

# Relative clause in Zilo

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## 1. Introduction

Zilo speakers use participles for the formation of relative clauses. Relative clauses can either precede the head or follow the head without any known changes in meaning (see 1b–1e), so the topic of the possible word orders in relative clause and whether different orders have different meanings needs further investigation based on corpora data.

## 2. Positions that can be relativized

### (1) Single argument of an intransitive verb

- a. if:i-χo      jofi j-iʔ-o  
we-AD.LAT girl F-come-PST(AOR)  
'The? girl came to us'
- b. di-<j>o ts'inn-e jofi [if:i-χo      j-iʔ-o-b]  
I-<F>AFF know-HAB girl we-AD.LAT F-come-PST-PTCP:PST  
'I know the girl who came to us'.
- c. di-<j>o ts'inn-e [if:i-χo      j-iʔ-o-b]      jofi  
I-<F>AFF know-HAB we-AD.LAT F-come-PST-PTCP:PST girl  
'I know the girl who came to us'.
- d. jofi [if:i-χo      j-iʔ-o-b]      di-<j>o ts'inn-e  
girl we-AD.LAT F-come-PST-PTCP:PST I-<F>AFF know-HAB  
'I know the girl who came to us'.
- e. [if:i-χo      j-iʔ-o-b]      jofi di-<j>o ts'inn-e  
we-AD.LAT F-come-PST-PTCP:PST girl I-<F>AFF know-HAB  
'I know the girl who came to us'.
- f. [if:i-χo      j-iʔ-ija]      jofi di-<j>o ts'inn-e  
we-AD.LAT F-come-PST-PTCP:PRAE girl I-<F>AFF know-HAB  
'I know the girl who will come to us'.

### (2) Agent of transitive verb

- a. maduhalʃ-di      χink'il-ol k'amm-i  
neighbour.OBL-ERG khinkal-PL eat-PST(AOR)  
'Neighbour ate khinkals'.
- b. [χink'il-ol k'amm-i-b]      maduhal di-<w>o ts'inn-e  
khinkal-PL eat-PST-PTCP:PST neighbour I-<M>AFF know-HAB  
'I know the neighbour who ate khinkals'.
- c. [χink'il-ol k'amm-ija]      maduhal di-<w>o ts'inn-e  
khinkal-PL eat-PTCP:PRAE neighbour I-<M>AFF know-HAB  
'I know the neighbour who will eat khinkals'.

- (3) Patient of transitive verb
- maduhalf-di      χink'il-ol    k'amm-i  
neighbour.OBL-ERG khinkal-PL eat-PST(AOR)  
'Neighbour ate khinkals'.
  - [maduhalf-di      k'amm-i-b-ol]      χink'il-ol    den-ni dzid-i  
neighbour.OBL-ERG eat-PST-PTCP:PST-PL khinkal-PL I-ERG    do-PST(AOR)  
'I made khinkals that the neighbour ate'.
  - [maduhalf-di      k'amm-ij-ol]      χink'il-ol    den-ni dzid-i  
neighbour.OBL-ERG eat-PTCP:PRAE-PL khinkal-PL I-ERG    do-PST(AOR)  
'I made khinkals that the neighbour will eat'.
- (4) Affective argument
- dada-<r>o      refa haʔ-o  
father-<¬AN2>AFF tree see-PST(AOR)  
'Father saw the tree'.
  - [refa haʔ-o-b]      dada    di-<w>o    ts'inn-e  
tree    see-PST-PTCP:PST father I-<M>AFF know-HAB  
'I know the father who saw the tree'.
  - [refa haʔ-ija]      dada    di-<w>o    ts'inn-e  
tree    see-PTCP:PRAE father I-<M>AFF know-HAB  
'I know the father who will see the tree'.
- (5) Instrumental argument
- jofi halux-onn-ij baba-qxi  
girl miss-PST-PF mother-INST  
'Girl missed her mother'.
  - [jofi haluxonn-i-b]      baba    di-<j>o    ts'inn-e  
girl    miss-PST-PTCP:PST mother I-<M>AFF know-HAB  
'I know the mother whom the girl missed'.
  - [jofi haluxonn-ija]      baba    di-<j>o    ts'inn-e  
girl    miss-PTCP:PRAE mother I-<M>AFF know-HAB  
'I know the mother whom the girl will miss'.
- (6) Adz argument
- wofo imu-tf'u      sir-i  
boy father.OBL-AD2 afraid-PST(AOR)  
'The boy is afraid of [his] father'.
  - [wofo sir-i-b]      ima    di-<w>o    ts'inn-e  
boy    afraid-PST-PTCP:PST father I-<M>AFF know-HAB  
'I know the father that boy was afraid of'.
  - [wofo sir-ija]      ima    di-<w>o    ts'inn-e  
boy    afraid-PTCP:PRAE father I-<M>AFF know-HAB  
'I know the father that boy will afraid of'.
- (7) Dative argument
- dada-di      j-oful-lu      intfɪ    itʃi-i  
father.OBL-ERG girl.OBL-DAT apple give-PST(AOR)  
'Father gave an apple to the daughter'.
  - [dada-di      intfɪ    itʃi-i-b]      jofi    di-<j>o    ts'inn-e  
father.OBL-ERG apple give-PST-PTCP:PST girl I-<F>AFF know-HAB  
'I know the girl that father gave an apple to'.

- c. [dada-di        intʃi itʃi-ija]        joʃi di-<j>o    ts'inn-e  
father.OBL-ERG apple give-PTCP:PRAE girl I-<F>AFF know-HAB  
'I know the girl that father will give an apple to'.

(8) Comitative argument

- a. joʃi j-ik-on        ritʃi'i-loj  
girl F-live.on-PST(AOR) meet-COM  
'The girl live on meet'.
- b. [joʃi j-ik-oni-b]        ritʃi di-<b>o        dʒiʔ-e  
girl F-live.on-PST-PTCP:PST meet I-<¬AN1>AFF love-HAB  
'I like the meet that girl lived on'.
- c. [joʃi j-ik-on-ija]        ritʃi di-<b>o        dʒiʔ-e  
girl F-live.on-¬PST-PTCP:PRAE meet I-<¬AN1>AFF love-HAB  
'I like the meet that girl will live on'.

(9) Causee argument

- a. woʃu-di        joʃu-<b>o        χink'il-ol    k'amm-oʃ-i  
boy.OBL-ERG girl.OBL-<¬AN1>AFF khinkal-PL eat-CAUS-PST(AOR)  
'The girl live on meet'.
- b. [woʃu-di        χink'il-ol    k'amm-oʃ-i-b]        joʃi if:i-χo        j-iʔ-o  
boy.OBL-ERG khinkal-PL eat-CAUS-PST-PTCP:PST girl we-AD.LAT F-come-PST(AOR)  
'The girl who was made to eat khinkals came to us'.
- c. [woʃu-di        χink'il-ol    k'amm-oʃ-ija]        joʃi if:i-χo        j-iʔ-o  
boy.OBL-ERG khinkal-PL eat-CAUS-PTCP:PRAE girl we-AD.LAT F-come-PST(AOR)  
'The girl who will be made to eat khinkals came to us'.

(10) Genitive possessor

- a. joʃu-tʃi        reʔa ruq'-u-r  
girl.OBL-GEN hand hurt-PST-PROGR  
'Girl's hand hurts'.
- b. [reʔa ruq'-u-b]        joʃi di-<j>o        ts'inn-e  
hand hurt-PST-PTCP:PST girl I-<F>AFF know-HAB  
'I know the girl whose arm hurt'.
- c. [reʔa ruq'-ija]        joʃi di-<j>o        ts'inn-e  
hand hurt-PTCP:PRAE girl I-<F>AFF know-HAB  
'I know the girl whose arm will hurt'.

(11) Time

- a. zɛʔal woʃo w-uʔ-o  
today boy M-come-PST(AOR)  
'Today boy came'.
- b. [woʃo w-uʔ-o-b]        zubu  
boy M-come-PST-PTCP:PST day  
'Day when the boy came'.
- c. [woʃo w-uʔ-ija]        zubu  
boy M-come-PTCP:PRAE day  
'Day when the boy will come'.

(12) Spatial location

- a. woʃo hon-tʃi        w-uʒ-un  
boy village.OBL-INTER.ESS M-be.born-PST(AOR)

- ‘The boy was born in a village’.
- b. [wofo w-u3-uni-b]                      hon    di-<r>o                      haʔ-o  
 boy    M-be.born-PST-PTCP:PST village I-<¬AN2>AFF see-PST(AOR)  
 ‘I saw the village, where the boy was born’.
- c. [wofo w-u3-un-ija]                      hon    di-<r>o                      haʔ-o  
 boy    M-be.born-¬PST-PTCP:PRAE village I-<¬AN2>AFF see-PST(AOR)  
 ‘I saw the village, where the boy will be born’.

Since relativisation remove all relation markers from the head of the relative clause, the ambiguity arise: the relativised spatial goal and spatial source will be the same (but there is a lexical way to distinguish them anyway):

(13) Spatial goal and spatial source

- a. wofo hon-tʰi                                      w-utʃʰ:-un  
 boy    village.OBL-INTER.LAT M-run-PST(AOR)  
 ‘Boy ran to the village’.
- b. wofo hon-tʰi-k:u                                      w-utʃʰ:-un  
 boy    village.OBL-INTER-ELAT M-run-PST(AOR)  
 ‘Boy ran from the village’.
- c. [wofo w-utʃʰ:-uni-b]                      hon    di-<r>o                      haʔ-o  
 boy    M-run-PST-PTCP:PST village I-<¬AN2>AFF see-PST(AOR)  
 ‘I saw the village that boy ran to/from’.
- d. [wofo w-utʃʰ:-un-ija]                      hon    di-<r>o                      haʔ-o  
 boy    M-run-¬PST-PTCP:PRAE village I-<¬AN2>AFF see-PST(AOR)  
 ‘I saw the village that boy will ran to/from’.

In adpositional relative clause the adposition could be placed anywhere in a relative clause but the last position (see 14b–14e). Probably, participle should be placed in last position in a relative clause, but it should be investigated in more accurate way. The first informants’ reaction is in example (14c).

(14) Adpositional argument

- a. j-ofu-di                      k’amm-i                      intʃi    haq’u-tʃʰu                      tʰeru  
 girl.OBL-ERG eat-PST(AOR) apple hous.OBL-AD2 near  
 ‘The girl ate apple near the hous’.
- b. [tʰeru j-ofu-di                      intʃi    k’amm-i-b]                      haq’u di-<r>o                      haʔ-o  
 near    girl.OBL-ERG apple eat-PST-PTCP:PST house I-<¬AN2>AFF see-PST(AOR)  
 ‘I saw the house near which the girl ate an apple’.
- c. [j-ofu-di                      tʰeru intʃi    k’amm-i-b]                      haq’u di-<r>o                      haʔ-o  
 girl.OBL-ERG near    apple eat-PST-PTCP:PST house I-<¬AN2>AFF see-PST(AOR)  
 ‘I saw the house near which the girl ate an apple’.
- d. [j-ofu-di                      intʃi    tʰeru k’amm-i-b]                      haq’u di-<r>o                      haʔ-o  
 girl.OBL-ERG apple near    eat-PST-PTCP:PST house I-<¬AN2>AFF see-PST(AOR)  
 ‘I saw the house near which the girl ate an apple’.
- e. \*[j-ofu-di                      intʃi    k’amm-i-b                      tʰeru] haq’u di-<r>o                      haʔ-o  
 girl.OBL-ERG apple eat-PST-PTCP:PST near    house I-<¬AN2>AFF see-PST(AOR)  
 ‘I saw the house near which the girl ate an apple’.
- f. [j-ofu-di                      tʰeru intʃi    k’amm-ija]                      haq’u di-<r>o                      haʔ-o  
 girl.OBL-ERG near    apple eat-PTCP:PRAE house I-<¬AN2>AFF see-PST(AOR)  
 ‘I saw the house near which the girl will eat an apple’.

(15) Actant from the general question

- a. jofi j-iʔ-o di-bolo dada-di rats':-in  
girl F-COME-PST:(AOR) ?-INDEF father.OBL-ERG ask-PST(AOR)  
'Father asked, whether the girl came.'
- b. [dada-di j-iʔ-o di-bolo rats':-ini-b] jofi di-<j>o ts'inn-e-ssu  
father.OBL-ERG F-COME-PST:(AOR) ?-INDEF ask-PST-PTCP:PST girl I-<F>AFF know-HAB-NEG  
'I don't know the girl about whom father asked, whether she came.'
- c. [dada-di j-iʔ-o di-bolo rats':-ini-ja] jofi di-<j>o ts'inn-e-ssu  
father.OBL-ERG F-COME-PST:(AOR) ?-INDEF ask-¬PST-PTCP:PRAE girl I-<F>AFF know-HAB-NEG  
'I don't know the girl about whom father will ask, whether she came.'

(16) Actant from the special question

- a. maduhalf-χo i-m w-uʔ-o di-bolo dada-di rats':-in  
neighbour.obl-AD.LAT what-H M-COME-PST(AOR) ?-INDEF father.OBL-ERG ask-PST(AOR)  
'Father asked, who came to the neighbour.'
- b. [dada-di i-m w-uʔ-o di-bolo rats':-ini-b] maduhal di-<w>o  
father.OBL-ERG what-H M-COME-PST(AOR) ?-INDEF ask-PST-PTCP:PST neighbour I-<M>AFF  
ts'inn-e-ssu  
know-HAB-NEG  
'I don't know the neighbour to whom father asked who came.'
- c. [dada-di i-m w-uʔ-o di-bolo rats':-ini-ja] maduhal di-<w>o  
father.OBL-ERG what-H M-COME-PST(AOR) ?-INDEF ask-¬PST-PTCP:PRAE neighbour I-<M>AFF  
ts'inn-e-ssu  
know-HAB-NEG  
'I don't know the neighbour to whom father asked who came.'

(17) So called relative clause without coreferential noun phrase in the modifying clause

- a. [den-ni zīw b-ertʃ':-i-b] ʃ:iw wofu-di ts'ad-i  
I-ERG cow AN-milk-PST-PTCP:PST milk boy.OBL-ERG drink-PST(AOR)  
'Boy drank the milk from my milking the cow.'
- b. [den-ni mafina b-aχo-ʔ-i-b] orsi di-<b>o haʔ-o-ssu  
I-ERG car ¬AN1-sell-CAUS-PST-PTCP:PST money I-<¬AN1>AFF see-PST(AOR)-NEG  
'I didn't see the money from my selling the car.'
- c. [woful-di orsi b-eq'af':-i-b] χabar di-<b>o tsinn-e  
boy.OBL-ERG money ¬AN1-steal-PST-PTCP:PST story I-<¬AN1>AFF know-HAB  
'I know the story about the boy stealing the money'
- d. [jofu-di χ<sup>w</sup>ami-lj-ez-a-b] ʃam di-<b>o b-aχo-r  
girl.OBL-ERG fish-PL F-cook-PST-PTCP:PST smell I-<¬AN1>AFF ¬AN1-smell-PROGR  
'I pick up the smell of fishes that girl cooked.'

It is not possible to relativise some non-obligatory adjuncts:

(18) Committative adjunct

- a. dada jofi-loj w-uʔ-o  
father girl-COM M-COME-PST(AOR)  
'Father came with the daughter.'
- b. \*[dada w-uʔ-o] jofi di-<j>o ts'inn-e  
father M-COME-PST(AOR) girl I-<F>AFF know-HAB  
'I know the daughter that father came with.'

It is not possible to relativise from coordination island:

- (19) Coordination Island
- a. wofo-lo jofi-lo w-uʔ-o  
boy-ADD girl-ADD M-come-PST(AOR)  
'A boy and a girl came.'
- b. \*[wofo-lo w-uʔ-o] jofi di-<j>o ts'inn-e  
boy-ADD M-come-PST(AOR) girl I-<F>AFF know-HAB  
'I know the girl that boy and she came.'

### 3. Head properties

The head of the relative clause could be:

- (20) common noun
- a. [ifi-χo j-iʔ-o-b] jofi di-<j>o ts'inn-e  
we-AD.LAT F-come-PST-PTCP:PST girl I-<F>AFF know-HAB  
'I know the girl who came to us.'
- (21) demonstrative pronoun
- a. [hon-tʃi w-uʔ-uni-b] hege-w hoʔu w-etʃ'uxa w-uʔ-un  
village.OBL-INTER.ESS M-be.born-PST-PTCP:PST dem-M here M-big M-become-PST(AOR)  
'He, that was born in village, grew up here.'
- (22) personal pronoun
- a. [hon-tʃi w-uʔ-uni-b] men hoʔu w-etʃ'uxa w-uʔ-un  
village.OBL-INTER.ESS M-be.born-PST-PTCP:PST you here M-big M-become-PST(AOR)  
'You, that was born in village, grew up here.'
- (23) interrogative pronoun
- a. [ifi-χo w-uʔ-o-b] i-m-ʒi hede-w?  
we-AD.LAT M-come-PST-PTCP:PST what-H-WH ??-M  
'Who was that who came to us?'
- b. [maduhalf-di k'amm-i-b] i-b-ʒi hede-b?  
neighbour.OBL-ERG eat-PST-PTCP:PST what-¬H-WH ??-¬AN I  
'What was that that the neighbour ate?'
- (24) indefinite pronoun
- a. [ifi-χo w-uʔ-o-b] i-m-bolo di-<w>o ts'inn-e-ssu  
we-AD.LAT M-come-PST-PTCP:PST what-H-INDEF I-<M>AFF know-HAB-NEG  
'I don't know somebody who came to us.'
- b. [maduhalf-di k'amm-i-b] i-bolo di-<b>o ts'inn-e-ssu  
neighbour.OBL-ERG eat-PST-PTCP:PST what-INDEF I-<M>AFF know-HAB-NEG  
'I don't know something that neighbour ate.'
- (25) heavy head
- a. [ifi-χo j-iʔ-o-b] j-etʃ'uxa j-ots:i aminat di-<j>o dʒiʔ-e  
we-AD.LAT F-come-PST-PTCP:PST F-big F-sibling Aminat I-<F>AFF love-HAB  
'I love older sister Aminat, that came to us.'
- (26) headless
- a. [ifi-χo j-iʔ-o-b] di-<j>o ts'inn-e-ssu  
we-AD.LAT F-come-PST-PTCP:PST I-<F>AFF know-HAB-NEG  
'I don't know (female) that came to us.'

- b. [χink'il-ol k'amm-i-b] di-<w>o ts'inn-e-ssu  
khinkal-PL eat-PST-PTCP:PST I-<M>AFF know-HAB-NEG  
'I don't know (male) who ate khinkals'.

## 4. Properties of the participle

There are several categories that could be expressed on participle:

### (27) number

- a. [maduhalf-di k'amm-i-b] χink'il den-ni dzid-i  
neighbour.OBL-ERG eat-PST-PTCP:PST khinkal I-ERG do-PST(AOR)  
'I made khinkal that the neighbour ate'.
- b. [maduhalf-di k'amm-ija] χink'il den-ni dzid-i  
neighbour.OBL-ERG eat-PTCP:PRAE khinkal I-ERG do-PST(AOR)  
'I made khinkal that the neighbour will eat'.
- c. [maduhalf-di k'amm-i-b-ol] χink'il-ol den-ni dzid-i  
neighbour.OBL-ERG eat-PST-PTCP:PST-PL khinkal-PL I-ERG do-PST(AOR)  
'I made khinkals that the neighbour ate'.
- d. [maduhalf-di k'amm-ij-ol] χink'il-ol den-ni dzid-i  
neighbour.OBL-ERG eat-PTCP:PRAE-PL khinkal-PL I-ERG do-PST(AOR)  
'I made khinkals that the neighbour will eat'.

### (28) negation

- a. [if'i-χo j-iʔ-o-ssu-b] jofi di-<j>o ts'inn-e  
we-AD.LAT F-COME-PST-NEG-PTCP:PST girl I-<F>AFF know-HAB  
'I know the girl who didn't come to us'.
- b. [if'i-χo j-iʔ-essa] jofi di-<j>o ts'inn-e  
we-AD.LAT F-COME-NEG.PTCP:PRAE girl I-<F>AFF know-HAB  
'I know the girl who won't come to us'.

### (29) class agreement (only with absolutive from relative clause)

- a. [hajman b-iqχ-u-b] wofo di-<j>o ts'inn-e  
ram ¬AN1-slaughter-PST-PTCP:PST boy I-<M>AFF know-HAB  
'I know the boy who slaughter the ram'.
- b. [woful-di b-iqχ-u-b] hajman di-<j>o ts'inn-e  
boy.OBL-ERG ¬AN1-slaughter-PST-PTCP:PST ram I-<M>AFF know-HAB  
'I know the ram that boy slaughtered'.

### (30) case (only on headless relative clauses)

- a. [if'i-χo j-iʔ-o-b]-di χink'il-ol k'amm-i  
we-AD.LAT M-COME-PST-PTCP:PST-ERG khinkal-PL eat-PST(AOR)
- b. [if'i-χo j-iʔ-o-b] jofi-di χink'il-ol k'amm-i  
we-AD.LAT M-COME-PST-PTCP:PST-ERG girl.OBL-ERG khinkal-PL eat-PST(AOR)
- c. \*[if'i-χo j-iʔ-o-b]-di jofi-di χink'il-ol k'amm-i  
we-AD.LAT M-COME-PST-PTCP:PST-ERG girl.OBL-ERG khinkal-PL eat-PST(AOR)
- d. \*[if'i-χo j-iʔ-o-b]-di jofi χink'il-ol k'amm-i  
we-AD.LAT M-COME-PST-PTCP:PST-ERG girl.OBL-ERG khinkal-PL eat-PST(AOR)  
'(The girl), who came to us, ate khinkals'.

## 5. Resumptives

During the elicitation tasks native speakers didn't produce any resumptives by themselves. Even if informants allow to use reflexive pronouns as a resumptives, they still find this sentences little bit strange (31a). No attempts to use demonstratives as a resumptive succeeded. In example (31b) demonstrative tend to be a modifier of relative clause head *jofl*, but more work should be done on this topic. In the most natural example (31c) unfortunately it is not clear, whether *enfuro* is in relative clause or it is a head of the NP with a relative clause modifier.

- (31) a. <sup>?</sup>[**enfu**-<r>o                      reʃa haʔ-o-b]                      dada                      if:i-χo                      w-uʔ-o  
RFL.OBL-<¬AN2>AFF tree see-PST-PTCP:PST we-AD.LAT M-come-PST(AOR)  
'Father that saw a tree came to us'
- b. **hege-j** [if:i-χo                      j-iʔ-o-b]                      jofi di-<j>o                      ts'inn-e  
DEM-F we-AD.LAT M-come-PST-PTCP:PST girl I-<F>AFF know-HAB  
'I know this girl who came to us'.
- c. **enfu**-<r>o                      reʃa haʔ-o-b                      if:i-χo                      w-uʔ-o-do  
RFL.OBL-<¬AN2>AFF tree see-PST-PTCP:PST we-AD.LAT M-come-IMP-JUS  
'That who saw a tree let's come to us!'

## Glosses

AD = Ad location, AD2 = Ad2 location, ADD = additive, AFF = affective case, AN = animal class, AOR = aorist, CAUS = causative, COM = comitative, DAT = dative case, DEM = demonstrative, ELAT = ellative direction, ERG = ergative case, ESS = essive direction, F = female class, GEN = genitive case, H = human, HAB = habitual, INDEF = indefinite, INST = instrumental case, INTER = Inter location, LAT = lative direction, M = masculine class, NEG = negation marker, OBL = oblique stem, PF = perfect tense, PL = plural, PRAE = present tense, PROGR = progressive, PST = past tense, PTCP = participle, RFL = reflexive pronoun, WH = special question marker, ¬AN1 = first non-animated class, ¬AN2 = second non-animated class, ¬H = non-human, ¬PST = non-past forms.