Para-hypotaxis in the world’s languages: A cross-linguistic survey

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What is para-hypotaxis?

Siar (Oceanic, Papua New Guinea; Rowe 2005:102):

Na e Lula el wót, ap al war-ai i. when ART Lula 3SG arrive, and 1SG say-TRANS 3SG ‘When/if Lula arrives, I’ll tell him.’

lit. ‘When/if Lula arrives, and I’ll tell him.’
What is para-hypotaxis?

• Recent research has recognized the lack of a clear dichotomy between coordination and subordination (Fabricius-Hansen & Ramm 2008; Verstraete 2007; etc.)

• Several constructions with mixed properties have been identified:
  • Cosubordination (Foley & Van Valin 1984; Van Valin 1984)
    \[-embedded, +dependent\]
  • Pseudocoordination (Ross 2016a)
    'go and get’ (form of coordination, function of subordination or otherwise)
  • Pseudosubordination (Yuasa & Sadock 2002)
    (form of subordination, function of coordination, e.g. clause-chaining)

• Para-hypotaxis is unique in that it actually mixes elements of coordination and subordination in the form of the construction...
Introducing Para-hypotaxis

The term para-hypotaxis was introduced by Sorrento (1929), for some syntactic configurations observed at an early stage of Romance languages.

**Parataxis**: traditional term for ‘coordination’

**Hypotaxis**: traditional term for ‘subordination’

In para-hypotactic constructions a marked dependent clause is *additionally* linked to the main clause by a coordinating conjunction (either copulative or adversative). In old Romance languages, the dependent clause is *proleptic*, so that PH follows the scheme below (not the only possible configuration):

\[
[(\text{SUB}) \text{dependent clause }] + [\text{and/but}] + [\text{main clause}]
\]

Sorrento (1929) was one of the first attempts to overcome the dichotomous view of the contrast between parataxis and hypotaxis.
Para-hypotaxis in literature

Para-hypotaxis (PH) is found in Old French, Old Italian, Old Occitan, Old Spanish and Old Portuguese. Here, the presence of the coordinating conjunction in is not obligatory and apparently even unnecessary. PH has almost completely disappeared in Romance. As a literary feature, it may be stylistic as much as grammatical.

\[
[(\text{SUB}) \text{ dependent clause }] + [\text{and/but}] + [\text{main clause}]
\]

Old Italian (Dante Alighieri, Inferno 30.115)

\[
[S’io \text{ diss}i \quad \text{il} \quad \text{falso}], \quad [e] \\
\text{If.1S} \quad \text{say.1S.PAST.PERF} \quad \text{DET.MS} \quad \text{false-MS} \quad \text{AND} \\
[tu \text{ falsast}i \quad \text{il} \quad \text{conio}] \\
\text{2S} \quad \text{alter-2S.PAST.PERF} \quad \text{DET.MS} \quad \text{minting_die-MS} \\
\text{‘If I said something false, you altered the minting die’}
\]

Considering that PH was also known in Biblical Hebrew, Old Greek and Latin, it was suggested that it could be the result of literary influence, not a phenomenon to be found in the spoken language (Pasquali 1929).
Documenting para-hypotaxis

• PH was also observed in Swahili (Rebuschi 2001), as well as in Ayoreo and Chamacoco (Bertinetto & Ciucci 2012), two Zamucoan languages of South America with no literary tradition.

\[(\text{SUB}) \text{ dependent clause } \] + [\text{and/but}] + [\text{main clause}]

**Swahili** (Rebuschi 2001:47)

\[\text{Mtu ye yote akitaka kunifuata} [\text{na} \text{ajikane mwenyewe}]\]

man all if 3S.want 1S.follow AND 3S.deny.SUBJ 3.RFL

‘Should anyone want to follow me, he should renounce to himself.’
Documenting para-hypotaxis

- PH was also observed in Swahili (Rebuschi 2001), as well as in Ayoreo and Chamacoco (Bertinetto & Ciucci 2012), two Zamucoan languages of South America with no literary tradition.

[(SUB) dependent clause ] + [and/but] + [main clause]

Chamacoco (Zamucoan; Bertinetto & Ciucci 2012:98)
[Uje ye t-uu_leeych], [ich] [ese aahn-t s-erz yoo]
SUB NEG 1S-fight AND DEM.MS evil_spirit-Ms 3-win 1s
‘When/if I don’t fight, that evil spirit will defeat me’

Zamucoan languages share PH with other neighboring languages spoken in the Gran Chaco of South America (Bertinetto & Ciucci 2012), inviting the hypothesis that PH spread in the region through language contact. New cases of PH were identified by Pesini (2013) in written sources of several Indo-European languages, and by Olguín-Martínez (2016) in Uto-Aztecan languages of Mexico.
Documenting para-hypotaxis

Despite the fact that PH characterizes Old Italian (Mazzoleni 2011), and it is considered lost, as in the other Romance languages, it can still be rarely heard in some varieties of Italian. (We also have similar information for dialectal Spanish.)

\[
((\text{SUB}) \text{ dependent clause }] + [\text{and/but}] + [\text{main clause}]
\]

Italian [spontaneous utterance, Florentine speaker] (Bertinetto & Ciucci 2012:92)

\[
[\text{Quando } i \text{ fatt-i } \text{ divent-ano } \text{ personal-i}],\text{ when DET.MP thing-MP become-3P.PRES.IND personal-MP}
\]

\[
[e] \text{ [s:]ono difficil-i da gest-ire]}
\]

AND be.3P.PRES.IND hard-MP to deal_with-INF

‘When things become personal, they are hard to deal with’

Interestingly, Inoue (2013:63) also finds limited usage in English corpora:

‘\textbf{Though I have no instruction on that, but almost certainly that would be the view of my council.}’ (BNC)
Para-hypotaxis and typological studies

Since **PH** is generally not obligatory, and often low frequency, it is mostly overlooked in grammatical descriptions and still lacks a systematic cross-linguistic study, which is the aim of the present investigation.

Typologically, **PH** is often confused with co-subordination, even though it is not mentioned by Foley & Van Valin (1984). It is also not found in studies on clause linking, such as Lehmann (1988) and Bickel (2010).

**PH** constructions were identified by Bednarczuk (1971) in a number of Indo-European languages, and by Cardarelli (2005) in Old Church Slavonic, Old Czech, Old Polish and Old Russian, although they did not establish any link with the tradition of studies on **PH** in Romance linguistics. The first typological study on **PH** is Bertinetto & Ciucci (2012), while Pesini (2013) is the first systematic analysis of **PH** in the available historical sources a single language (Italian), aiming at identifying its subtypes and its development over time.
Survey methodology

How to identify para-hypotaxis in the world’s languages?

• We followed the approach of WALS (Haspelmath et al. 2005) and looked for examples in descriptive grammars and other sources.

• The first two authors annotated languages in the samples for their respective dissertations (Ross forthcoming, Olguín Martínez forthcoming)

• We then combined the overlapping languages from those two samples because this doubled the chances of finding relevant constructions from our searches
  • 150-language sample used for para-hypotaxis survey

• We then discussed candidate constructions to verify instances of para-hypotaxis, especially with the experience of the third author with traditional and typological research on the phenomenon (Bertinetto & Ciucci 2012)
  • Wide variety of candidate constructions considered, allowing bottom-up analysis too

• The result is a carefully and thoroughly researched study that still has a great deal of uncertainty due to limited descriptive materials available
Survey challenges

• Identifying para-hypotaxis requires identifying:
  1. Coordinating conjunctions
  2. Subordination strategies
  3. Co-occurrence of these two strategies in one construction
     And verifying that the co-occurrence is not explained otherwise

• Conceptual difficulty:
  (How) can AND conjunctions be definitively identified?
Survey challenges

For example:

- Mocoví considered to have para-hypotaxis (Bertinetto & Ciucci 2012)
- The conjunction *kaʔ* is found in apparent para-hypotactic usage
  - However, Grondona (1998) inconsistently glosses it as ‘and’ or ‘then’
  - And Gualdieri (1998) instead glosses it as a temporal particle
- But another conjunction *čaqae* is glossed as ‘and’ by both authors
- And the adversative conjunction *qam* also appears in similar usage
- Therefore, in this case, we have sufficient evidence to consider Mocoví to exhibit para-hypotaxis, with some complex details
  - Consider another similar example without additional evidence
- In these cases, we generally relied on the author’s glossing
  - Our sample is still ‘alive’, subject to revision as we find more information
Survey results: para-hypotaxis

Black: PH attested (20 =13%); gray: attested only historically (4)
White: not attested (126)
Survey results

• Para-hypotaxis is attested around the world, but sparsely
  • 13% of the languages in our sample appear to have para-hypotaxis
  • Although the results are uncertain in some ways, it is actually likely to be an underestimate of the total distribution, given the paucity of description
  • The widespread use beyond Europe supports the interpretation of para-hypotaxis as a grammatical (rather than stylistic) phenomenon
  • However, para-hypotaxis does not seem to be obligatory in any languages

• Our results are not dense enough for conclusions of regional effects
  • Previous research does suggest genetic and contact effects in (historical) Europe and the Americas (Bertinetto & Ciucci 2012, Olguín-Martínez 2016, inter alia)
Para-hypotaxis: a preliminary typology

- Para-hypotaxis varies in several ways typologically:
  - The semantic relationship of the dependent clause
  - The choice of coordinating conjunction linking the clauses
  - The form of the construction (e.g., word order)
  - Later: hypo-parataxis
Several different semantic relations of dependent clauses to main clauses are attested in our data.

One common type of para-hypotaxis involves a dependent clause encoding a temporal semantic relation (e.g. Acoma, Totonac):

**Squamish** (Jacobs 2013:33)

- As the children dropped, then they made a thump.

```
u na wi7xwem-Ø ta s7ixwalh welh na-kw kwemi7n-Ø.
as RL fall-3A DET children and RL-then thump-3N
```

‘As the children dropped, then they made a thump.’
Semantic relation of dependent clause

- Another common type involves a dependent clause encoding a conditional semantic relation (e.g. Mocoví, Wichita, Ndyuka).

**Hoava** (Davis 2003:283)

*pana* vena gerigeri-ni-a sa kabasa gua,
*when* SIM prepare-AP-3SG ART:SG house be.thus

‘If you prepare to build a house,

*sagi* t<in>avete susua pa g<in>erigeri kabasa koni la pita deri.
*CONJ* work<NOM> be.first PRP prepare<NOM> house FUT go look.for posts

the first work in house preparation will be to look for posts.’

*Note the earlier Siar example variably interpreted as either temporal or conditional.*
A distinct but also widespread type encodes a concessive semantic relation (e.g. Chamorro, Nahuatl, Vietnamese, Zoque).

Often (but not always) corresponds to BUT as the linking coordinator.

**Woods Cree** (Starks 1992:171)

\[ \text{@ta kwayask nikî-pîhtîn mwâ nikiskisin mayia.} \]

although right 1=PST=hear/TI=1-OI NEG 1=remember/AI=11 but 'I’ve heard a lot, but I still don’t remember.'

**Veracruz Huasteca Nahuatl** (Olguín-Martínez 2016:114)

\[ \text{maske kauï-tl ach-kuali-yaya pero ti-maulti-to-h.} \]

even.though weather-ABS NEG-good-IPFV but 2PL.SBJ-play-PURP-PL 'Even though the weather wasn’t good, you went to play.'

*Notice the borrowed conjunction (<Spanish) in this example.*
Semantic relation of dependent clause

Not all semantic types are equally prone to appear in the proleptic dependent clause. The following are not attested in the sample:

1. Causal subordinators
2. Purpose subordinators

Notice that dependent-main clause order is most common in para-hypotaxis.

Thus one possible explanation stems from the fact that causal clauses and purpose clauses tend to follow the main clause, while conditional, temporal and concessive clauses tend to appear pre-posed to their main clause (cf. Diessel 2001).

This is due to discourse pragmatic motivations and iconicity of sequencing.

For instance, conditional clauses tend to occur sentence-initially because they provide a thematic ground or orientation for subsequent clauses and also due to iconicity of sequencing (i.e. Sequence of forms matches sequence of events: Greenberg 1966). On the other hand, causal clauses and purpose clauses tend to follow the main clause because causes and purposes provide information that is communicatively too important to serve a subsidiary discourse function in the position preceding the main clause (Diessel 2005:465-466).
Type of linking coordinating conjunction

- We find AND combining with a number of semantic relations:

  **Ayoreo** (Bertinetto & Ciucci, 2012:98)

  (5) ujetiga Jate di=rase nga, ch-isi=rase yogu=iji cucha-rique.
  - SUB Jate 3.arrive=MOD COORD 3-give=MOD 1PL=LOC thing-SG.M.IF
  - ‘If Jate arrived, he would give us something.’

- We also find BUT in adversative/contrastive usage:

  **Pima Bajo** (Estrada-Fernández 2011:140)

  (6) timosa aan si’ li’id per aan si’ bagar-d-ai.
  - even.though 1SG.SBJ INT small but 1SG.SBJ INT brave-APPL-POT
  - lit. ‘Even though I am small, but I can be very brave.’

- We have identified **no examples of OR** (disjunctives) in para-hypotaxis
Word order typology

Para-hypotactic constructions usually involve *proleptic* dependent clauses:
- The dependent clause precedes the main clause
- The conjunction indicates a boundary (Bertinetto & Ciucci 2012:104)
- PH is typically not grammatical if the order is reversed

By definition, we would not exclude other orderings for clauses P & Q:

A) SUB P & Q
B) P & Q SUB
C) P SUB & Q

…

(B) seems to be very rare but would follow the same logic as (A);
(C) Adjacent coordinator and subordinator is possible but may not be as useful (likely to grammaticalize) diachronically because the boundary is already marked;
Moreover, type (C) is difficult to distinguish from complex conjunctions;
We have also seen some languages with clause-internal conjunction positions.

There is also variation in the form of markers: independent word or morphological
Para-hypotaxis in a broader context?

Correlative conjunctions (both… and…, etc.) in general are similar in form to para-hypotactic linkage.

Compare also English “if… then…”

**Question:** is the structure of “if… then…” the same as para-hypotactic ‘if… and…’?

- It depends on analysis, e.g. THEN as conjunction, adverb, etc.
- Difficult to determine from descriptive sources in a consistent way

Additionally, what function does AND have in para-hypotaxis? Does it have one?

Comparative evidence suggests some similarity between constructions with AND and other more semantically full conjunctions:

- Many (classical) Semitic languages exhibit para-hypotaxis (Woodard 2008)
- Arabic *wa* (AND, cognate with the para-hypotactic conjunction in the other languages) is not used in para-hypotaxis, but similar constructions are found with *fa* ‘so, then’ (functionally similar to AND but semantically specific)
Introducing: Hypo-parataxis

If there is subordination (hypotaxis) with added coordinating conjunction (para-) then can we also identify the correlated **hypo-parataxis**?

- That is, a coordinate construction involving additional dependency marking

In fact, we find exactly that in some languages: what looks at first to be para-hypotaxis in form actually functions like **coordination**.

Usage like this is found historically in English (Alcázar & Saltarelli 2014:178-9): *The battle done, and they within our power shall never see his pardon.*

(Shakespeare’s *King Lear* (1605), V, I, 67; see also Visser 1966:1278-9)

**Para-hypotaxis**: subordination + AND

**Hypo-parataxis**: coordination + dependency-marker
Hypo-parataxis

In Swahili, AND and OR are found in usage semantically like coordination but involving a second verb in the infinitive form, not inflected for TAM, etc.
(Schadeberg 2010:108)

A-li-li-okota boga na ku-ingia na-lo jiko-ni
SM1-PST-OM5-pick pumpkin AND INF-enter with-RC5 kitchen-LOC
‘She picked up the pumpkin and went with it into the kitchen.’

Mi-swada i-li-yo-andikwa au ku-fasiriwa kwa Kiswahili
4-manuscript SM4-PST-RC4-write.PSV OR INF-translate.PSV PREP Swahili
‘manuscripts that were written in or translated into Swahili’

Note that in this usage, it is the infinitive that is optional, rather than conjunction. Note also that dependent-final clause ordering is more common than for para-hypotaxis.
Hypo-parataxis

Amele (Papuan, Roberts 2016:295-6) has BUT and OR as overt conjunctions added on top of switch-reference chaining (which is by default additive, AND semanics):

Age ceteteh bahu=na=dec ced-im-eig
3PL things forest=at=from get.NSG-SS.SEQ-2PL

‘You can get something from the forest, ...

[cut qet-im-eig=fo ceed weg-im-eig=fo]
sago cut-SS.SEQ-2PL=OR bamboo weave-SS.SEQ-2PL=OR

‘...cut some sago or weave some bamboo, ...

fal-d-opaq-an
fence-3SG.2PL-FUT
‘and then fence it.’
Survey results: hypo-parataxis

Black: HP attested (7 =5%); gray: attested only historically (2)
White: not attested (141)
Hypo-parataxis: challenges

The most common type of hypo-parataxis also reveals a grammaticalization path:

Clause-chaining involves one or more non-finite verbs (e.g. “medial verb” or “converb”: Haspelmath 1995) followed by a finite, inflected verb to end the chain.

Foley & Van Valin (1984) call this cosubordination because it has a dependent form (like subordination) but involves no embedding (like coordination).

In many languages, clause-chaining like this functions in place of coordination. Yuasa & Sadock (2002) call this pseudosubordination because it looks like subordination but functions like coordination.

Now, imagine that one of these languages shifts toward European-style AND:

One possibility of course is to link two finite verbs with AND (e.g. Mithun 1988)

But why not add AND to the existing clause-chaining structure?
Hypo-parataxis: challenges

Veracruz Huasteca Nahuatl (Olguín Martínez field notes)
kuah-tok ihuan hual-motlalo-k
eat-PTCP AND DIR-run-PFV

‘Having eaten, he ran.’ ~ ‘He ate and ran.’

• This appears to be a clear example of hypo-parataxis!
• However, the language also exhibits para-hypotaxis of other types…
  • Does the language then have both?
  • Or should we interpret both as subordination expressed via para-hypotaxis?

• In general, clause-chaining is a construction type with mixed properties (hence cosubordination and pseudosubordination)
  • Analogously could hypo-parataxis be coordinative usage of para-hypotaxis?
  • Or are cosubordinate dependent-marked forms already a type of coordination, such that this “hypo-parataxis” is really double-marked coordination (para-parataxis?)
Yimas (Lower Sepik, Papua New Guinea) has both functions for the same construction: “[mnta] can be used to link any two clauses regardless of their structural relationship, i.e., subordination, clause chaining...” (Foley 1991:449)

Apwi m-jãa-kn m-n-a-pan-t-mp-n
father.I.SG 2SG-POSS-I.SG NR-3SG-DEF-pound.sago-PRES-VII.SG-NOM.OBL
mnta arp-mpi-awt-jãa-k
CONJ help-SEQ-get-IMP-3.SG.O

‘If your father is working sago, help him.’

tmal l-jãka-p-mpi kumpwia mnta wa-ka-tay
sun down-go.by.land-away-SEQ flying.fox.VIII.PL CONJ VIII.PL-1SG-see

‘The sun (having) set, (and then) I saw flying foxes.’

- Mnta can also join two finite clauses for coordination.
A broader typology

- Converbs may be used for clause-chaining or adverbial subordination in some languages, while other languages have distinct forms for the two functions. (See Ross 2016b, also on disagreement about definition of converb)

We have observed mixed subordinate-coordinate forms with similar functions: para-hypotaxis (adverbial subordination) and hypo-parataxis (clause-chaining)

One other use of converbs is to form complex predicates (similar to serial verb constructions, but one verb is dependent-marked)

In fact, para-hypotaxis/hypo-parataxis also has this function in at least one language:

**Dullay** (Cushitic: Amborn et al. 1980:123; Ross 2016a:223; Tosco 2008; Yoshino 2016)

ašša  pa  kas'ad’-a

go.IMP  AND  ask-2SG.SUBORD

‘Go and ask!’

There may be some similar functions in Yimas (Foley 1991)
Typology: summary

The **function** of the overall construction:
- Clause-chaining/coordination (hypo-parataxis)
- Adverbial subordination (para-hypotaxis)
- Complex predicates

The **form** of the construction
- Dependent-Main vs. Main-Dependent clause ordering
  - Para-hypotaxis is typically Dependent-Main order, while hypo-parataxis varies
- Position of conjunctions (clause-initial, clause-internal, clause-final)
- Form of conjunctions (affix vs. independent word)

The **semantic relation** between the clauses
- Para-hypotaxis: *temporal, conditional, concessive*
- Hypo-parataxis: additive (via clause-chaining, thus default relation)

The **choice** of coordinating conjunction
- Para-hypotaxis: AND most generally, BUT for some semantic relations
- Hypo-parataxis: AND, BUT and OR attested

**Obligatoriness** or **optionality** (both para-hypotaxis and hypo-parataxis typically optional)