	(11d) topic- aux- lex verb - focus
Palù	7/14 – 50%	3/14- 21%	3/14 – 16%	0/14 – 0%
Fierozzo	3/14 – 21%	5/14 – 35%	0/14 -0%	6/14- 42%
Roveda	1/9 – 11%	4/9 – 44%	0/9 -0%	4/9 – 44%
Total	11/36	12/36	3/36	10/36
Percentage	30%	33%	8%	27%

Note that some speakers, mostly from Roveda, did not produce any of the sentences in (11), but answered the question with a sentence with a fronted subject and both the topic and the new-information focus appearing in the lower portion of the clause. As shown in Table 5, a sentence in which a topic preceded the past participle was produced once, two speakers produced the mixed order in which focus precedes topic and five produced VO syntax. None of them produced strict OV syntax.

Table 5

Syntax of accessible topics: part II

	subj- aux- topic-lex verb - focus	subj- aux- focus-lex verb - topic	subj- aux- lex verb – focus - topic
Palù	1/15	1/15	0/15
Fierozzo	0/15	0/15	1/15
Roveda	0/15	1/15	5/15
Total	1/45	2/45	6/45
Percentage	2%	4%	13%

I also tested the syntax of accessible topics in a judgement task, the results of which are summarised in Table 6. All informants agreed that simple preposing (with the new-information focus appearing in OV syntax) is the best construction for realising accessible topics. 60% of the consulted speakers judge the VO position possible for topics. Crucially, only 39% of speakers judged OV word order grammatical when the direct object was a topic.

Table 6

Syntax of accessible topics: judgement task

	Simple preposing and OV	Topic is in VO position	Topic is in OV position
Palù	14/14	8/14	8/13
Fierozzo	15/15	8/15	6/15
Roveda	14/15	10/14	3/15
Total	44/44	26/43	17/43
%	100%	60%	39%

From the quantitative point of view, the data summarised in Table 7 clearly indicate that topics cannot satisfy the low EPP feature for the great majority of consulted speakers,

which stick to the simple-preposing construction or VO syntax both in production (90%) and in the grammaticality judgement task.

Table 7

Syntax of topics: overview

Syntax of topics	Production	Judgement
Simple preposed	21/45 – 46%	44/44 – 100%
VO	20/45 – 44%	26/43 – 60%
OV	4/45 -8% [all from Palù]	17/43 – 39%

The results in Table 7 pattern with the distribution of new-information foci summarised in Table 7, from which it can be inferred that the preferred position for new-information foci is either CP or vP (OV).

Table 8

Syntax of foci in sentences with a realised focus: overview

Syntax of foci	Production
Fronted	15/45 – 33%
VO	18/45 – 40%
OV	12/45 – 26%
Total edge position	27/45 – 60%

From a qualitative point of view, the data indicate that for the great majority of Mòcheno speakers (23/36) new-information foci must satisfy the low EPP feature, either in passing or *in-situ*. Moreover, for the majority of speakers topics must appear either in the high left periphery (21/36 speakers) or in VO syntax (12/36). When the topic is fronted, half of the speakers, all from Palù, produced OV (11a, as predicted by

Cognola forthcoming, but unlike in Table 1) and half of them, all from Fierozzo and Roveda, stick to VO word order (11d). This indicates, firstly, that the distribution of OV and VO in sentences with a simple-preposed topic is clearly influenced by diatopic variation, and, secondly, that new-information foci tend to appear in OV syntax (as predicted by Cognola) only in sentences in which the topic is clearly given. These differences disappear in the judgement task, where the word order predicted by Cognola *topic – aux – new-information focus – past participle* is judged grammatical by 100% of speakers.

I take these facts to indicate that the system described by Cognola (forthcoming) belongs to the active competence of the majority of speakers from Palù[19], who produce the OV/VO alternation, and to the passive competence of the speakers of the other two varieties, where the OV/VO alternation only emerges in the judgement task[20]. This indicates that the "double-V2" mechanism is only productive in the Palù variety, but belongs to the passive competence of speakers of the two other varieties (cf. Cognola and Bidese forthcoming). Moreover, I claim that the results for the syntax of topics indirectly confirm the fact that new-information foci must appear in OV syntax in Mòcheno, at least for those speakers who productively instantiate the "double-V2" mechanism, a result that runs counter to those shown in Table 1. I suggest that the

19 The three speakers from Palù who allow for OV word order with a fronted focus probably instantiate a different grammar, in which i) the fronted XP does not interfere with the low EPP feature, which ii) seems to be satisfied by the topic in OV syntax.

20 Speakers from Fierozzo and Roveda very rarely produce sentences with OV word order in the corpus, and only say that this word order is possible when asked in the grammaticality judgement tasks. This indicates that OV belongs to their passive, and not active, language competence. For the analysis of sentences with a fronted topic and VO syntax (11d), this implies that the fronted topic has not satisfied the low EPP feature, and that VO does not originate from an alternation with OV, but is the only available option.

necessity for OV syntax with new-information foci does not emerge from the test summarised in Table 1 because a topic was missing in that test. This might indicate that it is much easier for informants to identify the new-information focus when also the topic is present.

2.3 Partial conclusions

If we adopt Van Urk and Richards's (2013) analysis, the data discussed in this section indicate that the heads of Spec,CP and of Spec,vP are associated with an EPP feature in both Mòcheno and Dinka, which instantiate a sort of “double-V2” mechanism. Empirically, the “double-V2” rule manifests itself in the distribution of constituents with respect to the lexical verb in both languages. In (12), I sum up the properties shared by Mòcheno and Dinka.

(12) a. All XPs can satisfy the high EPP feature;

b. only a subset of XPs can satisfy the low EPP feature;

c. the low EPP feature can be satisfied either *in-situ* leading to OV syntax or by an extracted XP, leading to VO syntax.

The only difference between Mòcheno and Dinka occurs in the subsect of XPs able to satisfy the low EPP feature:

(13) a. arguments and adjuncts in Dinka, and foci and topics in Mòcheno can satisfy the high EPP feature;

b. arguments and not adjuncts in Dinka, and foci but not topics in Mòcheno can satisfy the low EPP feature.

It is evident that the hypothesis proposed by van Urk and Richards (2013) on the basis

of the Dinka data does not account for the Mòcheno facts, nor does it offer a unitary account for both languages. I will now propose an alternative account, first for the Mòcheno facts and to then for a unitary theory for both languages. My aim is to demonstrate that the phenomena described in the previous sections for Mòcheno are not the effect of the presence of an EPP feature associated with v^0, but of an EPP associated with the lowest head of the vP periphery. The satisfaction of this EPP feature within the vP periphery interacts with movement to (leading to OV syntax) or through (leading to VO syntax) the FocusP of the vP periphery. This means that the distribution of OV/VO word orders found in Mòcheno is not a direct consequence of the movement of one XP to Spec,vP, but a side-effect of the interaction between the use of low FocusP (edge of the vP phase) and the satisfaction of the low EPP feature. Separating the low EPP feature from v^0 will allow us to give a simple account of the "double-EPP" mechanism, in particular of the asymmetries observed between topics and foci in Mòcheno.

2.4 Low EPP feature and low left periphery

2.4.1 Structure of the vP periphery

I propose that the vP periphery of Mòcheno has the structure in (14). FP hosts the head associated with the low EPP feature which is satisfied by remnant vP movement to Spec,FP (cf. 2.5)[21]. FocusP is hosts the focus of the lower phase.

21 Cognola (forthcoming) proposes that the FP of the vP periphery whose head is associated with the EPP feature is VoiceP, i.e. the FP which encodes the active/passive diathesis in Cinque's (1999) system. The fact that it has been claimed that the low EPP feature can be associated with $Voice^0$ is relevant to the asymmetries between Mòcheno and German described in this paper. I have suggested that both languages have an EPP feature associated with the head of CP, but that only the latter also has an EPP feature on T^0. Mòcheno lacks the EPP feature on T^0, but has it on the head of VoiceP. This asymmetry between Mòcheno and German might, therefore, be connected with a different parametrization of the "non-CP-EPP" feature among V2 languages, which in some languages can be connected with tense (German), whereas in others (Mòcheno and possibly Dinka) with diathesis/aspect. Note, that this difference in the parametrization of

(14) FocusP – FP - vP

Unlike Belletti (2004), Poletto (2006, forthcoming) and Cognola (2008, forthcoming), I suggest that the Mòcheno vP periphery lacks TopicP(s)[22], i.e. that OV is never derived through XP feature-driven movement to a lowTopicP in Mòcheno. This is evidenced by the data in Tables 3 and 7 above, which show that topics can never appear in OV syntax. In Mòcheno it is possible to have sentences with more than one XP preceding the past participle, and it might be thought that they involve the presence of a topic and a focus in the vP periphery (as proposed by Poletto forthcoming for Old Italian). This possibility must be rejected on the basis of the data in (9) above, where can be seen that a new-information focus and a topic cannot precede the past participle. Moreover, as shown in (15), two XPs can only precede the past participle in Mòcheno if they are both foci and not when they are topics. This I take to indicate that sentences in which two XPs appear in OV syntax involve remnant movement of the XPs following v^0 to Spec,lowFocusP, i.e. TopicP does not exist in the vP periphery.

(15) a. Bos ist tschechen?

'What happened?'

---

the EPP feature does not seem to be restricted to the small set of languages considered here (i.e. German, Mòcheno and Dinka), but seems to be a much general phenomenon across languages. Schifano (in preparation) clearly demonstrates that Romance languages differ in the position targeted by the finite verb, which can either move to TP or to a low FP of the aspectual area (cf. Ledgeway and Lombardi 2005). Her findings strongly resemble (modulo the lack of V2 in modern Romance languages) those made for Mòcheno (and possibility Dinka), and indicate that either TP or an AspP can be involved in verb movement. Whether TP or AspP is the target of verb movement is language-specific.

22 Cognola (2013a) shows that the high periphery of Mòcheno is composed of ForceP, TopicP, FocusP and FinP. TopicPs can be multiple, but their number and order is subject to Relativised Minimality (Rizzi 2004). As we will see, we do not have evidence for such an articulated structure in the lower phase. Moreover, the novel analysis proposed in this paper opens up the possibility that the high left periphery lacks TopicP(s), too. For reasons of space, the implications of this new analysis on the description of Mòcheno cannot be explored in this paper.

b. Der Mario hòt a puach en de mama kaft

the Mario has a book to the mum bought

c.#Der Mario hòt (kaft) a puach (kaft) en de mama

the Mario has bought a book bought to the mum

'Mario bought a book for the mum'

Now that we have shown that we have to assume a reduced vP periphery, let us show how the derivation of main clauses takes place.

2.5 Proposed analysis

Following Cognola (2008, 2010, 2013a, forthcoming), I begin with the idea that Mòcheno has an EPP feature associated with C^0, and an EPP feature on the lowest head of the *v*P periphery, but lacks an EPP feature associated with T^{023}. Following Müller (2004)[24], I propose that i) the EPP feature associated with the head of CP is satisfied by the moved vP, and ii) the VP moves to the lower head of the vP periphery[25]. I assume that vP is the FP in whose head the auxiliary verb and in whose Spec the syntactic subject are generated, and that the V2 effect at the CP level is not due to independent head movement of the finite verb followed by XP fronting, but to vP fronting. I suggest

23 This fact is evidenced not only by the data discussed in this paper, but also by those in Cognola (2013a), which show that DP subjects never appear in Spec,TP in Mòcheno main declarative clauses, but must appear either in the high or in the vP periphery according to their information-structural status. This means that DP subjects behave syntactically like all other XPs and must appear in the high or in the vP periphery, depending on whether they are topics or foci. This behaviour of DP subjects follows directly from the hypothesis defended here that a head of the vP periphery, not of TP, is associated with the lowest EPP feature.

24 Here, I depart from analyses of V2 in terms of head movement (den Besten 1983, Tomaselli 1990, Holmberg forthcoming) and adopt the view that V2 results from XP movement. This account, which is envisaged in Cognola (forthcoming) but not pursued, allows us to account for the Mòcheno data in a more straightforward way.

25 Note that Mòcheno and German do not differ in *how* they satisfy the high and EPP feature, but simply in *where* they satisfy the lower one (TP vs low periphery). This fact provides further evidence for Müller's (2004) approach to V2.

that in Mòcheno (unlike in German) only topics are moved to CP as a remnant within vP, whereas operators move to CP as an effect of scrambling. If the XP moved to Spec,vP is not the syntactic subject, I assume that the obligatory subject clitic pronoun enclitic to the auxiliary verb that we find in Mòcheno is generated directly in v^0. The subject clitic realises the subject theta role and the nominative case, and its distribution is not free, but is crucially dependent on the absence of the DP subject (cf. Cognola 2013a for evidence that in all cases in which the fronted XP satisfies the EPP feature associated with C^0, the subject must be realised by the clitic enclitic to the finite verb)[26]. For a Mòcheno main declarative clause with a fronted topic and the new-information focus in OV syntax such as (16),

(16) En de Maria hòt=er de zaitung kaft
to the Mary has=SUBJ-CL.3.SG.M the newspaper bought
'To Mary he has always bought the newspaper'

I suggest, starting out from an underlying right-branching structure (Kayne 1994)[27] in which the direct object preceeds the indirect object, that: i) the indirect object is moved to Spec,vP (to be then moved to CP); ii) since the XP appearing in Spec,vP is not the syntactic subject, a subject clitic is generated in the head of vP together with the auxiliary verb[28]; iii) the direct object is moved to Spec,low FocusP to check its

26 This proposal implies that in Mòcheno the nominative case is assigned *in situ* by v^0 and not by T^0.
27 I do not adopt a Larsonian (1988) VP shell, since in Mòcheno indirect objects are always introduced by the preposition *en*. I assume that adverbs are generated in Spec of dedicated FP in the IP area (Cinque 1999, Alexiadu 1997) and that the vP periphery is found below Tense Anterior, where the adverb *always* is found (cf. Cognola 2008 on this). Since low (manner and completive) adverbs always precede the past participle in all main clause of Mòcheno, I follow Cognola (forthcoming) in assuming that this class of adverbs must appear in the vP periphery in Mòcheno, in the Spec of a dedicated FP found above VoiceP. I refer the reader to Cognola's paper and to section 3.2.3 for the arguments supporting this analysis.
28 I claim here that in all cases in which the pragmatic subject (i.e. the XP appearing in the left periphery)

discourse-features, and iv) VP is moved to the lowest Spec of the VP periphery. This derivation completes the lower phase (17).

(17) [$_{\text{LOW-FOCUS-P}}$ **de zaitung** [$_{\text{FP}}$ [$_{\text{VP}}$ **kaft**] [$_{\text{vP}}$ [$_{\text{SPECvP}}$ **en de Maria**] [$_{\text{v}}^{0}$ **hòt-er**]
[$_{\text{VP}}$ [$_{\text{V}}^{0}$ ~~**kaft**~~] [$_{\text{NP}}$ ~~**de zaitung**~~][$_{\text{PP}}$ ~~**en de Maria**~~]]]]]

Once the lower phase has been completed, vP is moved to Spec,CP to satisfy the EPP feature on C^0.

(18) [$_{\text{CP}}$ [$_{\text{SPECvP}}$ **en de Maria**] [$_{\text{v}}^{0}$ **hòt-er**] ... [$_{\text{LOW-FOCUS-P}}$ **de zaitung** [$_{\text{FP}}$ [$_{\text{VP}}$ **kaft**] [$_{\text{vP}}$
[$_{\text{SPECvP}}$ ~~**en de Maria**~~] [$_{\text{v}}^{\theta}$ ~~**hòt-er**~~][$_{\text{VP}}$ [$_{\text{V}}^{0}$ ~~**kaft**~~] [$_{\text{NP}}$ ~~**de zaitung**~~][$_{\text{PP}}$ ~~**en de Maria**~~]]]]]

Let us consider now the derivation of a wh-main interrogative clause (19), in which VO is obligatory and the XP following the past participle is a topic (cf. also Benincà 1988).

(19) En bem hòt=er kaft de zaitung?
to whom has=SUBJ-CL.3.SG.M bought the newspaper
'Who has he bought the newpaper for?'

I propose that i) the wh-element moves to Spec,vP, forcing the realisation of the

---

is different from the semantic/syntactic subject (i.e. the XP agreeing with the finite verb), a special verb morphology (i.e. a subject clitic pronoun) must appear on the finite verb. As discussed by Cognola (2013a), the clitic is ruled out in all cases in which a DP subject (assumed to be merged in Spec,vP, see below) is present in the clause. The presence of a special verb morphology (subject clitics) in relation to the XP merged in Spec,vP recalls the "Bergin rule" found in Old Irish (Bergin 1938). As is well-known, Old Irish was a V1 language, in which, though, some cases of V2 (and V3) are found. Interestingly for the present paper, all instances of V2/V3 word orders in Old Irish have an effect on the morphology of the verb: in V1 sentences, the verb appears in the independent (Absolute) paradigm form, whereas in V2/V3 sentences, the verb must follow the dependent (Conjunct) conjugation. I find this correlation between Mòcheno and Old Irish striking, especially in the light of the fact that all V2 word orders of Old Irish are very likely to involve the use of CP (Doherty 2000 a.o.), i.e. they are likely to have the same derivation as German and Mòcheno. As pointed out by Theresa Biberauer (pers.comm.), this hypothesis has important implications for our understanding of the role of subject clitics in V2 languages, since the correlation found in Mòcheno and Old Irish seems to indicate that their role is not that of realising some subject *phi*-features and possibly license pro, but to actually mark the fact that the XP in Spec,vP (appearing in Spec,CP) is not the syntactic subject, i.e. the XP agreeing with the finite verb. This correlation seems to be important also for our understanding of the Old Romance V2 type, in which a finite verb appearing in CP could license *pro* in TP (Benincà 1984, Adams 1987 a.o.).

syntactic subject as a clitic pronoun; and then ii) moves to Spec,lowFocusP; iii) the whole VP is moved to the lowest Spec of the vP periphery to satisfy the low EPP feature. This completes the lower phase. Then i) the operator moves to Spec,FocusP of the high periphery and ii) the vP moves to the lowest Spec of CP (20).

(20) [$_{CP}$ [$_{SPEC\text{-}FOCUS\text{-}P}$ **en bem$_j$**] [$_{SPEC\text{-}FP}$ [$_{SPECvP}$ **t$_j$**][$_{v}^{0}$ **hòt-er**] ... [$_{LOW\text{-}FOCUS\text{-}P}$ ~~**vP**~~ [$_{FP}$ [$_{VP}$ **kaft de zaitung**] [$_{vP}$ ~~[$_{SPECvP}$ **en bem**]~~ [$_{v}^{\theta}$ ~~**hòt-er**~~][[$_{VP}$ ~~[$_{v}^{\theta}$ **kaft**]~~ [$_{NP}$ ~~**de zaitung**]~~][$_{PP}$ ~~**en bem**~~]]]]]]]

The structures above imply that there is a clear sequence in the order of operations in both phases (cf. contributions in Heck, and Assmann (2013) on the role of timing of operations), in particular A'-scrambling to FocusP precedes the satisfaction of the EPP feature in both phases. In the lower phase, operations take place in this order: i) decide which XP is moved to Spec,vP; ii) movement of one XP to low FocusP, and iii) satisfaction of the low EPP feature (VP movement). In the higher phase, focus movement is assumed to precede the satisfaction of the EPP feature (vP fronting). This order of operations indicates that the lower phase is concluded when one XP is moved to Spec,FocusP: this XP can either remain there (OV), or be extracted through the edge, forcing VO syntax.

Let us now consider sentences with a DP subject. As discussed by Cognola (2013a), DP subjects always appear either in the high periphery (when they are topics) or in the vP periphery (when they are new-information foci)[29], i.e. their distribution is ruled by information-structure as all XPs in Mòcheno. In all cases in which the DP subject shows

29 I refer the reader to Cognola (2013a) for evidence supporting this.

up in the clause, the subject clitic on the auxiliary verb is ruled out because the XP appearing in Spec,vP is the syntactic subject (cf. fn. 26).

I propose that sentences with a fronted DP subject must receive the same analysis as sentences with a fronted topic, as shown in (21).

(21) [$_{CP}$ [$_{SPECvP}$ **der Mario**] [$_{v}^{0}$ **hòt**] ... [$_{LOW\text{-}FOCUS\text{-}P}$ **de zaitung** [$_{FP}$ [$_{VP}$ **kaft**] [$_{vP}$ ~~[$_{SPECvP}$ **der Mario**] [$_{v}^{\theta}$ **hòt**~~][$_{VP}$ [$_{Spec\text{-}VP}$ ~~**der Mario**~~ [$_{V}^{0}$ ~~**kaft**~~] [$_{NP}$ ~~**de zaitung**~~]]]]]]

When the DP subject follows the finite verb, I suggest that the DP subject i) is merged in Spec,vP; and since it is is a new-information focus, ii) it moves to Spec,FocusP to check its discourse-features. Since Spec,vP is empty due to the fact that the DP subject has been focussed in the lower phase and V1 is impossible in Mòcheno, iii) the indirect object is moved to Spec,vP[30]. Finally, iv) vP is moved to Spec,CP to satisfy the high EPP feature associated with C^0.

(22) [$_{CP}$ [$_{SPECvP}$ **en de Maria**] [$_{v}^{0}$ **hòt**] [$_{LOW\text{-}FOCUS\text{-}P}$ **der Mario** [$_{FP}$ [$_{VP}$ **kaft de zaitung**] [$_{vP}$ [$_{SPECvP}$ ~~**en de Maria**~~] [$_{SPECvP}$ ~~**der Mario**~~] [$_{v}^{\theta}$ ~~**hòt**~~][$_{VP}$ [$_{v}^{\theta}$ ~~**kaft**~~] [$_{NP}$ ~~**de zaitung**~~] [$_{PP}$ ~~**en de Maria**~~]]]]]]

The analysis proposed provides a straightforward explanation for the fact that topics can be moved to CP but apparently do not “count” for the low EPP feature, i.e. they can never appear in OV syntax. Neither the high nor the low EPP features are satisfied by the fronted XP, but rather by a remnant entailing the finite verb and the past participle, respectively. The XP preceding the finite verb moves to CP in two different ways: if it is a focus, it undergoes scrambling and it is extracted through Spec,vP and the vP edge

30 This movement, which leads to the creation of an extra Spec, must follow the merging of the DP subject in Spec,vP, since no subject clitic appears on the finite verb in this case.

(low FocusP), and if it is a topic, it is moved to CP along with the vP. This means that the linear V2 word order involves two FPs when there is a fronted focus, and one FP when the sentence-initial XP is a topic. In the lower phase, I assume that OV is derived through the former mechanism available in the higher phase to derive V2, more specifically, I suggest that OV is derived by moving one XP to the Spec of the low FocusP, a position that is obviously ruled out for topics, which must either be moved first to Spec,vP and then to Spec,CP or remain in their base position.

In the following section, I examine the syntax of long extraction in Dinka and Mòcheno and show that in both languages we have converging evidence for the claim that extracted XP move cyclically through the lower and higher phases. The usual asymmetry between arguments vs adjuncts in Dinka, and topics vs foci in Mòcheno is also found when long extraction is considered. For the case of Mòcheno, I show that foci move cyclically though all intervening FocusPs of the vP and the high periphery, whereas topics move cyclically through all intervening TopicPs of the high periphery, which follows directly from the account given in this section.

3. Long Extraction

3.1 Dinka

Dinka also displays the remarkable transparency in extraction discussed in section 2.1 even when long-distance dependencies are taken into consideration.

Van Urk and Richards (2013) show that all extracted arguments or adjuncts must move through all intervening CP positions, blocking the possibility of embedded V2, which is generally possible in Dinka. As illustrated in (23, from Van Urk and Richards 2013:16),

it is not possible to move the direct object to the CP of the embedded clause when an XP has been extracted (23b,d), because extraction proceeds cyclically through all intervening CPs. The fact that in both examples in (23) OV is obligatory (pers. comm. Coppe van Urk) indicates that extracted subjects and adjuncts are never able to satisfy the low EPP feature, i.e. they are not extracted through the edge of the lower phase.

(23) a. [$_{\text{Spec CP}}$ Yeŋà cúkkú luéel [$_{\text{Spec CP}}$ ~~yeŋà~~ cíi [$_{\text{Spec vP}}$ kitạ̀p] ɣòoc]?
who PRF.1PL say PRF.NS book buy.trs

b.*[$_{\text{Spec CP}}$ Yeŋà cúkkú luéel [$_{\text{Spec CP}}$ kitạ̀p (a-)cíi [$_{\text{Spec vP}}$ ~~kitạ̀p~~] ɣòoc]?
who PRF.1PL say book PRF.NS buy.trs
'Who did we say bought a book?'

c. [$_{\text{Spec CP}}$ Yétenô cúkkú luéel [$_{\text{Spec CP}}$ ~~yétenô~~ cíi wɔɔk [$_{\text{Spec vP}}$ kitạ̀p] ɣòoc]
where PRF.1PL say PRF.NS we.gen book buy. tr

d.*[$_{\text{Spec CP}}$ Yétenô cúkkú luéel [$_{\text{Spec CP}}$ kitạ̀p cíi wɔɔk [$_{\text{Spec vP}}$ ~~kitạ̀p~~] ɣòoc]?
where PRF.1PL say book PRF.NS we.gen buy. tr
'Where did we say that we bought a book?'

Long wh-extraction of verb arguments does not only proceed cyclically through all intervening CPs blocking the possibility of having embedded topicalization, but also targets all intervening Spec,vP positions, blocking the possibility of having OV syntax. As pointed out by Coppe van Urk (pers.comm.), when one of the two objects is long extracted, the other one must appear after the non-finite verb form (VO). Cyclic movement of extracted arguments through Spec,vP is also evidenced by the phenomenon of *ke* stranding. Van Urk/Richards (2013) show that a long extracted plural

object must strand the plural marker *ke* on all intervening vPs all the way to CP. As shown in (24a), when the long-extracted object is singular, *ke* is absent. If the object is plural, *ke* must appear (24b,c) in a position which van Urk/Richards (2013) claim to be Spec,vP (all examples from van Urk/Richards 2013:17)[31].

(24) a. [$_{\text{Spec CP}}$ Yeŋà yḛ̈ tàak [$_{\text{Spec CP}}$ ~~yeŋà~~ cíi Bôl tḭ̈ŋ]?
who IMP think C PRF.NS Bol see
'Who did Bo see?'

b. [$_{\text{Spec CP}}$ Yèyíŋà yḛ̈ [$_{\text{Spec vP}}$ ké] tàak [$_{\text{Spec CP}}$ ~~yèyíŋà~~ cíi Bôl [$_{\text{Spec vP}}$ ké] tḭ̈ŋ]]?
who-PL IMP PL think C PRF.NS Bol PL see

c.*[$_{\text{Spec CP}}$ Yèyíŋà yḛ̈ [$_{\text{Spec vP}}$ __] tàak [$_{\text{Spec CP}}$ ~~yèyíŋà~~ cíi Bôl [$_{\text{Spec vP}}$ ____] tḭ̈ŋ]]?
who-PL IMP think C PRF.NS Bol see
'Who did all Bo see?'

Summing up, the Dinka data indicate that in this language i) all extracted XPs must move cyclically through all intervening Spec,CP positions, blocking embedded topicalization, and ii) only extracted arguments must move cyclically through all intervening Spec,vP and Spec,CP positions, blocking OV syntax. In what follows, I will now demonstrate that the same empirical effects of long extraction are found in Mòcheno: topics and foci must be extracted through CP, blocking embedded topicalization, and foci must also move through the edge of the vP periphery, thus blocking OV syntax.

31 Interestingly, a very similar effect to *ke* stranding is found in Welsh. Willis (2011) reports that long-distance wh-dependencies involve the presence of the object clitic *ei* in the Spec,vP (in main wh-interrogative clauses) and the Spec,CP (in sentences with wh-long extraction) positions targeted by the extracted wh element.

3.2 Mòcheno

3.2.1 On the syntax of embedded clauses

In order to explain the data on wh- long extraction in Mòcheno, I must first discuss the word order patterns found in standard embedded clauses. I will focus on two aspects: i) the syntactic position of the direct object in relation to the verbs, and ii) the syntax of the subject. The two types of embedded clauses relevant here are i) embedded interrogative clauses, and ii) embedded (subject and object) that-clauses.

Focusing first on embedded interrogative clauses, in (25) I show that three word orders are possible in Mòcheno: i) strict OV (as in standard German) (25a), ii) the *Satzklammerstruktur* (25b), and iii) strict VO (25b)[32].

(25) a. Er hòt mer pfrok, en bem as der Mario s puach kaft hòt
he has to me asked to whom that the Mario the book bought has

b. Er hòt mer pfrok, en bem as der Mario hòt (kaft) s puach (kaft)
he has to me asked to whom that the Mario has bought the book bought

'He asked me who Mario bought the book to'

Cognola (2013a) proposes that DP subjects must appear in Spec,TP in Mòcheno embedded interrogative clauses, and that they are ruled out from both the high and the vP peripheries[33]. This is evidenced by, among other things, the fact that i) in embedded interrogative clauses, the DP subject is not given any pragmatic reading, unlike in main

32 The fourth logical possibility **Der Mario hòt mer pfrokt, en bem as der Mario kaft s puach hòt* is ruled out. This means that Mòcheno does not allow for any FOFC-violating options (I thank Theresa Biberauer, pers.comm., for pointing this out to me).

33 This hypothesis is part of the claim that Mòcheno is an asymmetric *pro*-drop language, i.e. a language in which *pro* is only licensed in main clauses when an XP can be moved to CP, and not when the access to CP is blocked, as in embedded interrogative clauses.

declarative clauses, and ii) the distribution of embedded topicalization. As shown in (26), embedded topicalization is always ruled out in embedded interrogative clauses with VO syntax. I take this to indicate that the DP subject in (25) appears in Spec,TP when it precedes the finite verb, and not in CP.

(26) *Er hòt mer pfrok, en bem as s puach hòt=er kaft
he has to me asked to whom that the book has=SUBJ.CL.3SG.M bought

I explain the fact that in embedded clauses DP subjects must appear in Spec,TP by assuming that the EPP feature associated with C^0 is inherited by T^0 when CP is not available, as in embedded interrogative clauses (cf. Old Romance, Benincà 2006 for the same behaviour of embedded interrogative clauses and Haegeman 1997 and Roberts 2004 for the mechanism blocking access to CP).

For embedded interrogative clauses with strict OV, I propose that, starting out from the same underlying structure of main clauses (cf. Section 2.5), that i) the DP subject is merged in Spec,vP; ii) the wh-element undergoes scrambling to the lowest Spec of CP without moving through low Spec,FocusP; iii) the direct object is moved to low FocusP, iv) the VP is moved to the lowest Spec of the vP periphery, and v) the DP subject is moved to Spec,TP to satisfy the high EPP feature inherited from C^0.

(27) [$_{CP}$ **en bem as** [$_{TP}$ **der Mario** [$_{LOW\text{-}FOCUS\text{-}P}$ **de zaitung** [$_{FP}$ [$_{VP}$ **kaft**] [$_{vP}$ [$_{SPECvP}$ ~~**der Mario**~~] [$_{v}^{0}$ **hòt**][$_{VP}$ [$_{V}$ ~~$^{\theta}$ **kaft**~~] [$_{NP}$ ~~**de zaitung**~~][$_{PP}$ ~~**en bem**~~]]]]]]]

The *Satzklammerstruktur* is derived as shown in (50). The wh-element is attracted to the left periphery without being extracted through the edge of the lower phase, the direct object is moved to Spec,lowFocusP, the VP is moved to the lowest FP of the vP

periphery, and vP is moved to satisfy the high EPP feature on Spec,TP.

(28) [$_{CP}$ **en bem as** [$_{TP}$ [$_{vP}$ **der Mario hòt**][$_{LOW\text{-}FOCUS\text{-}P}$ **de zaitung** [$_{FP}$ [$_{VP}$ **kaft**] [~~$_{vP}$~~ [~~$_{SPEC\text{-}vP}$~~ **der Mario**] [~~$_{v}^{\theta}$~~ **hòt**][$_{VP}$ [~~$_{V}^{\theta}$~~ **kaft**] [~~$_{NP}$~~ **de zaitung**][~~$_{PP}$~~ **en bem**]]]]]]

Finally, in (29), I give the derivation of sentences with VO word order. I suggest that in this case Spec,FocusP is empty and the vP satisfies the EPP feature on T^0.

(29) [$_{CP}$ **en bem as** [$_{TP}$ [**der Mario hòt**][$_{LOW\text{-}FOCUS\text{-}P}$ [$_{FP}$ [$_{VP}$ **kaft de zaitung**] [~~$_{vP}$~~ [~~$_{SPEC\text{-}vP}$~~ **der Mario**] [~~$_{v}^{\theta}$~~ **hòt**][$_{VP}$ [~~$_{V}^{\theta}$~~ **kaft**] [~~$_{NP}$~~ **de zaitung**][~~$_{PP}$~~ **en bem**]]]]]]

If this analysis is correct, Mòcheno instantiates a mixed system for the satisfaction of the EPP feature on T^0 in embedded clauses: the EPP feature can either be satisfied by the moved DP subject or by the moved vP. According to the typology proposed by Biberauer (2010), the first option is found in English and Midland Scandinavian, and the second one in German, Dutch and Afrikaans.

According to this analysis, the low FocusP is always available in embedded clauses, i.e. the wh-element selected by a main clause does not saturate it on its way to CP, as do extracted wh-elements[34].

The syntax of embedded interrogative clauses is not shared by all embedded clauses in Mòcheno. Those introduced by the complementiser *as* and selected by a bridge verb can have the three word orders discussed in (25) above, which I assume to be derived in the same way as in embedded interrogative clauses. Moreover, they allow for embedded topicalization (for an overview of this construction in the Germanic languages, cf.

34 I do not have an explanation to offer of why wh-elements selected by a main clause behave differently from long-extracted wh-elements (cf. 3.2.2, 3.2.3). My analysis indicates that there is a clear connection between wh- extraction and the possibility of having a focus in the lower phase, and that low FocusP is only availabile when the wh-element has been selected, and not extracted.

Vikner 1995, Heycock 2006), as shown in (30a). The topicalised XP must follow the complementiser (30b).

(30) I hòn gamuat as en de Maria bar=e vourstelln
I have thought that to the Mary AUX-FUT=SUBJ.CL.1SG introduce
der dai kamarot
the your friend
'I thought hat you would introduce Mary your friend'

Therefore, the high left periphery of embedded clauses selected by a bridge verb is available, unlike that of embedded interrogative clauses. I suggest that this follows from the fact that i) the complementiser is generated in Spec,ForceP, and ii) an empty FocusP makes the left periphery availabile for movement. Now that we have seen what happens in embedded clauses, we can consider sentences with long wh-extraction.

3.2.1 Long extracted XPs move through all intervening CPs

Relying on the prototypical syntax of embedded clauses described in the previous section, I show that Mòcheno replicates Dinka in sentences with long wh-extraction. In particular, I show that long extraction of both foci and topics blocks embedded topicalization in conditions under which it would be expected to be possible.

In (31) I give a sentence with long wh-extraction, where can be seen that the main clause contains a bridge verb, and the embedded clause is introduced by the complementiser *as*. As discussed in section 3.2.1 and in example (30), these are conditions under which embedded topicalization can take place in Mòcheno.

(31) En bem muas=o as der Mario kaft hòt s puach?

to whom think=SUBJ-CL.2.SG that the Mario bought has the book

'Who do you think that he bought the book to?'

In (32) I show that embedded topicalization is impossible in sentences with wh-long extraction, which I suggest follows from the fact that the extracted wh-element has moved through Spec,CP of the embedded clause, as in Dinka.

(32) *En bem muas=o as s puach hòt=er

to whom think=SUBJ-CL.2.SG that the book has=SUBJ-CL.3.SG.M

kaft?

bought

As shown in (33), extracted topics block embedded topicalization, too, which is fully expected within the present analysis, given that both topics and foci are both assumed to move (although in different ways) to CP.

(33) a.*En de sai mama muan=e as s puach hòt=er kaft

to the his mother think=SUBJ-CL.1.SG that the book has=SUBJ-CL.3.SG.M bought

b.*Der Mario muan=e as s puach en de mama hòt kaft

the Mario think=SUBJ-CL.1.SG that the book to the mum has bought

As shown in (34), the blocking effect of long extraction in an embedded clause is cyclical: nothing can precede the subject in an embedded clause when long extraction has taken place, and this fully in accordance with the assumption that any long-extracted XP must move through all intervening CPs in Mòcheno.

(35) a. [$_{FocusP}$ En bem muas=o [$_{FocusP}$ ~~en bem~~ as [$_{TP}$ der Mario gamocht hòt,

to whom think=SUBJ-CL.2.SG that the Mario thought has

[$_{FocusP}$ ~~en bem~~ as [$_{TP}$ber kaft hom s puach?

that we bought have the book

b.*En bem muas=o [$_{ForceP}$ as [$_{TopicP}$ s puach der Mario gamocht hòt,

to whom think=SUBJ-CL.2.SG that the book the Mario thought has

[$_{ForceP}$ as ber kaft hom ?

that we bought have

c.*En bem muas=o [$_{ForceP}$ as [$_{TopicP}$ s puach hòt=er gamocht,

to whom think=SUBJ-CL.2.SG that the book has=SUBJ-CL.3.SG.M thougth

[$_{ForceP}$ as ber kaft hom?

that we bought have

Who do you think that Mario thought that we had bought the book?

The data discussed in this section show that all long extracted XPs move through all intervening CPs and block embedded topicalization in a context, that-clauses selected by a bridge verb, in which it is usually possible. This is like in Dinka, the only difference being that in Mòcheno topics and foci, not adjuncts and arguments, are involved in the pattern of variation. I will now consider whether extracted XPs interact with the lower phase: the prediction is that extracted foci (like extracted operators in Dinka) must move through the edge of the vP periphery, blocking OV syntax, whereas extracted topics do not interfere with the lower phase (like extracted adjuncts in Dinka).

3.2.2 On the interaction between long-extraction and the vP periphery

In this section, I provide evidence supporting the claim that long extracted foci, but not extracted topics, must move through the vP edge. The test that I use to demonstrate this

is the distribution of OV/VO word orders, which, as discussed in this paper, involve the low FocusP. The prediction to be tested is whether or not OV word orders must be ruled out in embedded clauses if long-extracted XPs move through the FocusP of the vP periphery.

As shown in (36a,b) it is not possible to have strict OV syntax in sentences with long wh-extraction, unlike in embedded interrogative clauses (cf. 25a). This contrast is to be expected within the hypothesis that the wh- element moves through Spec,lowFocusP only in sentences with long wh-extraction[35].

(36) *En bem muas=o as er s puach kaft hòt?
to whom think=SUBJ-CL.2.SG that he the book bought has

As exemplified in (61), the *Satzklammerstruktur* is also ruled out in embedded clauses with an extracted wh-element, differently from embedded interrogative clauses (cf. 25b).

(37) *En bem muas=o as er hòt s puach kaft?
to whom think=SUBJ-CL.2.SG that he has the book bought

This implies that VO word order, which in embedded interrogative clauses involves an empty focus (cf. 29), is the only word order available for XPs different from the DP subject in sentences with an extracted wh-element.

(38) En bem muas=o as der Mario kaft hòt s puach?
to whom think=SUBJ-CL.2.SG that the Mario bought has the book

35 This means that the difference between embedded interrogative clauses and sentences with wh- long extraction lies in the fact that in the former the wh-element moves to Spec,Focus through scrambling, i.e. without moving through the FocusP of the vP periphery, whereas in the latter the focus moves through the lower FocusP.

‘Who do you think that he bought the book to?’

Leaving the relative order of the auxiliary and the lexical verbs aside for the moment, the data above are fully predicted by the proposed account. Since XPs can precede the verb complex or the past participle only if they are focussed, it is expected that they cannot appear in this position if long extraction involves movement through Spec,FocusP. This implies that the XP following the verb complex is a topic, since low FocusP has been saturated by the extracted wh-element.

The last piece of data to be considered before giving the structure of sentences with long wh-extraction is the relative word order of the auxiliary and the lexical verbs. I suggest that the word order *aux-verb-XP (topic)* is the result of a repairing strategy to avoid the violation of the FOFC (Holmberg 2000, Biberauer, Holmberg, Roberts 2007, Sheehan forthcoming). As discussed in 3.2.1 (structure in 27), OV word order in embedded interrogatives is derived from the movement of the DP subject to Spec,TP, the movement of the direct object to Spec,lowFocusP and VP movement to the lowest Spec of the vP periphery. As shown in (39), if we apply this derivation in a structure in which the lowFocusP is not available, we violate FOFC, since the output is the word order **Verb – DO – auxiliary*.

(39) [$_{CP}$ **en bem as** [$_{TP}$ **der Mario** [$_{LOW\text{-}FOCUS\text{-}P}$ ~~**en bem**~~ [$_{FP}$ [$_{VP}$ **kaft s puach**] [$_{vP}$ [$_{SPECvP}$ ~~**der Mario**~~] [$_{v}^{0}$ **hòt**][$_{VP}$ [$_{V}^{\theta}$ ~~**kaft**~~] [$_{NP}$ ~~**s puach**~~][~~**en bem**~~]]]]]]]

Note, that the FOFC violation arises from the fact that the VP must move to the vP periphery to satisfy the lowEPP feature in Mòcheno. Since the direct object cannot move to Spec,lowFocusP, which is not available because it contains the trace of the

long-extracted wh-element, it is impossible to move the evacuated VP to the vP periphery, thus leading to FOFC violation. I suggest that as a repairing strategy to avoid this the low EPP feature is satisfied by the direct object, which is moved to the lowest Spec of the vP periphery. The past participle is moved to Spec,vP and moved along with the vP to satisfy the EPP feature associated with the head of TP, as illustrated in (40).

(40) [$_{FocusP}$ **en bem muas-o** [$_{FocusP}$ ~~**en bem**~~ **as** [$_{TP}$ [$_{vP}$ **der Mario kaft hòt**] [$_{LOW\text{-}FOCUS\text{-}P}$ ~~**en bem**~~ [$_{FP}$ [$_{NP}$ **s puach**] [$_{vP}$ ~~[$_{SPECvP}$ **der Mario**]~~ [[$_{VP}$ ~~**kaft**]~~ [$_{v}^{\theta}$ ~~**hòt**]~~][$_{VP}$ [$_{V}^{0}$ ~~**kaft**]~~ [$_{NP}$ ~~**s puach**~~][~~**en bem**]~~

The prediction made in the present account is that none of the phenomena (block of OV word order and *Satzklammerstruktur* plus obligatoriness of the order *lexical verb – auxiliary - XP*) found in the embedded clause of a sentence with long wh-extraction should be there when a topic is long extracted. As shown in (41) this prediction is fully borne out.

(41) a. En de sai mama muan=e as der Mario a puach kaft hòt
to the his mother think=SUBJ-CL.1.SG that the Mario a book bought has

b. En de sai mama muan=e as der Mario hòt (kaft)
to the his mother think=SUBJ-CL.1.SG that the Mario has bought
a puach (kaft)
a book bought
'To his mother, I think, Mario has bought a book'

The theoretical account given here explains the syntax of Mòcheno as the output of the interaction beween the high and the vP peripheries, and also makes strong predictions

about the syntax of adverbs, which will be considered in the following section.

3.2.3 A note on the syntax of adverbs

As discussed in Fn 10, I follow Cognola (forthcoming) in assuming that i) adverbs are generated in the Spec positions of FPs found in the IP area (Cinque 1999, Alexiadou 1997), that ii) the vP periphery is found below Tense Anterior (hosting *always*), and that iii) manner adverb are hosted inside the periphery between the FocusP and the FP, whose head is associated with the low EPP feature (VoiceP in Cognola forthcoming). This is illustrated in the structure in (42). The low EPP feature is satisfied by the VP, except for sentences with long wh-extraction, in which, I suggest, the direct object is moved to the Spec of FP.

(42) [$_{Tant}$ **òllbe** [$_{LOW\text{-}FOCUS\text{-}P}$ [$_{FP}$ **schia** [$_{FP}$[$_{VP}$ **VP**] [$_{vP}$ [$_{SPECvP}$ **XP**] [$_{v}^{0}$ **aux**] [$_{VP}$ [$_{V}^{0}$ **past participle**] [$_{NP}$]]]]]]

For main declarative clauses with OV syntax, in which the XP(s) preceding the past participle is/are in FocusP, the structure in (42) predicts that the new-information focus follows *always* and precedes *schia* in its unmarked word order. As shown in (43a), this prediction is borne out[36].

(43) Der Mario hòt òllbe s haus schia putzt
the Mario has always the house well cleaned
'Mario has always cleaned well the house'

The second prediction is that in all main declarative clauses with VO word order both

36 In (69) we see that the unmarked position of the direct object (and of all XPs preceding the past participle) is below sentential adverbs: i.e. scrambling of definite objects does not take place in Mòcheno. As discussed by Cognola (2013b), scrambling does not have the same properties as the German construction and is restricted to *verum focus* readings of scrambled XPs.

adverbs precede the past participle, since VO is derived through VP movement below the FP hosting *schia*. As shown in (44), this is borne out.

(44) Ver bem hòt=er òllbe schia putzt (*schia/òllbe)
for whom has=SUBJ-CL.3.SG.M always well cleaned well/always
s haus (*schia/òllbe)?
the house well/always
'Whom has he always cleaned well the house for?'

I have proposed that the low EPP feature in embedded clauses is satisfied in the same way as in main clauses, and that the EPP feature associated with C^0 is inherited by T^0. The prediction for the syntax of adverbs is therefore that i) they stick to the syntax exemplified in (43) in sentences with strict OV word order and the *Satzklammer-struktur*, and ii) in sentences with VO syntax, they are distributed as shown in (44). The examples in (45) demonstrate that this prediction is confirmed: sentential adverbs precede new-information foci and manner adverbs follow them in sentences in which the verb complex or the lexical verb appear in the sentence-final position (45a,b). In sentences with VO word order, both adverbs precede the past participle (45c)[37].

(45) a. Er hòt mer pfrok, ver bem as der Mario òllbe s haus
he has to me asked for whom that the Mario always the house
schia putzt hòt
well cleaned has

37 According to the informant, when adverbs are present in an embedded clause, the word order in (75a) is to be preferred, whereas (75b) and (75c) are marginal. This effect is not found when adverbs are not present in the clause.

b.%Er hòt mer pfrok, ver bem as der Mario hòt

he has to me asked for whom that the Mario has

òllbe s haus schia putzt

always the house well cleaned

c.%Er hòt mer pfrok, ver bem as der Mario hòt òllbe

he has to me asked for whom that the Mario has always

schia putzt s haus

well cleaned the house

'He asked me for who Mario has always cleaned well the house'

As shown in (46), adverbs cannot follow the verb complex or appear between the past participle and the finite verb (46a), nor can they follow the past participle (46b,c).

(46) a.*Er hòt mer pfrok, ver bem as der Mario s haus

he has to me asked for whom that the Mario the house

putzt (òllbe/schia) hòt (òllbe/schia)

cleaned always/well has always/well

b.*Er hòt mer pfrok, ver bem as der Mario hòt (putzt) s haus

he has to me asked for whom that the Mario has cleaned the house

(putzt) (òllbe/schia)

cleaned always/well

The above data are fully expected within the account given, which states that the low EPP feature must be satisfied in the same way in both main and embedded clauses, by moving the VP to the lowest Spec of the vP periphery, and the higher one by DP or vP

movement to the head of TP.

The last prediction to be tested is about the syntax of adverbs in sentences with long wh- extraction, which I claim involve i) extraction of the wh-element through the lower FocusP, ii) satisfaction of the low EPP feature by the moved topic, and iii) satisfaction of the high EPP feature by the vP containing the past participle and the subject. The proposed derivation predicts that both sentential and manner adverbs must follow the *past participle-auxiliary verb* complex, given that the whole verb complex has been moved above the vP periphery. Moreover, the topic (the direct object in the examples here) is expected to have to follow manner adverbs, given the claim that it has moved alone to the lower Spec of the vP periphery (found below manner adverbs) to satisfy the low EPP feature. As shown in (47), these predictions are partially confirmed. In (47) we see that sentential adverbs can both follow (as expected) and precede (unpredicted option) the verb complex. Manner adverbs can both follow (as expected) and precede (unpredicted) the verb complex. When they follow the verb complex, they precede the topic assumed to have moved to the vP periphery to satisfy the low EPP feature (as predicted).

(47) Ver bem muas=o as der Mario (òllbe/schia)
for whom think=SUBJ.CL.2SG that the Mario always/well
puzt hòt (òllbe/schia) s haus?
cleaned has always/well the house
'Who do you think that Mario has always cleaned well the house for?'

As my account would lead us to expect, adverbs can never intervene between the past

participle and the auxiliary verb (48).

(48) *Ver bem muas=o as der Mario puzt òllbe/schia
for whom think=SUBJ.CL.2SG that the Mario cleaned always/well
hòt s haus?
has the house

The fact that the relevant adverbs can both precede and follow the verb complex is not predicted by the present account, which must therefore be refined, but not changed. Note, in fact, that the analysis proposed has made the correct predictions that i) no adverb can ever intervene between the *past participle-aux* sequence (48), and ii) manner adverbs can follow the *past participle-aux* sequence or the past participle only in sentences with long wh-extraction (cf. (44) and (46) above). This latter option is only found in sentences with long wh-extraction because only in these sentences can the EPP feature on T^0 be satisfied by the moved vP containing the past participle. This, however, does not seem to be the only option, since adverbs can precede the verb complex. I propose that this word order results from the fact the DP subject satisfies the high EPP feature (as is generally possible in embedded clauses, cf. 3.2.1) and the low EPP feature is satisfied by the whole vP which containing the past participle[38]. The direct object (topic) is assumed to be in its base position and to be moved, along with the remnant, to the Spec of FP to satisfy the low EPP feature[39].

38 The past participle must have moved to vP through head movement, an option that I have not contemplated so far. I suggest that the possibility that the past participle moves through head movement to vP must be considered a repairing strategy caused by the restriction on VP movement in FOFC violation contexts. Note that this repairing strategy in which the remnant containing the past participle satisfies the low EPP feature, allows us to maintain the parallel with all other Mòcheno sentences, for which I claimed that the low EPP feature must be satisfied by the VP containing the past participle.
39 The hypothesis that the high EPP feature can be satisfied by both the moved vP and the moved DP

(49) [$_{FocusP}$ **ver bem muas-o** [$_{FocusP}$ ~~**ver bem**~~ **as** [$_{TP}$ [$_{DP}$ **der Mario**] [$_{FP}$ **òllbe** [$_{LOW\text{-}FOCUS\text{-}P}$ ~~**ver bem**~~ [$_{FP}$ **schia** [$_{FP}$ [$_{vP}$ **putzt hòt s haus**] [$_{vP}$ ~~[$_{SPEC vP}$ **der Mario**]~~ [[$_{VP}$ **puzt**] [$_{v}$ $^{\theta}$- ~~**hòt**~~][$_{VP}$ [$_{V}$ ^{0} ~~**putzt**~~] [$_{NP}$ ~~**s haus**~~][~~**ver bem** ~~]

4. Conclusions

This paper compars the properties of extraction in Dinka and Mòcheno and shows that the syntax of both languages is shaped by the presence of a “double-V2” mechanism which involves both the higher and the lower phase and manifests itself in both languages through the empirical properties listed in (50).

(50) a. All XPs can satisfy the high EPP feature;

b. only a subclass of XPs can satisfy the low EPP feature;

c. the satisfaction of the low EPP feature determines the distribution of OV/VO word orders: when the XP that has satisfied the EPP feature remains in the lower portion of the clause, we have OV word order; when the XP that has satisfied the low EPP feature is also moved to CP, VO is obligatory;

d. long-extraction of any XP blocks the possibility of having embedded topicalization;

e. long-extracted XPs able to satisfy the low EPP feature also block OV word order.

The fact that the properties in (50) have been independently found in a Germanic dialect

subject in sentences with long extraction implies that the EPP feature can be satisfied in two ways – as in all embedded clauses. The first option available in embedded clauses with no extraction is to move the DP subject to Spec,TP, which leads to strict OV, and the second is to move vP to Spec,TP, which leads to the *Satzklammerstruktur* or to strict VO. The fact that low FocusP is always blocked in sentences with long wh-extraction makes the presence of these two options less evident, since they do not interfere with the position of verb arguments, but with the position of the verb complex with respect to adverbs.

spoken in Northern Italy, and in a Nilo-Saharan language spoken in South Sudan indicates that it is very unlikely that they follow from extra-grammatical factors, such as contact with languages with different parameter settings[40]. In the spirit of Van Urk and Richards (2013) and Cognola (2008, 2010, forthcoming), I have therefore suggested that this cluster of properties derives from a single grammatical property shared by Mòcheno and Dinka which I have tentatively labelled “double-V2” to try to explain the data indicating that Mòcheno is a V2 language not only at the CP level, but also at the vP level. I have shown that the low EPP feature must be assumed to be associated with the lowest head of the vP periphery, and that the transparency in extraction in the lower phase follows from the fact that foci, but not topics, must be extracted through low FocusP. If my analysis is on the right track, the transparency observed in the lower phase of Mòcheno results from a sort of “conspiracy” between the presence of an EPP feature on a head of the vP periphery, and extraction through the edge of the lower phase, i.e. through low FocusP.

I have shown that in Mòcheno both foci and topics can appear in CP and are long-extracted through CP, whereas only foci, and not topics, can appear in the vP periphery and be extracted through the edge of the lower phase. I have captured this asymmetry by slightly modifying Müller's (2004) analysis of V2 in Germanic, and I have proposed that in Mòcheno topics are always moved to CP within vP (as in Müller 2004), whereas foci undergo A'-scrambling to CP and must be extracted through the edge of the lower phase[41]. This is a tentative new hypothesis that tries to explain the asymmetries between

40 In the case of Mòcheno, Romance varieties.

41 If I am right here, the difference between Mòcheno and German is that the former allows for a

topics and foci discussed in this paper, and that might also help shed new light on the differences between these types of constituents in "relaxed" V2 languages which have been noted by many researchers (Poletto 2002, Benincà 2006, Holmberg forthcoming and references cited there).

It is obviously tempting to try to explain the Dinka data in the same way as those of Mòcheno by saying that all the asymmetries between arguments and adjuncts with respect to the satisfaction of high and low EPP features result from the fact that adjuncts can only be topics in this language, whereas arguments can potentially be both topics and foci[42]. Whether this speculative idea can become a working hypothesis depends on whether or not the information-structural facts in Dinka can be investigated[43].

Despite the fact that the Dinka and the Mòcheno data cannot yet be analysed in the same way, I think that the data discussed in this paper raise questions that are potentially very relevant for future research, in particular about why movement is cyclical and about the nature of Spec,vP.

"mixed" strategy of XP movement (scrambling) and remnant vP movement to CP, whereas German only allows the latter strategy. Interestingly, Gallego (2013) observes a similar asymmetry in the derivation of subject-final sentences across Romance languages.

42 Interestingly, subjects pattern with adjuncts in Dinka. If the correlation adjuct – topic is correct, this is an important argument for the debate on the nature of subjects (cf. Cardinaletti 1997, Rizzi 2005 and references cited there).

43 Independently of the information-structural facts, I think that the idea that XPs are moved to CP in different ways (scrambling vs remnant vP) proposed for Mòcheno can be potentially very important for the derivation of Dinka sentences, too.

References

Adams, Marianne. 1987. Old French, Null Subjects and Verb Second Phenomena. PhD dissertation, UCLA.

Alber, Birgit. 2010. Past participles in Mòcheno: Allomorphy and alignment. In *Studies on German-Language Islands*, ed. Michael T. Putnam , 33–63. Amsterdam: John Benjamins.

Alexiadou, Artemis. 1997. *Adverb Placement*. Amsterdam/Philadelphia: John Benjamins.

Belletti, Adriana. 2004. Aspects of the low IP area. In *The Structure of CP and IP. The Cartography of Syntactic Structure, Vol. 2*, ed. by Luigi Rizzi, 16–51. Oxford: Oxford University Press.

Benincà, Paola. 1984. Un'ipotesi sulla sintassi delle lingue romanze medievali. *Quaderni Patavini di Linguistica* 4: 3–19. Reprinted in Benincà, Paola. 1994. *La Variazione Sintattica*, 177–194. Bologna: Il Mulino.

Benincà, Paola. 1988. Costruzioni con ordini marcati degli elementi. In Grande Grammatica Italiana di Consultazione, Vol. 1, Lorenzo Renzi (ed.), 115–195 (pp. 119–129 in collaboration with Giampaolo Salvi). Bologna: Il Mulino.

Benincà, Paola. 2001. The position of Topic and Focus in the left periphery. In *Current Studies in Italian Syntax: Essays Offered to Lorenzo Renzi*, ed. by Guglielmo Cinque, and Giampaolo Salvi, 39–64. Amsterdam: Elsevier.

Benincà, Paola. 2006. A detailed map of the left periphery of Medieval Romance. In

Crosslinguistic Research in Syntax and Semantics. Negation, Tense and Clausal Architecture, ed. by Raffaella Zanuttini, Hector Campos, Elena Herburger, and Paul Portner, 53–86. Washington DC: Georgetown University Press.

Bergin, Osborn. 1938. On the syntax of the verb in Old Irish. *Eriu* 12: 197-214.

den Besten, Hans. 1983. 1983. On the interaction of root transformations and lexical delective rules. In *On Formal Syntax of the Westgermania*, ed. by Werner Abraham, 47- 131. Amsterdam: John Benjamins.

Biberauer, Theresa. 2010. Semi null-subject languages, expletives and expletive pro reconsidered. In Parametric Variation: Null Subjects in Minimalist Theory, Theresa Biberauer, Anders Holmberg, Ian Roberts & Michelle Sheehan (eds), 153–199. Cambridge: CUP.

Biberauer, Theresa, Anders, Holmberg, and Ian Roberts. 2008. Structure and linearization in disharmonic word orders. In *The Proceedings of the 26th Western Coast Conference on Formal Linguistics*, ed. by C. B. Chang, and H. J. Haynie, 96-104. Somerville, MA: Cascadilla Press.

Cardinaletti, Anna. 1997. Subjects and clause structure. In *The New Comparative Syntax*, ed. by Liliane Haegeman, 56–95. London: Longman.

Chafe, Wallace. 1987. Cognitive constrains on information flow. In *Coherence and Grounding in Discourse*, ed. by Russell Tomlin, 21–51. Amsterdam: John Benjamins.

Chomsky, Noam. 1995. *The Minimalist Program.* Cambridge, MA: MIT Press.

Chomsky, Noam, 2001. Derivation by phase. In *Ken Hale: A life in language*, ed. by.

Michael Kenstowicz, 1-52. Cambridge, MA: MIT Press.

Chomsky, Noam. 2008. On phases. In *Foundational issues in linguistic theory: Essays in honor of Jean-Roger Vergnaud*, ed. by Robert Freidin, David Michaels, Carlos P. Otero, and Maria Luisa Zubizaretta, 133-166. Cambridge, MA: MIT Press.

Cinque, Guglielmo. 1999. *Adverbs and Functional Heads.* Oxford: Oxford University Press.

Cinque Guglielmo, and Luigi, Rizzi. 2010. Introduction. In *Mapping Spatial PPs. The cartography of syntactic structure. Vol. 6*, ed. by Guglielmo Cinque, and Luigi Rizzi, 3-25. Oxford: Oxford University Press.

Cognola, Federica. 2008. OV/VO word orders in Mocheno main declarative clauses. *Rivista di Grammatica Generativa* 33: 83–97.

Cognola, Federica. 2010. Word order and clause structure in a German dialect of Northern Italy. On the interaction between high and low left periphery. Doctoral Dissertation, University of Padua. Availabile at <paduaresearch.cab.unipd.it>

Cognola, Federica. 2013a. *Syntactic Variation and Verb Second. A German Dialect in Northern Italy.* Amsterdam/Philadelphia: John Benjamins.

Cognola, Federica. 2013b. *Scrambling in Mòcheno*. Ms. University of Trento.

Cognola, Federica, *forthcoming,* The mixed OV/VO syntax of Mòcheno main clauses: On the interaction between high and low left periphery. To appear in *Theoretical Approaches to Disharmonic Word Orders*, ed. by Theresa Biberauer, and Michelle Sheehan. Oxford/New York: Oxford University Press. http://ling.auf.net/lingbuzz/001612.

Cognola, Federica, and Ermenegildo, Bidese, forthcoming, Standardizzare la variazione sintattica: ordini OV/VO in mòcheno. To appear in *Introduzione alla linguistica del mòcheno*, ed. by Ermenegildo Bidese, and Federica Cognola. Turin: Rosenberg&Sellier.

Cruschina, Silvio. 2006. Informational focus and in Sicilian and the left periphery. In *Phases of Interpretation*, ed. by Mara Frascarelli, 363-385. Berlin: Mouton de Gruyter.

Cruschina, Silvio. 2010. Syntactic extraposition and clitic resumption in Italian. *Lingua* 120: 50-73.

den Dikken, Marcel. 2009. Arguments for successive-cyclic movement through Spec-CP: A critical review. *Linguistic Variation Yearbook* 9:89–126.

Doherty, Cathal. 2000. Residual Verb Second in Early Irish. On the nature of Bergin's construction. *Diachronica* XVII,1: 5-38.

Frascarelli, Mara, and Hinterhölzl, Roland. 2007. Types of topics in German and Italian. In *On Information Structure. Meaning and Form*, ed. by Kerstin Schwabe, and Susanne Winkler, 87-116. Amsterdam: John Benjamins.

Gallego, Ángel. 2013. Object Shift in Romance. *Natural Language and Linguistic Theory.* 31:2, 409-451.

Haegeman, Liliane. 1997. Verb second, the split CP and null subjects in early Dutch finite clauses. *GenGenP* 4(2): 133–175.

Heck, Fabian, and Anke, Assmann (eds.). *Rule interaction in Grammar*. Band 90 of *Linguistische Arbeitsberichte* LAB: Institut für Linguistik der Universität

Leipzig.

Heycock, Caroline. 2006. Embedded root phenomena. In *The Blackwell Companion to Syntax*, Vol. II, ed. by Martin Everaert, and Henk van Riemsdijk, 174–209. Malden MA: Blackwell.

Hinterhölzl, Roland. 2006. *Scrambling, Remnant Movement and Restructuring in West Germanic.* Oxford/New York: Oxford University Press.

Holmberg, Anders. 2000. Deriving OV in Finnish, In *The derivation of VO and OV*, ed. by Peter Svenonius, 123-152. Amsterdam/Philadephia: John Benjamins.

Homberg, Anders. Forthcoming. Verb second. To appear in *Syntax. An International Handbook of Contemporary Syntactic Research*, ed. by Tibor Kiss, and Artemis Alexiadou. Berlin: Walter de Gruyter.

Jayaseelan, Karattuparambil. 2001. IP-internal Topic and Focus phrases. *Studia Linguistica* 55(1): 39–75.

Kayne, Richard S. 1994. *The Antisymmetry of Syntax.* Cambridge MA: MIT Press.

Koopman, Hilda, and Dominique, Sportiche. 1991. The position of subjects. *Lingua* 85, 211-258.

Larson, Richard K. 1988. On the Double Object Construction. *Linguistic Inquiry*, 19, 335-91.

Ledgeway, Adam, and Alessandra, Lombardi. 2005. Verb movement, adverbs and clitic positions in Romance. *Probus* 17: 79-113.

López, Luis. 2009. *A Derivational Syntax for Information Structure*. Oxford: Oxford University Press.

Müller, Gereon. 2004. Verb-second as vP-first. Journal of Comparative Germanic Linguistics 7: 179–234.

Neeleman, Ad, and Hans van de Koot. 2008. Dutch Scrambling and the Nature of Discourse Templates. *Journal of Comparative Germanic Linguistics* 11:137-189.

Pesetzky, David. 1987. Wh-in-situ: Movement and unselective binding. In *The Linguistic Representation of (In)definiteness*, ed. by Eric J. Reuland, and Alice Meulen, 98-129. Cambridge MA: The MIT Press.

Poletto, Cecilia. 2002. The left periphery of a V2-Rhaetoromance dialect: A new perspective on V2 and V3. In *Syntactic Microvariation. Proceedings of the Workshop on Syntactic Microvariation, Amsterdam, August 2000*, ed. by Sjef Barbiers, Leonie Cornips, and Susanne van der Kleij, 214–242. Amsterdam: Meertens Institute. <http://www.mertens.knaw.nl/books/synmic/pdf/poletto.pdf>

Poletto, Cecilia. 2006. Parallel phases: A study of the high and low left periphery of Old Italian, In *Phases of Interpretation*, ed. by Mara Frascarelli, 261–294. Berlin: Mouton de Gruyter.

Poletto, Cecilia. Forthcoming. *The syntax of Old Italian.* Oxford/New York: Oxford University Press.

Rackowski, Andrea, and Norvin Richards. 2005. Phase edge and extraction: A Tagalog case study. *Linguistic Inquiry* 36: 565–599.

Reinhart, Tanya. 1981. Pragmatics and linguistics: An analysis of sentence topics. *Philosophica* 27: 53-94.

Rizzi, Luigi. 1997. The fine structure of the left periphery. In *Elements of Grammar. A*

Handbook of Generative Syntax, ed. by Liliane Haegeman, 281–337. Dordrecht: Kluwer.

Rizzi, Luigi. 2004. Locality and left periphery. In Structures and Beyond. The Cartography of Syntactic Structure, Vol. 3, Adriana Belletti (ed.), 223–251. Oxford: OUP.

Rizzi, Luigi. 2005. On some properties of subjects and topics. In *Contributions to the 30th Incontro di Grammatica Generative*, ed. by Laura Brugè, Giuliana Giusti, Nicola Munaro, Walter Schweikert, and Giuseppina Turano, 203–224. Venezia: Libreria Editrice Cafoscarina.

Roberts, Ian. 2004. The C-System in Brythonic Celtic languages, V2 and the EPP. In *The Structure of CP and IP. The Cartography of Syntactic Structures, Vol. 2*, ed. by Luigi Rizzi, 297–328. Oxford: OUP.

Rowley, Anthony. 2003. *Liacht as de sproch: grammatica della lingua mochena*. Palù del Fersina: Pubblicazioni dell'istituto mòcheno di cultura.

Schifano, Norma. in preparation. Verb-movement: a pan-Romance investigation. Doctoral dissertation, University of Cambridge.

Sheehan, Michelle. Forthcoming. Explaining the Final-over-final constraint. Formal and Functional approaches. To appear in *Theoretical Approaches to Disharmonic Word Orders*, ed. by Theresa Biberauer, and Michelle Sheehan. Oxford/New York: Oxford University Press. http://ling.auf.net/lingbuzz/001263.

Togni, Lucia. 1990. Per un'analisi di alcuni fenomeni linguistici del dialetto della Valle del Fersina: Un confronto con la sintassi tedesca. MA thesis, University of

Trento.

Tomaselli, Alessandra. 1990. *La sintassi del verbo finito nelle lingue germaniche*. Padova: Unipress.

Urk, Coppe van, and Norvin, Richards. 2013. Two components of long-distance extraction: Successive cyclicity in Dinka. Ms MIT. http://ling.auf.net/lingbuzz/001766.

Vikner, Sten. 1995. *Verb Movement and Expletive Subjects in the Germanic Languages*. Oxford/New York: Oxford University Press.

Willis, David. 2011. The limits of resumption in Welsh *wh*-dependencies. In *Resumptive pronouns at the interfaces*, ed. by Alain Rouveret, 189-222. Amsterdam/Philadelphia: John Benjamins.