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Intervention effects in Czech clitic climbing

GUY TABACHNICK
University of Nova Gorica

ABSTRACT

This paper examines restrictions on the ability of Czech second-position clitics to climb out of embedded clauses. Clitics cluster together in a set order, and while arguments of a single verb can freely rearrange themselves to match the required order, arguments of embedded infinitives generally cannot climb over controllers in the matrix clause in object control constructions. I propose that clitic movement is due to a DP probe that comes equipped with a hierarchy of case features, and that clitics reached by the probe in the wrong order are trapped and cannot cliticize. Arguments may freely scramble within a single TP, allowing arbitrary reordering, but embedded arguments cannot scramble over matrix arguments, leading to the restrictions in object control sentences.

KEYWORDS Czech, clitic climbing, scrambling, intervention, case hierarchy

1 INTRODUCTION

Czech has a number of short, clitic-like elements that tend to appear together in a cluster after the first element of a sentence—thus known as "second position clitics". Under certain circumstances, clitics associated with the argument structure of an embedded clause can instead appear in the matrix clause, a phenomenon known as *clitic climbing*.

Previous work on Czech clitic climbing has shown limitations on clitic climbing out of infinitival complements of object control verbs (Rosen 2001, Lenertová 2004, Rezac 2005, Hana 2007). After a brief overview of Czech clitics in §2, I discuss empirical evidence clarifying these restrictions. I provide new evidence for a contrast between monoclausal and biclausal structures: within a single TP, clitics may cross one another in moving from their merged position to the clitic cluster (§3), but in object control constructions, clitics usually cannot climb if they would have to cross over the controller to do so (§4).

In §5, I account for these generalizations with a clitic probe containing a novel mechanism: a nested case hierarchy (Caha 2009) that interacts with a DP by successively shedding layers until matching its case. If the probe reaches a DP in the wrong order, it will have already discarded the layer required to match it. This analysis explains both the standard clitic order and case-based intervention effects in object control sentences. I derive the contrast between monoclausal sentences and object control sentences from the fact that clitics may scramble (and thus reorder themselves to match the required hierarchy), but only within a TP. I then provide an overview of my account's predictions and discuss outstanding issues. §6 concludes with additional paths for future research.

2 BACKGROUND

Before discussing the details of clitic climbing, I present my basic assumptions about the position and behavior of clitics.

2.1 CLITICS COME "SECOND"

In (1) we see that the clitics (bolded here) can appear after the main verb, as in (1-a), or a phrase, like the adverb in (1-b):

(1) a. Omluvil **jsem** **se** **mu**.
apologized PST.1SG REFL.ACC him.DAT
'I apologized to him.'
b. Včera **jsem** **se** **mu** omluvil.
yesterday PST.1SG REFL.ACC him.DAT apologized
'Yesterday I apologized to him.' (cf. Fried 1994:170)

The examples in (1) show members of the clitic cluster in their canonical order: first come auxiliaries like *jsem*, followed by the accusative *se* and dative *si* reflexive clitics, then pronominal clitics, with dative clitics like *mu* preceding accusative and, more rarely, genitive clitics.

Clitics can sometimes follow two elements, like a complementizer and a contrastive or non-contrastive topic (Lenertová 2004, Sturgeon 2008, Kašpar 2016). I assume that clitics are always in the same place, and other things can vary around them.

2.2 CLITICS ARE IN THE SPECIFIER OF CLITICP

Following earlier accounts (e.g., Toman 1999, Lenertová 2004), I assume that clitics occupy a set position in the lower left periphery. In main clauses, clitics usually end up in second position because of an EPP feature that attracts an element to a pre-clitic projection—which I, in line with these previous accounts, identify as Fin, also the site of auxiliary clitics. The EPP feature is satisfied by movement of a phrase (like *včera* in (1-b)) or, if no phrase is available, by head movement of the inflected verb to Fin, as in (1-a) (Alexiadou & Anagnostopoulou 1998, Lenertová 2004, Sturgeon 2008).

I assume Theory A of Toman (1999): clitics are base-generated and move to specifiers of a clitic projection. Unlike Dotlačil (2007), I assume that clitics are DPs that have some syntactic deficiency. This deficiency is not the ability to receive case: as Dotlačil (2004) shows, clitic movement is not case assignment (contra Rezac 2005). While Toman (1999) assumes a series of projections—ReflP for reflexive clitics, K_{dat}P for dative clitics, etc. (see also Ciucivara 2009)—I place all clitics in successive specifiers of a single CliticP.

2.3 CLITICS CAN CLIMB OUT OF TP, BUT NOT CP

Certain embedded clauses allow arguments originating within them to "climb" out of them, cliticizing in second position of the matrix clause. Clitics cannot climb out of finite embedded clauses or wh-infinitives (Lenertová 2004, Rezac 2005, Dotlačil 2007).[1] For example, when the verb *chtít* 'want' (first singular *chci*) acts as a subject control verb embedding an infinitive (cf. Rezac 2005), the reflexive clitic associated with the verb *soustředit se* 'focus' can climb ((2-a)). However, when it embeds a conditional that is headed by a conditional complementizer and includes an inflected verb ((2-b)), the clitic cannot climb.

(2) a. Teď **se** chci [soustředit hlavně na hokej].
now REFL.ACC want.1SG focus.INF mainly on hockey
'Now I want to focus mainly on hockey.' (SYNv11)[2]

[1] Lenertová (2004:fn. 22) discusses an apparent counterexample of clitics climbing out of a certain type of wh-infinitive with modal meaning. Šimík (2011) argues that this construction is smaller than a CP in Czech.

[2] This note marks examples taken from the Czech National Corpus's SYNv11 corpus (Křen et al. 2022).

b. Teď {*se} chci, [aby {se} soustředil hlavně na
now REFL.ACC want.1SG that.COND.3SG REFL.ACC focus mainly on
hokej].
hockey
'Now I want him to focus mainly on hockey.'

Dotlačil (2004) shows, contra Lenertová (2004) and Rezac (2005), that clitics can climb out of infinitives with syntactic subjects (that is, PRO). One of his diagnostics for PRO is partial control (Landau 1999), where the subject of the embedded verb includes, but is larger than, the matrix subject. In (3), the matrix subject *Pavel* cannot be the subject of the infinitive *líbat se* 'kiss', where the reflexive clitic *se* has a reciprocal meaning. This reading requires a subject coindexed with *Pavel* and some other individual(s), hence the index *i+* (otherwise the reading is reflexive: 'Pavel kissed himself'). This PRO does not block climbing of the reflexive clitic *se* to the matrix clause.

(3) Pavel$_i$ **se** ne-chtěl [líbat PRO$_{i+}$ v knihovně].
Pavel REFL.ACC NEG-wanted kiss.INF PRO$_{i+}$ in library
'Pavel did not want to kiss [someone else] in the library.' (Dotlačil 2004:92)

I thus assume that clitic climbing is blocked by a CP boundary, and that embedded infinitives with PRO can be TPs out of which clitics may climb.

2.4 SUMMARY

I assume that Czech pronominal clitics are merged like other DPs and cluster together in multiple specifiers of a single dedicated CliticP projection. Their "second position" derives from being in CliticP just below Fin, an EPP head that attracts an element to its specifier (or, sometimes, its head). Clitics originating in embedded clauses can climb into matrix clauses, but climbing is blocked by a CP boundary.

3 CLITIC MOVEMENT IS FREE IN MONOCLAUSAL CONSTRUCTIONS

The next two sections discuss mismatches between the relative order of clitics in their merged position and their surface position. In this section, I show that, within a TP, the only restriction on pronominal clitics is their surface order (reflexive–dative–genitive/accusative). Otherwise, cliticization is quite unrestricted: two pronouns may reverse their merged order (that is, one may cross over another) when needed to satisfy this order. This is true even if the pronouns have non-structural case or are not arguments at all, but rather extract from within an argument DP. In §4, I show that this relative freedom contrasts with a restriction on clitic climbing in object control sentences: pronouns merged in a lower TP usually cannot climb into the matrix clause across a matrix DP.

Rezac (2005) attributes the limitations discussed in §4 to the fact that clitic movement is intimately tied to case assignment. He predicts that clitic movement should always respect the merged order of clitics, and that arguments with non-structural case should not cliticize; both predictions are incorrect. These findings thus reinforce the argument of Dotlačil (2004:87–92) that clitic movement cannot be for the purpose of case. Accordingly, the restrictions discussed in §4 require a different explanation; I present an account of them in §5.

3.1 ACC–DAT DITRANSITIVES: NON-STRUCTURAL DATIVE CAN CLITICIZE ACROSS STRUCTURAL ACCUSATIVE

Dvořák (2010) shows that Czech has two types of ditransitive: first, standard dative–accusative verbs including benefactives, which she analyzes with an accusative merged in

VP and a dative merged in a higher applicative projection; and second, accusative–dative verbs, where the dative is the object of a null preposition below the accusative.

The dative argument of accusative–dative verbs like *svěřit* 'entrust', which is thus non-structural, can cliticize. When both arguments cliticize, as in (4), the dative must cross over the accusative, since the latter is merged at a higher position.

(4) Soud **mu** **ho** svěřil loni 25. května.
court him.DAT him.ACC entrusted last year 25th May
'The court entrusted him [the child] to him last year on May 25.' (SYNv11)

The dative argument of accusative–dative verbs like *podřídit* 'subordinate' can be reflexivized, as shown in (5). Reflexive clitics precede accusatives, so reflexive datives with these verbs must cross over accusatives to cliticize, under the assumption (which I adopt) that reflexive clitics originate in the same position as non-reflexive internal arguments.[3]

(5) 'And what's more, I'm taking the route of befriending my dog rather …'
než **si** **ho** za každou cenu podřídit.
than REFL.DAT him.ACC for any price subordinate.INF
'than subordinating him to myself at any cost.' (SYNv11)

3.2 DAT–ACC DITRANSITIVES: REFLEXIVE ACCUSATIVE CAN CLITICIZE ACROSS DATIVE

If reflexive clitics originate in the same position as internal arguments, as assumed in §3.1, the dative–accusative ditransitives discussed in Dvořák (2010) provide another example of clitic order reversing merged order. In these verbs, the accusative argument is merged below the dative argument, so a reflexive accusative would have to cross over the dative to occupy its position in the cluster preceding the dative. This is shown in (6) for the reflexive form of the dative–accusative verb *připomenout* 'remind'.

(6) '[Hockey opponent] David Výborný didn't even recognize me, …'
musel jsem **se** **mu** připomenout tvrdším zákrokem.
needed PST.1SG REFL.ACC him.DAT remind.INF harder.INS tackle.INS
'I had to remind him who I was with a rather rough tackle.' (SYNv11)

This class of ditransitives thus provides further evidence that clitics can be reordered from their merged position.

3.3 NUMERALS: DATIVES AND REFLEXIVES CLITICIZE ACROSS NON-ARGUMENT GENITIVES

Genitive clitics, which are somewhat marginal, are positioned after datives. These can arise from a few verbs that take genitive arguments or, more commonly, as complements to certain quantifiers, mostly numerals five or greater (Rezac 2005):

(7) Včera jsem **jich** šel [koupit pět].
yesterday PST.1SG them.GEN went buy.INF five
'Yesterday I went to buy five of them.' (Rezac 2005:130)

The genitive clitic in (7) is not a verbal argument. This is unexpected if cliticization is limited to arguments with structural case, as acknowledged by Rezac (2005).

[3] See Medová (2009:c. 3–5) for an overview of theories of reflexive clitics, focusing on Romance and Slavic. In her account, adapted from Kayne (1986) and Alboiu et al. (2004), reflexive clitics in true reflexive constructions are associated with the merged position of internal arguments, so the examples presented in this section still constitute reversal of merged order. By contrast, in the account of Kayne (1986), the merged order of reflexive clitics always precedes that of verbal arguments and the examples presented here do not constitute reversals of merged order.

Pronominal objects of numeral constructions may cliticize when they are associated with the *subject* (which triggers neuter singular agreement), as in (8). Here genitive *jich* slots below dative *mi*, even though the latter originates below it.

(8) 'When I shook hands with them …'
tak **mi** **jich** několik řeklo …
then me.DAT them.GEN several said.N.SG
'a few of them said to me …' (SYNv11)

Reflexive clitics likewise cliticize above genitive clitics from subject numerals, as shown in (9) for the reflexive verb *přihlásit se* 'enroll' and the numeral *několik* 'several'.

(9) Již nyní **se** **jich** několik přihlásilo.
already now REFL.ACC them.GEN several enroll.N.SG
'Several of them have already enrolled.' (SYNv11)

The genitives above do not c-command internal arguments when merged inside a nominal phrase; however, if they must extract to the clausal spine to cliticize, their landing site would c-command those arguments, making (8) and (9) a reversal of hierarchy.

3.4 SUMMARY

In this section, I showed that pronouns are able to cliticize within a single TP, no matter their initial position—so long as they end up in the order reflexive–dative–genitive/accusative.

4 CLITICS CANNOT REORDER IN BICLAUSAL STRUCTURES

The freedom of clitic order in clauses with a single verb contrasts with clitic climbing of embedded objects into matrix object control clauses, which obeys several restrictions (Rosen 2001, Lenertová 2004, Rezac 2005, Hana 2007). In this section, I show that embedded objects usually cannot climb into the matrix clause if they would need to cross over the object controller to do so, regardless of whether the controller is a clitic or a full DP. There is one exception: accusative and genitive embedded clitics can climb into dative object control sentences, even if this involves crossing over a full DP dative controller.

4.1 REFLEXIVE CLITICS CANNOT CLIMB OVER OBJECT CONTROLLERS

Hana (2007) notes that reflexive clitics cannot climb in object control sentences. We see this in (10): the reflexive clitic from the embedded infinitive *pojistit se* 'insure oneself' cannot climb, but must stay in the lower clause. This is true regardless of whether the controller is a clitic or a full DP.

(10) Vláda {***se**} { **jim** / občanům } doporučila [{**se**}
government REFL.ACC them.DAT / citizens.DAT recommended REFL.ACC
pojistit].
insure.INF
'The government recommended the citizens to get insurance.'
(cf. Hana 2007:130)

The only available site for clitics in the matrix clause is the second position, after *vláda* 'government'. Thus, in order for the reflexive clitic to climb to this position, it would have to cross over the dative controller (*jim* or *občanům* in (10)), which is not permitted. This contrasts with the pattern shown in §3.2: within a TP, when reflexive accusative

clitics are merged below datives, the reflexive can cross over the dative to cliticize in reflexive–dative order.

4.2 DATIVE CLITICS CANNOT CLIMB OVER ACCUSATIVE CONTROLLERS

Embedded dative clitics cannot climb into sentences with accusative object controllers, as shown in (11). Here, the dative clitic *jí*, which is the oblique object of the embedded infinitive *pomoct* 'help', cannot climb over the accusative controller merged in the matrix clause. As in (10), the object clitic must remain in the embedded clause. This is true whether the controller is a clitic or a full DP.

(11) Matka {***jí**} { **ho** / Petra } přinutila [{**jí**} pomoct].
mother her.DAT him.ACC / Petr.ACC forced her.DAT help.INF
'Mother forced him/Petr to help her.' (cf. Lenertová 2004:162)

This restriction, too, contrasts with its monoclausal analogue in §3.1: within a TP, dative clitics precede accusative clitics even when the dative is merged below the accusative and must cross over it.

4.3 CLITICS OF THE SAME CASE RESPECT ORDER OF EMBEDDING

Rosen (2001) notes that an embedded dative clitic can climb into a clause with a dative controller, so long as the controller comes first. Hana (2007) tentatively expands this to accusatives as well. For example, (12) is better when the dative controller of *zakázat* 'forbid' precedes the indirect object of the embedded infinitive *kupovat* than vice versa; similarly, (13) is better when the accusative controller of *učit* 'teach' precedes the direct object of the embedded infinitive *napsat* 'write', but the reverse order is questionable.

(12) Martin **mu** **jí** včera zakázal [kupovat takové dárky].
Martin him.DAT her.DAT yesterday forbade buy.INF such presents
'Martin forbade him from buying her such presents yesterday.'
?'Martin forbade her from buying him such presents yesterday.'

(13) Martin **ji** **ho** učil [napsat].
Martin her.ACC him.ACC taught write.INF
'Martin taught her to write it [a masculine noun like *článek* 'article'].'
?'Martin taught him to write it [a feminine noun like *povídka* 'story'].'
(Hana 2007:147–8)[4]

These examples are problematic: the judgements are weak, and other authors (e.g. Veselovská 1995) consider climbing ungrammatical in both interpretations. In addition, *jí* can function as either a clitic or a full pronoun, so (12) allows an alternative analysis where the second dative is not a clitic.[5] For greater insight, I searched for attested examples of clitics climbing into sentences with a controller of the same case.[6] I included cases where the climbing object is unambiguously a clitic (the second-person singular and third-person masculine singular clitics) and it has unambiguously climbed, meaning that there is matrix clause material located between the clitic cluster and the embedded infinitive. I found 4 examples satisfying these criteria of dative clitics climbing into matrix clauses with dative object controllers and 56 such examples with two accusatives. One example with two accusatives, similar to (13), is shown in (14) below. In most of the examples, the object controller is first- or second-person; (14) is one of two tokens with

[4]Hana (2007) writes the feminine accusative clitic as *jí*, with a long vowel, although the standard orthographic form has a short vowel. He notes that the accusative clitic can be pronounced either way, so I bring the example in line with the orthography.
[5]I thank a reviewer for raising this point.
[6]Object control verbs were selected from Lopatková et al. (2022), a database of Czech argument structure.

two third-person clitics. Crucially, in all 60 examples across both dative and accusative, the embedded clitic appears after the controller clitic of the same case.

(14) A prý **ji** **ho** baví i [uklízet]!
and supposedly her.ACC it.ACC amuses even clean.INF
'And she says she even enjoys cleaning it [her house]!' (SYNv11)

The corpus results bolster the judgements in (12) and (13): at least some speakers allow clitics to climb into matrix clauses with clitic controllers of the same case. However, embedded clitics consistently slot in after the controller clitics. This fits the generalization that embedded clitics can climb, so long as they do not climb over an object controller.

4.4 ACCUSATIVE AND GENITIVE CLITICS CAN CLIMB OVER DATIVE CONTROLLERS

In this section, I show that embedded accusative and genitive clitics can climb into sentences with dative object controllers (Lenertová 2004, Rezac 2005). When both objects cliticize, the order is dative–genitive/accusative: the merged order matches the usual clitic order. When the dative object controller is a full DP, embedded accusative and genitive clitics can still climb into the matrix clause, even though they have to cross over the object controller to do so. In the examples in (15), the accusative object *ji* of the infinitive *navštívit* climbs when the dative controller is the clitic *mu* or the full DP *Petrovi*.[7]

(15) a. Matka **mu** **ji** ne-dovolila [navštívit].
mother him.DAT her.ACC NEG-allowed visit.INF
'Mother didn't allow him to visit her.'
b. Matka **ji** Petrovi ne-dovolila [navštívit].
mother her.ACC Petr.DAT NEG-allowed visit.INF
'Mother didn't allow Petr to visit her.' (Lenertová 2004:162)

Attested equivalents to (15) for genitive clitics are shown in (16). In these sentences, genitive pronouns originating inside a numeral in the embedded clause climb to the matrix clause, slotting in after a dative clitic controller as in (16-a), or before a full DP dative controller, as in (16-b). In both cases, the clitics slot in after the reflexive clitic from the impersonal matrix verb *podařit se* 'succeed'.

(16) a. Za pár desítek minut **se** **mu** **jich** podařilo
during few tens minutes.GEN REFL.ACC him.DAT them.GEN succeeded
[koupit pět]
buy.INF five
'Over the course of half an hour or so, he managed to buy five of them.'
(SYNv11)
b. Pokud **se** **jich** účastníkům hry podaří [nasbírat
if REFL.ACC them.GEN participants.DAT game.GEN succeed collect.INF
pět], mají na šestou památku vstup zdarma.
five have.3PL to sixth sight entry free
'If participants of the game manage to collect five of them, they get entry to a sixth attraction for free.' (SYNv11)

These examples show that full DP dative controllers do not block genitive or accusative clitics from climbing, even though accusative controllers block dative clitics from climb-

[7] Dotlačil (2004:81) notes that only third-person accusative clitics can climb across a dative controller (see also Nováková 2012). This is plausibly due to the Person Case Constraint, which restricts the order of clitics by person (e.g. Béjar & Rezac 2003, 2009, Nevins 2007, Deal 2024).

ing (see §4.2). This is the one configuration in which embedded clitics are able to cross over object controllers.

4.5 SUMMARY

In the preceding sections, I have surveyed the empirical landscape of clitic movement, making the following generalizations:

1. Within a TP, elements may cross over one another to cliticize.

2. Clitics originating in an embedded TP usually cannot cross over object controllers to cliticize in a matrix clause. One exception is that embedded accusative and genitive clitics can climb across full DP dative controllers.

5 A CASE CONTAINMENT ANALYSIS OF CLITIC MOVEMENT

I will now present an analysis that captures the two generalizations described in §4.5. The main mechanism is a probe on the Clitic head that allows clitics to move into specifiers of CliticP, so long as they are reached in an appropriate order. Examples of successful and unsuccessful clitic movement with the probe are found in §5.4.

5.1 THE PROBE ON THE CLITIC HEAD

An extensive literature on clitics (e.g. Béjar & Rezac 2003, Coon & Keine 2021 and many others) casts clitic movement as the product of a need for the clitic to be licensed in some way—the exact way in which clitics are defective relative to other DPs is unclear, though in Czech, it is not for the purposes of case assignment (Dotlačil 2004). As case is relevant for my proposed probe, I tentatively suggest that clitics can receive case but lack a K layer to license this case (e.g. Nevins 2011).

I place a probe on the Clitic head that searches the tree below it for potential DPs to agree with. This probe has no satisfaction requirements; its purpose is to interact with DPs to allow clitics to move and be licensed. If the probe matches with a clitic, the clitic can choose to move, although it does not have to.[8] If a clitic has not cliticized to a possible landing site at the end of the derivation, the derivation crashes. The probe interacts with all DPs in its c-command domain, clitic or not, similar in spirit to Multiple Agree (Hiraiwa 2001, 2005, Nevins 2007, 2011) or other probes that allow for multiple interactions (Deal 2015, 2024). If a given probe attracts multiple clitics, they occupy multiple specifiers in the order in which they move, each "tucking in" beneath the last, as Richards (1997:100–101) also suggests for clitic movement in Serbo-Croatian.[9]

The probe, like other Agree relations, is blocked by a CP boundary due to the Phase Impenetrability Condition (Chomsky 2000, 2001, Keine 2018). However, it can search into control infinitives, which are at most weak, penetrable phases (Landau 2008).

[8] That is, the presence of CliticP in a lower clause does not block clitic climbing. This optionality in clitic landing sites predicts that clitics should be able to climb partway to intermediate projections, which Hana (2007:127) allows. It similarly predicts that in a cluster with multiple clitics, some may climb while others stay low. Rezac (2005:111) says that this is not possible. The grammaticality judgements of these two authors are likely mutually exclusive in this case, as they are elsewhere.

[9] Alternatively, Krapova & Cinque (2005) propose that multiple specifier movement must preserve the hierarchy of the moving phrases because reversing their order would violate a form of Relativized Minimality (Rizzi 2001). That is, the chain comprising a phrase and its copies cannot be contained entirely within the chain of another phrase "of the same structural type": $*XP_1 \ldots XP_2 \ldots <XP_2> \ldots <XP_1>$. Relativized Minimality cannot account for all the Czech climbing data: it predicts that full DP object controllers should either *always* block clitic climbing (if full DPs are "of the same structural type" as clitics) or *never* do so (if they are not). However, in Czech this intervention effect is sensitive to case, as shown in §4.4.

5.2 THE PROBE'S FEATURE GEOMETRY

While interactions with DPs leave no visible trace except for potential clitic movement, they can prevent DPs lower down from matching the probe. I propose that the probe has the feature geometry in (17), with a reflexive feature dominating a dative feature, followed by genitive and accusative features.

(17) *Full clitic probe in its initial state – can match REFL, DAT, GEN, or ACC*
[REFL [DAT [GEN [ACC]]]]

The REFL feature may be a shorthand for some structure or feature that matches reflexive clitics; the rest of the hierarchy has been independently proposed as the containment hierarchy for Czech cases to explain phenomena like case syncretism (Caha 2009).

When the probe encounters a DP, it attempts to match its case (or reflexive feature). If the top layer of the probe does not match that of the DP (i.e., if the DP is not a reflexive clitic), it discards layers one by one until it finds a match. For example, if a probe with the features in (17) encounters a genitive DP, it discards the REFL and DAT features so that the required GEN feature is exposed. The probe then continues its search, now with a diminished feature set:

(18) *Full clitic probe after matching a genitive – can match GEN or ACC but not REFL or DAT*
[GEN [ACC]] (discarded: REFL, DAT)

From here, the probe can match any additional number of genitive DPs, or it can shed its GEN layer and match accusative clitics. This process accounts for the order of the cluster: a given probe must first attract reflexives, then datives, then genitives, then accusatives, because once a layer has been discarded, it is gone for the remainder of the probe's search. However, multiple clitics of the same case can be attracted in succession, for as long as the probe has a given case exposed.

In certain case configurations, DPs can act as interveners preventing lower clitics from matching and moving. This occurs, for example, if the probe encounters a dative clitic after an accusative. In this case, the probe discards its DAT feature in the process of matching the accusative, so when it subsequently reaches the dative, it has no DAT feature to match it and the dative cannot cliticize. This is what happens in object control sentences: in most instances, clitics from an embedded clause cannot climb across matrix object controllers (the second generalization in §4.5). This is because arguments in a matrix clause (object controllers) interact with the probe before those in an embedded clause. Thus, if both the controller and the embedded object cliticize, the controller must come first. If the controller is a full DP, the intervention effect depends on case: if the controller is accusative, a dative embedded object clitic is unable to match the probe and cannot climb. However, if the controller is dative, an accusative embedded object *can* climb, since the clitic probe can match the dative (which does not move), followed by the accusative (which does). This is the pattern we see in §4.4.

5.3 SCRAMBLING TO ACCOMMODATE THE CASE HIERARCHY

The probe described in §5.2 requires clitics to be matched in a particular order and cannot rearrange them. However, in §3, I showed that clitics can cross over one another, with no intervention effects, within a single TP. This can only be true if clitics are able to obviate intervention effects by rearranging themselves *prior to* clitic movement—but only within the bounds of a TP. I propose that they do so through what Kučerová (2007) calls g-movement and Šimík et al. (2014), Šimík & Wierzba (2015), and many others call scrambling: movement of given elements to the middlefield. Clitics are necessarily given elements, and Biskup (2006) and Sturgeon (2008) show that phrases can scramble (to specifiers of *v*P, in their analysis) in any order (contra Veselovská 1995). Thus, clitics

should be able to rearrange themselves as needed to match the probe's case hierarchy by scrambling before clitic movement.[10]

Kučerová (2007:34–35) shows that Czech scrambling, unlike wh-movement and contrastive focus movement, cannot escape infinitival TPs.[11] Thus, embedded clitics cannot scramble outside of their TP to the matrix *v*P to place themselves above the object controller prior to clitic movement. In this case, as described in §5.2, embedded clitics can only climb into matrix clauses if the matrix clitic probe can successfully match the object controller before the embedded object—that is, if the merged hierarchy (matrix object controller > embedded object) matches the probe's containment hierarchy (reflexive > dative > genitive > accusative). By proposing that clitics, like other given elements, can scramble, I thus derive the attested contrast between clitic climbing, which shows intervention effects, and clitic movement within a TP, which does not.

5.4 EXAMPLES

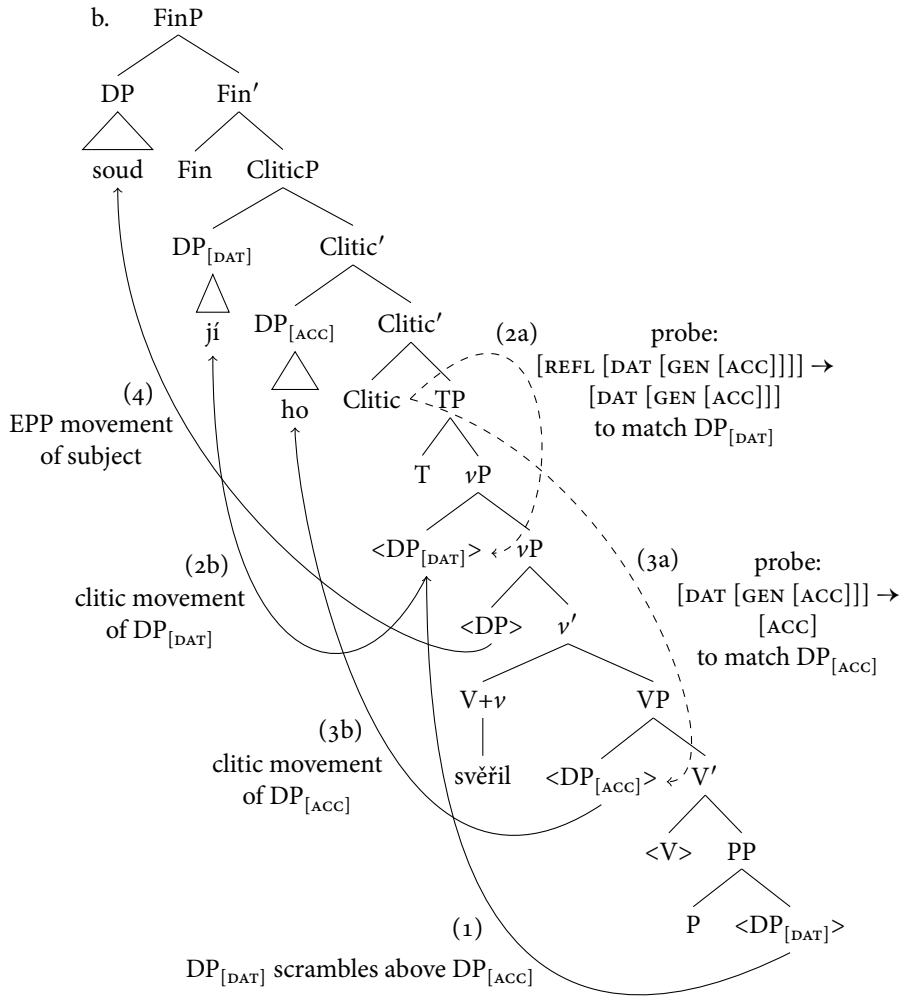
I now present two examples showing attempted movement of accusative and dative clitics where the merged position of the accusative c-commands that of the dative.

First, (19) features the accusative–dative ditransitive *svěřit* 'entrust' (see §3.1). The accusative clitic *ho* originates in the VP, while the dative *jí* is merged in a PP below it (Dvořák 2010). For the probe to attract both clitics, the dative must be above the accusative, so (1) the former scrambles to the *v*P edge above the latter. Now the probe can work: (2a) the probe first encounters the scrambled dative clitic, so it sheds its REFL layer to expose DAT and match the dative clitic, which (2b) moves to the specifier of CliticP. The probe then continues (ignoring the subject) until (3a) it reaches the accusative clitic—which I show *in situ*, although it may also scramble below the dative. The probe casts off its DAT and GEN layers to match the accusative and attract it to CliticP, where (3b) the clitic tucks into a specifier beneath the previously moved dative. Finally, (4) the subject moves to the specifier of FinP to satisfy the EPP feature on Fin.

(19) a. Soud **jí** **ho** svěřil.
court her.DAT him.ACC entrusted
'The court entrusted him to her.' (see (4))

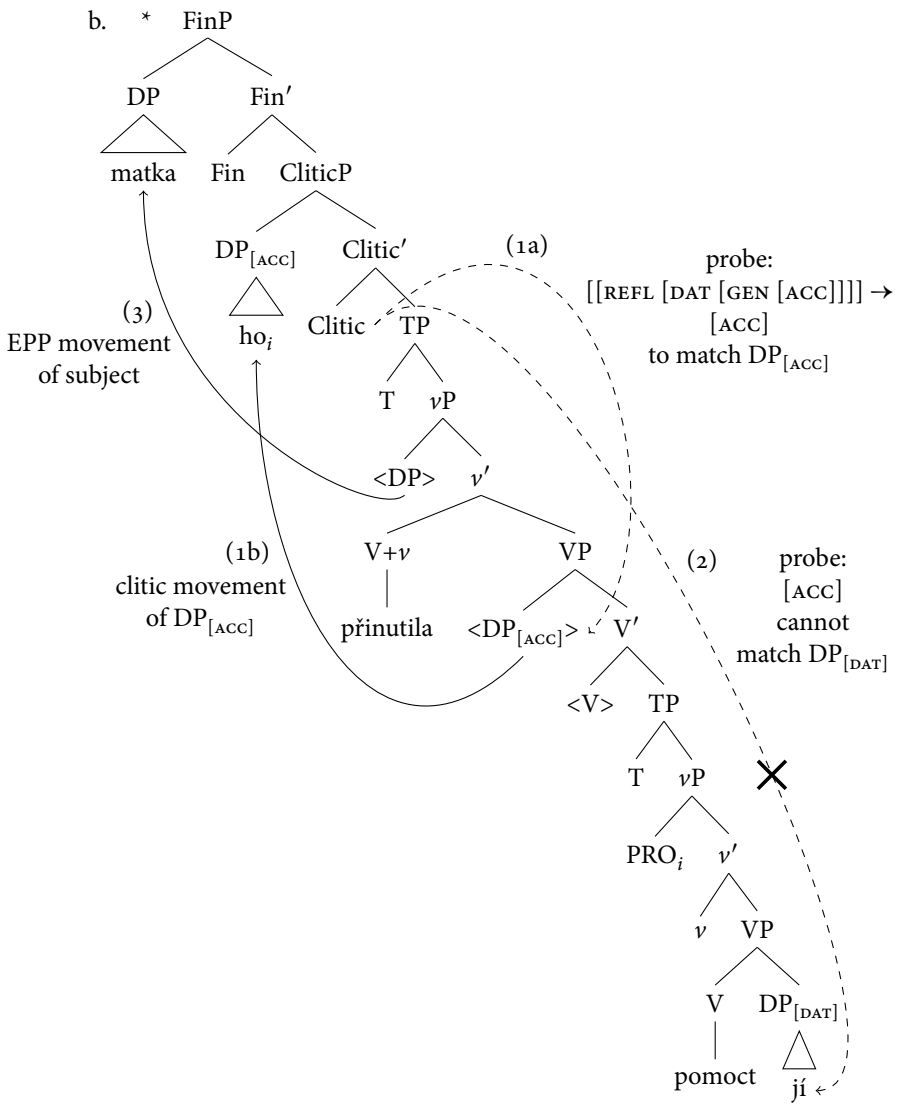
[10] Diesing (2003) likewise argues that certain intervention effects in Yiddish wh-movement can be cancelled by scrambling (cf. Richards 1997:90–95) prior to wh-movement, given that scrambling itself in Yiddish is not subject to superiority effects (Diesing 1997).

[11] I follow Kučerová (2007) and Kosta (2006) in assuming that the scrambling operation in question is A-movement and has different properties than the long-distance scrambling out of embedded clauses in languages like Hindi and Japanese (see e.g. Mahajan 1990, Miyagawa 1997). Kosta (2006) assumes that in Czech, as in German (cf. Wurmbrand 2001), phrases can only scramble out of infinitives smaller than TP, which themselves can only be embedded under lexically specified "restructuring" predicates. Since object control verbs are not restructuring predicates, they can only embed infinitives out of which objects cannot scramble.



We can contrast this with the failed derivation in (20), with an accusative controller *ho* in the matrix clause and a dative object *jí* merging in the embedded clause, as the object of *pomoct* (whether this argument is a simple VP complement, as I have it, or introduced in a different structure does not matter for these purposes). This dative cannot scramble outside of its TP, so it is stuck below the accusative. Thus, (1a) the clitic probe first encounters the accusative DP and sheds its first three layers, leaving only [ACC]. After being matched, (1b) the accusative moves to the specifier of CliticP. Next, (2) the probe finds the embedded dative. By this point, the probe has no DAT feature, and cannot match the dative object. Thus, the dative clitic is stranded in a non-clitic position, so after (3) regular EPP movement of the subject to FinP, the derivation crashes. The grammatical alternative (not depicted here) is for the dative to be attracted to a lower CliticP projected in the embedded clause, where the accusative controller cannot intervene—that is, the clitic does not climb.

(20) a. *Matka **jí** **ho** přinutila [pomoct].
mother her.DAT him.ACC forced help.INF
'Mother forced him to help her.' (see (11))



5.5 PREDICTIONS AND OUTSTANDING ISSUES

This section discusses my account's predictions. Table 1 shows combinations of clitics merged in the same TP. The predicted orders are listed in with the section in which evidence, sometimes incidental, is provided. Canonical cases in which the template and the merged order align and for which I have no example are labelled [C].

		merged lower			
		R(EFL)	D(AT)	G(EN)	A(CC)
merged higher	R(EFL)	R R	R D [C]	R G [C]	R A [C]
	D(AT)	R D 3.2	D D	D G [C]	D A [C]
	G(EN)	R G 3.3	D G 3.3	G G	G A
	A(CC)	R A 3.1	D A 3.1	G A	A A

Table 1: Predicted clitic orders for single clauses, with sources of evidence

Table 2 shows predicted combinations of matrix and embedded clitics—certain combinations should be impossible (that is, certain embedded clitics should not climb), while the others should be possible in a fixed order, with the matrix clitic (*m*) preceding

the climbing embedded clitic (*e*). When a section is listed in brackets, the relevant cases are not discussed directly but follow the pattern shown in that section.

		embedded clitic			
		R(EFL)	D(AT)	G(EN)	A(CC)
matrix clitic	R(EFL)	$R_m\ R_e$	$R_m\ D_e$ [4.4]	$R_m\ G_e$ 4.4	$R_m\ A_e$ [4.4]
	D(AT)	* 4.1	$D_m\ D_e$ 4.3	$D_m\ G_e$ 4.4	$D_m\ A_e$ 4.4
	G(EN)	* [4.1]	* [4.2]	$G_m\ G_e$ [4.3]	$G_m\ A_e$
	A(CC)	* [4.1]	* 4.2	*	$A_m\ A_e$ 4.3

Table 2: Predicted clitic combinations and orders for embedded infinitives, with sources of evidence

Some issues remain involving two arguments of the same case or type. Table 1 predicts that clitics of the same case from the same TP should appear in any order. However, for the verb 'teach' (imperfective *učit*, perfective *naučit*), which takes two accusatives, only the order in (21) is attested, in which the clitic for the student precedes the clitic for the material being taught.

(21) 'And where on earth did he come to learn that Czech sentence?'
Naučila **ho** **ji** jeho dívka, Češka, která zde studovala arabštinu.
taught him.ACC it.ACC his girl Czech.F who here studied Arabic
'His girlfriend, a Czech who studied Arabic here, taught it to him.' (SYNv11)

The reverse order may be ruled out by economy (dispreferring movements unnecessary to obtain a grammatical result) or a preference for animate clitics to precede inanimate clitics.

Reflexive clitics are predicted to be able to climb into clauses with other reflexive clitics, but as Rosen (2014) discusses, they cannot. However, one solution is the deletion of one of the reflexives (haplology). This restriction and solution are unique to reflexive clitics, so I assume that these clitics are subject to some additional restriction.

Another issue involves clitics climbing into clauses with full DP controllers of the same case. Matrix controllers serve as interveners whether they are clitics or full DPs (see §4.2 and §4.4) and clitics can climb into clauses with clitics of the same case (see §4.3), so they should be able to climb over full DP controllers of the same case as well. However, I have not been able to find any examples of them doing so: sentences like (22), adapted from (14)—and equivalents with a dative clitic climbing over a full DP dative controller—should be grammatical but are unattested.

(22) %A prý **ho** její náctileté děti baví i [uklízet]!
and supposedly it.ACC her teenage.ACC children.ACC amuses even clean.INF
'And she says her teenage children even enjoy cleaning it [their house]!'

These examples may be unattested because they are confusing, featuring inversion of merged order for arguments of the same case. Sentences somewhat similar to (22), with a full DP dative controller in sentence-initial position preceding a dative clitic that has climbed out of an embedded infinitive, are marked * by Dotlačil (2004:80) but *??* by Dotlačil (2017)—so it is unclear whether such sentences are wholly ungrammatical or merely degraded.[12] I leave rigorous testing of this prediction to future research.

[12] A reviewer notes that a similar logic should apply to (15-b), in which the third-person feminine singular accusative clitic *ji* climbs across a full DP dative controller, because *ji* is syncretic with the dative. However, (15-b) is judged as acceptable. In fact, there is reason to suspect that *ji* climbing across a dative controller would be less confusing than (22): the accusative–dative syncretism is incomplete. Hana (2007:78) notes that many speakers have neutralized the vowel length distinction among third-person feminine singular clitics between accusative *ji* and dative *jí*, but the distinction is still maintained in the written standard and usually holds up in published texts as well. Moreover, for speakers who have merged the two pronouns,

My account predicts that genitive clitics should precede accusative clitics. Genitive and accusative clitics rarely appear in the same cluster and exhibit widespread syncretism—they are only consistently distinguished in the third personal plural, which has genitive *jich* and accusative *je*. The literature is divided about their ordering. Veselovská (1995) and Toman (1999) place genitive clitics before accusative clitics. However, Franks & King (2000:108) report mixed judgements for (23), which has a genitive clitic extracted from a subject numeral (see §3.3) and an accusative object clitic: of three speakers asked, one preferred each clitic order and the third rejected both.

(23) %Pět **mu** { **jich** **ho** / **ho** **jich** } nikdy nedalo.
five him.DAT them.GEN it.ACC it.ACC them.GEN never NEG-gave
'Five of them never gave it to him.' (Franks & King 2000:108)

There is also one common ditransitive verb, *zbavit* 'rid', which takes a genitive and an accusative argument: 'rid X [accusative] of Y [genitive]'. Franks & King (2000) found that when both arguments cliticize in this verb, as in (24-b), speakers preferred the order accusative–genitive, although judgements were quite uncertain. Lenertová (2004:154) also claims that arguments of *zbavit* usually cliticize in accusative–genitive order.

(24) a. Zbavili Alenu občanství.
rid Alena.ACC citizenship.GEN
'They stripped Alena of her citizenship.'
b. Zbavili {%**ji** **ho** /***ho** **ji** }.
rid her.ACC it.GEN it.GEN her.ACC
'They stripped her of it'. (Franks & King 2000:108)

A corpus search suggests that sentences like (23), with a genitive clitic extracted from the subject and an accusative object clitic, overwhelmingly show genitive–accusative order (as predicted in Table 1), while sentences with *zbavit*, like (24), show a rather more ambiguous preference for accusative–genitive order. For reasons of space, I leave further empirical study of the order of genitive and accusative clitics for future work.

For object control sentences, my account similarly predicts that accusative clitics originating in embedded infinitives should be able to climb into matrix clauses with clitic or full DP genitive controllers; if both are clitics, the order should be genitive–accusative. There are no verbs that assign genitive case to controllers, so these genitives must be extracted from numeral accusative object controllers (as shown in (25)) or numeral subject controllers.[13] Examples (25) and (26) below are shown with their *predicted* judgements.

(25) 'The teacher would be devastated if none of his students tried his goulash, …'
tak bychom { **jich** **ho** /***ho** **jich** / **ho** kluků } měli
so COND.1PL them.GEN it.ACC it.ACC them.GEN it.ACC boys.GEN should
přinutit ochutnat alespoň pár.
force.INF taste.INF at least few
'so we should force at least a few of them / the boys to taste it.'

In contrast, embedded genitive clitics should not be able to climb into matrix clauses with accusative controllers—thus, sentences like (26) should always be ungrammatical.

(26) 'You can't expect that Pepa will learn to cook every classic Czech dish, but …'
*příští týden bych { **jich** **ho** / **ho** **jich** / **jich**
next week COND.1SG them.GEN him.ACC him.ACC them.GEN him.ACC

the usual pronunciation is *jí*, with a long vowel. Thus, a given written pronoun *ji* is much more likely to be accusative than dative, and thus less likely to be confused with another dative argument than *ho* with another accusative argument.

[13] I thank a reviewer for suggesting this point and the basic format of these examples.

kluka } mohl naučit vařit šest.
boy.GEN could teach cook six
'next week I could teach him / the boy to cook six of them.'

My proposal's predictions are clear but hard to test. I have not found attested examples like (25) and (26), and speakers have unclear judgements or reject all such examples—in part because they are confusing, requiring multiple extractions and stacked verbs. Here, too, I leave thorough testing of my account's predictions to future work.

5.6 SUMMARY

I have proposed that clitic movement is driven by a probe with a hierarchy of reflexive and case features that it uncovers one at a time to match DPs in its c-command domain. When DPs are ordered in accordance with the probe's hierarchy, we get the canonical clitic order of reflexive–dative–genitive–accusative. When they are not, clitics fail to cliticize. Scrambling allows clitics to reorder themselves as needed, so long as they are in the same TP. This probe thus accounts for the generalizations about clitic climbing discussed in the previous sections. Some predictions of my account, particularly those involving genitive and accusative clitics, require further testing.

6 CONCLUSION

In this work, I have refined previous empirical generalizations about Czech clitic climbing (e.g. Dotlačil 2004, Lenertová 2004, Rezac 2005, Hana 2007) and proposed a novel probe that handles intervention effects through a hierarchical feature geometry that removes layers to match successive DPs depending on their case. While this general approach neatly unifies the various possibilities and limitations of Czech clitic movement presented here and makes generally correct predictions, some further issues remain.

One issue is technical: what is the feature I call REFL? We cannot say that reflexives somehow bear nominative case alongside dative or accusative: nominative is at the *bottom* of the case hierarchy (Caha 2009), predicting that reflexives should come *last*.

Another open question is the interaction of case and person. Some Czech speakers allow inversion of the usual clitic order to satisfy the Person Case Constraint, which requires first- and second-person clitics to precede third-person clitics (Medová 2009, Sturgeon et al. 2011)—that is, first-person accusative clitics may precede third-person dative clitics. Future work should aim to reconcile the Person Case Constraint and the case-based template. One potential route is to require two steps of clitic movement, first for case and then for person, as proposed by Ciucivara (2009) for Romanian.

Another avenue for further exploration is scrambling. Kosta (2006) and Kučerová (2007) assume that elements cannot scramble out of TPs, but Lenertová (2004:162n24) shows an example with a full DP scrambling out of an embedded infinitive into a matrix clause beneath (but not across) an object controller. Future work should explore when, exactly, elements can scramble out of embedded infinitives.

Overall, the empirical theoretical work presented in this study should provide ample ground for further exploration of Czech clitic movement and embedded infinitives.

CONTACT INFORMATION

Guy Tabachnick — guyt@ung.si

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ABBREVIATIONS

1	first person	INS	instrumental
3	third person	N	neuter
ACC	accusative	NEG	negation
COND	conditional	PL	plural
DAT	dative	PST	past
GEN	genitive	REFL	reflexive
INF	infinitive	SG	singular

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