**Do-support as spellout of split head chains**

Karlos Arregi  
University of Chicago

Asia Pietraszko  
University of Connecticut

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1. Claims

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**Do-support is not triggered by failure of some operation**

It’s triggered by special integrity conditions on certain head chains.

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**Do-support is not triggered by idiosyncratic requirements of particular heads**

Variation in the surface position of *do* follows from independent parameters on verb position.

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Section 2  Analysis: *Do* is inserted in split head chains.

Section 3  *Do*-support is not triggered by failure of Head Movement or Lowering.

Section 4  *Do*-support is not triggered by idiosyncratic requirements of particular heads.

2. Analysis: *Do* is inserted in split head chains

Heads in the clausal spine form a head chain:

$$\begin{align*}
\text{CP} & \quad [\text{TP} \quad \text{T} \quad \text{VP} \quad \text{V} \quad \text{VP} \quad \text{V} \quad \ldots] \\
\text{C} & \quad \text{is part of the head chain in V2 sentences}
\end{align*}$$

A head chain is pronounced as an **inflected verb** in one of the positions (v in English, T in French.) (The precise mechanism of head chain formation is orthogonal. Possibilities include agreement, head movement or a mirror-theoretic complementation line.)

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**Parameter: Some languages require integrity of head chains**

In languages with special integrity conditions, head chains are built around a special V: $\forall$

Disrupting the integrity of a $\forall$-chain causes *do-support*:

- **Standard view**: *Do*-support is due to **blocking** of head chain formation.

- **Our proposal**: Head chains are **fully formed but later split**.
(2) **Split-by-deletion**

Deletion splits the chain at deleted XP

(3) **Split-by-intervention**

(by heads & specifiers, not adjuncts: Bobaljik 1995)

Orphan chain

A head chain that becomes dissociated from a lexical verb due to splitting.

*Do is inserted in orphan chains and surfaces where the lexical verb would.*
3. *Do*-support is not triggered by failure of Head Movement or Lowering

**The traditional view**


- *Do* is inserted in **stranded heads** (typically T) as a Last Resort
- A head is stranded if it’s affixal but cannot combine with V
  (by Head Movement, Lowering, etc.)

**WRONG PREDICTION:** a language with V-to-T movement should not have *do*-support.

3.1. Monnese has both V-to-T movement and *do*-support

Benincà & Poletto 2004, Bjorkman 2011

Both auxiliaries and lexical verbs move to T and precede adverbs (Benincà & Poletto 2004:59):

(4) l à *semper* tfakolà
    he *have.3SG* always spoken

   ‘He’s always spoken.’

   [TP T+*have* [AuxP <have> ... ]]

(5) l *tfákola* *semper*
    he *speak.3SG* always

   ‘He always speaks.’

   [TP T+*speak* [VP <speak> ... ]]

⇒ The affixal requirement of T is always satisfied by verb-movement.

In further T-to-C movement, *do*-support emerges:

(6) **Monnese has T-to-C** (Benincà & Poletto 2004:63):
    kwal è *t* tferkà fora?
    which *have.2SG* -you searched out

   ‘What have you chosen?’

   [CP C+*have* [TP subject <T+have> ... ]]

(7) **T-to-C with lexical V triggers do-support** (Benincà & Poletto 2004:68):
    ke *fe* *majá?*
    what *do.2SG* -you eat.INF

   ‘What do you eat?’

   [CP C+*do* [TP subject <T+?> ... ]]

⇒ A **countercyclic effect:** V-to-T is precluded by T-to-C.
3.2. Monnese do-support arises due to Split-by-intervention

The orphan chain is pronounced in C as *do*:

(8) **T-to-C: Split-by-intervention**

\[
\begin{array}{c}
\text{CP} \\
\text{C} \\
\text{TP} \\
\text{subject} \\
\text{T'} \\
\text{vP} \\
\text{VP} \\
\end{array}
\]

CORRECT PREDICTION: The lexical verb is pronounced low, despite the normal V-to-T.

(9) **l tfàkòla mia**

he *speak.3SG not*

‘He doesn’t speak.’

(Benincà & Poletto 2004:60)

(10) **fe -t mia majal ‘l pom?**

do.2SG *you not eat.INF the apple*

‘Do you not eat the apple?’

(Bjorkman 2011:190–191)

No orphan chains arise in other sentence types:

(11) **V-to-T: no intervention**

\[
\begin{array}{c}
\text{TP} \\
\text{subject} \\
\text{T'} \\
\text{T} \\
\text{vP} \\
\text{VP} \\
\end{array}
\]

\[
\begin{array}{c}
\text{\ldots} \\
\end{array}
\]

\[
\begin{array}{c}
\text{\ldots} \\
\end{array}
\]

⇒ **V-to-T movement does not preclude do-support**

(See also Bjorkman 2011)
4. Do-support is not triggered by idiosyncratic requirements of particular heads

Do can surface in C, T, or v, or in multiple positions, in a predictable way

4.1. Mainland Scandinavian (MSc): Do in C or v

Position of do follows from independent parameters on verb position

Finite verb positions:

(13) 

(14) Om morgenen **drikker** Peter ofte kafe.
in the.morning **drinks** Peter often coffee
‘Peter often drinks coffee in the morning.’

(15) Vi ved at Peter ofte **drikker** kaffe om morgenen.
we know that Peter *often drinks* coffee in the.morning
‘We know that Peter often drinks coffee in the morning.’

Danish (Vikner 1995:47)

(16)

(17) Mona og Jasper **vaskede bilen,** eller rettere Mona **gjorde** ΔVP
Mona or Jasper washed the.car, or rather Mona **did**
‘Mona or Jasper washed the car, or rather Mona did.’

Danish (Houser et al. 2011:249)
We are expected to go further. That said, it would be a great disappointment, not a catastrophe, if we don’t.’

Danish (Houser et al. 2011:251–252)


4.2. English: Do in C or T

**Surface position of do follows from site of split**

Verb typically surfaces in v:

(19) Mary *often drinks* coffee.

With vP ellipsis & Split-by-deletion, do surfaces in C or T, since v is not in the orphan chain:

(20)

(21) Sue washed the car.

Did Mary ΔvP?

(22) Sue washed the car, but . . .

. . . Mary did not ΔvP

With Split-by-intervention, do also surfaces in C or T:

(23)

(24) Did Mary wash the car?

(25) Mary did not wash the car.
4.3. VP ellipsis under auxiliaries: *Do* in v

VPE can result in *do* under auxiliaries:

(26)

In MSc:

(27) *Nu fisker jeg ikke efter en partner*. Men hvis jeg *havde gjort* Δ_P, havde jeg . . .

now *fish* I not *after a partner* but if I *had done* had I

‘I’m not looking for a new partner. But if I had, I would . . .’

Danish (Houser et al. 2011:271)

In British English (BrE):

(28) Kim isn’t *running for office* now, but she *has done* Δ_P in the past.

(Thoms & Sailor 2018:1)


4.4. *Do* in both T and v in the same sentence


(29)

2 orphan chains → 2 instances of *do*-support:

(30) John said he would *help*, but he *doesn’t usually* *do* Δ_P.

(Chalcraft 2006:5)