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Referential hierarchies: A new look at some historical and typological patterns

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1. In a nutshell

(a) Old news: (Pro)nominals can be ordered along the lines of

1/2 > 3 PRONOUN > 3 PROPER > 3 HUMAN > 3 ANIMATE > 3 INANIMATE.

Several phenomena within languages (e.g. case marking, indexing, constituent order) and regularities across languages reflect (sub-parts of) this nominal hierarchy (Silverstein 1976).

(b) Good news: We know (a bit) more about how/where these phenomena may emerge in time. We also know more about how these language-specific grammatical phenomena are related to features / categories like person, animacy, definiteness, and topicality.

(c) Perhaps surprising news: A growing amount of evidence leads us to conclude that
(c1) there is probably not a unique universal hierarchy, and
(c2) there is probably no hierarchy at all — at least not as an entity with any psychological reality in the speakers' minds, and/or as a necessary element of our descriptive metalanguage.

2. Sources of so-called hierarchical alignment patterns

2.1 Reanalysis of deictic verbal morphology (cf. DeLancey 2001)

2.1.1 Cislocative > inverse/local marker in Tiddim and Sizang

(1) Sizang (Kuki-Chin, Tibeto-Burman; Burma | Sterne 1984:48-56)

a. *Hong* *sá:t* *thê:i* *lê:?*
CIS beat ever Q
'Do [they] ever beat you?'

b. *Na-sí:a* *k-óng* *púak* *aa?*
2-tax 1-CIS send NFIN
'Why didn't you send me your tax?'

2.1.2 Incorporated verb of giving > inverse/local marker in Kui and Pengo

(2) Kui (South-Central Dravidian; India | DeLancey 2001)

a. *Huṛ-d-av-at-an.*
see-D-NEG-PST-3SG.M
'He did not see me/us.'

b. *Huṛ-d-av-at-ang.*
see-D-NEG-PST-1SG
'I did not see you.'

2.1.3 In Molalla and Nez Perce (Plateau Penutian; USA), the cislocative marks verbs with 1P, in Molalla with any A (Berman 1996; Pharris 2006), in Nez Perce only with 2A (Rude 1985).

(3) Molalla (3a) & Nez Perce (3b) cislocatives with 1P

a. *N-pay-sla-m-i.*
1SG.O-kill-FUT-CIS-3.S
'She will kill me.' (Pharris 2006, 141)

b. *Ø-'ewí-m-a.*
SAP.S/A-shoot-CIS-PST
'You shot me.' (NP, corrected, Rude 1985:32)

2.2 Reanalysis of zero 3rd person forms

2.2.1 Cariban and Tupí-Guaraní (Gildea 2009)

- Lose marking for '3A' (perhaps was already *Ø-)*
- Lose marking for '3P' (the *i-* is lost in most modern C & TG languages)
- Develop a direction marker? (no evidence of one coming yet)
- Extend the hierarchy to LOCAL or NONLOCAL scenarios
  - Cariban: Hixkaryana (2A1P = DIRECT); Panare (2A1P = DIRECT, 1A2P = INVERSE); Yukpa: both = INVERSE)
  - Tupí-Guaraní: maybe the Tupinambá examples of nonlocal alternations cited in Payne (1994)

2.2.2 Deixis + *Ø-* '3' becomes hierarchical indexing in Huastec (Mayan; Mexico | Zavala 1994)

Table 1. Proto-Mayan
(clearly not a direction system)

	1P	2P	3P
1A		B2-A1	Ø-A1
2A	B1-A2		Ø-A2
3A	B1-A3	B2-A3	Ø-A3

Table 2. Colonial Huastec
(clearly not a direction system)

	1P	2P	3P
1A		*ta*-B2-A1	Ø-A1
2A	*ta*-B1-A2		Ø-A2
3A	*ta*-B1-A3	*ta*-B2-A3	Ø-A3

Table 3. Simplified Potosino Huastec
(the shift to a direction system: 1 > 2 > 3)

	1P	2P	3P
	LOCAL	(DIRECT)	DIRECT
1A	(INVERSE)	*t*-(B2-)A1	A1
2A	*t*-B1		A2
	INVERSE		NON-LOCAL
3A	*t*-B1	*t*-B2	A3

- The *ta-* > *t-* prefix occurs exactly where DeLancey's deictic source would predict
- The loss of 3A marking in INVERSE contexts creates hierarchical indexing
- The loss of 2A marking in 2A1P LOCAL contexts creates a 1 > 2 hierarchy
- If 2B were completely lost, the 1 > 2 hierarchy would be strengthened

2.3 Person-sensitivization of passive constructions

2.3.1 Passive > inverse in Tewa and Tiwa

(4) Southern Tiwa (Tanoan; USA | Klaiman 1991:2019)

a. *Seuan-ide* *ti-mų-ban.*
man-SG 1SG.A-see-PST
'I saw the man.'

b. *Seuan-ide-ba* *te-mų-che-ban.*
man-SG-OBL 1SG.S-see-PASS-PST
'The man saw me.'

2.3.2 Fixed vs. flexible voice alternations in Coast Salish (Jelinek & Demers 1983)

Table 4. Squamish voice alternations
(presented as a direction system)

	DIRECT	INVERSE	LOCAL (A)	NONLOCAL
1	ACT	ACT/PASS	ACT	—
2	ACT	PASS	ACT	—
3	—	—	—	ACT/PASS

Table 5. Lummi voice alternations
(presented as a direction system)

	DIRECT	INVERSE	LOCAL (A)	NONLOCAL
1	ACT	PASS	ACT	—
2	ACT	PASS	ACT	—
3	—	—	—	ACT/PASS

2.4 Other sources

2.4.1 Second-position clitics > hierarchical indexes in Reyesano (Tacanan; Bolivia | Guillaume 2011)

- Prefixes refer to any second or first person participant, regardless of role, 2 > 1
  - Proto-Tacanan second position clitics become fixed preverbally, creating a new generation of person morphology
- The suffix *-ta* refers only to 3A or 3PLS; 3P is unmarked (the Ø third person)
  - The older suffix *-ta* '3A' reconstructs to Proto-Tacanan
  - In Reyesano, it has become nearly an INVERSE direction marker

Table 7. Reyesano organized into quadrants

	1/2P	3P
1/2A	LOCAL *2*-V	DIRECT *1/2*-V
3A	INVERSE *1/2*-V-*3*	NONLOCAL V-*3*

  - (The term 'inverse marker' appears to be felicitous when it occurs in both the INVERSE & LOCAL quadrants, but not in both the INVERSE and NONLOCAL)

2.4.2 Cleft > hierarchical organization in Movima (unclassified; Bolivia | Haude & Gildea in progress)

- Structure of the original clefts for intransitive and transitive predicates
    - S of (unpossessed) intransitive focus predicate > S of intransitive predicate
      'The (thing) that fell down (was) a spider.' > VINTR 'The spider fell.'
    - Transitive PATIENT focus predicate > DIRECT
      'That is her hung-up (one) then.' > DIRECT 'That one she hangs up then.'
    - Transitive AGENT focus predicate > INVERSE
      'That, they say, was the scarer of the ox.' > INVERSE 'That, they say, scared the ox.'
- Questions:
    - Who is PROXIMATE? 1 > 2 > 3HUMAN > 3ANIMATE > 3INANIMATE (exceptions)
    - Where did the hierarchical effects come from?
        - The source of the hierarchy effects in Movima is not inherent to the source — a similar source has given rise to nominative (Celtic), ergative (Trumai, isolate, Brazil), and the Philippine focus systems.
        - Possessors tend to be definite > maybe this planted the seeds of a definiteness hierarchy, which expanded into a more elaborate referential hierarchy.

2.5 Summary

Table 8. Correlating sources with resulting structural patterns

Sources	Direction marking	Case marking	Alignment with S	Direction domains			Source of Hierarchy Effects
				Local	Nonlocal	Mixed	
Deixis	yes	no	Free	yes	no	Yes	1/2 = CIS
Loss of 3	(no)	no	PROX	(yes <)	no	Yes	3 = Ø
Word order	(from 3rd)	no	PROX	yes	no	Yes	discourse topicality?
Passive	(PASS)	Yes (OBV)	PROX	(yes <)	yes	(> yes)	Topicality
Focus	yes	(S≠PSR)	OBV	yes	yes	yes	??

3. Consequences for the study of so-called hierarchy effects

3.1 Empirical problems with "The Hierarchy" as a typological universal

- The general case can be made for more than one hierarchy, both within and across languages; cf. Silverstein (1976), Zúñiga (2006, 2008) and Macaulay (2009) for Algonquian and Richards & Malchukov (2008) for a more general concern. Table 9 summarizes the sorts of synchronic problems with "The Hierarchy"

Table 9. The hierarchy as analytical tool

Hierarchy works	**Hierarchy does not (really) work**
Emerillon verbal prefix selection 1/2 > 3	Belhare verbal dual marker *-chi* idiosyncratic person-number combinations
Plains Cree verbal prefix selection 2 > 1 > 3	Plains Cree verbal suffix selection 1PL > 2PL > 3ANIM > 1SG/2SG > 3 INAN
Tagalog nominative assignment prominent > non-prominent	Aguaruna case marking 1SG > 2SG > 1PL/2PL > 3
Yurok Ø vs. ACC marking on P argument 1/2 > 3	Ik NOM vs. ACC marking on P argument direct/local NOM, inverse/nonlocal ACC

- Speech act participants resist ranking attempts across languages.
- Even 3rd person participants resist consistent ranking attempts:
  - Across languages
  - Across different constructions within languages
  - Within given constructions within languages
- Many variables appear to be independent, such that they interact rather than being ranked in a linear fashion: i.e., animacy, definiteness, number, person, and discourse topicality are not "slots" in a single hierarchy.

3.2 On the lack of value of "The Hierarchy" for predicting or explaining historical change

- Given different etymological sources of hierarchical grammar, the (different!) results will be related to those sources but not derivable or even predictable from an all-governing nominal hierarchy.
- More specifically, "The Hierarchy" provides no guidance for reconstructing (or even understanding) changes within specific language families, such as Algonquian (Table 10) and Kiranti (Table 11), both from Witzlack-Makarevich *et al* (2012).

Table 10. Pairwise ranking of person values in the Algonquian languages

Language	**1 vs. 2**	**1 vs. 3**	**2 vs. 3**
Arapaho	2>1	diverse	2>3
Atikamekw	diverse	diverse	3>2
Blackfoot	2>1	1>3	diverse
Cheyenne	2>1	diverse	diverse
Cree (Plains)	diverse	diverse	diverse
Micmac	diverse	diverse	2>3
Munsee	2>1	diverse	diverse
Ojibwa (Eastern)	2>1	1>3	2>3
Passamaquoddy	2>1	diverse	2>3

Table 11. Pairwise ranking of person values in the Kiranti languages

Language	**Tense**	**1 vs. 2**	**1 vs. 3**	**2 vs. 3**
Bahing	any	1>2	1>3	2>3
Bantawa	any	none	1>3	2>3
Belhare	any	none	3>1	none
Camling	any	1>2	1>3	2>3
Chintang	any	none	1>3	2>3
Dumi	PST	diverse	none	2>3
Jero	any	diverse	3>1	2>3
Kõic	NPST	none	none	none
	PST	none	1>3	none
Koyi	any	1>2	1>3	diverse
Kulung	NPST	none	1>3	3>2
	PST	none	1>3	2>3
Limbu	any	2>1	1>3	2>3
Wambule	any	diverse	1>3	2>3
Yakkha	any	none	1>3	none
Yamphu	any	2>1	3>1	diverse

- Once a "hierarchical system" is in place, further changes appear to be multi-directional
  - Changes in LOCAL prefixes in Cariban are language-specific (Gildea 1998: 82-4)
    - 2A1P becomes 2A marker (2 >1) in Hixkaryana and Panare, 1P marker (1 > 2) in Yukpa, and both markers (1 = 2) in Waimiri-Atroari

        - 1A2P marker becomes 2P marker (2 > 1) in Panare and Yukpa, changes idiosyncratically in five other languages.
    - Changes in NONLOCAL paradigm for Tupí-Guaraní: maybe the Tupinambá examples of NONLOCAL alternations cited in Payne (1994)

3.3 Where do we go from here? > Fuller synchronic description

- Local versus Global strategies for determining grammatical treatment of core arguments
    - Local strategies only consider features of the argument in question (e.g. (largely) Spanish DOM), while
    - Global strategies consider features of both the argument in question and those of its companion argument(s). Witzlack-Makarevich *et al* (2012) label this CO-ARGUMENT SENSITIVITY.
- Each individual case of co-argument sensitivity needs to be computed separately; "The Hierarchy" now becomes a testable (and falsified) hypothesis as to what the relevant variables are and how they are ranked vis-à-vis one another.
- Probabilistic multivariate models can consider degrees of interdependence amongst (logically independent) types of variables (Bresnan & Ford 2010, Schikowski i.p.) > Better Analyses of Individual Languages
- Explanation:
    - Formal properties of constructions sensitive to semantic/referential factors are largely predictable from knowing their sources and the mechanisms of change.
    - Semantic/referential properties relevant to each construction are inherited from its source; additional features become relevant as these constructions evolve further, and it is an empirical question whether there are consistent cross-linguistic patterns (i.e. directionality) to such additions.

Abbreviations

A agent-like argument, ACT active, CIS cislocative, DIR direct, FUT future, INV inverse, M masculine, NEG negation, NFIN nonfinite, NPST nonpast, OBV obviative, P patient-like argument, PASS passive, PROX proximate, PST past, Q question, S single argument, SAP speech act participant, SG singular

References

Berman, Howard. 1996. Position of Molala in Plateau Penutian. *International Journal of American Linguistics* 62: 1-30.

Bresnan, Joan & Marilyn Ford. 2010. Predicting syntax: Processing dative construction in American and Australian varieties of English. *Language* 86: 168-213.

DeLancey, Scott. 2001. *Lectures on Functional Syntax*. Revised notes for the Summer School held at the University of California, Santa Barbara, July 2001. http://darkwing.uoregon.edu/~delancey/sb/fs.html

Gildea, Spike. 1998. *On Reconstructing Grammar: Comparative Cariban Morphosyntax*. Oxford: Oxford University Press.

Gildea, Spike. Reconstructing Sources for Hierarchical Alignment in Main Clause Grammar. 8th Biennial Conference of the Association for Linguistic Typology, UC Berkeley, 23-26 July.

Guillaume, Antoine. 2011. From ergative case-marking to hierarchical agreement in Reyesano (Tacanan, Bolivia). Annual Meeting of the Societas Linguistica Europaea, September 8-11.

Jelinek, Eloise & Richard Demers. 1983. The agent hierarchy and voice in some Coast Salish languages. *International Journal of American Linguistics* 49.2: 167-185.

Klaiman, M.H. 1991. *Grammatical Voice*. Cambridge: Cambridge University Press.

Macaulay, Monica. 2009. On prominence hierarchies: Evidence from Algonquian. *Linguistic Typology* 13.3: 357-389.

Payne, Doris. 1994. The Tupí-Guaraní inverse. *Voice*, ed. by Barbara Fox & Paul Hopper, pp. 313-40. Amsterdam: John Benjamins.

Pharris, Nicolas. 2006. *Winuunsi tm talapaas: A Grammar of the Molalla language.* PhD diss., University of Michigan.

Richards, Marc & Andrej Malchukov (eds.). 2008. *Scales*. Leipzig: University of Leipzig. [Linguistische Arbeitsberichte 86.]

Rude 1985

Silverstein, Michael. 1976. Hierarchy of features and ergativity. In Dixon, R.M.W. (ed.). *Grammatical Categories in Australian Languages.* Canberra: Australian Institute of Aboriginal Studies. pp. 112-171.

Schikowski, Robert. In preparation.

Stern, Theodore. 1984. Sizang (Siyin) Chin texts. *Linguistics of the Tibeto-Burman Area* 8.1:43-58.

Witzlack-Makarevich, Alena, Taras Zakharko, Lennart Bierkandt, Fernando Zúñiga, & Balthasar Bickel. 2012. Decomposing hierarchical alignment: co-arguments as conditions on alignment. Presented at the Final RHIM Internal CRP meeting, Zurich, Switzerland, May 31.

Zavala, Roberto. 1994. Inverse alignment in Huastec. *Función* 15-16: 27-81.

Zúñiga, Fernando. 2006. *Deixis and Aligment. Inverse Systems in Indigenous Languages of the Americas*. Amsterdam: John Benjamins.

Zúñiga, Fernando. 2008. How many hierarchies, really? Evidence from several Algonquian languages. In Richards & Malchukov (eds.), 99-129.