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Direct/Inverse as Case

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1. Introduction: What inverse is (not)

What does the inverse look like?

Algonquian languages have a verb form known as the ***inverse***: in comparison to the unmarked ('direct') verb form (1), the assignment of person features to the agent and patient roles is 'inverted' (2).

Plains Cree (Algonquian)

DIRECT

(1) a **Ki**=wâpam-**i**-n.
2.Agent see DIR LOC
'**You** see me'

b **Ki**=wâpam-**â**-wak.
2.Agent see DIR 3PL
'**You** see them'

c Wâpam-**ê**-**wak**.
see DIR **3PL.Agent**
'**They (prox)** saw him/her (obv)'

INVERSE

(2) a **Ki**=wâpam-**it**-in.
2.Patient see INV LOC
'I see **you**'

b **Ki**=wâpam-**iko**-wak.
2.Patient see INV 3PL
'S/he sees **you**'

c Wâpam-**iko**-wak.
see INV **3PL.Patient**
'S/he (obv) saw **them(prox)**'

What conditions the presence of the direct/inverse constrast?

…found on ***transitive verbs*** with ***animate participants*** and sensitive to ranking effects. The combination of these syntactically conditioned pair-wise constraints derives the so-called person hierarchy. (">" means "c-commands".)

- direct verb forms: 2>1 2/1>3 3>3'
- inverse verb forms: 1>2 3 >2/1 3'>3

(3) *Relation between the direct/inverse contrast and animacy*

DIRECT →				
2 (hearer)	1 (speaker)	3 (proximate)	3' (obviative)	0 (inanimate)
			← INVERSE	
LOCAL (speech act participant)		NON-LOCAL (non speech act participant)		

Where do we find the direct/inverse contrast?

…coded by a closed class of suffixes—labeled DIRECT and INVERSE—that attach to the verb stem.

What does the direct/inverse contrast do?

…codes how thematic roles map onto agreement

(4) a AGR$_{\textbf{AGENT}}$-[…]-*verb*-**DIRECT**-[…]-AGR$_{\textbf{PATIENT}}$ cf. (1b)

b AGR$_{\textbf{PATIENT}}$-[…]-*verb*-**INVERSE**-[…]-AGR$_{\textbf{AGENT}}$ cf. (2b)

Question: What is the formal basis of the direct/inverse contrast?

Hypothesis 1: direct is a kind of active construction; inverse is a kind of passive construction
(Howse 1844, Lacombe 1874, Hunter 1875, Jones 1911, Voegelin 1946; LeSourd 1976, Rhodes 1976, Jolley 1982)

Hypothesis 2: both direct and the inverse are transitive active constructions
(Bloomfield 1958, Bloomfield 1962, Hockett 1966, Wolfart 1973).

Hypothesis 3: independent factors converge to create the effect of the direct/inverse contrast
(Dahlstrom 1991; Dryer 1996; Halle & Marantz 1993; herein)

§2 The direct/inverse contrast reflects a split case system
- direct/inverse reflects case-marking (cf. Halle & Marantz 1993)
- direct morphology codes a nominative-accusative configuration
- inverse morphology codes an ergative-nominative configuration

§3 Deriving the case split
- representation of transitive predicates
- structural determination of case

§4 Mapping case onto agreement
- (anaphoric) linking of Case-positions to agreement

Data set: The data is drawn primarily from Plains Cree (*y*-dialect) and Swampy Cree (*n*-dialect).
Given that the direct/inverse distinction is a feature of all Algonquian languages, the proposal, if tenable, presumably generalizes to all Algonquian languages.

2. Direct/inverse is split case

§2.1 Accusative versus ergative alignment
§2.2 The locus of case-marking
§2.3 Algonquian verbal agreement is case-sensitive
§2.4 Algonquian has a person-sensitive case-split

2.1 Accusative versus ergative alignment

- Terminological conventions (Comrie 1989, Blake 1994, Dixon 1994)
  subject = single argument of an intransitive verb
  agent and *patient* = arguments of a transitive verb

(5) ACCUSATIVE ALIGNMENT

	NOMINATIVE	**ACCUSATIVE**
transitive verb	agent	**patient**
intransitive verb	subject	

(6) ERGATIVE ALIGNMENT

	~~NOMINATIVE~~	~~**ACCUSATIVE**~~
transitive verb	**agent**	**patient**
intransitive verb		subject

- Accusative/Ergative are marked cases:
  (i) Acc/Erg is the ***marked member of the opposition***:
  ...identifies only one type of argument (Accusative object; Ergative subject);
  (ii) if a language has overt case-marking, and if it also permits zero case-marking, Acc/Erg is singled out as the ***morphologically marked case*** (via case inflection or case particles).

2.2 The locus of case-marking

- Case may be marked on full nouns or pronouns (dependent marking), or it may be reflected in the pattern of verbal agreement (head-marking). This holds of both accusative and ergative alignment.

CASE-MARKING ON NOUNS (dependent marking)

(7) *Korean* (Nom/Acc)

a Minca-**ka** Yongho-**lul** mann-ss-ta.
NOM ACC meet-PAST-DECL
'Minca met Yongho' (Sohn 1994:231)

b Nalssi-**ka** coh-ta.
weather-NOM good-DECL
'The weather is good' (Sohn 1994:235)

(8) *Kalkatunga; Australian* (Erg/Nom)

a Kuntu wampa-**ngku** kaun muu-yan-puni-mi
not girl-**ERG** dress.**NOM** dirt-PROP-CAUS-FUT
'The girl will not dirty the dress'

b Kaun muu-yan-ati.
dress.**NOM** dirt-PROP-INCH
'The dress is dirty'
(Blake 1979; cited in Blake 1994:166)

CASE-MARKING ON PRONOUNS (dependent marking)
[data gap?: is there an attested language that correspond to English'?]

(9) *English*; *Germanic* (Nom/Acc)

a **She** (NOM) saw **her** (ACC).

b **She** (NOM) fell.

(10) *English'* (Erg/Nom) only pronouns have erg pattern

a **She** (ERG) saw **her** (NOM).

b **Her** (NOM) fell.

CASE-MARKING VIA VERBAL AGREEMENT (head-marking)

(11) *Kinyarwanda; Bantu* (Nom/Acc)

a **B-** á- **k-** íib -ye
3PL.**NOM**-PAST-3.**ACC**-steal-ASP
'They stole it' (Kimenyi 1978:185)

b Ábáana **b**-a-gii-ye.
children 3PL.**NOM**-PAST-go-ASP
'The children left' (Kimenyi 1978:59)

(12) *Basque* (Erg/Nom)

a Gizona ikusi **d**-u-**t**
man.NOM see3s.**NOM**-AUX-1s.**ERG**
'I have seen the man'

b Gizona etorri **d**-a.
man.NOM come 3s.**NOM**-AUX
'The man has come'
(Brettschneider 1979:376, 378;
cited in Palmer 1994:104)

2.3 Algonquian verbal agreement is case-sensitive

- Algonquian direct/inverse verb forms display split case alignment.
  - Direct verb forms show accusative alignment: transitive **agent** = intransitive **subject**, (13-14)
  - Inverse verb forms shows ergative alignment: transitive **patient** = intransitive **subject**, (15-16)

*direct verb forms: accusative alignment (**LOCAL** > 3)*

(13)
a. **ni** = wâpam -â - w
1.AGENT see DIR 3
'I see him/her'

b. **ni** = wâpam -â - nân
1.AGENT see DIR 1pl
'We see him/her '

c. **ki** = wâpam -â - w
2.AGENT see DIR 3
'You see him/her'

d. **ki** = wâpam -â - naw
2.AGENT see DIR pl
'We (incl) saw him/her'

e. **ki** = wâpam -â - wâw
2.AGENT see DIR 2pl
'You (pl) saw him/her'

(14)
a. **ni** = kisiwâsi - n
1.SUBJ angry sg
'I am angry'

b. **ni** = kisiwâsi - nân
1.SUBJ angry 1pl
'We are angry'

c. **ki** = kisiwâsi - n
2.SUBJ angry sg
'You am angry'

d. **ki** = kisiwâsi - naw
2.SUBJ angry pl
'We (incl) are angry'

e. **ki** = kisiwâsi - nâwâw
2.SUBJ angry 2pl
'You (pl) are angry'

proclitic represents Nom in the Acc system

*inverse verb forms: ergative alignment (3 > **LOCAL**)*

(15)
a. **ni** = wâpam - ik - (w)
1.PATIENT see INV 3
'S/he sees me'

b. **ni** = wâpam - iko - nân
1.PATIENT see INV 1pl
'S/he sees us'

c. **ki** = wâpam - ik - (w)
2.PATIENT see INV 3
'S/he sees you'

d. **ki** = wâpam - iko - naw
2.PATIENT see INV pl
'S/he sees us (incl)'

e. **ki** = wâpam - iko - wâw
2.PATIENT see DIR 2pl
'S/he sees you (pl)'

(16)
a. **ni** = kisiwâsi - n
1.SUBJ angry sg
'I am angry'

b. **ni** = kisiwâsi - nân
1.SUBJ angry 1pl
'We are angry'

c. **ki** = kisiwâsi - n
2.SUBJ angry sg
'You am angry'

d. **ki** = kisiwâsi - naw
2.SUBJ angry pl
'We (incl) are angry'

e. **ki** = kisiwâsi - nâwâw
2.SUBJ angry 2pl
'You (pl) are angry'

PRO clitics represent ~~Erg~~ argument Nom in the Erg system

Dir/Indir is sensitive to person hierarchy

2.4 Algonquian has a person-sensitive case-split

- The Algonquian case split is sensitive to person features:
  agreement with local speech act participant (1st and 2nd person) = Nominative argument
  - Direct verb forms (NOM/ACC): LOCAL agreement = Nominative agent/subject
  - Inverse verb forms (ERG/NOM): LOCAL agreement = Nominative patient /subject

- Person-sensitive split-case is attested in other languages; e,g, Rembarnga
  if Agent > Patient OBJ-SUBJ-Verb
  if Patient > Agent, then Ergative alignment OBJ-***n***-SUBJ-Verb

(17) *mapping of Case to person features in Rembarnga*

Accusative alignment →			
1	2	**3 plural**	3 singular
			← Ergative alignment

- Rembarnga agreement codes person-senstivie grammatical function:
  (18a) unmarked verb form: OBJ- SUBJ-Verb
  (18b) marked verb form: OBJ-**n**-SUBJ-Verb

(18) *Rembarnga* (Australian)

a. Pa-**nga**-na
3PL.OBJ-1.SUBJ-see
'I saw them'

b. **Nga-n**-pa-na
1.OBJ-N-3PL.SUBJ-see
'They saw me'
(adapted from Blake 1994: 121, 123)

(19) *Plains Cree* (Algonquian)

a. **ni**=wâpam-â-wak
1 see DIR 3PL
'I saw them'

b. ni=wâpam-**ik**-wak
1 see INV 3PL
'They saw me'

Another language where case- marking is sensitive to a nominal hierarchy is Fore, a Papuan language:

(20) *mapping of Case to noun type in Fore*

Accusative alignment →					
pronoun	personal name	kin term	human	animate	inanimate
					← Ergative alignment

- Fore word order is person-sensitive:
  (21a) unmarked word order: O S V (ACCUSATIVE ALIGNMENT)
  (21b) marked word order: S-**wama** O V (ERGATIVE ALIGNMENT)

(21) *Fore* (Papua New Guinea)

a. Yagaa wá aegúye
pig man.NOM 3s.hit.3s
'The man kills the pig'

b. Yagaa-**wama** wá aegúye
pig-ERG man.NOM 3s.hit.3s
'The pig kills the man'
(Blake 1994: 123)

(22) *Plains Cree* (Algonquian)

a. Kî = wâpam - â – w John Mary-wa.
PERF see DIR 3 John(PROX) Mary OBV
'John(prox) saw Mary(obv)'

b. Kî = wâpam - **ik** - (w) John Mary-wa.
PERF see INV 3 John(PROX) Mary OBV
'Mary(obv) saw John(prox)'

3. Deriving the case split in Algonquian

- Results so far:
  (i) Algonquian agreement is cued to a person features.
  (ii) The same factors that condition split case in other languages are at play in Algonquian
- The person-sensitive split case-marking seen in Algonquian reflects the convergence of two mechanisms:
  §3.1 Theta-theoretic properties of *v*P
  §3.2 Case-theoretic properties of Accusative/Ergative alignment

3.1 Theta-theoretic properties of *v*P

- The Theta Criterion imposes a one-to-one correspondence between **theta-roles** and **argument positions**.

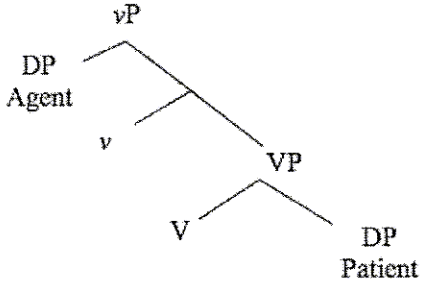
(23) *Theta Criterion (version I)*
  (i) Each argument is assigned one and only one theta role.
  (ii) Each theta role is assigned to only and only one argument. (Haegeman 1994:54)

- In Minimalism, the Theta Criterion is derived by feature checking (Hornstein):
  - an argument expression (DP) is introduced into the derivation to check theta-features
  - verbal heads are the locus of theta-features
  - there is a one-to-one correspondence between **theta-features** and **verbal heads**.

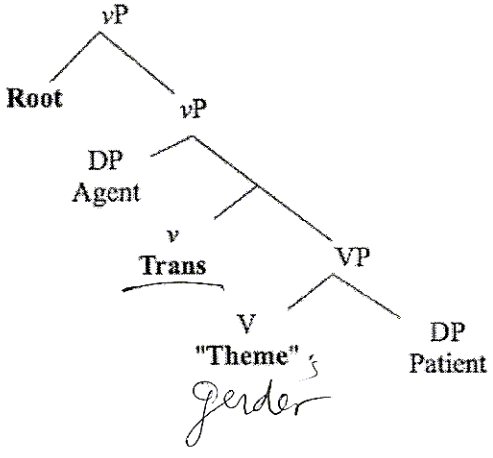
(24) *Theta Criterion (version II)*
  (i) Each verbal head has one and only one theta-feature.
  (ii) Each theta-feature is associated with one and only one verbal head.

- *Theta Criterion II* imposes is a one-to-one correspondence between verbal heads an argument positions. (cf. Hale & Keyser 1993, Chomsky 1995, Kratzer 1996, Borer 2005a).
  - the external agent argument of a transitive predicate is introduced by "small v"
  - the internal patient argument of a transitive predicate is introduced by "big V"
- Applying the articulated vP structure to Algonquian morphosyntax yields the following:
  (i) "Roots" are modifiers adjoined to *v*P (Déchaine 2003, Reinholtz 2006)
  (ii) "Abstract finals" spell-out small *v* (Hirose 2000)
  (iii) "Theme signs" spell-out big V (Hirose 2000)

(25) a *articulated vP Structure*



b *articulated vP structure in Algonquian*



- Algonquian roots are obligatorily augmented by suffixes—transitivizing "finals" and "theme signs"—which code valency (intransitive, transitive), aspect (state, process, event), and argument type (inanimate/animate).

(26) a *Miyosiw.*
[miyo-**si**]=w
good-STAT.*anim*=3
's/he is well'

b *Miyonam.*
[miyo-**n-am**]
good-TRANS.by.hand-*inanim*
's/he made it better'

(27) a *Kiskisiw.*
[kiskis-**i**]=w
remember-PROCESS-3
's/he remembers' (AH64)

b. Kiskisohêw.
[kiskiso-**h-ê**]=w
[remember-TRANS-*anim*]=3
's/he made him/her remember'

(26') a $[_{VP}\ [_{ROOT}\ \textbf{\textit{miyo}}\ ]\ \ [_{VP}\ pro_{anim}\ [_{V}\ \textbf{-\textit{si}}_{STATE.ANIM}\ ]\ ]$

b $[_{vP}\ [_{ROOT}\ \textbf{\textit{miyo}}\ ]\ [_{vP}\ pro\ [_{v}\ \textbf{-\textit{n}}\ [_{VP}\ pro_{anim}\ [_{V}\ \textbf{-\textit{am}}_{inanim}\ ]\ ]\ ]$

(27') a $[_{VP}\ [_{ROOT}\ \textbf{\textit{kiskis}}\ ]\ \ [_{VP}\ pro_{anim}\ [_{V}\ \textbf{-\textit{i}}_{PROCESS.ANIM}]\ ]$

b $[_{vP}\ [_{ROOT}\ \textbf{\textit{kiskiso}}\ ]\ [_{vP}\ pro\ [_{v}\ \textbf{-\textit{h}}\ [_{VP}\ pro_{anim}\ [_{V}\ \textbf{-\textit{ê}}_{ANIM}\ ]\ ]\ ]$

3.2 Case-theoretic properties of Accusative/Ergative alignment

- What is Case? Possible answers include saying that Case is a(n)…
  Hypothesis 1: relation between a head (e.g. V, Infl, P, Agr) and an argument
  Hypothesis 2: kind of aspect-marking (Borer 1993)
  Hypothesis 3: (uninterpretable) feature (Chomsky 1995)
  Hypothesis 4: scope-assigning mechanism (Hornstein (1995, 2001)
  Hypothesis 5: D-feature for marked Case (Acc, Erg), and Nom elsewhere (Bittner & Hale 1996a,b)
- We adopt a combination of Hypotheses 4 and 5:
  (i) marked Case (Acc, Erg) has a fixed scope position within *v*P, Nom Case has wide scope
  (ii) D-feature forces marked structural Case (Acc/Erg)

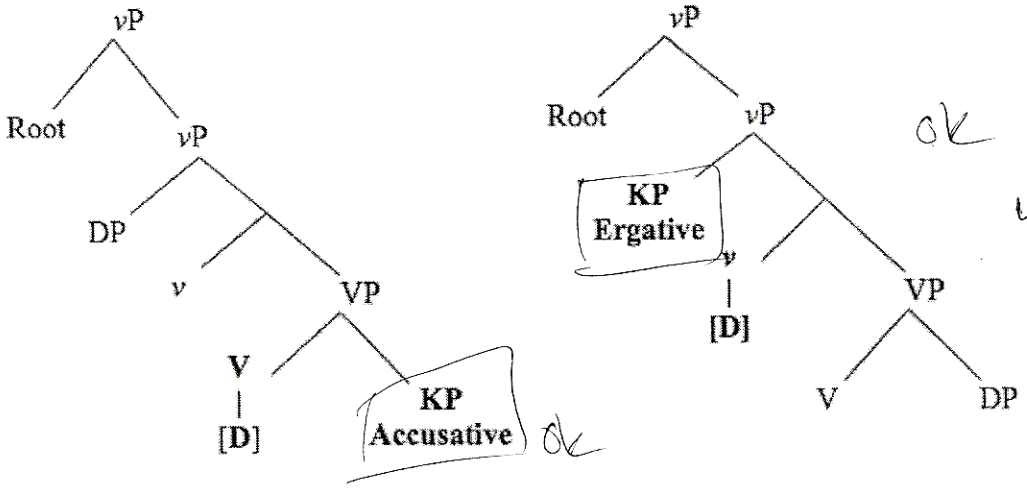
(28) *Split-case analysis of direct/inverse*

LOCUS OF D-FEATURE	MARKED CASE (KP)	TARGET OF MARKED CASE	VERB FORM
V	Accusative	Patient	DIRECT
v	Ergative	Agent	INVERSE

(29) a Ni=wâpam-â=w.
1.Agent see DIR 3.Patient
'I see her/him'

b Ni=wâpam-ik=(w).
1.Patient see INV 3.Agent
'S/he sees me'

(30) a Accusative alignment b Ergative alignment



3.2.1 Accusative alignment

- The 'theme' suffixes instantiate a D-feature on "big V", i.e force Accusative case
  - (i) they sub-classify according to whether they combine with VTA or VTI stems.
    - (31) theme suffixes with VTA (direct) verb stems: *-i, -â, -ê*
    - (32) theme suffixes with VTI verb stems *-ê, -am*
  - (ii) they are traditionally described as specifying agent-patient pairings
    …we analyze them as restricting the value of the D-feature on "big V".

(31) VTA stem *wâpam-* 'see an animate entity'

a	Ki=wâpam-**i**-n. 2.Agent see DIR.LOC 'You see me'	*-i*: 2 →**1**	[V –$i_{LOC:1}$]
b.i	Ni=wâpam-**â**-w. 1.Agent see DIR 3 'I see him/her'	*-â*: 1 → **3anim**	[V –$â_{ANIM}$]
b.ii	Ki=wâpam-**â**-w. 2.Agent see DIR 3 'You see him/her'	*-â*: 2 → **3anim**	[V –$â_{ANIM}$]
c	Wâpam-**ê**-w. see DIR 3 'S/he(prox) saw him/her(obv)'	*-ê*: 3 → **3anim.obv**	[V –*ê*]

(32) VTI stem: *wâpaht-* 'see inanimate entity'

a	Ni=wâpaht-**ê**-n. 1.NOM see TH SG 'I see it'	*-ê*: 1 → **3inanim**	[V –*ê*]
b	Ki=wâpaht-**ê**-n. 1.NOM see TH SG 'You(sg) see it'	*-ê*: 2 → **3inanim**	[V –*ê*]
c	Wâpaht-**am**-(w). see TH 3.NOM 'S/he sees it'	*-am*: 3anim → **3inanim**	[V –am_{INANIM}]

(31)' a $[_{ROOT}$ ***wâpa-*** $[_{vP}$ pro $[_{v}$ ***-m***$]$ $[_{VP}$ $[_{V}$ $-i_{LOC:1}$ $]$ [pro]] VTA stem

b $[_{ROOT}$ ***wâpa-*** $[_{vP}$ pro $[_{v}$ ***-m***$]$ $[_{VP}$ $[_{V}$ $-â_{ANIM}$ $]$ [pro]]

c $[_{ROOT}$ ***wâpa-*** $[_{vP}$ pro $[_{v}$ ***-m***$]$ $[_{VP}$ $[_{V}$ $-ê$ $]$ [pro]]

(32)' a $[_{ROOT}$ ***wâpa-*** $[_{vP}$ pro $[_{v}$ ***-m***$]$ $[_{VP}$ $[_{V}$ $-ê$ $]$ [pro]] VTI stem

b $[_{ROOT}$ ***wâpa-*** $[_{vP}$ pro $[_{v}$ ***-m***$]$ $[_{VP}$ $[_{V}$ $-am_{INANIM}$] [pro]]

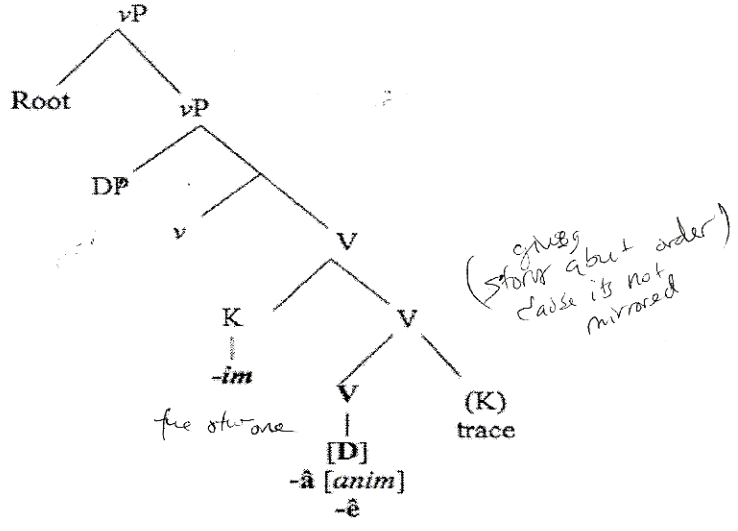
- A special object suffix (*-im*) can be positioned between the verb stem and the theme marker.
  (i) *-im* is translated as 'the other one'
  (ii) denotes the presence of a referentially independent argument;
  (iii) locus of discourse-linked reference (Déchaine & Wiltschko 2002, Muehlbauer *in prep.*)
  (iv) here analyzed as the spell-out of Accusative K(ase)

(33) a Ni=wâpam-**im**-â-wa.
1 see ACC DIR OBV
'I saw the other one(obv)'

b Ki=wâpam-**im**-â-wa.
2 see ACC DIR OBV
'You saw the other one'

c Wâpam-**im**-ê-w.
see ACC DIR-3
'S/he(prox) saw the other one'

(34) *-im* as the spell-out of Accusative Kase



3.2.2 Ergative alignment

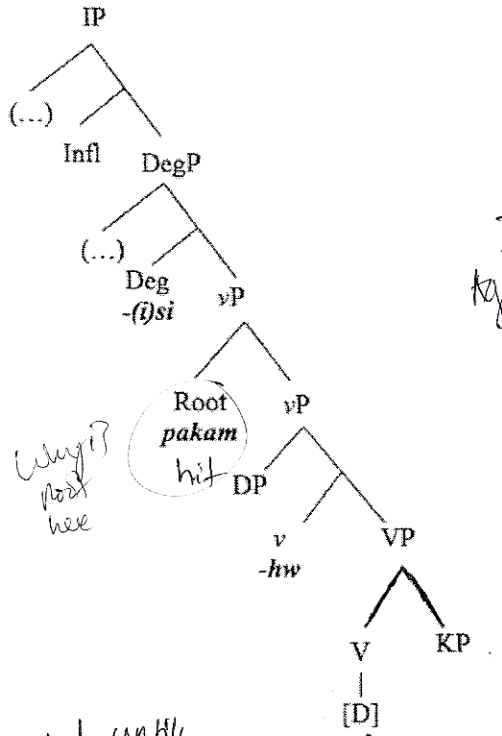
- The inverse suffix *–ik(w)* correlates with a D-feature on "small v", which forces Ergative Case
  (i) inverse and direct suffixes are introduced in distinct positions (*pace* Dahlstrom, Brittain)
  (ii) inverse suffix *-ik(w)* is introduced in Infl (and not in "small v")
- Reasons for positioning inverse in Infl
  (i) "small v" is locus of transitivising morphology which is insensitive to Case alignment
  (ii) diminutive suffix *–(i)si* confirms direct suffix is vP-internal and inverse suffix is vP-external
    - diminutive follows the direct suffix, (35a)
    - diminutive precedes the inverse suffix, (35b)

  (assumption: diminutive *–(i)si* is a Degree head sister to *v*P)

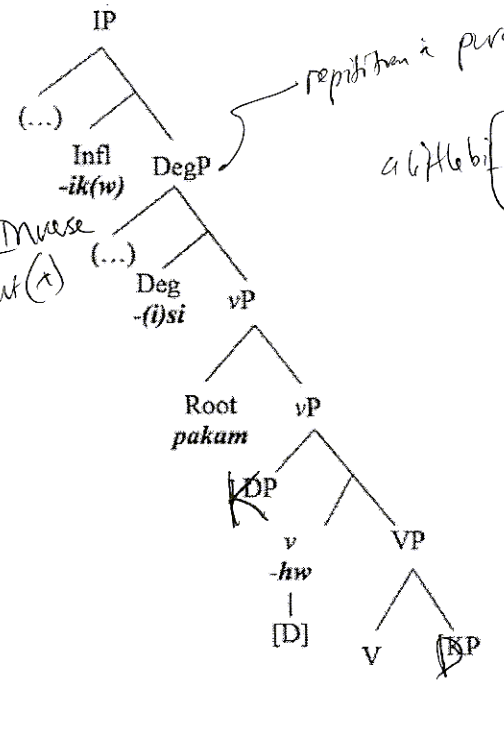
(35) a [pakamahw-ê]-**si**-w
hit.so DIR DIM 3
'he hits him a little bit'

b …[pakamaho]-**si**-**ko**-t…
hit.so DIM INV 3 (conjunct)
'he(obv) hits him a little bit'
(Wolfart 1973:61*b*)

(36) a *diminutive + Accusative alignment*



b *diminutive + Ergative alignment*



4. Mapping Case onto Agreement

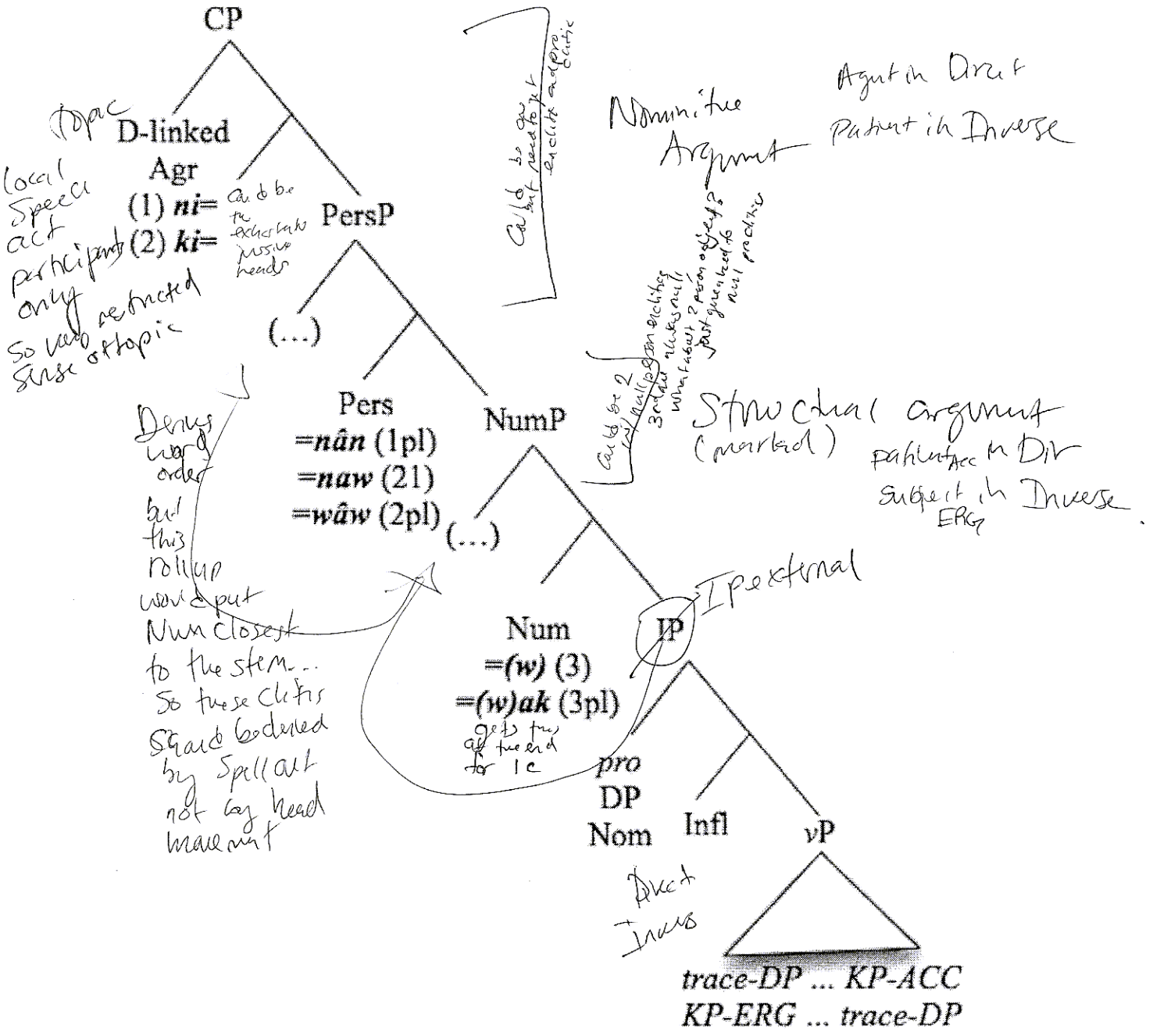
- Results so far: Acc and Erg are marked structural Cases associated with vP-internal argument positions
- Remaining to be accounted for: Nom Case
  - (i) Nominative is the elsewhere Case assigned to "bare DPs" that have raised to Spec, IP
  - (ii) Movement of the Nom argument captures the fact that it has higher scope (cf. Hornstein 1995)

(37) Mapping Nominative Case

verb form	Marked structural Case (KP)	Nominative (DP)	Position	
DIRECT	Accusative	agent	Spec,IP	(43a)
INVERSE	Ergative	patient	Spec,IP	(43b)

- There are three IP-external agreement positions (Déchaine 1999)
  - (i) Discourse-linked agreement (D proclitic in Spec,CP);
  - (ii) Person-sensitive number agreement (Person enclitic)'
  - (ii) Person-sensitive number agreement (Person enclitic)
- Linking Case to Agreement:
  - (i) Argument with highest scope (Nominative DP) links first.
  - (i) Nominative DP links to highest Agreement available (D/Pers, else Num)
  - (ii) Acc/Erg KP links to highest Agreement available (D/Pers, else Num)

(38) Linking Case-positions to Agreement-positions



(39) Agreement sub-paradigms

sub-paradigm	DIRECT		INVERSE		
	Nom	Acc	Erg	Nom	
"mixed" series	1/2	3	3	1/2	discussed here
"local" series	2	1	1	2	not treated here
"3rd person" series	3	3'	3	3'	discussed here in part

- (40-41) 3 Agreement positions (D/Pers/Number): Nom links to D/Pers Acc/Erg links to Number
  (42-43) 2 Agreement positions (D/Number): Nom links D Acc/Erg links to Number
  (44-45) 1 Agreement position (Number): Nom links to Number

DIRECT NOM-ACC

(40) a **Ni**=wâpam-â=**nân**=**ak**.
1.NOM see DIR 1pl pl.ACC
'We see them'

b **Ki**=wâpam-â=**wâw**=**ak**.
2. NOM see DIR 2pl pl.ACC
'You(pl) see them'

(42) a **Ni**=wâpam-â=**wak**.
1.NOM see DIR pl.ACC
'I see them'

b **Ki**=wâpam-â=**wak**.
2.NOM see DIR pl.ACC
'You(sg) see them'

(44) Wâpam -ê - **wak**.
see DIR pl.NOM
'They see him/her(OBV)'

INVERSE ERG-NOM

(41) a **Ni**=wâpam-iko=**nân**=**ak**.
1.NOM see INV 1pl pl.ERG
'They see us'

b **Ki**=wâpam-iko=**wâw**=**ak**.
2. NOM see INV 2pl pl.ERG
'They see you(pl)'

(43) a **Ni**=wâpam-ik=**wak**.
1.NOM see INV pl.ERG
'They see me'

b **Ki**=wâpam-ik=**wak**.
2.NOM see INV pl.ERG
'They see you(sg)'

(45) Wâpam -ik - **wak**.
see INV 3. pl.NOM
'S/he(OBV) sees them'

5. Conclusion

5.1 Language-internal consequences

- Consequence 1: derives indefinite subject construction
  (i) '3rd person' series (indefinite>3) is necessarily based on direct Nom-Acc forms
  Why? …because this is the only context where Acc = 3
  (ii) 'mixed' series (indefinite>1/2) is necessarily based on inverse Erg-Nom forms
  Why? …because this is the only context were Nom = 1/2 (i.e. LOCAL patient)
  (iii) part of a larger series of 'inverse elements' (Wolfart 1973:58)

(46) a Wâpam -**â** - wak.
see DIR pl.ACC
'Someone sees them/ They are seen'

b —

(47) a —

b Ni=wâpam-**ikawi**-nân.
1.NOM see -ikawi-1pl
Someone sees us (excl)'

- Consequence 2: "3rd person" can map onto D, Pers or Num; correctly predicts variation in number marking

		D	Pers	Number	
Blackfoot	direct inverse	 √	 √	√ √	(48)
Potawatomi		√	√		(49)
Eastern Swampy Cree	direct: 3NOM inverse: 3ERG		 √	√	(50)
Plains Cree				√	(51)

(48) *Blackfoot*

a [ikákomimm-ii]-**yi**
love-DIR-pl.NOM
'**they** love him/them'

b **ots**-[ikákomimm-ok]-**oaa-yi**
3.NOM-love-INV-pl.NOM-pl.NOM
'he/they love(s) **them**'

(49) *Potawatomi*

a /**w**-[wapm-a]-**wa-n**/
3.NOM-see-DIR-pl-OBV.ACC
'**they** see **the other(s)**'

b /**w**-[wapm-uk]-**wa-n**/
3.NOM-see-INV-pl-OBV.ERG
'**the other(s)** see(s) **them**'

(50) *Eastern Swampy Cree*

a Wâpam-ê-**wak**
see DIR pl. NOM(NUMBER)
'**They** see him/her'

b Wâpam-ik-**wak**
see INV pl.ERG(PERSON)
'**They** see him/her'

(51) *Plains Cree*

a Wâpam-ê-**wak**
see DIR pl.NOM
'**They** see him/her'

b Wâpam-ik-**wak**
see INV pl.NOM
'S/he sees **them**'

5.1 Theoretical consequences

- Theta theory:
  - (i) "argument structure" is stated in terms of a **one-to-one relation between a head and an argument**
  - (ii) transitive structure necessarily involved two heads ("small v" and "big V")
  - (iii) "small v" and "big V" are the locus of D-features relevant for marked structural Case

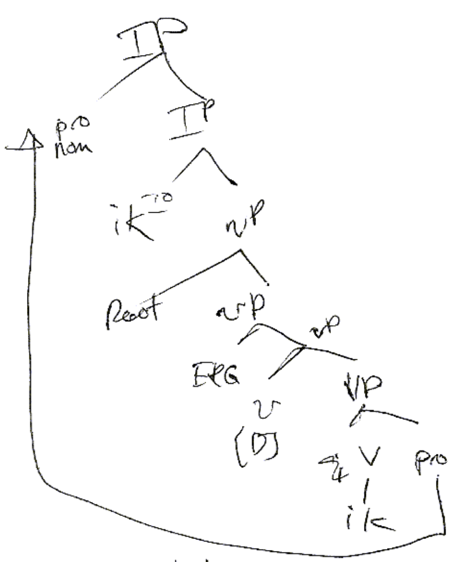
- Case theory:
  - (i) Case-features (whatever they are) are interpretable (*pace* Chomsky);
  - (ii) Case-positions are scopal (in accordance with Hornstein)——
  - (iii) **Marked structural case** (Acc/Erg KP) **is vP-internal**
  - (iv) **Marked structural case is induced by a D-feature** on "small v" and "big V" (friendly amendment to Bittner & Hale)

- Linking theory:
  Higginbotham's linking theory correctly accounts for the **many-to-one mapping** between argument positions and agreement which is pervasive throughout the Algonquian language family.

Naoko wants a derivation

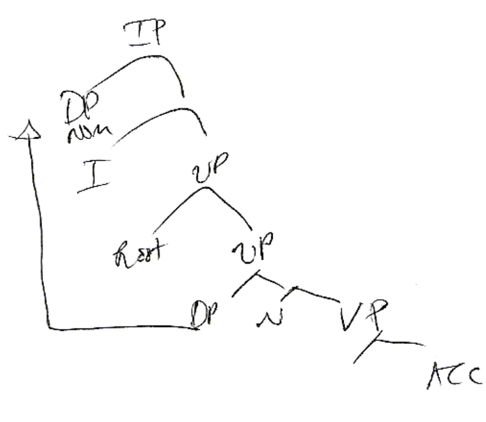
They say me   you saw me

they saw me



Me is encoded.

you saw me



Higginbotham's Linking
discourse coreference resolution
→ can help explain the discourse organized nature of languages?
that all NPs are adjoined

Nothing in objects manipulates