

## Final-over-Final Condition

The FOFC is an important generalization (Holmberg 2000:124; Biberauer et al. 2014: 171):

### The Final-over-Final Condition

A head-final phrase  $\alpha P$  cannot immediately dominate a head-initial phrase  $\beta P$ , if  $\alpha$  and  $\beta$  are members of the same extended projection.

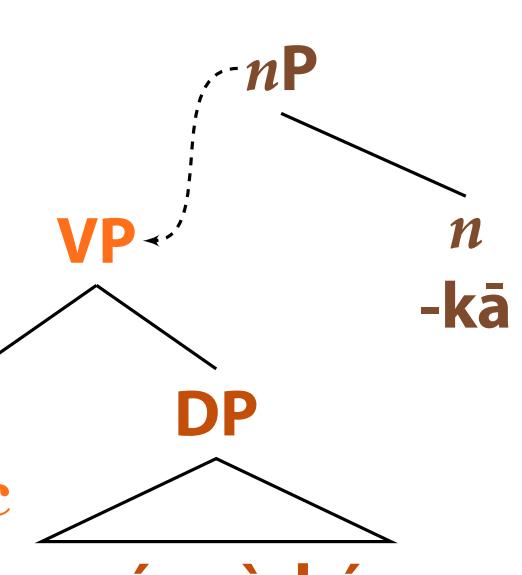
This predicts **tetrachoric** (3/4) patterns such as what we find with auxiliaries and VPs:

- (1) a. Consistent head-initial (harmonic)
- b. Consistent head-final (harmonic)
- c. Initial-over-final (disharmonic)
- d. \* Final-over-initial (disharmonic)

- (2) 3/4 orders attested across Germanic (Biberauer et al. 2014:173ff.):
  - a. ...dass Johann [AuxP [VP das Buch gelesen] hat] that Johann the book read.PTCP has '...that Johann has read the book.' (German; **O V AUX**)
  - b. ...oyb dos yingl [AuxP vet oyfn veg [vp zen a kats]] whether the boy will.on.the way see a cat '...whether the boy will see a cat on the way.' (Yiddish; **AUX V O**)
  - c. ...da Jan [AuxP wilt [vp een huis kopen]] that Jan wants a house buy.INF '...that Jan wants to buy a house.' (West Flemish; **AUX O V**)
  - d. \*... dass Johann [AuxP [vp gelesen das Buch] hat] that Johann read the book has 'that Johan has read the book.' (German); \* **V O AUX**

**Question:** What about other heads that attach to VPs, e.g. the kind of overt nominalizer we find in many West African languages, e.g. Bùli (3).

- (3) *Bùli* (Hiraiwa 2005a: 262; Hiraiwa 2005b: 546):
  - a. Átim [vp dè mágò-kú-lá] diém Átim ate mango-DEF-DEM yesterday 'Átim ate that mango yesterday.'
  - b. (ká) [vp mágò-kú dè]-ká áli Átim dè diém FOC mango-DEF eat -NMLZ C Átim ate yesterday 'It is eating the mango that Átim ate yesterday.'



**Problem:** Why does the order inside the VP change from **VO** to **OV** when nominalized?

**Possible explanation:** The FOFC also constrains word order in nominalized VPs.

- (4) a. Consistent head-initial (harmonic)
- b. Consistent head-final (harmonic)
- c. Initial-over-final (disharmonic)
- d. \* Final-over-initial (disharmonic)

## Full typology

### Typology of eventive VP nominalization (complete):

Base order Nominalized

Bzhedug Adyghe	OV	OV-NMLZ	(Ershova 2015)
Jamsay	OV	OV-NMLZ	(Heath 2008)
Khoekhoe	OV	OV-NMLZ	(den Besten 2002)
Korean	OV	OV-NMLZ	(Cho & Kim 2002)
Southern Paiute	OV	OV-NMLZ	(Givón 2011)
Akan	VO	OV-NMLZ	(Hein 2017)
Buli	VO	OV-NMLZ	(Hiraiwa 2005a,b)
Dagaare	VO	OV-NMLZ	(Hiraiwa & Bodomo 2008)
Dangme	VO	OV-NMLZ	(Ameka & Kropp Dakubu 2008)
Ewe	VO	OV-NMLZ	(Buell 2012)
Gengbe	VO	OV-NMLZ	(Abob 2005)
Krachi	VO	NMLZ-VO	(Kandybowicz & Torrence 2016)
Igbo	VO	NMLZ-VO	(Manfredi 1997)
Yoruba	VO	NMLZ-VO	(Manfredi 1997)
Edo	VO	NMLZ-VO-NMLZ	(Stewart 2001)
Hausa	VO	NMLZ-VO	(Hartmann 2006)
Limbum	VO	NMLZ-VO	(Becker & Nformi 2016)
Mani	VO	NMLZ-VO	(Childs 2011)
Thai	VO	NMLZ-VO	(Jenks 2011)
Yoruba	VO	NMLZ-VO	(Manfredi 1993)

## VP Nominalization

### VO languages with prefical nominalizer

- (6) *Mani* (Childs 2011: 148, 219):
  - a. Ú ká [vp tók dómà mì] 1SG PST wash shirt 1SG 'I washed my shirt.'
  - b. Ú-[vp bán wóm] kó ímbòm wò báñ-yé NMLZ- build boat PRO.FOC Mbom 3SG build-STAT 'It is building a boat Mbom built a boat.'
- (7) *Yoruba* (Manfredi 1993: 19f.):
  - a. Ajé [vp ra iwé] Aje buy paper 'Aje {is buying/bought} {a book/books}'
  - b. Rí-[vp rà iwé] ni Ajé ra iwé NMLZ- buy paper FOC Aje buy paper 'It is book-buying that Aje {is doing/did}'
- (8) *Limbum* (Becker & Nformi 2016: 58, 74f.):
  - a. Nwè fɔ àm [vp tí ngü] man DET PST3 cut wood 'The man cut the wood.'
  - b. Á r-[vp yú msāŋ] (cí) njíñwè fɔ bí gí FOC NMLZ- buy rice COMP woman DET FUT1 do 'The woman will BUY RICE.'
- (9) *Thai* (Jenks 2011: 17, 166):
  - a. Nát [vp kin thúrian] kéew Nat eat durian already 'Nat already ate the durian.'
  - b. kaan-[vp khian cót-máay] náa-búa NMLZ- write letters boring 'Writing letters is boring.'

(VO → NMLZ-VO)

### VO languages with suffixal nominalizer

- (10) *Asante Twi/Akan* (Hein 2017: 7):
  - a. Kofí [vp á-sí dán] Kofi PRF-build house 'Kofi has built a house.'
  - b. [vp Dán sí ](-é) na Kofi á-yó house build -NMLZ FOC Kofi PRF-do 'Kofi has BUILT A HOUSE (not e.g. bought a boat)'.
- (11) *Dangme* (Ameka & Kropp Dakubu 2008: 273, 274):
  - a. Í [vp káné womí o] 1SG read book DEF 'I read the book'
  - b. [vp womí o káné ]-mí book DEF read -NMLZ 'reading the book'
- (12) *Dagaare* (Hiraiwa & Bodomo 2008: 802, 805):
  - a. Ñ dà [vp dá lá bóó] 1SG PST buy FOC goat 'I bought a goat.'
  - b. [vp Bóó dáá ]-ó lá ká ní dà dà goat buy -NMLZ FOC C 1SG PST buy 'It is buying a goat that I did (not e.g. selling a hen)'.
- (13) *Gengbe* (Manfredi 1997: 90; Abob 2005: 165f.):
  - a. Mù [vp dù nú] 1SG eat thing 'I ate (something)'.
  - b. Kwésí lè [vp mólu dù ]-ò Kwesi AUX rice eat -NMLZ 'Kwesi is eating rice'

(VO → OV-NMLZ/\*VO-NMLZ)

## Generalization

There is no language in which a head-initial VP remains VO when combined with a suffixed nominalizer.

However, there are also **VO** languages such as Krachi that allow for both **VO/OV** orders with a prefical nominalizer

- (14) *Krachi* (Kandybowicz & Torrence 2016: 227f.):
  - a. Okyi wú [vp ε-dike i-gyo] woman the PST-cook PL-yam 'The woman cooked yams.'
  - b. Ke-[vp dike i-gyo] yi okyi wú ε-dike NMLZ- cook PL-yam FOC woman the PST-cook 'The woman only cooked yams.'
  - c. Ke-[vp i-gyo dike] yi okyi wú ε-dike NMLZ- PL-yam cook FOC woman the PST-cook 'It was COOKING YAMS that the woman did.'

The nominalizer *ke-* seems to be enclitic and 'leans' onto the VP.

(VO → NMLZ-VO/OV)

We therefore find a **¾ pattern** that is a signature of the FOFC:

### Typology of eventive VP nominalization (incomplete):

	Base order	Nominalized
Akan	VO	OV-NMLZ
Buli	VO	OV-NMLZ
Dagaare	VO	OV-NMLZ
Dangme	VO	OV-NMLZ
Gengbe	VO	OV-NMLZ
Krachi	VO	NMLZ-VO
Igbo	VO	NMLZ-VO
Yoruba	VO	NMLZ-VO
Krachi	VO	NMLZ-VO
Limbum	VO	NMLZ-VO
Thai	VO	NMLZ-VO

Note: It is not just that **OV-NMLZ** order is unattested, it is actively avoided in all the languages in which we would expect to find it.

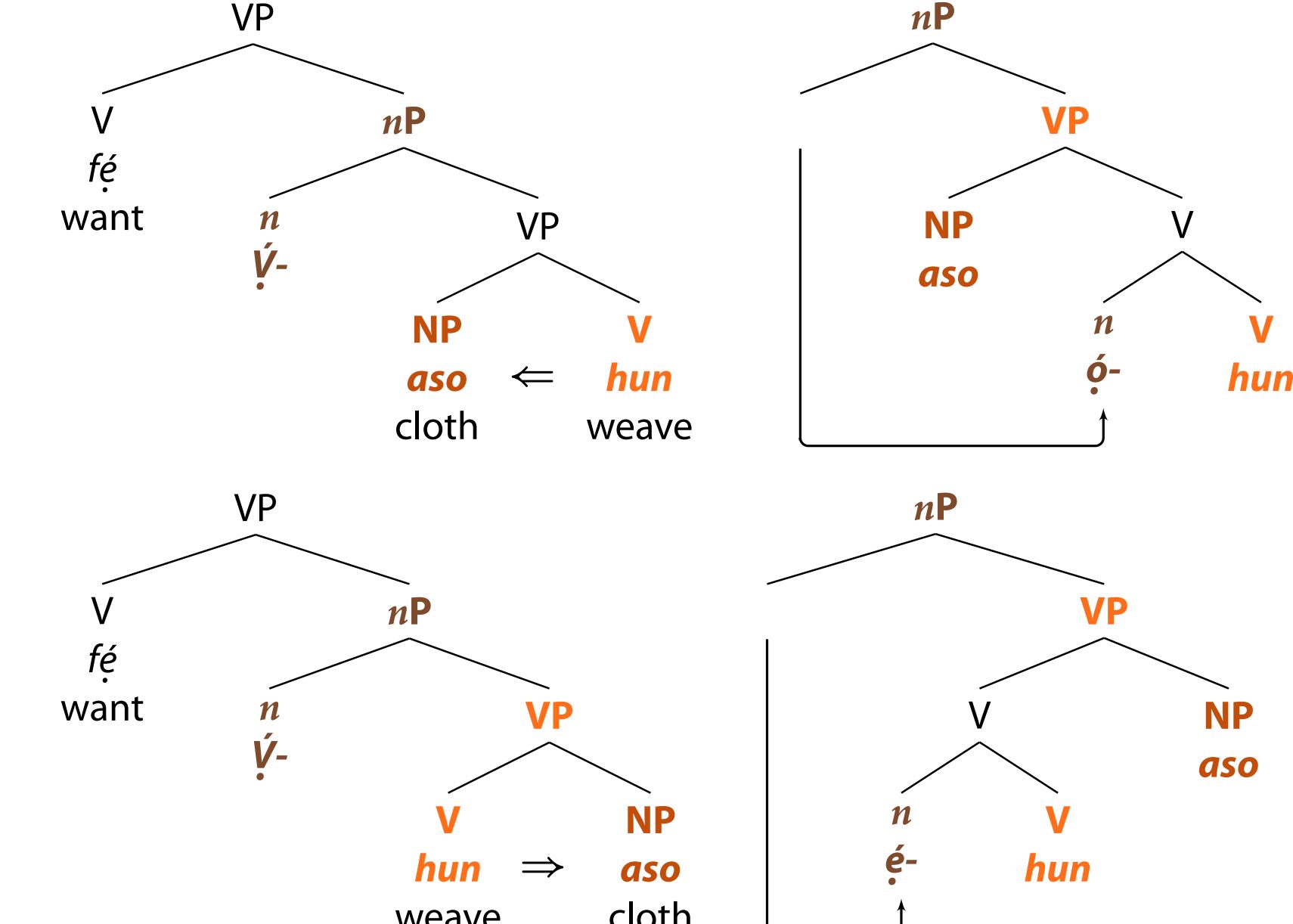
In Yoruba and Igbo, the nominalizer is a verbal affix and therefore must attach to the verb.

Nevertheless, we observe an (optional) switch in word order:

- (15) *Yoruba* (Manfredi 1997: 96):
  - a. Mo fé [vp é-hun aso] 1SG want NMLZ-weave cloth 'I want to weave (some) cloth.'
  - b. Mo fé [vp aso ó-hun] 1SG want cloth NMLZ-weave 'I want to weave (some) cloth'

### Igbo (Manfredi 1997: 97f.):

- a. Ó kúzhi-ri m [vp i-gbá igwé] 3SG teach-ASP 1SG INF-move iron 'S/he taught me to ride a bike.'
- b. Ó mára-na [vp igwé a-gbá] 3SG know-PERF iron NMLZ-move 'S/he knows how to ride a bike.'



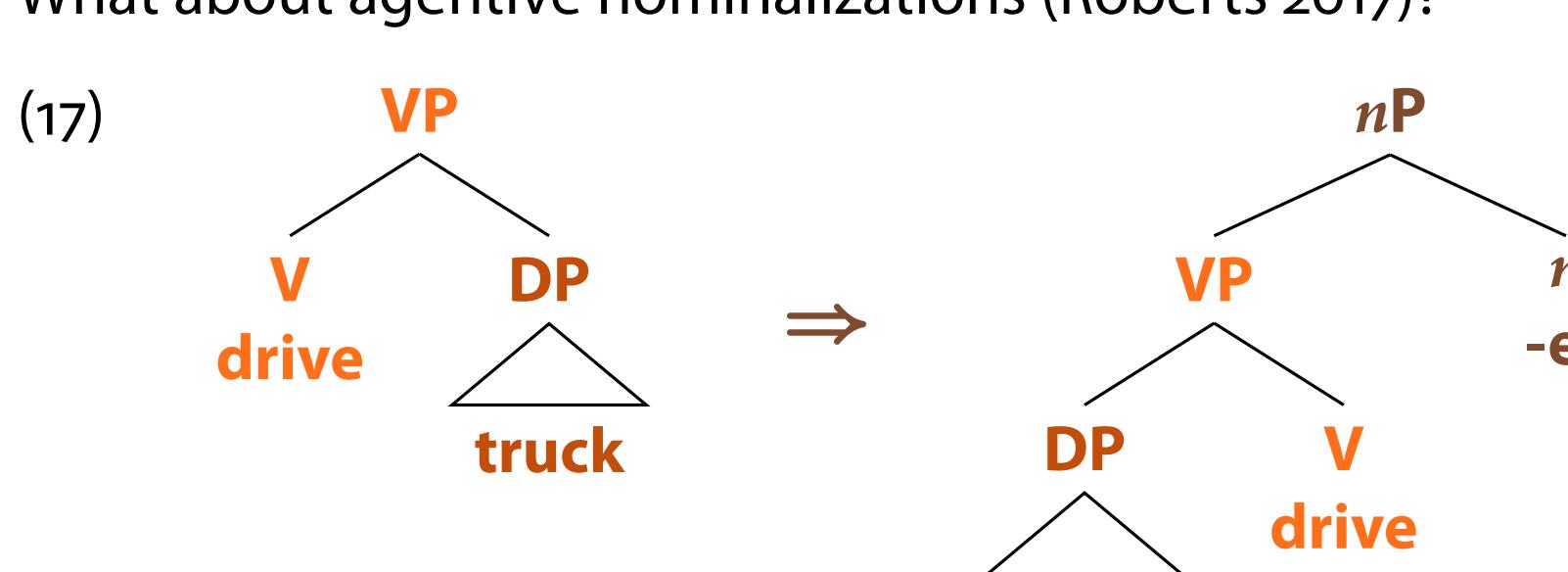
## Discussion

**Assumption:** Following Grimshaw (1990) and Borsley & Kornfilt (2006), nominalizations are **mixed extended projections**.

### Consequence for the FOFC

The FOFC also holds within mixed extended projections

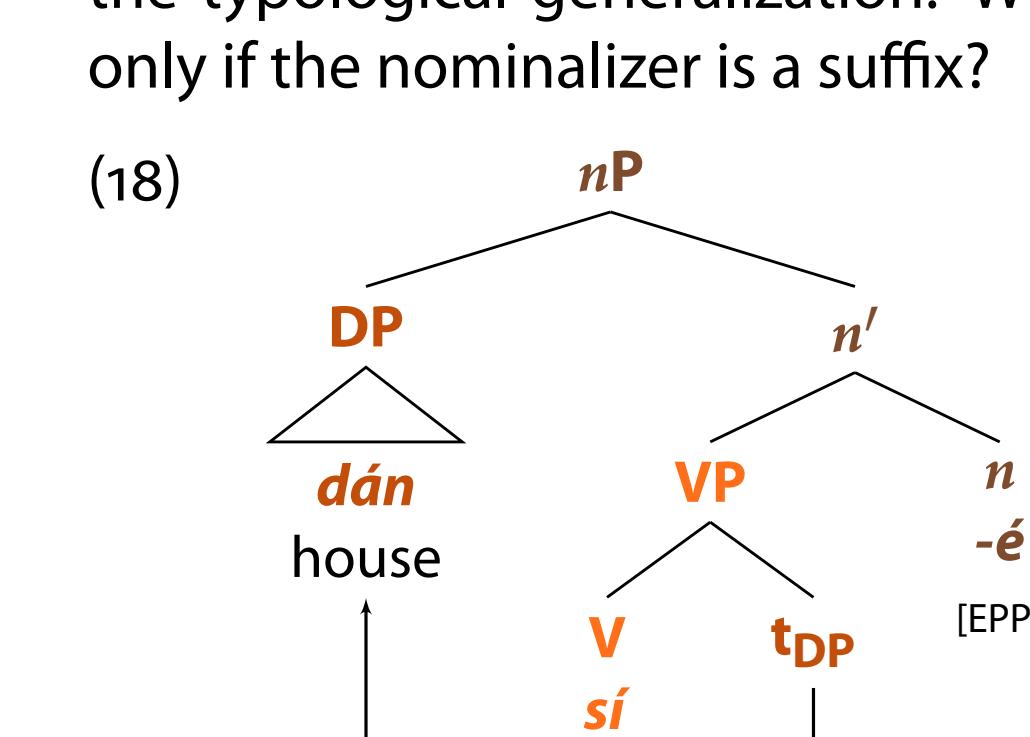
What about agentive nominalizations (Roberts 2017)?



This provides an alternative approach to synthetic compounds other than incorporation (see e.g. Harley 2009, Puniske 2016).

### Alternatives?

• **Object shift** (Manfredi 1997, Abob 2004, 2005) fails to capture the typological generalization: Why would it be obligatory only if the nominalizer is a suffix?



• **Head movement:** V-to-n movement fails to capture optional VO → OV switch with NMLZ-, also cf. **Lowering** in (15) & (16).

• Instead, we suggest that (re-)linearization is a repair to the FOFC (cf. **Untethering**; Richards 2016).