Reanalyzing syntactic ergativity in Control and conjunction reduction

Lisa Morgenroth & Martin Salzmann*

Abstract

Research on syntactic ergativity has focused on accounting for the ban on A′-movement of the ergative. In this paper, we focus on syntactic ergativity in Control and conjunction reduction, which has received considerably less attention. We argue that the S/P-pivot in these constructions can be accounted for if the movement theory of Control (MTC) is adopted and the following two assumptions are made: First, Control complements/non-initial conjuncts are merged as complements of the matrix verb. Under the MTC, this automatically derives the S/P-pivot in the matrix clause/initial conjunct given Minimality: the object position is targeted first by theta-driven movement. Secondly, the ergative cannot undergo A-movement since it is an inherent case (or possibly a PP). This derives the S/P-pivot w.r.t. the gap in the non-finite clause/non-initial conjunct as only S or P arguments can move out. The fact that movement out of Control complements/non-initial conjuncts is possible follows from the assumption that S and P are not involved in an Agree operation that involves a full set of phi-features. For coordination, this requires that non-initial conjuncts are treated as non-finite, which receive their tense specification from the matrix clause, as in clause-chaining languages. This analysis favors a theory of case assignment where both S and P receive case (nominative/absolutive) from T (and thus fail to be deactivated in control clauses/non-initial conjuncts). For a language like Dyirbal, the perhaps most prominent syntactically ergative language, this favors a theory like that of Müller & Thomas (2017).

1. Introduction: Syntactic ergativity

Languages can differ in how the grammatical functions pattern w.r.t. argument encoding (case, agreement) and their behavior in certain syntactic processes.

*This paper is based on discussions of the authors in late 2012 and early 2013. A first version appeared as Morgenroth (2013). Given Gereon's recurrent reminders concerning the unpublished status of this work, we have taken the occasion to make these ideas available to a wider audience in revised and updated form. Many aspects of the paper have greatly benefited from Gereon's comments on Morgenroth (2013).

Strict Cycling: A Festschrift for Gereon Müller, 341–364
Silke Fischer, Doreen Georgi, Fabian Heck, Johannes Hein, Anke Himmelreich, Andrew Murphy & Philipp Weisser (eds.)
STRICT CYCLING, Universität Leipzig 2024

In what follows, we will distinguish the following functions/argument roles well known from the typological literature (see, e.g., Palmer 1994):

(1) a. S-argument: sole argument of an intransitive verb
b. A-argument: the usually agent-like external argument of a transitive verb
c. P-argument: the usually patient-like internal argument of a transitive verb (sometimes also referred to as O-argument)

Nominative-accusative alignment obtains if S and A pattern together, ergative alignment arises if S and P pattern together. In what follows we will often use the term S/A- or S/P-pivot to indicate that two functions/argument roles pattern together. An example for ergative case alignment is provided in (2) (from Dixon 1994: 10):[1]

(2) a. ŋuma banaga-n^{y}u
father:ABS return-NONFUT
'Father returned.'
b. ŋuma yabu-ŋgu bura-n
father:ABS mother-ERG see-NONFUT
'Mother saw father.' *Dyirbal*

Ergative alignment in syntax is most prominent in A′-movement. In a subset of morphologically ergative languages, A′-movement of S and P is unproblematic, while A′-movement of A can be restricted in various ways, viz., requires detransitivization (antipassive), nominalization, resumption or special agreement (anti-agreement or so-called agent focus).[2] The example in (3) illustrates the S/P-pivot in Dyirbal relativization. While S and P can be relativized without additional means and thus appear as zero inside the relative clause, (3a–c), to relativize the A-argument, antipassive is needed (which involves detransitivization and thus turns A into S), (3d), see Dixon (1979: 128), Dixon (1994: 169–170) (note that the case-marking on the relativized verb indicates the function of the head noun in the main clause):

[1]The glosses follow the Leipzig glossing rules.

[2]See Polinsky (2017: 8–9, 10–12) for more discussion of the compensatory strategies and evidence that syntactic ergativity need not affect all types of A′-movement in the language.

(3) a. ŋuma [banaga-ŋu] yabu-ŋgu bura-n
father:ABS return-REL.ABS mother-ERG see-NONFUT
'Mother saw father who was returning.'

b. ŋuma yabu-ŋgu [banaga-ŋu-rru] bura-n
father:ABS mother-ERG return-REL-ERG see-NONFUT
'Mother, who was returning, saw father.'

c. ŋuma [yabu-ŋgu bura-ŋu] duŋgara-n^{y}u
father:ABS mother-ERG see-REL.ABS cry-PST
'Father, who mother saw, was crying.'

d. yabu [bural-ŋa-ŋu ŋuma-gu]
mother:ABS see-ANTIPASS-REL.ABS father-DAT
banaga-n^{y}u
return-NONFUT
'Mother, who saw father, was returning.'

Syntactic ergativity thus implies morphological ergativity, while the reverse does not hold (see Polinsky 2017: 8–10 for an attempt to assess the pervasiveness of syntactic ergativity). In general, even syntactically ergative languages do not function along an S/P-pivot in all areas of syntax. Domains like reflexivization or imperatives never seem to show an ergative pattern (see Manning 1996 and Aldridge 2008: 970–972 for an overview of split subject properties). It is contested to what extent S/P-alignment can be found in other areas of syntax.

The most debated cases involve Control and conjunction reduction. W.r.t. Control, Deal (2015: 661–662) mentions two languages displaying an S/P-pivot, viz., Dyirbal and Sama Southern. Kazenin (1994) lists Yidin, Kalkatungu, Mam, and Aguacatec. Kazenin explicitly limits his claims to Control into purpose clauses, while some of the examples in Deal illustrate (translational equivalents of) Control into complement clauses. The ergative pattern can usually be seen in the fact that only the S/P-argument can be PRO/zero, and it seems that at least in Dyirbal, Kalkatungu and Yidin, the controller must also be S or P (while in Sama Southern, it can also be A). Here is a paradigm from Dyirbal with the controller in P-function, which shows that S and P can be zero, (4a/b), while for a transitive subject (viz., A) to be zero inside the purpose clause, antipassive is required (which turns A into S), (4c), see Dixon (1994: 168–169):

(4) a. yabu ŋuma-ŋgu giga-n [PRO banaga-ygu]
mother:ABS father-ERG tell.to.do-NONFUT return-PURP
'Father told mother to return.' P = S

b. yabu ŋuma-ŋgu giga-n [gubu-ŋgu PRO
mother:ABS father-ERG tell.to.do-NONFUT doctor-ERG
mawa-li]
examine-PURP
'Father told mother to be examined by the doctor.' P = P

c. yabu ŋuma-ŋgu giga-n [PRO
mother:ABS father-ERG tell.to.do-NONFUT
bural-ŋa-ygu jaja-gu]
see-ANTIPASS-PURP child-DAT
'Father told mother to look at the child.' P = S

Even rarer seems to be an S/P-pivot in coordination. The most famous case is Dyirbal. The following triple illustrates that only S and P can be zero in the second conjunct; for an external argument of a transitive verb to be zero, antipassive is required again (which turns A into S), see Dixon (1994: 12–13):[3]

(5) a. [ŋuma banaga-n^{y}u] [yabu-ŋgu __ bura-n]
father.ABS return-NONFUT mother-ERG see-NONFUT
'Father returned and mother saw him.' S = P

b. [ŋuma yabu-ŋgu bura-n] [__ banaga-n^{y}u]
father.ABS mother-ERG see-NONFUT return-NONFUT
'Mother saw father and he returned.' P = S

c. [ŋuma banaga-n^{y}u] [__ bural-ŋa-n^{y}u
father:ABS return-NONFUT see-ANTIPASS-NONFUT
yabu-gu]
mother-DAT
'Father returned and saw mother.' S = S

Other possible cases are Yidin, discussed in Kazenin (1994: 89), and Tongan,

[3] As in Control, the coreferential element in the first clause must be in S or P function in Dyirbal.

As described in Dixon (1972: 77–79), Dixon (1994: 165–168), Dyirbal has a special type of coordination where the suffix *-ŋurra* on the second verb replaces the tense morphology; this marker indicates that the coreferential NP in the first conjunct is in fact the A-argument (somewhat reminiscent of switch-reference). This does not affect deletion in the second conjunct, though, which is limited to the S/P-argument.

analyzed in Otsuka (2010).[4] Based on this distribution, Kazenin (1994: 92) proposes the following hierarchy (slightly reformulated for our purposes):

(6) conjunction reduction is ergative ≻ Control is ergative ≻ A′-movement is ergative ≻ argument encoding is ergative

Dyirbal would thus constitute a language that is ergative in all respects of the hierarchy, Kalkatungu would be ergative in all aspects except coordination, West Greenlandic (Deal 2016: 166–169) or Chukchi (Manning 1996: 26) would only show syntactic ergativity in relativization, while a language like Basque (Polinsky 2017: 4) would only be morphologically ergative.

Ergativity in both Control and especially in coordination thus seems to be rather rare. In addition, in both cases it is not a priori clear whether what looks like Control or conjunction reduction on the surface really has the corresponding underlying syntax. On these grounds, Polinsky (2017) discards both phenomena as irrelevant for the study of syntactic ergativity.

While this may eventually turn out to be the correct strategy,[5] we will instead – we think in line with Gereon's thinking – pursue what we take to be the more interesting and especially challenging perspective, viz., that true syntactic ergativity in Control and conjunction reduction does exist and therefore has to be accounted for by a theory of syntactic ergativity.

Given that it is the most prominent language in the discussion of syntactic ergativity and seems to display the most consistent S/P-pivot, we will in

[4]Dixon (1994: 178–179) mentions two further languages displaying an S/P-pivot in coordination, viz., Nadeb and Alutor.

The situation in Tongan is more complicated in that there are two different coordinators with a different alignment each. Thus, while there is an S/A-pivot with *mo*, *pea* instantiates an S/P-pivot. In addition, even with *pea*, there is also the possibility for conjunction reduction of A if the antecedent is an A as well, see Otsuka (2010: 325). Thus, conjunction reduction in Tongan arguably works differently than in Dyirbal. Otsuka (2010) argues that *pea*-coordination involves PF-deletion under case-identity, but this leaves unexplained why under coreference deletion of the coreferential argument in the second conjunct and deletion of tense are obligatory. *Mo*-coordination is argued to involve feature copying from the antecedent onto a silent pronoun in the second conjunct which has to be in the same syntactic position.

[5]See, e.g., Legate (2008a) for arguments that there is no good evidence for proper Control or conjunction reduction in Dyirbal. Rather, both constructions seem to be instances of clause-chaining with optional deletion of the S/P-argument. Note, though, that this leaves unexplained the fact that only S and P arguments can be zero but A cannot. If the ergative is analyzed as an inherent case, this pattern could be related to an independent (and cross-linguistically well-attested) requirement for inherent case to be visible.

what follows focus on Dyirbal but will occasionally point out what other assumptions would be necessary to account for slightly different patterns.

This paper is structured as follows: Section 2 briefly sketches theories of case assignment in ergative languages. Section 3 discusses syntactic ergativity in Control and conjunction reduction and outlines why they constitute an interesting challenge for existing theories of syntactic ergativity. Section 4 proposes a reanalysis in terms of movement as Control. Section 5 concludes.

2. Case assignment in ergative languages

Perhaps the most widespread analysis in recent years of the S/P-pivot in case marking in ergative languages involves inherent ergative assignment to A by v, while both S and P receive absolutive/nominative case from T. Variants of this can be found in Polinsky (2016), were the ergative is instead analyzed as a PP, and in Müller (2009), where A receives *structural* case from v (see Deal 2015: 670–685 for an overview of theories of case assignment in ergative languages).

Legate (2008a) shows that identical morphological case on S and P need not imply that both receive their case from T. Rather, she argues that two classes of ergative languages must be distinguished. In one, as sketched above, S and P both receive case from T. In another class of ergative languages, however, P actually receives accusative case from v, which is, however, usually not morphologically realized (except on certain types of DPs, e.g., pronouns). Such languages are thus actually underlyingly tripartite. She adduces a number of syntactic arguments in favor of such a split between ergative languages, the most straightforward being the licensing of P in non-finite contexts. Since P receives its case from different heads under this classification, P is expected to be PRO in those languages where it receives case from T but not in those where it receives case from v. The reason why S and P receive the same morphological case is due to the fact that there are no special exponents for nom and acc, rather, a default form is inserted. Additional morphological evidence for an analysis as a tripartite system comes from case-mismatches: These languages often show case splits in that some P-arguments bear accusative case, while others are unmarked (and some A-arguments bear ergative, while others bear nominative). If a P-argument is complex, there can be mismatches in that some part of the DP bears accusative, while other parts bear absolutive/nominative, see, e.g., Legate (2008b: 77, ex. 44a).

What is important in the present context is that Legate (2012, 2014) applies the tripartite analysis also to Dyirbal, thus, nominative for S, ergative for A and accusative for P. Ergative on A is only overt on nominals but zero (= impoverished) on local pronouns, while accusative on P is only visible on pronouns, optional for human nouns and proper names but zero (= impoverished) on all other nominals.

Müller & Thomas (2017) provide a reanalysis of such three-way systems as two-way systems, viz., P receives its case from T, like S (while A receives its case from v). Nominative on certain A-arguments such as local pronouns results from impoverishment, as in Legate (2012, 2014). Where the approach differs is in the analysis of the separate accusative form on certain P-arguments. It is reanalyzed as a (marked) absolutive, which has failed to undergo impoverishment. Concretely, impoverishment effects all S-arguments and most but crucially not all P arguments (viz., it does, e.g., not apply to local pronouns). The zero-exponent on S and unmarked P arguments is thus a default, while the visible exponent on P arguments is specified for nominative/absolutive. Note that this Optimality-Theory approach is formulated in such a way that one need not stipulate that impoverishment affects a non-natural class.

For what follows, both the nature of the case on the A-argument as well as which head case-licenses the P-argument will be important. We will see that the facts favor an approach where the case on A is inherent (possibly even a PP), while the case on P is assigned by T.

3. Syntactic ergativity in Control and conjunction reduction

In this section, we will try to highlight why ergative alignment in control and conjunction reduction poses interesting challenges to both theories of syntactic ergativity and theories of Control and conjunction reduction.

3.1. Control

Starting with Control, accusative alignment in languages like English is traditionally related to Case: Since non-finite T cannot assign structural nominative, subjects can only be PRO (on some accounts, it bears a special null case).

The same logic has been extended to languages with an S/P-alignment in Control: It obtains under those approaches to ergativity where the case

borne by S and P is absolutive/nominative and is assigned by T (and S/P move to Spec,TP), while ergative is (an inherent case) assigned by v. Under the assumption that non-finite T cannot license absolutive, ergative alignment is a natural consequence.

Non-ergative alignment in Control (as, e.g., in West Greenlandic) can arise if P receives case from v, see Deal (2016: 171-172) for discussion.[6]

Recall from above that Dyirbal is sometimes reanalyzed as a tripartite language with accusative on P, assigned by v (Legate 2012, 2014). Still, S and P pattern together w.r.t. all syntactic ergativity diagnostics in Dyirbal. Thus, under this type of analysis, PRO in Dyirbal Control constructions cannot be due to the absence of case, at least not in the case of P, which receives its case from v.

An orthogonal challenge for all approaches is the fact that at least in some syntactically ergative languages, the controller must also be S/P (recall ex. (4)). Since there can be case-mismatches in Control between controller and PRO (see section 4 below), one cannot easily rule out Control by A by means of a condition requiring case identity.

3.2. Conjunction reduction

Turning to coordination, it is instructive to start with a language with an S/A-pivot such as English, where only the S/A-argument can be omitted in the second conjunct, and it can only be coreferential with an S/A-argument of the preceding clause:

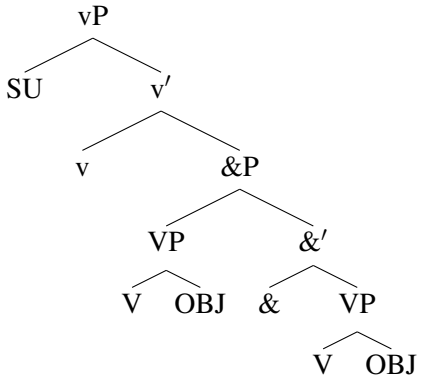
(7) a. John kissed Mary and fell. (= John fell.) A = S
b. John fell and kissed Mary. (= John kissed Mary) S = A
c. John kissed Mary and bought flowers. (= John bought flowers) A = A
d. *John kissed Mary and Peter praised. (intended: Peter praised John/Mary) A/P = P

[6]Given that the ergative receives case from v, it is actually not clear why it can be (and perhaps has to be) PRO in languages like West Greenlandic. Perhaps this raises similar issues as finite Control, to which we turn in section 4 below.

There are essentially two technical possibilities to ensure that the subject is realized only once in such coordinations:[7]

First, the subject is introduced above the coordination. Such examples would thus involve VP-coordination with v introducing a single argument:

(8)



This type of analysis only works if both subjects are external arguments. In (7a/b), however, the subject of one of the conjuncts (that of *fall*) is arguably unaccusative and thus merged as an object. Consequently, the low coordination analysis is not applicable.

Second, the subjects undergo ATB-movement (however it is to be analyzed) to Spec,TP, e.g., as in (9), the derivation for (7a):

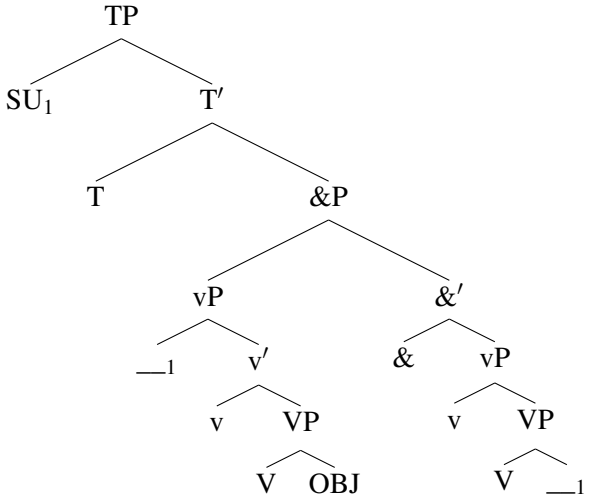
[7]One may think that conjunction reduction could also involve full clausal coordination with PF-deletion in the second conjunct. However, apart from the fact that this would leave unexplained why it should only affect the A/S argument, it also leads to incorrect interpretations as, e.g., in (i):

(i) a. No one kissed Mary and fell.
b. No one kissed Mary and no one fell.

Clearly, the two sentences in (i) differ in meaning with *no one* having scope over both events in (ia) but not in (ib).

While one can rule out a biclausal analysis with PF-deletion for (at least some cases in) English, one cannot rule out a priori that something along these lines is possible in ergative languages. The literature usually does not provide any relevant tests that would help limit the number of possible analyses. In what follows, we will assume that conjunction reduction is not the result of PF-deletion but should point out that exactly this type of analysis is proposed for the S/P-pivot in Tongan, see Otsuka (2010) and recall fn. 4.

(9)



The S/A-pivot follows from minimality: The EPP on T triggers A-movement of the closest argument to its specifier, which in the presence of two or more arguments is the external argument. As a consequence, only A and S can be moved.[8] Without ATB-movement, a constituent of the second conjunct cannot be silent. This rules out examples like (7d), where the object of the first conjunct does not c-command that of the second.[9]

The question is now whether the analyses that have been proposed for English can be extended to syntactically ergative languages. We will in what follows assume that the external argument is merged in Spec,vP and the internal argument as a complement of V, viz., arguments are projected in the same way as in languages with accusative alignment.[10] As in English, low coordination fails whenever one of the coreferential arguments corresponds to

[8]In object experiencer constructions as in *The book pleases me*, the nominative argument moves across the experiencer. A minimality violation can be avoided if the experiencer is not visible/accessible to T, either because it already bears case (Activity Condition) or because it is encapsulated in a PP. Inherent case will also play an important role in our analysis in section 4.2.2 below.

[9]This would be an instance of sideward movement, which is only possible in very restricted circumstances such as adjunct Control, in which case, however, only the subject but not the object can be targeted, a point to which we return in our analysis in section 4.2.1 below.

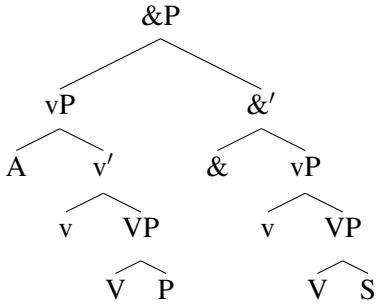
[10]Apart from universalist considerations, the major motivation for this assumption comes from reflexivization in ergative languages, which displays an accusative pattern, suggesting the ergative is merged higher than the absolutive argument, see, e.g., Aldridge (2008: 970f.) for discussion and references.

an internal argument, as arguably in (5a/b), and can therefore be set aside. As for ATB-movement, an S/P-pivot can only arise if (i) movement of the absolutive across the ergative is not blocked by minimality, (ii) only the absolutive can move to Spec,TP and (iii) T has an obligatory EPP-feature.

There is in fact a tradition in the analysis of syntactic ergativity that includes exactly these ingredients, viz., posits obligatory movement of the absolutive across the ergative, the so-called inversion analysis, see Deal (2015: 690–701), Deal (2016: 170–172), Polinsky (2017: 15–24) for description and references. Movement of the absolutive is usually linked to case-licensing (or an EPP-requirement), while the ergative receives inherent case from v. There is no minimality violation because the ergative argument is not visible to T (as it no longer needs case). The inversion analysis receives support from languages like West Greenlandic, where the absolutive systematically scopes over the ergative (irrespective of the surface order), suggesting it occupies a high A-position. However, the inversion analysis of ergativity is unlikely to be the source of the S/P-pivot in conjunction reduction: First, languages with inversion do not necessarily display an S/P-pivot in conjunction reduction, cf., e.g., West Greenlandic, where only A′-movement shows an ergative pattern. Second, it is not clear that the absolutive always has to be externalized and the ergative may stay low, see Polinsky (2017: 20), Deal (2015: 685–688), Deal (2016: 174–175). Crucially, if the absolutive in the first conjunct stays low, an ATB-derivation would not be possible since the gap in the second conjunct would fail to be c-commanded. The following tree diagram represents the structural relationship in (5b) (assuming that the S-argument of the second conjunct is unaccusative, though nothing hinges on this):[11]

[11] Surface word order is often taken to be unreliable in the relevant languages, which is why ergative $\succ$ absolutive word order may involve an extra movement step of the ergative rather than the base-generated structure with the absolutive in a low position. But at least in some languages, there is no evidence from scope that the absolutive occupies a higher A-position than the ergative, see, e.g., the data from Chukchi in Polinsky (2017: 20). Also, if ergative-initial orders involve an extra movement step of the ergative, one wonders what kind of movement could be involved. There is often reference to optional scrambling, but this must then crucially not represent A′-movement given the ban on A′-moving ergatives – unless, of course, it affects only a subset of A′-constructions.

(10)



It thus seems safe to conclude that since (i) inversion does not always correlate with an S/P-pivot and (ii) the evidence for actual inversion/externalization of the P-argument is not sufficiently strong, the inversion theory of ergativity is inadequate to account for the S/P-pivot in conjunction reduction.[12]

4. Reanalysis via Control als Movement

In this section, we will argue that, given certain assumptions, the S/P-pivot in Control and conjunction reduction in the relevant languages can be elegantly accounted for by means of the movement theory of Control (MTC), see Hornstein (1999, 2001), Boeckx et al. (2010). We will first illustrate the basic logic of this theory before applying it to the puzzles at hand.

4.1. Introduction: Control as movement

In the standard theory of (obligatory) Control, a silent element, PRO, appears in the subject position of non-finite clauses and specific assumptions ensure

[12]As discussed above w.r.t. the S/P-pivot in Control, the inversion analysis is not obviously applicable under analyses where P receives case from v and externalization thus cannot be motivated by case-theoretic reasons. There is a version of the inversion approach championed by Aldridge (2008: 983–987) where inversion is not triggered by the case-licensing needs of the absolutive but by an EPP-feature on v, which moves the object past the external argument and thus closer to the probes on T. This type of approach to syntactic ergativity is, in principle, compatible with an analysis of Dyirbal where the transitive object receives case from v. Given that conjunction reduction that involves arguments with different cases, viz., accusative and nominative/absolutive, is possible in Dyirbal, see Dixon (1994: 15–16), ATB-movement must then be assumed to tolerate mismatches between structural cases, cf. also English *Who did John support and Mary say would win*? Still, it is not clear whether there is always inversion in Dyirbal, viz., whether the P argument always moves to Spec,TP, while the ergative stays low.

that it appears only in that position and has a local controller (nowadays this often involves some form of Agree linking controller and PRO), cf. (11a).

A prominent alternative introduced in Hornstein (1999, 2001) is to reduce Control to movement: The controller is generated in the relevant argument position of the embedded clause and undergoes A-movement via the embedded subject position to the matrix argument position and, in case of subject control, finally to Spec,TP of the matrix clause, see (11b):

(11) a. John$_i$ expects [PRO$_i$ to PRO$_i$ win].
b. [John$_1$ [$_{vP}$ ~~John$_T$~~ expects [$_{TP}$ ~~John$_T$~~ to [$_{vP}$ ~~John$_T$~~ win]]]]

Under this theory, DPs can bear more than one theta-role. The trigger for movement under this theory is to check theta-features of a predicate. This requires numerations that contain too few DPs for the number of theta-roles assigned by the predicates. Note that case is not the trigger given the robust evidence that PRO can bear case, usually an oblique/quirky case (at least in Icelandic). This entails that under the MTC a DP can receive more than one case (and usually surfaces with the latest case assigned), see Boeckx et al. (2010: 152–168). DPs can move on despite case- and phi-feature checking in the embedded clause because this does not involve (complete) phi-feature checking: Both the v-head associated with the quirky case assigning head and the embedded T-head are deficient in such a way (viz., do not bear a full set of phi-features including person) that Agree does not deactivate the DP. It can thus move on into the matrix clause. Since movement is involved and tails of movement chains are normally not spelled out, it is correctly predicted that a gap obtains in the embedded clause.

The MTC has sparked a lot of controversy and we will not attempt to justify it here (but see Boeckx et al. 2010: chapter 5 for discussion of the many challenges that have been raised against it). Rather, we will go on to show that it has the potential to provide an elegant account of syntactic ergativity in Control and conjunction reduction.

4.2. Applying the MTC to syntactic ergativity

Syntactic ergativity can be obtained by means of the MTC given the following two key assumptions:

- control clauses and non-initial conjuncts are merged as complements
- only S/P can undergo A-movement

The first ingredient derives the fact that the Controller of PRO/the antecedent of the gap in the subsequent conjunct can only be S/P. The second assumption is necessary to explain why only S/P can be zero in Control clauses/non-initial conjuncts. We will discuss both aspects in turn.

4.2.1. Complementation

The first assumption is unproblematic in the case of Control into complement clauses as in example (4) above. However, the same assumption is necessary for Control into what at least translationally seem to be adjunct clauses (viz., proper purpose clauses), see Dixon (1972: 68), Dixon (1994: 168) for examples. There is a minority position in the field according to which some adjunct clauses are merged very low, sometimes even as complements of the verb, see, e.g., Larson (1988). Support for this view comes from the observation that some adjuncts, and crucially also purpose clauses, can be transparent for extraction in several languages, see, e.g., Truswell (2011: 130–134):[13]

(12) Who did John travel to England [to make a sculpture of __]?

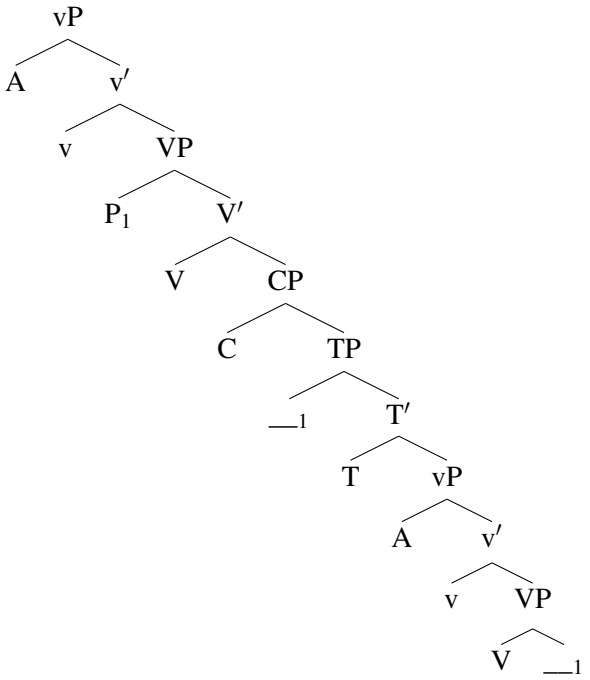
Surely the most unorthodox assumption is that non-initial conjuncts are merged as complements. However, in a language like Dyirbal, purpose clauses and non-initial conjuncts seem structurally similar (see also section 4.2.3 below on clause-chaining): they always follow the main clause; there is in fact no overt coordinator, and the interpretation of non-initial conjuncts is always sequential.

Merging both Control clauses and non-initial conjuncts as complements is a crucial piece in accounting for the S/P-pivot: Under the MTC, given minimality, the moved subject targets the first argument of the matrix clause, viz., the object (*promise*-type verbs require a special treatment of their objects). Thus, if an S or P argument of the subordinate clause/a non-initial conjunct moves into the matrix clause/previous conjunct, it will invariably target the lower argument, viz., the P-argument (if there is one). In other words, the

[13]Note, though, that Truswell links the transparency of purpose clauses not to their structural integration but to their event properties.

MTC automatically derives this part of the S/P-pivot. A schematic derivation for an example like (4b) is given in (13) (the derivation includes a stop-over in Spec,TP; this will arguably be necessary for locality reasons, even if the language does not have systematic inversion; the derivation for an example with conjunction reduction would be essentially the same):

(13)



If purpose clauses and non-initial conjuncts were merged as adjuncts, this generalization could no longer be derived given that Control into adjunct clauses is normally only possible for subjects (see Hornstein 2001: 49 for the data and how this follows under the MTC).[14, 15]

[14]The purpose clause-like Control examples in Dixon (1994: 168) involve an intransitive matrix clause, which would be compatible with adjunct control and thus an adjunction structure, but at least some purpose clause-examples in Dixon (1972: 68, 377, ex. 52) involve a transitive matrix clause with P functioning as the controller. Hence, to derive the S/P-pivot, complementation is necessary after all.

[15]As mentioned in fn. 3, there is a version of conjunction reduction in Dyirbal where the antecedent in the initial conjunct is A rather than S/P. One possibility to account for the fact that A is the antecedent rather than P is to assume that such clauses are in fact adjuncts,

4.2.2. Only S and P can move

We will entertain two possibilities that account for why only S and P but not A can move out of Control clauses/non-initial conjuncts. First, A cannot move because A′-movement is involved and thus is blocked from moving for whatever reason accounts for the ban on ergative movement. Second, there is A-movement involved, and the configuration in syntactically ergative languages is such that A cannot undergo A-movement. We will discuss both options in turn, but we will conclude that a solution based on A-movement is more promising.

MTC involves A′-movement Under the MTC, movement out of a Control clause is usually taken to be A-movement, not the least given certain similarities with raising and the fact that the movement targets a theta- (and thus A-related) position.

In line with this, Control complements were originally treated as TPs (and thus like raising complements) in Hornstein (1999), contrary to the prevalent assumption in the Government and Binding era that they are CPs. In later work, though, see, e.g., Boeckx et al. (2010: 127ff.), Control complements are treated as CPs, in accordance with the more traditional assumption (an assumption that seems unavoidable at least in those languages that have overt complementizers in Control complements). But once a CP is present, questions pertaining to the locality of movement from the Control clause arise given the Phase Impenetrability Condition (PIC). If the non-finite clause counts as a strong phase, then movement from the embedded subject position (Spec,TP) to the matrix external argument position (Spec,vP) should not be possible – the TP-complement of the embedded C-head should be spelled out once the next higher phase head, viz., matrix v, is introduced, thereby bleeding movement from the embedded Spec,TP. We are not aware of any clear evidence in favor of the strong or weak phasal status of Control CPs and there is also not much discussion about this issue in the literature adopting the MTC. The most explicit discussion we have been able to find is in Nunes (2010: 95–98), who actually claims that there *is* an intermediate movement step to Spec,CP. Simplifying somewhat, one possible piece of indirect evidence is Control into

thereby precluding object control. A similar solution could be entertained for those languages mentioned in section 1 (like Sama Southern) where the controller of PRO can also be A.

indirect questions or clauses from which wh-movement has taken place as in (14):

(14) a. What did John try to do?
b. John wondered what to do.

In both examples, at the point when the embedded subject moves into the matrix clause, there will be an element in Spec,CP, which potentially could cause intervention for movement of the subject. While Boeckx et al. (2010: 76ff.) argue that under a relativized minimality perspective there is no intervention given that different features are involved (viz., wh- vs. theta-), Nunes (2010: 96) proposes that movement of the embedded subject via Spec,CP voids the intervention effect as it renders both specifiers equidistant.

Admittedly, the evidence for an intermediate movement step is not overwhelming, but for the sake of the argument we will assume that under the MTC, there is movement via Spec,CP.[16] The question then is whether this qualifies as A′-movement. Given that the final movement step into the matrix theta-position will count as A-movement, this is not clear, unless any movement via Spec,CP qualifies as A′-movement. Let's assume for the sake of the argument that it does (and set aside questions that may arise concerning improper movement), then, whatever moves out of the Control clause/the non-initial conjunct in a syntactically ergative language will actually have to be compatible with A′-movement.

As a consequence, in principle any theory of the ban on ergative movement (see Deal 2015, 2016, Polinsky 2017 for detailed discussion and references) can derive the S/P-pivot in the non-finite clause/the non-initial conjunct.

There are broadly two types of approaches: First, the ergative cannot be extracted because the absolutive moves across it (usually for case-licensing/EPP-checking, by means of A- or A′-movement, depending on the proposal) and then blocks A′-movement of the ergative. This usually has to do with locality, viz., the absolutive is closer to the higher A′-probe (minimality), see Campana (1992), Aldridge (2008) or the fact that the object occupies the only specifier of the vP-phase boundary, see Coon et al. (2014), or the fact that the absolutive

[16]Drummond & Hornstein (2014: 461) actually concede that the MTC is possibly not compatible with movement via phase-edges. Otherwise, the distinction between licit sideward movement from adjuncts and illicit regular A′-extraction from adjuncts can no longer be made (note, though, that this only concerns the vP-edge and not movement via Spec,CP).

cannot be case-licensed if the ergative moves instead, see Bittner & Hale (1996), Assmann et al. (2015).

As discussed above, apart from the version in Aldridge (2008: 983–987), where movement of the absolutive is triggered by an EPP-feature, these approaches fail if Dyirbal is analyzed as a tripartite language, where P receives case from v rather than T as in Legate (2012). Furthermore, as also mentioned above, the evidence for inversion is limited and we are not aware of any conclusive evidence in favor of it in Dyirbal apart from the fact that many examples have the absolutive in clause-initial position.

Under the second type of approach, the ban on ergative movement arises because (i) the ergative is a PP and PPs cannot move since the language allows neither P-stranding nor pied-piping, see Polinsky 2017: 25–28 or (ii) C probes (like certain ϕ-probes) are case-discriminating in that they can only attract goals with certain case-features, viz., unmarked/absolutive case, see Otsuka (2010), Deal (2016: 175–178).[17]

We are not aware of any conclusive evidence that the ergative is a PP in Dyirbal. While we have no information about P-stranding, the fact that the language allows flexible order (see, e.g., Dixon 1972: 107) could suggest that ergatives *can* move; if they were PPs, one would have to conclude that pied-piping is possible; consequently, the categorial status of ergatives is unlikely to be responsible for their inability to undergo A′-movement. Stipulating that C-probes are case-discriminating, viz., can only attract goals bearing unmarked/absolutive case, is, of course, a possibility and would derive the desired result, although it would essentially restate the facts.

In conclusion, then, deriving the S/P-pivot in Dyirbal on the assumption that there is an A′-movement step involved is not very promising. Not only is the evidence for A′-movement being involved in theta-related movement rather shaky, it is also not clear whether existing theories of syntactic ergativity can be fruitfully applied to languages like Dyirbal.

MTC involves A-movement only The alternative possibility to account for the S/P-pivot in Control/conjunction reduction is to relate it to a ban on

[17] See also Legate (2008a) for the proposal that the S/P-pivot follows from the fact that only the cases associated with a phase-head can undergo A′-movement (assuming that nominative originates on C) and Legate (2012: 190) for the proposal that only structurally-case marked DPs can undergo A′-movement.

ergatives to undergo A-movement. Given different theories of ergativity, this could be implemented in different ways:

Under the inversion approach where the absolutive moves across the ergative, often to an A-position like Spec,TP, one could argue that further A-movement of the ergative past the absolutive is blocked by Minimality. Obviously, this kind of approach will only work if there really is inversion and the absolutive targets an A-position; in addition, there is a danger that this incorrectly predicts there to be syntactic ergativity in Control and conjunction reduction in all inversion languages, contrary to fact (recall that West Greenlandic provides the best evidence for inversion, yet, relativization is the only domain with an S/P pivot in the language).

A different and more promising possibility is that the ergative generally cannot undergo A-movement. This may follow if the ergative is an inherent case, as is usually assumed in inversion approaches, or a PP (see Polinsky 2016: 65-68). In many languages, only DPs bearing structural case can undergo A-movement, viz., EPP-driven movement to Spec,TP; cf., e.g., the impossibility for PP-experiencers in French to undergo raising, see Preminger (2014), or the fact that in English object experiencer constructions the surface subject is a theme generated below the experiencer and moves across it to Spec,TP.[18] An analysis of languages like Dyirbal where A bears inherent case, while S and P bear a structural case (either both nominative or S nominative and P accusative) will thus straightforwardly derive the S/P-pivot if A-movement is only possible for structurally case-marked DPs.[19]

[18]Recall that ergatives can undergo A-movement/raising in some languages, see Deal (2016: 687–688); Polinsky (2016: 101–104) claims that what may look like raising in syntactically ergative languages actually constitutes a different construction, e.g., copy-raising or prolepsis. What would be crucial under our hypothesis is not the absence of raising but rather the existence of an S/P-pivot in raising; unfortunately, there is generally little empirical information available about raising in ergative languages which is why this hypothesis cannot be tested properly.

[19]Recall that Dyirbal retains the S/P-pivot even with pronouns, which display nominative-accusative case-marking (see Dixon 1994: 15-16). This shows that what is at stake is structural rather than morphological case.

Interestingly, Yidin displays an S/A-pivot in conjunction reduction with pronouns (which display nom-acc alignment like in Dyirbal), see Kazenin (1994: 89). Consequently, extra assumptions will be necessary to account for the switch in alignment depending on the morphological form.

4.2.3. Questions about the defectiveness of clauses

As discussed above, the trigger for movement in Control is not Case, given the possibility of multiple Case-assignment. Rather, movement is theta-driven because there are not enough arguments in the numeration for the number of theta-roles assigned by the predicates of that numeration. In addition, to limit the MTC, the subjects are taken to be active only until they have been involved in Agree with a probe bearing a full set of phi-features. This largely limits the MTC to non-finite clauses.

It has been argued that the MTC can also be extended to finite control, viz., Control clauses with fully inflected verbs, such as declaratives in Brazilian Portuguese or Balkan subjunctives. In Boeckx et al. (2010: 63–79) it is argued that movement from these finite complements is possible if the T-head is deficient in some way, viz., either lacks tense (as in Balkan subjunctives) or a full set of phi-features (3rd person in Brazilian Portugese has been analyzed as a default with T initially bearing only a number feature). In either case, Agree will not deactivate the subject and therefore it can move on into the matrix clause (the same analysis is then proposed for hyperraising).

We would like to propose that this logic, viz., a deficient T-head enabling A-movement out of a clause, can be straightforwardly extended to Control and conjunction reduction in syntactically ergative languages, given certain assumptions. Starting with Control, while there is no agreement on subordinate verbs, they bear a purposive marker rather than a tense marker like main clause verbs, suggesting that they are non-finite and thus count as deficient. If S and P are licensed by and thus agree with T in Dyirbal, they will not be deactivated in Control complements and thus must move into the matrix clause. The S/P-pivot thus can successfully be derived in a theory where both S and P are licensed by T as in Müller & Thomas (2017). It is much less clear how this result could be obtained if instead P is licensed by v (as in Legate 2012) given that there seems to be no reason to assume that v has an incomplete set of phi-features/is deficient in any other relevant sense.

Once we look at conjunction reduction, the defectiveness of final conjuncts may seem less obvious given that the verbs are marked for tense. We can think of one way in which non-initial conjuncts can still be defective: As described in Dixon (1972: 67–73), what is sometimes described as conjunction reduction is part of a more general phenomenon, viz., clause chaining, where the S/P-argument is silent. Now these topic chains in Dyirbal look different

from prototypical clause chaining constructions where usually only the last verb is finite, while the preceding ones (so-called medial clauses) are non-finite to varying degrees and often display switch reference, see, e.g., Weisser (2015). But given that the interpretation of topic chains in Dyirbal is sequential, non-initial clauses do not seem to be specified for independent/absolute tense. One possibility is thus to treat topic chains as reversed clause-chains with only the initial clause being fully finite, while all subsequent clauses are defective, which would be sufficient for A-movement out of them to be possible according to the MTC. Again, the S/P-pivot follows most straightforwardly if both S and P are licensed by T.[20]

A final question pertains to cross-linguistic variation in the degree of syntactic ergativity. Recall that we need to distinguish three types of languages, viz., languages that display syntactic ergativity only in A′-movement, those that also display it in Control and finally those that also display it in conjunction reduction. Those that in addition to A′-movement display an S/P-pivot in control can be assumed to involve Case-licensing via T. The presence/absence of an S/P-pivot in coordination could be related to various factors: (i) the nature of coordination, viz., not all languages may merge non-initial conjuncts as complements; (ii) the defectiveness of non-initial conjuncts, viz., not all languages may have clause-chaining with defective non-initial conjuncts; (iii) even if a language has clause-chaining with complementation, an S/A-pivot may still obtain once ergative arguments can A-move.

5. Conclusion

In this paper we have argued that syntactic ergativity in Control and conjunction reduction can be accounted for if the movement theory of Control is adopted. More precisely, the S/P-pivot with respect to what can be the antecedent and what can be zero follows from the assumptions (i) that Control clauses and non-initial conjuncts are merged as complements and (ii) that ergative arguments

[20]The tense-marking on non-initial clauses would thus be the result of an Agree relationship of an unspecified T-head with the fully specified T-head of the matrix clause, see Weisser (2015: 41).

Again, complications arise if P receives case from v (as in Legate 2012). One possibility to make movement of P possible nevertheless under such assumptions, is to tie its deactivation to a v that is connected to a T-head that bears tense. This would only be possible in main clauses, but not in (non-finite) Control clauses or non-initial conjuncts.

cannot undergo A-movement. This result obtains most straightforwardly in theories of ergativity where A receives inherent case, while both S and P receive structural absolutive/nominative case from T. The facts thus favor a two-way analysis of Dyirbal as in Müller & Thomas (2017) rather than a three way analysis as, e.g., in Legate (2012).

References

Aldridge, Edith. 2008. Generative approaches to ergativity. *Language and Linguistics Compass* 2(5). 966–995.

Assmann, Anke, Doreen Georgi, Fabian Heck, Gereon Müller & Philipp Weisser. 2015. Ergatives move too early: On an instance of opacity in syntax. *Syntax* 18(4). 343–387.

Bittner, Maria & Ken Hale. 1996. Ergativity: Toward a theory of a heterogeneous class. *Linguistic Inquiry* 27(4). 531–604.

Boeckx, Cedric, Norbert Hornstein & Jairo Nunes. 2010. *Control as movement*. Cambridge: Cambridge University Press.

Campana, Mark. 1992. *A movement theory of ergativity*. Montreal: McGill University Doctoral dissertation.

Coon, Jessica, Pedro Mateo Pedro & Omer Preminger. 2014. The role of case in A-bar extraction asymmetries: Evidence from Mayan. *Linguistic Variation* 14(2). 179–242.

Deal, Amy Rose. 2015. Ergativity. In Tibor Kiss & Artemis Alexiadou (eds.), *Syntax – theory and analysis. An international handbook. Volume 1*, 654–708. Berlin: Mouton de Gruyter.

Deal, Amy Rose. 2016. Syntactic ergativity: Analysis and identification. *Annual Review of Linguistics* 2(1). 165–185.

Dixon, Robert Malcolm Ward. 1972. *The Dyirbal language of North Queensland*. Cambridge: Cambridge University Press.

Dixon, Robert Malcolm Ward. 1979. Ergativity. *Language* 55(1). 59–138.

Dixon, Robert Malcolm Ward. 1994. *Ergativity*. Cambridge: Cambridge University Press.

Drummond, Alex & Norbert Hornstein. 2014. Some purported problems for the movement theory of Control. *Linguistic Inquiry* 45(3). 449–462.

Hornstein, Norbert. 1999. Movement and Control. *Linguistic Inquiry* 30(1). 69–96.

Hornstein, Norbert. 2001. *Move! A minimalist theory of construal*. Malden, MA: Blackwell.

Kazenin, Konstantin I. 1994. Split syntactic ergativity: Toward an implicational hierarchy. *STUF – Language Typology and Universals* 47(2). 78–98.

Larson, Richard K. 1988. On the double object construction. *Linguistic Inquiry* 19(3). 335–391.

Legate, Julie Anne. 2008a. Dyirbal ergativity. Paper presented at the 82nd LSA Annual Meeting, Chicago. Accessed September 18, 2023. https://www.ling.upenn.edu/ jlegate/lsa08h2.pdf.

Legate, Julie Anne. 2008b. Morphological and abstract case. *Linguistic Inquiry* 39(1). 55–101.

Legate, Julie Anne. 2012. Types of ergativity. *Lingua* 122(3). 181–191.

Legate, Julie Anne. 2014. Split ergativity based on nominal type. *Lingua* 148. 183–212.

Manning, Christopher D. 1996. *Ergativity: Argument structure and grammatical relations*. Stanford, CA: CSLI Publications.

Morgenroth, Lisa. 2013. Reanalyse syntaktischer Ergativität. Term paper, Department of Linguistics, University of Leipzig.

Müller, Gereon. 2009. Ergativity, accusativity, and the order of Merge and Agree. In Kleanthes K. Grohmann (ed.), *Explorations of phase theory. Features and arguments*, 269–308. Berlin: Mouton.

Müller, Gereon & Daniela Thomas. 2017. Three-way systems do not exist. In Jessica Coon, Diane Massam & Lisa Demena Travis (eds.), *The Oxford handbook of ergativity*, 279–307. Oxford: Oxford University Press.

Nunes, Jairo. 2010. A note on wh-islands and finite Control in Brazilian Portuguese. *Estudos da Língua(gem)* 8(2). 79–103.

Otsuka, Yuko. 2010. DP ellipsis in Tongan: Is syntactic ergativity real? *Natural Language & Linguistic Theory* 28(2). 315–342.

Palmer, Frank Robert. 1994. *Grammatical roles and relations*. Cambridge: Cambridge University Press.

Polinsky, Maria. 2016. *Deconstructing ergativity: Two types of ergative languages and their features*. Oxford: Oxford University Press.

Polinsky, Maria. 2017. Syntactic ergativity. In Martin Everaert & Henk van Riemsdijk (eds.), *The Wiley Blackwell companion to syntax, second edition*, 1–37. Oxford: Wiley-Blackwell.

Preminger, Omer. 2014. *Agreement and its failures*. Cambridge, MA: MIT Press.

Truswell, Robert. 2011. *Events, phrases, and questions*. Oxford; New York, NY: Oxford University Press.

Weisser, Philipp. 2015. *Derived coordination. A minimalist perspective on clause chains, converbs and asymmetric coordination*. Berlin: De Gruyter.