

# Alemannic verb doubling is the overt realization of a head movement chain<sup>1</sup>

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## 1 The phenomenon: Verb doubling

- Alemannic (~ Swiss German) allows sentences in which some verb appears several times.
- This is descriptively called *Verb Doubling* and has been shown to exist in several languages (Barbiers et al., 2008), where usually the doubling is dependent on an topicalization (fronting) operation.
- Alemannic verb doubling is different from the rest, though: Here, no topicalization is involved; rather, some verbs more generally co-occur with a truncated second instance of themselves. (1-3) below show verb doubling in main, subordinate, and small clauses.

### 1.1 The base case

- |                             |                                  |                               |
|-----------------------------|----------------------------------|-------------------------------|
| (1) Main clause             | (2) Embedded clause              | (3) Small Clause (Infinitive) |
| <i>i gang *(ga) schaffa</i> | <i>dass i gang *(ga) schaffa</i> | <i>goo *(ga) schaffa</i>      |
| i go.fin go work            | that I go.fin go work            | go.inf go work                |
| i go work                   | that I go work                   | go work                       |

- (4) **Observation 1: Verb doubling in Alemannic is not a result of topic fronting, but is a more general phenomenon of the verbal syntax.**

The distribution of the phenomenon is constrained in two ways, which will be addressed in turn.

### 1.2 Lexical restrictions

Only a given set of one to four verbs (varying across dialects) evoke Verb Doubling. Apart from the verb for "go" given in (1-3), the three verbs for "come", "start/begin", and "let" can do so:

- |                          |                           |
|--------------------------|---------------------------|
| (5) "go"                 | (6) "come"                |
| <i>i gang ga schaffa</i> | <i>i chum cho schaffe</i> |
| i go.fin go work         | i come.fin come work      |
| i go work                | i come (to) work          |

- |                        |                  |
|------------------------|------------------|
| (7) "start"            | (8) "let"        |
| <i>s fot afo rägne</i> | <i>la lo si!</i> |
| it starts starts rain  | let.imp let be   |
| it starts to rain      | let it be!       |

- (9) **Observation 2: Verb doubling is restricted to a closed class of verbs, call them *doubling verbs*: go, come, begin, let.**

For ease of exposition I will present examples involving the doubling verb from (1-3), "gaa" ("go") + "ga", but the claims are equally valid for the three remaining verbs in (5-7).

### 1.3 Structural restrictions

The second constraint on the distribution of verb doubling has to do with the complement of the doubling verb: If and only if a doubling verb has a verbal complement (as opposed to a DP, PP, or none at all), doubling occurs, as exemplified below:

- |                                  |                                  |
|----------------------------------|----------------------------------|
| (10) <i>i gang *(ga) schaffa</i> | (12) <i>I gang *(ga) da Wäag</i> |
| I go go work                     | I go go the way                  |
| I go work                        | I walk the path                  |
| (11) <i>I gang *(ga) is Büro</i> | (13) <i>I gang *(ga)</i>         |
| I go go in+the office            | I go go                          |
| I go to the office               | I go                             |

### 1.4 Complications: Object scrambling and multiple doublets

- The verbal complement can include its own arguments. These can stay in place or be scrambled upwards into the domain of the matrix clause.
  - If there are several such arguments, either the higher one, or both, (or none,) can be moved, as exemplified in the following data points.
- |  |                                   |
|--|-----------------------------------|
| (14) Complement is <b>transitive</b> , object in-situ      | (15) ... object is scrambled      |
| <i>i gang ga [s Büro] ufrumme</i>                          | <i>i gang [s Büro] ga ufrumme</i> |
| I go.fin go the office tidy-up                             | I go.fin the office go tidy-up    |
| I go clean the office                                      | I go clean the office             |
| (16) Complement is <b>ditransitive</b> , DO and IO in-situ |                                   |
| <i>I gang ga [dem Onkl] [a buach] koufe</i>                |                                   |
| I go.fin go the uncle a book buy                           |                                   |
| I go buy a book for my uncle                               |                                   |
| (17) Complement is ditransitive, IO scrambled              |                                   |
| <i>I gang [dem Onkl] ga [a buach] koufe</i>                |                                   |
| I go.fin the uncle go a book buy                           |                                   |
| I go buy a book for my uncle                               |                                   |

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- (18) Complement is ditransitive, DO and IO scrambled

*I gang [dem Onkl] [a buach] ga koufe*  
I go.fin the uncle a book go buy  
I go buy a book for my uncle

- The presence of objects correlates with the possibility of **multiple doublets**.
- The sentences that follow are grammatical, but much rarer than counterparts with only one doublet (as above).

- (19) At least one doubler, but possibly several!

a. *I gang ga [dem Onkl] ga [a buach] koufe* two doublets  
I go.fin go the uncle go a book buy  
I go buy a book for my uncle

b. *?I gang ga [dem Onkl] ga [a buach] ga koufe* three doublets  
I go.fin go the uncle go a book go buy  
I go buy a book for my uncle

c. *\*I gang [dem Onkl] [a buach] koufe* zero doublets  
I go.fin the uncle a book buy  
I go buy a book for my uncle

- (20) **Observation 3: A verb doubling configuration consists of one verb (finite, non-finite, or participle) plus at least one, but possibly more, doublets.**

### 1.5 Doubling without a doubling verb: Copies of what?

Aside from the multi-doublet constructions, there is another family of configurations involving doublets that requires explanation: Auxiliaries and modals can both replace the tensed doubling verb, serving as hosts so-to-say for a doubling construction. Furthermore, in "go" doubling, an open class of verbs denoting motion can do so, too. Below I show examples:

- (21) Modal + doublet (+ infinitive)

*I sot (goo) ga schaffa*  
I should (go) go work  
I should go work

- (22) Auxiliary + doublet (+ past participle)

*I bia (ggange) ga schaffa*  
I AUX (gone) go work  
I went to work

- (23) Open class of motion verbs + "go" doublet<sup>2</sup>

*I renn/louf/... s ga hola*  
I run it go get  
I am running to go get it

- (24) **Observation 4: Doublets can occur even if there is no realized doubling verb. Instead, modals and auxiliaries, as well as an open class of motion verbs, are in the position where normally a doubling verb would be.**

## 2 Previous research: VD is unproductive

Existing research unanimously rejects a productive doubling analysis, while some assumes doubling to have been productive at earlier stages (Hodler, 1969; Lötscher, 1993; Schönenberger & Penner, 1995a; van Riemsdijk, 2002; Brandner, 2006; Salzmänn & Brandner, 2011; Salzmänn, 2013).

- "Of course, in synchronic grammar these elements are fully grammaticalized anyway, so we are not really talking about a productive process in the grammar." (van Riemsdijk, 2002, p. 160)
- "This is also the reason why I do not think that the VIM could be the spell-out of an intermediate trace of moved verbs, as suggested to me by Günther Grewendorf (p.c.). In addition, it is also far from obvious where the governing verb should be moving from, where it is going, and why it should move in the first place." (van Riemsdijk, 2002, p. fn. 22)
- "(...) [It is] hardly made explicit in what sense go/cho are actually doubles and **what the underlying syntax of the construction looks like.**" (Salzmänn, 2013)[4], emph.added]

### 2.1 Empirical arguments for a doubling approach

- Empirical argument: The presence of multiple doublets in one sentence is not ruled out

- (25) *i gang ga da Onkl ga bsuacha*

I go.fin go the uncle go visit  
I go visit the uncle

- Another empirical argument: Systematic correspondence within (sub)dialects

- (26) a. *ich gu gu postnä (...)* (#520)

I go.fin go do-the-groceries

- b. *Ga de no mitem a dSense* (#2524)

go.fin then PART with+him to Sense

*ga loufä*  
go walk

- c. *ich go etz s beby go {a luege}* (#2116)

I go.fin now the baby go see

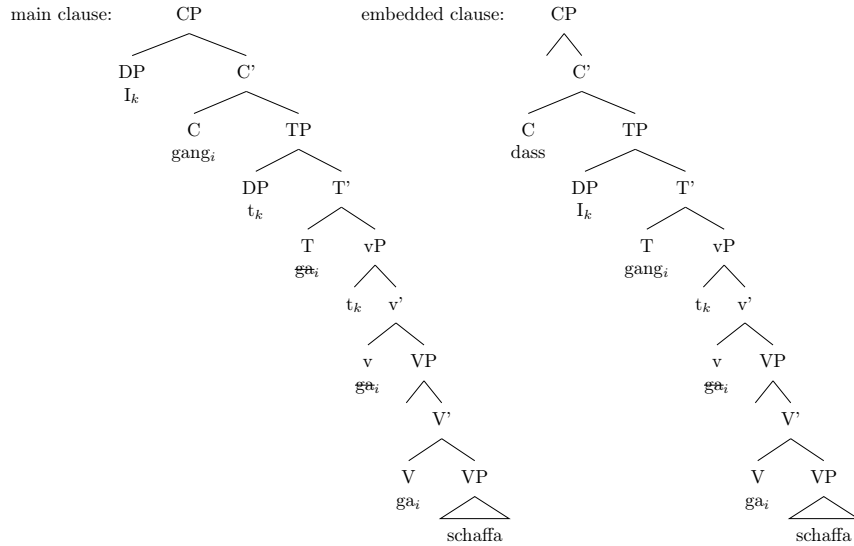
*Data from the Swiss SMS Corpus (Stark et al., 2009-2014).*

<sup>2</sup>A note on terminology: It is possible for the verb in [[chogo]] to be "cho" ("come"), a regular doubling verb in a different dialect: "choo" doubles with "cho" in West Alemannic, while it takes the "go" doublet in East Alemannic. For this reason, some authors call this specific case "cross-doubling".

### 3 Defending the productivity of Verb Doubling

#### 3.1 Doublets are traces of V-to-T (-to-C) movement

- I argue that verb doubling is the result of head-movement of the verb, combined with the spell-out of its trace(s).
- Verbs move from V to v to T in subordinate clauses, whereas in main clauses, they continue from T to C, as it is typically assumed for German Verb-second. This is illustrated below:



Based on actual syntactic identity (of several positions), this approach is in contrast the existing analyses in the literature, which explicitly reject such an account and instead treat what are here called doublets as distinct elements that do **not** stem from a shared derivational history with the V head.

Importantly, I am assuming head-initial VPs, vPs and TPs for reasons that will become evident in section 4.

#### 3.2 Verb doubling is Head doubling

- One of the doubling verbs is a a particle verb, "a+fo" ("begin/start", glossed in 28).
- It is generally assumed (Wurmbrand, 2000) for such verbs as "afo" (or the Standard German equivalent, "anfangen"), that they are an idiomatized V', consisting of a verb in V and a particle in its complement position, as shown in 27.

(27)  $[VP [V' [XP a ] [V fo ]]]$

(28) *as fot a*  
it starts ptcl  
it starts

(29)  $[TP \text{ as } [T \text{ fot } ] [vP [v \text{ fo } ] [VP a [V \text{ fo } ]]]]$

The ungrammaticality of 30 proves that it is only the head V that doubles, rather than a phrasal constituent.

(30) *as fot a (\*a)fo schneje*  
it starts ptcl (\*ptcl)start snow  
it starts to snow

(31)  $[TP \text{ as } [T \text{ fot } ] [vP [v \text{ fo } ] [VP a [V \text{ fo } ] \text{ schneje } ]]]]$

#### 3.3 Multiple doublets

- Usually, one doublet is realized in a sentence.
- There is a reasonable amount of data that suggests that the realization of multiple doublets in one sentence is also acceptable (though degraded).
- The possible realization locations of the doublets correspond to the intermediate movement landing sites in 32.

I place the indirect object in spec-vP for ease of illustration, but it would also suffice to place this in a higher VP shell (Larson, 1988, a.o.) or applicative phrase (Pylkkänen, 2008, a.o.).

(32)  $[CP I [C \text{ gang } ] [TP [T \{ga\} ] [vP \text{ dm } D [v \{ga\} ] [VP \text{ Wii } [V \{ga\} ] ] \text{ bringe } ]]]]$

- This analysis predicts that in verb-final (i.e. subordinate) clauses, one fewer instance of the doublet is possible compared to verb-second (i.e. main) clauses.
- It appears that this prediction matches the data, but the marginally acceptable configurations with multiple doublets are rare, and thus hard to elicit.

(33)  $[C \text{ dass } ] [TP I [T \text{ gang } ] [vP \text{ dm } D [v \{ga\} ] [VP \text{ Wii } [V \{ga\} ] ] \text{ bringe } ]]]]$

#### 3.4 Doubling without a realized doubling verb

##### 3.4.1 Doubling and subsequent elipsis of the original

- When the doubling verb is an infinitive embedded under a higher modal/auxiliary, doubling normally is possible as usual.
- However, it is a puzzle that in 21 we see doublets, but not the expected infinitival "go" that would be their ancestor. This puzzle dissolves when we note the fact that infinitival "go" is independently capable of being elided in Alemannic (van Riemsdijk, 2002).
- Thus we can analyze 21 as involving movement of a verb "go", creating the doublets we see there, followed by ellipsis of that verb, as diagrammed in 34.

See 21 for the gloss:

(34) [TP I [T sot ] [vP dm Dädä [v ε<sub>gōō</sub> ] [VP Wii [V ga ] bringe ]]]

"Time to go to work":

(35) [NP Zii [PP zum [vP [v ε<sub>gōō</sub> ] [VP [V ga ] schaffa ]]]

### 3.4.2 Traces of an elided IPP motion verb

- Another independently observed phenomenon that plays into the current puzzle is Infinitivus-pro-participio (IPP) – participles of modals generally have infinitive morphology when subordinating an infinitive complement themselves (similarly in Standard German: "ich habe gehen müssen/\*gemusst").
- This, plus subsequent ellipsis of the IPP-born *Infinitivus* as shown directly above makes it possible to allow also for the configuration of a modal plus a doublet, where there is no ancestor to the doublet either (7).

• In sum, these are the steps:

1. V moves to participle position (here v)
2. Upper copy has participle morphology, lower one is a doublet.
3. Upper copy is substituted by an infinitive form = IPP.
4. Infinitive is silenced, in the sense of van Riemsdijk (see above).
5. Result: Aux + doublet.

(36) [TP I [T bia ] [vP dm Dädä [v ~~gange~~ ε<sub>gōō.IPP</sub> ] [VP Wii [V ga ] bringe ]]]

### 3.4.3 Traces that realize semantic subcomponents of verbs

Some semantically richer motion verbs than "go" (e.g. "run") also require the "go" doublet, as shown in (7):

(37) [TP I [T renn ] [vP dm Dädä [v {ga} ] [VP Wii [V {ga} ] bringe ]]]

- It is not unusual for "doubling" phenomena to involve morphologically reduced forms. For instance, Van Urk (2018) shows instances of DPs that are doubled by pronouns in Dutch, and Landau (2006) shows that verb doubling in Hebrew results in an
- Thus the fact that in Alemannic various motion verbs are doubled by the semantically-unmarked verb "go" is not surprising.
- Plausibly this doublet, despite superficially resembling the verb "go", is in fact a semantically-bleached element. If this is so, it is not surprising that the morphological component of the grammar might take advantage of this element as a means of realizing lower copies left by verb movement.

### 3.5 Determining which traces are spelled-out

- In a copy-and-delete approach to movement, syntactic elements that are to be moved are actually merged again at a higher position ("copy").
- At PF, then, all but one instance is deleted. The deletion of higher copies results in covert movement, the deletion of lower copies in overt movement.
- The argumentation for how verb doubling is a result of copy-and-delete can receive a principled explanation.
- Assume for this that the syntax operates on vocabulary items ("early insertion") and not on syntactic features ("late insertion").
- At PF, inflection of the doubling verb has taken place. The derivation would look like this:

(38) [C dass ] [TP I [T gang ] [vP dm D [v {ga} ] [VP Wii [V {ga} ] bringe ]]]

- What PF sees is not a chain [gang, ga, ga, ga], but the chain [ga, ga, ga], since it operates on forms and not structures. Resultingly, one instance of "gang" and one of "ga" survives PF-deletion – doubling is born.

### 3.6 The doublet cannot be sentence-final

- Why can the embedded phrase (the sister of the original go-verb) not be raised, leaving in place a single doublet string-finally (39)?
- If <ga> is morphologically a (pro)clitic, this would predict that this would violate PF.

(39) \*schaffa gang i ga  
work go i go

I go go work

Future research should investigate double-doubler constructions as found in Bernese.

(40) a. gang goge schaffe Bernese  
b. gang \*ga ga schaffa non-Bernese  
c. mer gönd ebe vilicht goge tschüütele (#3329)  
we go just maybe gogo play-soccer.dim  
so we'll go play soccer perhaps

(Example (c) is from the Swiss SMS Corpus (Stark et al., 2009-2014))

- Hinted in orthography and prosody, the two clitics in this Bernese

form are incorporated (they form one word), unlike in non-Bernese. The newly formed double-clitic then can be licensed phonologically by the V ("schaffe"), whereas in non-Bernese, the linearly first "ga" has no licensing and is thus ruled out.

## 4 Consequence: Head-initiality in Alemannic

- In German and its dialects, it is usually assumed that heads in the clausal spine other than C are head-final.
- However, if the proposed analysis of doubling in Alemannic is correct, then this cannot be true for this German variety: If doublets spell-out head positions, and if those heads were final, then most (if not all) doublets ought to appear linearly at the right edge of the clause.
- However, the doublets *always* lean left (see 39), and are thus interspersed throughout the content of the clause, as we have seen.
- This suggests that all heads in the clause are in fact initial in Alemannic.
- I argue that this is so, and that the word orders available in Alemannic (which are more flexible than standard German) are compatible with an analysis in which an underlyingly head-initial structure can be subjected to considerable scrambling.

### 4.1 VO means that VP is head-initial

- Doublers strictly precede their complement.
- If the syntactic doubling account is right, and taken seriously, this means that at least VPs in Alemannic are head-initial (the headedness of Germanic VPs is disputed).

- (41) a. ... \**schaffa ga*  
       ... work go  
       b. ... *ga schaffa*  
       ... go work

To generate the cases of tripling (the main argument for a productive account here: two doublers and an inflected verb are not clearly ruled out), the analysis requires that also **vP** and/or **TP** are head-initial.

### 4.2 The headedness of TP

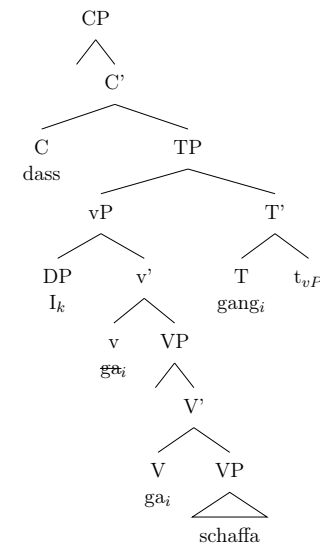
The headedness of TP in Alemannic is a question on its own, since both linearly T-final and T-initial forms are grammatical.

- (42) a. ... *welle schlofe*  
       ... wanted sleep  
       ... wanted to sleep  
       b. ... *schlofe welle*  
       ... sleep wanted  
       ... wanted to sleep

#### 4.2.1 How to derive linearly final T if we assume TP is head-initial, though?

In linearly T-final forms, the matrix vP/VP is moved to a specifier of this TP. Or, to avoid multiple specifiers, pied-piping the subject along with the raised VP (Biberauer & Roberts, 2005) is conceivable. This would also solve the problem that head-final TP over head-initial VP violates the *Final-over-final-condition* (Sheehan et al. (2017)) (a problem also brought up in the Salzmann (2010) handout).

## 4.3 Deriving linearly final T



## 5 Consequence (2): In support of the copy theory of movement

- This analysis supports a theory in which movement does not leave ‘traces’, but rather fully-fledged syntactic copies (Chomsky, 1993, a.o.).
- While these copies are usually silent, those copies are sometimes (in part) realized (see Pereltsvaig (2008) on Russian).
- The copy theory of movement has generally been defended using facts about phrasal movement. However, if head movement is also an instance of syntactic movement, then in principle we expect head movement to leave behind copies which in some languages might be realized overtly, yielding “doubling”.
- Thus these Alemannic facts flesh out the predicted typology of doubling that we expect, given these syntactic concepts.

## 6 Conclusion

- In sum, I have argued that head movement of V in Alemannic can result in one or more “doublets”, because these elements are the realizations of copies formed by the verb’s head movement chain.
- The existence of such a phenomenon in at least some languages is predicted by the copy theory of movement, along with the syntactic nature of head movement.

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