Some notes on coordination in head-final languages

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1. Head-final vs. head-initial languages

<table>
<thead>
<tr>
<th></th>
<th>V/P converging</th>
<th>V/P diverging</th>
<th>V unclear</th>
<th>only V or P clear</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>initial</td>
<td>58</td>
<td>4</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>final</td>
<td>53</td>
<td>1</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>total</td>
<td>111</td>
<td>5</td>
<td>5</td>
<td>12</td>
</tr>
</tbody>
</table>

Table 1: head-final/initial languages in a 144-language sample

2. Coordination

(1) a. asyndetic (juxtaposition) A B A B C
    b. monosyndetic A & B A & B & C
    c. polysyndetic & A & B & A & B & C

(2) a. initial A & B & A & B
    b. final A B & A & B &

3. Monosyndetic NP-coordination

<table>
<thead>
<tr>
<th>INITIAL</th>
<th>FINAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>108</td>
<td>16</td>
</tr>
</tbody>
</table>

Table 2: position of monosyndetic NP-conjunction in a 144 language sample

(3) Final conjunction is rare

(4) Latin, Italic, Indo-Hittite
    a. senatus populus-que romanus (common inscription)
       senate people-and roman
       ‘the Senate and the people of Rome’
    b. ingenia fecunda totius-que naturae capacia (Plinius, Nat. Q. 2, 190)
       mind:NTR.PL prolific:NTR.PL entire:GEN-and nature:GEN able to grasp:NTR.PL
       ‘minds that are prolific and able to grasp the entire universe’
    c. obtestantur per amicitiam per-que sua antea fideliter acta
       beseech:3PL by friendship through-and 3SG:POSS before loyally perform:PART.PERF
       ‘they beg in the name of (their) friendship and their prior loyal behavior’ (Sallustius, Jug 71,5)

(5) -que is a ‘second position’ initial conjunction

(6) 2P initial conjunctions in the sample
    West Greenlandic, Wardaman, Evenki, Amharic, Hausa, Turkish, Fon
(7) **West Greenlandic, Eskimo-Aleut**

\[ \text{ippassaq tikip-put aqagu=lu ikinnguta-at tiki-ssa-put} \]  
\[(\text{Fortescue 1984:120})\]

yesterday arrive-3PL:IND tomorrow=and friend their=PL arrive-FUT-3PL:IND

‘They arrived yesterday and their friends will arrive tomorrow.’

(5) **Turkish, Turkic, Altaic**

Hasan iş-in-e git-ti Ali ev-in-e dön-dü  
\[(\text{Kornfilt 1997:109})\]

H work-3SG-DAT go-PAST A house-3SG-DAT return-PAST

ben-de park-ta kal-di-m  
I-and park-LOC stay-PAST-1SG

‘Hasan went to work, Ali returned home, and I stayed in the park.’

4. **Correlations (Stassen 2003:775)**

(6) a. final coordination > V-final language  
b. V-initial language (and overt conjunction) > initial coordination

(7) **Languages using final conjunction as the only strategy**

<table>
<thead>
<tr>
<th>Language</th>
<th>V/P converging</th>
<th>V/P diverging</th>
<th>V unclear</th>
<th>only V or P clear</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logbara (Central Sudanic, Nilo-Saharan)</td>
<td>P-final, V unclear</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slave (Athabaskan, Na-Dene)</td>
<td>V/P-final</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yaqui (Uto-Aztecan)</td>
<td>V/P-final</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Ika (Chibchan)</td>
<td>V/P-final</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barasano (Tucanoan)</td>
<td>V/P-final</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paumari (Arawakan)</td>
<td>P-final, V-initial (?)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>V/P converging</th>
<th>V/P diverging</th>
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<th>only V or P clear</th>
</tr>
</thead>
<tbody>
<tr>
<td>initial</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>final</td>
<td>4</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>total</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 3: head-final(initial) languages among those using final monosyndetic noun phrase coordination as the only strategy

(8) **Languages using final conjunction as an optional strategy (monosyndetic conjunction only)**

Kolyma Yukaghir (Uralic-Yukaghir)  
Kham (Mahakiranti, Sino-Tibetan)  
Baram Kayan (Borneo, Austric)  
Western Desert Language (Pama-Nyungan, Australian)  
Navaho (Athabaskan, Na-Dene)  
Hualapai (Hokan)  
Wari’ (Chapacura-Wanham)  
Ket (isolate)  

V/P-final

V-final

V/P-initial

unclear

V/P-final

V-final

V/P-initial

V/P-final
Table 4: head-final/initial languages among those using final monosyndetic noun phrase coordination as optional strategy

<table>
<thead>
<tr>
<th></th>
<th>V/P converging</th>
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<th>V unclear</th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>V</td>
<td>P</td>
<td>V</td>
<td>P</td>
</tr>
<tr>
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<tr>
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</tr>
<tr>
<td>total</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

5. Pseudo-final conjunctions

(9) Summary strategy: a. copula (Paumari, Wari')
   b. number expression (Barasano)
   c. pronoun (Amele, Baram Kayan)
   d. focus marker (Western Desert Language, Slave, Barasano)

(10) Paumari, Arawakan
    kodí-abi'i-a biá-ka-vi-kha-hi ida kidi-hado abiha kodahi
    my-father-ERG 3SG-away-N:CLASS-COM-MOT-TH DEM,F his-knife arrow bow

    vanami ki-hi-ki
    paddle N:CLASS-AUX-DESC

    'My father took his knife, arrow, bow and paddle.'
    (lit. 'took them his knife arrow bow paddle being')

(11) Wari', Chapacura-Wanham
    Cotem We wata' ca' na ca
    CW 1SG:EMPH this:NTR 3SG:REAL.PAST/PRES INF:NTR.REAL.PAST/PRES

    to wet 'iripain xirim ca' ta
    be at:PRES still 1PL.INCL REAL.PAST/PRES:3NTR house this:NTR EMPH

    'Cotem We and me (lit. ‘thus it was’) stayed here at the house.'
    (Everett & Kern 1997:163)

(12) Barasano, Tucanoan
    ye kak-ú Paurú to-kã-rãk-ú yá-bwë yáa
    1SG parent-MASC.SG Paul that-count-with-MASC.SG be-PAST:NON3 1EXC

    'Myself, Dad and Paul (that’s how many of us) were there.'
    (Jones & Jones 1991:134)

(13) Baram Kayan, Borneo, Austric
    en na' uvui nah dalo' Anyi' ji Jau ji Uvang ji pah
    ACT he call VFOC them Anyi' one Jau one Uvang one also

    ‘He called them—Anyi, Jau, and Uvang.’
    (Clayre & Cubit 1974:72)

(14) Western Desert Language, Pama-Nyungan, Australian
    mimyma-ó ngaa-nya= pulanya tjilj'i-ó= kamu
    mother-ABS this-ABS OBJ:3DU child-ABS also

    ‘...this woman and child also.'
    (Glass & Hackett 1970:66)

(15) Slave, Athabaskan, Na-Dene
    lidi ts'ët'üh chu nåehndi
tea cigarette too

    ‘I bought tea and cigarettes.’
    (Rice 1989:1066)
Evidence that these are really focus markers:

(16) **Barasano, Tucanoan**

\[ \text{ëb}b \text{-a ròbì-a dake-rà kłe yā-ka-bā ïdà male-PL female-PL young-AN:PL also be-far:PAST-3PL 3PL} \]

‘There were men, women and children there.’ (Jones & Jones 1991:133)

**Slave, Athabaskan, Na-Dene**

Mary \( \text{chu} \) shëet\( j \) Mary too 3:ate

‘Mary too has eaten.’ (Rice 1989:1067)

**NB, the summary strategy is not specific to head-final languages**

6. The comitative strategy

Connection with summary strategy: Logbarra

(17) **Logbara, Central Sudanic, Nilo-Saharan**

(a) \[ \text{ët'bo } \text{p'1 mū } \text{d'f } \text{a'ú-ā } \text{bs} \]

hare and/PL go then fowl-DIM with/also

‘the hare and a small fowl went together.’

(b) \[ \text{à } \text{mu } \text{ëri } \text{pie } \text{ākú-a} \]

we go he and home-to

‘I went home with him.’

**Pure comitative final conjunctions**

(18) **Yaqui, Uto-Aztecan**

\[ \text{hùnén=su } \text{tesó-po } \text{lú'ú-te-k } \text{hùú'ú } \text{labén } \text{hiawa-i thus=EMP cave-to end-VERB-PERF that violin sound-PART} \]

\[ \text{'áapa } \text{čiba'áto-mak } \text{nau } \text{lu'ú-te-k} \]

harp goat-with together end-VERB-PERF

‘The violin music in the cave thus ended [and] the harp and the goat all ended together right there.’

VERB = verbalizer, PART = participializer

(19) **Ika, Chibchan**

\[ \text{ribru } \text{rapi-sin } \text{pa } \text{ú} \]

bookFLAT pencilLONG-with put down:FLAT AUX

‘Put the book and the pencil down!’

(Frank 1990:38)

(20) **Kolyma Yukaghir, Uralic-Yukaghir**

\[ \text{tabun-ge } \text{erie-t } \text{jaqte-de-jle tude eje } \text{johoti-n'è } \text{min-delle that-LOC hate-SS:IMP song-POSS-ACC his bow arrow-COM take-SS:IMP} \]

\[ \text{tabud-e } \text{tāt } \text{aji-m} \]

that-INST CA shoot-TR:3SG

‘Since he hated the song, he took his bow and arrows and shot at her.’

(CA = connective adverbial)
(21) **Hualapai, Hokan**

John-ch Mary-m hwák-k Banya:nyuwa ya:m-j-ay-k-yu
John-su Mary-com 3:be two-ss Phoenix 3:go-PL-IRR-SS-AUX/be
‘John and Mary are going to go to Phoenix.’ (Watahamogie 2001:414)

(22) **Ket, isolate**

ba:t ba:m-
d’s l’i B’n (Werner 1997:321 fn 2)
old man old woman-com live:3PL.PAST
‘The old man and the old woman lived.’

According to Mithun (1988:339), the comitative construction is “originally used to circumvent coordinate noun phrases”, an elaboration of a more basic asyndetic construction which has a similar purpose. She notes that “conjoined noun phrases are actually relatively rare in spontaneous discourse, (…) considerably rarer than conjoined clauses” (1988:337). The observation Mithun makes is that in narrative, distinct entities are preferably introduced by distinct information units, e.g. separate clauses, after which they can be referred to by plural pronouns. This suggests that juxtapositions and genuine comitative constructions are not strictly speaking coordinations.

7. Grammaticalization of comitative markers as conjunctions

<table>
<thead>
<tr>
<th>postpositional languages</th>
<th>66</th>
</tr>
</thead>
<tbody>
<tr>
<td>of these, using comitative strategy</td>
<td>25</td>
</tr>
<tr>
<td>of these, comitative element becomes initial conjunction</td>
<td>15</td>
</tr>
</tbody>
</table>

Table 5: final comitative markers used as initial conjunctions

(23) **Languages deriving initial conjunctions from postpositions/verbs**

Dogon Burmese
Suppire Northern Qiang
Turkish Mikir
Japanese Lavukaleve
West Greenlandic Slave
Ladakhi Navaho
Kinnauri Haida
Kokborok

NB, four others have developed a bisyndetic coordination pattern, which also involves the introduction of an initial conjunction.

(24) **Japanese, Korean-Japanese**

<table>
<thead>
<tr>
<th>a. Mary ga John to kekkonsita</th>
<th>(Kuno 1973:116)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mary NOM John with married</td>
<td>‘Mary married John.’</td>
</tr>
</tbody>
</table>

b. John to Mary ga kekkonsita  
John with Mary NOM married
‘John and Mary married.’

(25) **Kinnauri, Himalayish, Sino-Tibetan**

<table>
<thead>
<tr>
<th>a. oŋ rəŋ doː chañ due</th>
<th>(Sharma 1988:91)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1SG:GEN with 3SG:GEN son be:3PAST</td>
<td>‘His son was with me.’</td>
</tr>
</tbody>
</table>
b. ge rañi ki bi-tiç
1SG:DIR and you:HON go-FUT:1DU.INCL.HON
‘I and you will go.’

(26) Kokborok, Jingpho-Konyak-Bodo, Sino-Tibetan
a. ram bi-bi-bay phay-anu  
Ram his-elder.sister-with come-will
‘Ram will come with his elder sister.’

b. bo-bay bə-tə bajar-ə thanq-o  
3HUM-and his-elder.brother market-to go-PRES
‘He and his elder brother are going to the market.’

(27) Northern Qiang, Sino-Tibetan
a. qa khumtsi-ŋa tiantsә-wa kə  
1SG Khumtsi-LOC store-LOC go:PROSP:1SG
‘I am going to the store with Khumtsi.’

b. mutsıtsu-ŋa-tuŋantsu zapaq-tə ńo-lu-ə-ːji  
Mutsıtsu-LOC-Tuŋantsu earth-LOC DIR-come-PROSP-CHST
‘Mutitsu and Tugantsu wanted to come to earth.’

NB, PROSP = prospective aspect, CHST = change of state marker

(28) Mikir, Sino-Tibetan
a. la-pen na corapnon  
3SG-ASS 2SG eat
‘You eat with him.’

b. notbuk, kitap pen penchil  
notebook book and pencil

(29) Lavukaleve, East Papuan, Indo-Pacific
a. ma-mita'keu-mal va vo-ne  
3PL.POSS-dog-PL PL.DEF 3PL-with
‘with their dogs’

b. airal mima e-ma-re vo-mal nala  
man:DU way of lifeNTR 3SG.NTR.OB-take-INF come-DU MASC .DU.DEF
finala Sepo ne Laumate  
3DU.MASC.FOC S_MASC and L_MASC
‘The two men who brought the church were Sepo and Laumate.’

(30) Slave, Athabaskan, Na-Dene
a. ʢiye bee hé tadjhwee  
meat knife with 2SG:cut
‘You cut the meat with the knife.’

b. hnąi tsá hé tehk’áii kwik’iί t’áh kagenjwe  
past beaver with muskrat gun with 3PL:hunted
‘In the past, people hunted beaver and muskrat with guns.’
Haida, Na-Dene

a. kilraad-7ad xàaydas-7ad tlìjìg xàaydaraay-7ad hìlnagìd
Tsimshians-with Haidas-with Bellabellas-with Tlingits
gud-7ìïa gìna-ra suù-s-ìì
REC-different thing-PP sing-PR-TC
(Tsimshians and Haidas and Bellabellas and Tlingits were singing different songs.)

b. kyaa.n q’aal-gee-rahl taaaw-ee-ìísan ‘la gya.alat’ì.a-ì-gan
can empty-DF-with food-DF-too 3PL bring-PA
‘She brought the empty cans and the food.’

Turkish, Turkic, Altaic

a. Hasan Ali-yle opera-ya git-ìi
H A-with opera-DAT go-PAST-3SG
‘Hasan went to the opera with Ali.’

b. Ali-yle Zeynep dùn sinema-ya git-ìi-ler
A-with Z yesterday cinema-DAT go-PAST-3PL
‘Ali and Zeynep went to the cinema yesterday.’

Suppire, North Central Niger-Congo, Niger-Kordofanian

a. Uru na ñ-kàågé sà ù kàçììyì bàrà Bàmbemì wùyi
he:EMPH PROG INTR-go:IMPF go his bones:DEF add Babemba POSS:DEF(IISG)
na Sogo Kanha na
on Sikasso town at
‘He was going to go add his bones to Babemba’s in Sikasso.’

b. Mu bàrà mìì na, wùù sí ñ-kàrè Sukwoo na
you add me on we FUT FUT-go Sikasso at
‘You and I, we will go to Sikasso.’

8. Other final elements developing into initial conjunctions

focus markers

Lezgian, Northeast Caucasian

a. Zun-ìi q’üre-ìa
1sg-abs-also smile-AOR
‘I also smiled.’

b. Isa-di-ìì Ali-di sada-sada-w ñìlìr wuga-ìa
Isa-ERG-CONJ Ali-ERG one-one-ADESS hand-PL give-AOR
‘Isa and Ali shook hands.’

Kayardild, Pama-Nyungan, Australian

a. ngada ban
1SG.NOM too

b. riya-thì nga-rrì a bangà-y kabathaa-th bana bangà-a bana bangà-a
east-REM 1-DU-NOM turtle-MLOC catch-ACT and turtle-NOM and turtle-NOM
‘bana banga-a’
and turtle-NOM

(Evans 1995:395)
'Way in the east we two caught turtles and turtles and turtles and turtles.'
MLOC = modal locative case, expressing 'instantiated' modality

(36)  
ilit. Monguor  
a. mori nige da uguā  
horse one also not exist  
'There is not a single horse.'  
(De Smedt & Mostaert 1964:51)  
b. mori da rdžigeni əulōx 
horse and donkey hitch.up 
'Hitch up the horse and the donkey.' 
(De Smedt & Mostaert 1964:163)

Noncomitative prepositions

(36)  
ilit. Ainu, Korean-Japanese 
a. nupuri ka wa hotuypa  
hills top.of from call.in.loud.voice  
'Someone called in a loud voice from the top of the mountain.' 
(Tamura 2000:133)  
b. otcike huraye wa pirpa  
tray wash and wipe  
'Wash and wipe the tray.' 
(Tamura 2000:149)

Suffixes

(37)  
ilit. Amharic, Semitic, Afro-Asiatic 
ka-gābāya əcw-anna bābärre amättā“h  
from-market salt-and pepper i:brought  
'i brought salt and pepper from the market.'  
(Leslau 2002:154)

(38)  
ilit. Tauya, Adelbert Range, Indo-Pacific  
fei-ti ya-tu-aʔa  
boil-CONJ 1SG-give-3SG-IND  
'She cooked it and gave it to me.'  
(MacDonald 1990:247)

(39)  
ilit. Kiowa, Tanoan  
a. bāò: ə-nē-dō:  
cat 2/3SG.AG-1SG.PAT:DU.OB-be and:SS almost  
2/3SG.AG-1SG.PAT:DU.OB-lose:PERF  
'They are my cats and I almost lost them.'  
(Watkins 1980:293)  
b. ðpāl sép ə-când-ā:  
closer rain 3SG-arrive-coming and:DS clearly  
2PL-get wet:PERF  
'The rain is getting closer and it's obvious that we'll get wet.'  
(Watkins 1980:272)  
c. mà:yí əgō  
woman and man  
(Watkins 1980:288)

9. Other cases of head-final languages using initial conjunctions

(40)  
ilit. Kolyma Yukaghir, Uralic-Yukaghir  
paipe tāhile mēmē  
woman CA bear  
'The woman and the bear.'  
(Maslova 2003:318)
(41) Kabardian, West Caucasian
p’ša-k’wa-z (Colarusso 1992: 159)
ten-plus-one
‘eleven’

(42) Logbara, Central Sudanic, Nilo-Saharan
möödrí dri-ní áló (Crazzolara 1960:38)
ten on-it one
‘eleven’

(43) Mao Naga, Kuki-Chin-Naga, Sino-Tibetan
okhro kaxi ye khodu kali (Giridhar 1994:454)
daod two and gun one
‘two daos and a gun’

(44) Central Asmat, Trans New Guinea, Indo-Pacific
Juwúr enérim Ew (Voorhoeve 1965:172)
dog and crocodile
[story title]

(45) Canela, Ge-Pano-Carib
. capi me kryt ma të (Popjes & Popjes 1986:150)
Capi and Kryt away go
‘Capi and Kryt go away.’

(46) Basque, isolate
lagun eta ahaide-ei agur egí-n d-ı-ie-ı
‘He has greeted his friends and family.’ (Saltarelli 1988:90)

(47) Ket, isolate
ətna hissij-dinciple on’ qı:n, s’seqn
1PL:POSS forest?-NONMASC:SG:ADESS many elk:PL reindeer:PL
haj qo’n duyı’n’ (Werner 1997:321)
and bear:PL live:3PL
‘In our forest live many elks, reindeer and bears.’

(48) Daga, Trans New-Guinea, Indo-Pacific
wata ge manapawa (Murane 1974:95)
yesterday and day before yesterday
‘yesterday and the day before yesterday’

10. Head-final languages borrowing initial conjunctions

(49) Djingili, Australian
njargu’lii an njuilaimbirgari (Chadwick 1975:97)
Tommy and Ned

an < English and

(50) Lezgian, Northeast Caucasian
güzél wa čexi şeher (Haspelmath 1993:330)
beautiful CONJ big city
‘a beautiful and big city’

wa < Turkic < Arabic wa
Borrowing of conjunctions is quite common, for reasons discussed in Mithun (1988:351-352). However, I know of no case where the borrowed element is a final conjunction.

11. Bisyndetic conjunction

Amele, Madang, Indo-Pacific

Banag ca Bunag ca ale due bele-si-a (Roberts 1987:105)
B add B add 3DU dance go-3DU-HOD.PAST
‘Banag and Bunag have gone to the dance.’

Often, monosyndetic initial conjunction presents the unmarked case:

Marind, Trans New-Guinea, Indo-Pacific

a. nok namèk a nok namùk a (Drabbe 1955:135)
  1SG brother and 1SG sister and
  ‘my brother and my sister’

b. inah a izakod (Drabbe 1955:26)
  two and one
  ‘three’

Bisyndetic conjunction involving summary strategy

Daga, Trans New-Guinea, Indo-Pacific

a. nenip Bure ge nenip Dukuik dere (Murane 1974:94)
  bird Bure and bird Dukuik two
  ‘the Bure bird and the Dukuik bird’

b. wata ge manapawa (Murane 1974:95)
  yesterday and day before yesterday
  ‘yesterday and the day before yesterday’

12. Head-initial languages using final conjunctions?

The only candidates seem to involve the summary strategy:

Eastern Kayah Li, Karen, Sino-Tibetan

vē ʔomā kā Mophre nē Pímò sī klêmēkū
1SG lie down COM.PRT Mophre NE Pimo and them between
‘I slept between Mophre and Pimo.’ (Solnit 1997:171)

Mapudungu, Andean

(iñché) eymi inchiu i-y-u (Smeets 1989:177)
I you:SG we:DU eat-IND-1NONSG-DU
‘You and I ate.’

13. Explanation and conclusion

14. References

zwart@let.rug.nl ! http://www.let.rug.nl/~zwart/