When Dependent Case is not enough

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Our claims

- Even if dependent case exists, we need Case-assignment via Agree (contra Levin & Preminger 2015)

- Dependent case theory makes wrong predictions about the absence of transitivity-sensitive agreement and languages with split intransitive case

- M. C. Baker’s (2015) proposal that “the same constituents are subject to case theory both as undergoers of case marking and as triggers of dependent case marking” cannot be maintained

- Agreement-based case splits in Kashmiri, Wampis and elsewhere suggests a closer link between φ-features and case than in dependent case theory

- It is possible to adapt both Agree and dependent case to these patterns but we argue that Agree is often more parsimonious

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1 The dependent case approach

In recent years analyses of case assignment along the lines of (1) have become increasingly influential. We refer to such approaches as dependent case theory (DCT).

(1) Morphologically marked cases (ACC/ERG/DAT) result from a relationship between two DPs rather than from a relationship between a head and a DP.

According to M. C. Baker (2015), dependent cases are assigned at the transfer to spell-out.

(2) Dependent case by c-command (M. C. Baker 2015: 48–49, our emphasis)

a. If there are two distinct NPs in the same spell out domain such that NP1 c-commands NP2, then value the case feature of NP2 as accusative unless NP1 has already been marked for case.

b. If there are two distinct NPs in the same spell out domain such that NP1 c-commands NP2, then value the case feature of NP1 as ergative unless NP2 has already been marked for case.

In Sakha, the spell-out domain for dependent accusative is the vP phase (Baker & Vinokurova 2010).

(3) Dependent case in Sakha (Baker & Vinokurova 2010: 602)

a. \[
\text{[vP Masha salamaat-*(y) türgennik [vP salamaat sie-te]]]}
\]
Masha porridge-ACC quickly eat-pst.3sg.sbj
‘Masha ate the porridge quickly.’

b. \[
\text{[vP Masha türgennik [vP salamaat-#y sie-te]]]}
\]
Masha quickly porridge-ACC eat-pst.3sg.sbj
‘Masha ate porridge quickly.’ (ACC on ‘porridge’ only if it has contrastive focus)

M. C. Baker leaves open the possibility that some cases, notably nominative, may be assigned by Agree. Baker & Vinokurova (2010) argue that this is the case for nominative and genitive case in Sakha, which always correlate with the presence of agreement.

Levin & Preminger (2015), however, note that a more parsimonious model would do away with case assigned under Agree completely. They propose that nominative and genitive in Sakha are not assigned under Agree, even though they correlate with agreement (“co-variation ... does not determine causation”, Levin & Preminger 2015: 236).

- Is Case ever assigned under Agree?

? Are there contexts where dependent case is not sufficient?

→ We suggest that Agree is sometimes the most parsimonious source of case

1.1 Empirical advantages of dependent case

DCT provides elegant analyses of a number of phenomena, including case-marking sensitive to transitivity and differential object marking, at least when it involves scrambling (see (3) in §1).

M. C. Baker (2015) shows that in Shipibo, (applied) benefactive arguments of can be added to unaccusatives (semi-productively): the original absolutive subject surfaces as ergative.
2 Mismatches between alignment and transitivity

DCT predicts fundamentally different alignment patterns to emerge in languages with and without morphological case (see Levin & Preminger 2015, Baker & Bobaljik 2017).

Alignment and transitivity

DCT, in its strongest form, makes specific predictions about possible alignment types:

- No ergative agreement alignment without case
- No case-marking in the absence of a case competitor

We discuss two types of counterexamples to this view here:

Languages without case-marking, in which agreement is sensitive to transitivity, for example Mayan, Jé and Cariban languages (Gildea & Castro Alves 2010), (6)

Languages exhibiting some degree of split intransitive case, for example Basque, (7)–(9)
2.1 No case marking

Coon (2017) argues that for languages without morphological case which exhibit ergative agreement alignment, inherent ergative case is motivated empirically and theoretically. Q’anjob’al lacks case morphology but displays transitivity-sensitive ergative agreement.

(6) Q’anjob’al (Coon, Mateo Pedro & Preminger 2014: 187)
   a. Max-ach y-il-’a.
      ASP-2ABS 3ERG-see-TV
      ‘She saw you.’
   b. Max-ach way-i.
      ASP-2ABS sleep-ITV
      ‘You slept.’

2.2 Split intransitive case (in Basque)

Baker & Bobaljik (2017) argue that true split intransitive ABS/ERG splits do not exist and that aspectual splits and null cognate objects can account for them (but see J. Baker 2018)

Unergative predicates with ERG are said to be underlyingly transitive (Laka 1993, Baker & Bobaljik 2017), the cognate object feeding dependent ERG assignment.

(7) Basque light verb construction (Preminger 2012: 278)
   Jon-ek dantzaz egin d-∅-u-∅.
   Jon-ERG dance do 3.ABS-SG.ABS-have-3SG.ERG
   ‘Jon danced.’

This is less clear for “simplex” unergatives (Preminger 2012) and cases of long-distance agreement (Etxepare 2006):

(8) Basque simplex unergative verb (Preminger 2012: 279)
   Jon-ek dantzatze egin ∅-u-∅.
   Jon-ERG dance.PRT 3.ABS-SG.ABS-have-3SG.ERG
   ‘Jon danced.’

(9) Basque long-distance agreement (Etxepare 2006: 333, Preminger’s glosses)
   a. [ Harri horiek altxa-tze-n ] probatu
      stone those.PL.ABS lift-NMLZ-LOC attempted
      d-u-te / d-it-u-zte.
      3.ABS-have-3PL.ERG 3.ABS-PL.ABS-have-3PL.ERG
      ‘They have attempted to lift those stones.’
   b. [ Harri horiek altxa-tze-n ] proba egin
      stone those.PL.ABS lift-NMLZ-LOC attempt do
      d-u-te / *d-it-u-zte.
      3.ABS-have-3PL.ERG 3.ABS-PL.ABS-have-3PL.ERG
      ‘They have attempted to lift those stones.’
Alignment and transitivity: summary

The predictions of DCT with respect to alignment and transitivity are not always met.

- Mayan, Jê and Cariban show agreement sensitive to transitivity in the absence of case
  - If agreement tracks case, case must be represented abstractly in languages
  - This is not just syncretism: there is no morphological case in the system at all
- We need a more abstract representation of case, even on a dependent case approach
- The cognate object account of Basque unergative predicates with ERG SBJ is problematic

3 Clauses as case competitors

M. C. Baker (2015) notes the following about CP complements:

> Without tinkering with the dependent case rule, we expect fully nominalized clauses to both undergo and trigger dependent case assignment, whereas true CPs should neither trigger dependent case nor undergo it. (M. C. Baker 2015: 197)

3.1 Romance causatives and dependent dative

Building on Marantz (1991), Folli & Harley (2007), Pitteroff & Campanini (2013) propose that dative is a dependent case in the Italian faire-infinitive. Both finite and non-finite CPs count as case competitors (see also Pineda, Schifano & Sheehan 2018). In Italian, French, and Catalan, ...

- ... causees associated with a transitive predicate are dative (cf. (10a)),
- while causees associated with an intransitive predicate are accusative (cf. (10b))

(10) French

\[
\begin{align*}
\text{a. } & \text{Il } l' & \text{/* lui=a } & \text{fait} & \text{[ partir ]}. \\
& 3\text{SG.M} & 3\text{SG.ACC} & 3\text{SG.DAT=has} & \text{made} & \text{leave-INF} \\
& & & & \text{He made him/her leave.} \\
\text{b. } & \text{Elle lui} & \text{/* l'=a } & \text{fait} & \text{[ manger les épinards ]} \\
& 3\text{SG.F} & 3\text{SG.DAT} & 3\text{SG.ACC=has} & \text{made} & \text{eat-INF the.PL spinach.PL} \\
& & & & \text{She made him/her eat the spinach.} \\
\end{align*}
\]

Kayne (1975) shows that sentential complements trigger DAT on the causee (see Pineda, Schifano & Sheehan 2018 for further discussion of Romance languages).
(11) French (Kayne 1975: 210)

Elle a fait admettre à Jean [ qu’il avait tort ].
3SG.F has made admit.INF DAT Jean that=3SG.M had wrong
‘She made Jean admit that he was wrong.’

Stowell (1981) mentions differences in the distribution of CPs and DPs; the same is true of finite CPs and DPs in French. For example, reflexive verbs such as s’apercevoir ‘to realise’, se plaindre ‘to complain’, se méfier ‘to mistrust’ can take nominal or CP complements.

- Nominal complements must be introduced by the preposition de
- Finite CP complements cannot be introduced by de

(12) French (examples from the internet)

a. Il se plaint [ de la musique trop forte ].
3SG.M REFLEX complain.3SG de the music too loud.F
‘He complains about the music being too loud.’

b. Il se plaint [ que cet expert n’ait pas examiné des photographies ... ].
3SG.M REFLEX complain.3SG that that expert NEG=has.SBJV.3SG NEG examined DET photos
‘He complains that that expert has not examined photographs ...’

--- CPs as case competitors: summary ---

CPs are a challenge for dependent case because ...

- They do interact with dependent case assignment, even when not nominal
- Across Romance, finite and non-finite CPs are case competitors, too
- Yet finite CPs and DPs are distributed differently
- → This weakens DCT as the connection between undergoing and triggering case is lost
- → This makes an analysis in terms of distinctness (Richards 2010) unlikely
4 Global case splits

Differential marking often involves local case splits: the properties of a single argument, say the object DP, determine its case-marking, e.g. in (13).

(13) Spanish

a. *Veo* la mesa.
   see.1sg the table
   ‘I see the table.’

b. *Veo* a la mujer.
   see.1sg DOM the woman
   ‘I see the woman.’


4.1 Kashmiri

In Kashmiri, direct objects (DOs) can be nom or dat\(^1\) in the imperfective.

- Person hierarchy: 1 > 2 > 3
- DAT appears when the person of the object matches or outranks the person of the subject
- The arguments are cross-referenced by agreement or clitics

→ It looks like agreement feeds Case assignment

(14) Kashmiri (Wali & Koul 1997: 155)

a. 1st person sbj, 2nd person obj → obj.nom

\[bi\] chu-s-at\[t\] parina:va:n
I.nom be.m.sg-1sg.sbj-2sg.obj you.nom teach.ptcp.prs
‘I am teaching you.’

b. 2nd person sbj, 1st person obj → obj.dat

\[t\] chu-kh me parina:va:n
you.nom be.m.sg-2sg.sbj i.dat teach.ptcp.prs
‘You are teaching me.’

\(^1\)Both DOs and indirect objects (IOs) are marked with what is referred to as DAT here. On DOs, this is a structural ACC, arguably syncrletic with DAT (Wali & Koul 1997, Béjar & Rezac 2009, Bárány 2018).
(15) Kashmiri (Wali & Koul 1997: 156)

a. **2nd person sbj, 3rd person obj → obj.nom**

\[
\begin{align*}
&tsi & chi-h-an & su & parina:va:n \\
&you.nom & be-2sg.sbj-3sg.obj & he.nom & teach.ptcp.prs \\
&'You are teaching him.'
\end{align*}
\]

b. **3rd person sbj, 2nd person obj → obj.dat**

\[
\begin{align*}
&su & chu-y & tse & parina:va:n \\
&he.nom & be.m.sg-2sg.obj & you.dat & teach.ptcp.prs \\
&'He is teaching you.'
\end{align*}
\]

\begin{tabular}{c|ccc}
\hline
\textbf{\textbullet} SBJ / \textbf{\textbullet} OBJ & 1 & 2 & 3 \\
\hline
1 & & NOM & NOM \\
2 & DAT & & NOM \\
3 & DAT & DAT & DAT \\
\hline
\end{tabular}

Table 1: Distribution of nom and dat on objects in the imperfective in Kashmiri

**Deriving the case split**  The problem for a “classic” Agree analysis of Kashmiri data is that Case valuation and φ-valuation happen at the same time. To derive the split, φ-valuation must apply first and feed Case assignment (Béjar & Rezac 2009, Georgi 2012, Bárány 2015, 2017).

→ Case assignment has to be “delayed” to after φ-agreement with several arguments

→ We need a mechanism that chooses nom, dat or other allomorphs: syntax, morphology?

**Assumptions**

- φ- and Case valuation are separate processes (Keine 2010, Georgi 2014)
- If φ-valuation happens before Case assignment, φ-features can determine Case
  – Languages (and acquirers) choose between [Case < φ] and [φ < Case]
- Case and person are complex: sets of features (Harley & Ritter 2002, Caha 2009)
- Agree is cyclic (Béjar & Rezac 2009): a probe that is not fully valued will probe again
  – A probe stops probing if it is fully valued or cannot find a goal any more
- Impoverishment can apply in syntax, strictly locally (Keine 2010)
(16) Person features (Harley & Ritter 2002, Béjar & Rezac 2009)

\[ [1] = \{ \text{SPEAKER, PARTICIPANT} \} \supset [2] = \{ \text{PARTICIPANT} \} \supset [3] = \{ \pi \} \]

(17) Cyclic Agree (Béjar & Rezac 2009)

b. $\times [3] \subset [1]$: $v$ valued by OBJ only

Derivations

Based on these assumptions, there are two types of derivations (Bárány 2017):

- In **direct** configurations, $v$ agrees with the subject *and* the object, cf. (17a)
  - This feeds impoverishment rule (19) which makes the verb assign NOM instead of DAT
- In **inverse** configurations, $v$ agrees with the object only, cf. (17b)
  - The context for impoverishment rule (19) is not met, the verb assigns DAT

$\rightarrow v$ assigns Case when its $\varphi$-probe cannot enter any Agree relations any more: $[\varphi < \text{Case}]$

(18) (Relevant) Case features in Kashmiri

(19) DAT impoverishment

<table>
<thead>
<tr>
<th>NOM: [A]</th>
<th>DAT: [A, B]</th>
</tr>
</thead>
<tbody>
<tr>
<td>CASE: [A, B]</td>
<td>(\rightarrow) CASE: [A] / (v[\alpha, \beta])</td>
</tr>
</tbody>
</table>

(20) $v$ in Kashmiri: $v[\varphi, \text{CASE A, B}]$

The impoverishment rule in (19) deletes $v$'s B feature and $v$ assigns [A] (= NOM) iff $v$ has been valued by two sets of person features ($\alpha, \beta$), i.e. two arguments.
Direct configurations  The relevant steps of the deriving (21) are shown in (22).\textsuperscript{2,3}

(21) 2nd person SBJ, 3rd person OBJ $\rightarrow$ OBJ.NOM

{\textit{tsi} chi-h-an su parina:va:n }
{ you.NOM be-2SG.SBJ-3SG.OBJ he.NOM teach.PTCP.PRS }
‘You are teaching him.’

(22) a. 

(22) b. 

(22) c. 

\textsuperscript{2}Case assignment in (22c), (24c) is in accordance with the PIC2, discussed in Chomsky (2001: 14).

\textsuperscript{3}$v$ moves to $T$ and on to $C$ in Kashmiri (Bhatt 1999).
Inverse configurations  The relevant steps of deriving (23) are shown in (24).

(23)  3rd person **sbj**, 2nd person **obj** → **obj.dat**

\[ su\; chu-y\; tse\; parina:va:n \]
\[ he.nom\; be.m.sg-2sg.obj\; you.dat\; teach.ptcp.prs \]

‘He is teaching you.’

(24)  a.

\[ \text{Agree} \]

\[ \begin{array}{c}
\text{vP} \\
\text{SBJ} \\
\left[ \varphi \begin{array}{c}
\text{uCASE} \\
3 \\
\end{array} \right] \\
\left[ \begin{array}{c}
v \\
\text{A, B} \\
\end{array} \right] \\
\text{V} \\
\text{DO} \\
\left[ \varphi \begin{array}{c}
\text{uCASE} \\
2 \\
\end{array} \right] \\
\end{array} \]

b.

\[ \text{Move} \]

\[ \begin{array}{c}
\text{T'} \\
\text{T} \\
\left[ \begin{array}{c}
\text{v} \\
\text{T} \\
\text{SBJ} \\
\left[ \varphi \begin{array}{c}
\text{uCASE} \\
3 \\
\end{array} \right] \\
\left[ \begin{array}{c}
v \\
\text{A, B} \\
\end{array} \right] \\
\text{V} \\
\text{DO} \\
\left[ \varphi \begin{array}{c}
\text{uCASE} \\
2 \\
\end{array} \right] \\
\end{array} \right] \\
\end{array} \]

\[ \text{Agree, [3] ∈ [2]} \]

\[ \text{B Move} \]

c.

\[ \begin{array}{c}
\text{T'} \\
\text{T} \\
\left[ \begin{array}{c}
\text{v} \\
\text{T} \\
\text{SBJ} \\
\left[ \varphi \begin{array}{c}
\text{uCASE} \\
3 \\
\end{array} \right] \\
\left[ \begin{array}{c}
v \\
\text{A, B} \\
\end{array} \right] \\
\text{V} \\
\text{DO} \\
\left[ \varphi \begin{array}{c}
\text{uCASE} \text{D A, B} \\
2 \\
\end{array} \right] \\
\end{array} \right] \\
\end{array} \]

\[ \text{D Case assignment} \]
4.2 Dependent case and global case splits

How could dependent case handle languages with global case splits?

**Movement**: Arguments move to a particular domain, so that their configuration or their order determines their Case\(^4\)

**Fine-grained c-command**: C-command of layered \(\varphi\)-features determines Case

We suggest that neither of these approaches works (or is attractive).

4.2.1 Movement Kashmiri allows coordinating pronominal objects with different cases (“asymmetric DOM”, Kalin & Weisser 2018). If DAT, but not NOM objects, move, this is unexpected.


\[
\begin{align*}
\text{a.} & \quad tsi & \text{chu-kh} & [\&P \ yi & ti & me ] \quad \text{tul-aːn.} \\
& \quad 2SG.NOM & \text{be.M.SG-2SG} & 3SG.PROX.NOM & \text{and 1SG.DAT} & \text{lift.PTCP.PRS} \\
& \quad \text{‘You are lifting him and me.’}
\end{align*}
\]

\[
\begin{align*}
\text{b.} & \quad tsi & \text{chu-kh} & [\&P \ me & ti & yi ] \quad \text{tul-aːn.} \\
& \quad 2SG.NOM & \text{be.M.SG-2SG} & \text{1SG.DAT} & \text{and 3SG.PROX.NOM} & \text{lift.PTCP.PRS} \\
& \quad \text{‘You are lifting him and me.’}
\end{align*}
\]

4.2.2 Layered \(\varphi\)-features and fine-grained c-command Another DCT analysis was suggested to us by Thomas McFadden (p.c.). McFadden suggests that if \(\varphi\)-features are layers in the extended projection of the DP as in (26a–c), the Kashmiri pattern can be derived by rule (26d).

(26) a. 1st person: \([1P \ 1 \ [2P \ 2 \ [3P \ 3 \ [\text{DP} ]]]]\)

b. 2nd person: \([2P \ 2 \ [3P \ 3 \ [\text{DP} ]]]\)

c. 3rd person: \([3P \ 3 \ [\text{DP} ]]\)

d. If person feature \(N\) on DP\(_1\) c-commands person feature \(N\) on DP\(_2\), assign DAT to DP\(_2\).

If only the highest layer (i.e. the highest person feature) can c-command out, (26d) derives the correct pattern for Kashmiri:

- In (14a), SBJ’s 1P layer **does not c-command** 1P on 2.OBJ (because it does not have one)
- In (14b), SBJ’s 3P layer **does c-command** OBJ’s 3P layer \(\rightarrow\) OBJ is assigned DAT

? This could arguably be formulated as the higher person phrase probing the lower one?

### Wampis

Wampis (Jivaroan; Peru) has an accusative marker =na (Peña 2015: 715–720).

- The external and the internal argument agree with the verb
- Third person DOs do not get accusative if and only if the subject is 1pl or 2nd person

(27) Wampis (Peña 2015: 718)

a. **iauāa=na mā-á-ma-ha-i**
   
   jaguar=ACC kill-HIAF-REC.PST-1SG.SBJ-DECL
   
   'I killed a jaguar.'

b. **amī iauāa mā-á-ma-mi**
   
   2SG jaguar kill-HIAF-REC.PST-2SG.SBJ.DECL
   
   'You killed a jaguar.'

c. **iauāa mā-á-ma-hi**
   
   jaguar kill-HIAF-REC.PST-1PL.SBJ.DECL
   
   'We killed a jaguar.'

Rule (26d) would derive ACC on third person objects with third person subjects, but not with 1sg subjects in Wampis — and it is not clear how layered φ-features could work in Wampis.

(28) a. Dependent case rule for Wampis
   
   If a 1sg or 3rd person DP₁ c-commands a 3rd person DP₂, assign DP₂ ACC.

b. Impoverishment rules for Wampis
   
   i. **CASE: [A, B] → CASE: [A] / v[1PL, 3]**
   
   ii. **CASE: [A, B] → CASE: [A] / v[2, 3]**

(28a) and (28b) derive the same patterns, but …

- (28a) cannot be expressed purely in terms of c-command like (26d)
- (28b) is analogous to the impoverishment rules for Kashmiri in (19)
Global case splits and dependent case: summary

Global case splits are a challenge for dependent case because ...

- The relative person features of DPs determine case-marking, ...
- ... not just c-command or different positions
- Asymmetric DOM argues against movement

→ Some mechanism must compare φ-features of DPs: Agree
→ Dependent case rules that are sensitive to φ-features of DPs would be redundant
→ GCSs are a dependent-marking analogue of inverse systems (Rezac 2011, Verbeke 2018)

5 Conclusions

We presented empirical challenges to dependent case theory:

- DCT makes wrong predictions about alignment and transitivity
  → There are languages with ergative agreement alignment, but no case
  → There are languages with split intransitive case
- CPs can be case competitors without being case-marked themselves
- Global case splits suggest that agreement feeds case-assignment
  → C-command is not enough for GCSs

? How many modalities of Case assignment are there?

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Abbreviations

1 = first person, 2 = second person, 3 = third person, abs = absolutive, acc = accusative, appl = applicative, asp = aspect, cis = cislocative, CSC = coordinate structure constraint, dat = dative, dct = dependent case theory, decl = declarative, det = determiner, DO = direct object, DOM = differential object marking, erg = ergative, f = feminine, fut = future, GCS = global case split, HIAF = high affectedness aktionsart, inf = infinitive, IO = indirect object, IPFV = imperfective, ITV = intransitive verb, LOC = locative, m = masculine, neg = negative, NMLZ = nominalizer, nom = nominative, obj = object, pfv = perfective, PIC = phase impenetrability condition, pl = plural, prox = proximal,prs = present,prt = preterite,pst = past,ptcl = particle,ptcp = participle,rec = recent, refl = reflexive, subj = subject, sbjv = subjunctive, sg = singular, tv = transitive verb.

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