

In the Walman language of the Torricelli family, spoken on the north coast of Papua New Guinea, noun phrase-conjoining markers meaning 'and' (in short: NP-conjunctions) have the appearance of transitive verbs, showing prefixal subject agreement with the first conjunct and suffixal or prefixal agreement with the second conjunct.

Walman (Torricelli, Papua New Guinea; Brown and Dryer 2008: 531)

Ako	ru	w-	a-	n	muen	mkie
then	3.SG.F	3.SG.F-	and-	3.SG.M	brother	banana

y-	oko-	ꞑ
3.PL-	take-	3.SG.F	

'Then she and her little brother took the bananas ...'.

Brown, Lea and Matthew S. Dryer 2008. The verbs for 'and' in Walman, a Torricelli language of Papua New Guinea. *Language* 84, 3: 528-65.

This applies not only to one form but rather to two, *-aro-* and *-a-*, which are generally interchangeable and semantically essentially the same. The example illustrates the 'and'-construction with the 'and'-verb *-a-*. The construction behaves syntactically like a simple noun phrase.

Hybrid category: On account of this variable behavior, Brown and Dryer (2008: 548-9) conclude in an attempt to find the right taxonomic solution that the two 'and'-verbs occur in two constructions and that therefore two analyses of are possible, and "that there is no strong basis for choosing between them".

a Conjunction analysis: There are two NPs conjoined by an 'and'-verb, "the *and*-verbs are verbs morphologically but conjunctions syntactically".

b Verb analysis: The 'and'-verbs are verbs syntactically, but the two NPs are conjuncts semantically and clausal subjects and objects syntactically.

Evidence for conjunction analysis

- 1 The meaning of the 'and'-verbs is that of an NP-conjoining element 'and': As is characteristic of such conjunctions crosslinguistically, this meaning can be both cooperative and distributive, and in certain contexts the cooperative meaning is ruled out. Comitative markers, by contrast, only have cooperative meaning [= 'entailment of togetherness'].
- 2 The 'and'-construction occurs in all of the syntactic environments in which **simple NPs** in general occur.
- 3 If one were to adopt the clausal analysis one would be faced with the fact that there would be defective clauses in that **no clausal elements** can occur other than the subject, verb, and object and that, unlike in other clauses, the **word order is strictly fixed** (Brown and Dryer 2008: 548).

Evidence for verb analysis

- 1 In some of their uses the meaning of *-aro-* is more appropriately translated as 'be with' or 'accompany' (Brown and Dryer 2008: 545).
- 2 The **morphology** of *-aro-* is that of a verb, exhibiting subject and object agreement exactly like non-volitional transitive verbs.
- 3 In some contexts there is **singular agreement** rather than plural agreement, which would be expected under a conjunction analysis (see below).

- 4 Both the nominal subject and the nominal object are optional, they can be omitted. This means that on the conjunction analysis there is, so to speak, a conjoined construction without (nominal) conjuncts.

Talman (Torricelli; Brown and Dryer 2008: 536)

Kurue [n- aro- n] y- r-
but 3.SG.M- and- 3.SG.M 3.PL- RECP/REFL

apar nyemi mlin.
be.related.to friend true
'But they ([he and him]) became true friends.'

Evidence for verb analysis ctd

- 5 Subject pronouns normally occur with the 'and'-verbs while object pronouns are often omitted, which would be expected on a clausal analysis but unexpected if there were a conjoined NP.
- 6 It is possible to relativize out of the construction, an operation that is crosslinguistically unusual for conjoined NPs (Brown and Dryer 2008: 549).
- 7 The two 'and'-verbs generally conjoin **only animate referents** (p. 538).

A third analysis: An AB category

In some contexts, e.g. when the 'and'-construction occurs as a possessor of a noun phrase or an object of an adposition, a verb analysis does not seem possible (Brown and Dryer 2008: 551); in other contexts, a conjunction analysis does not make much sense.

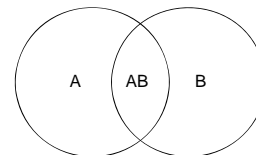
In most of its uses, however, the 'and'-construction is syntactically **ambiguous**: It can simultaneously be analyzed as forming a noun phrase in subject position and as an inclusive serial verb construction, e.g.,

Talman (Torricelli; Brown and Dryer 2008: 551)

To ru w- aro- n na y- anan.
then 3.SG.F 3.SG.F- and- 3.SG.M son 3.PL- go.down
'Then she and the son went down.'

A	First verb	Second verb
B	Subject	Verb

To conclude, there appear to be not two but three types of uses of the 'and'-construction, namely one supporting a conjunction analysis (A), one supporting a clausal analysis (B), and one supporting both (AB). Note that the majority of text examples are suggestive of AB (Brown and Dryer 2008: 551)



Questions

- a Why does *-aro-* have the morphology of a verb, exhibiting subject and object agreement exactly like non-volitional transitive verbs, but have the meaning of a conjunction?
- b If *-aro-* is a conjunction, why can it occur without nominal conjuncts, so to speak as a 'conjunction without conjuncts'?
- c Why does *-aro-* not occur with first- or second-person objects?
- d Why does *-aro-* exhibit the structure of an AB-category, showing an overlapping structure?

Grammaticalization theory

Grammaticalization is defined as the development from lexical to grammatical forms, and from grammatical to even more grammatical forms. Since the development of grammatical forms is not independent of the constructions to which they belong, the study of grammaticalization is in the same way concerned with constructions, and with even larger discourse segments.

Heine, Bernd and Tania Kuteva 2007. *The Genesis of Grammar: A Reconstruction*. Oxford University Press. Chapter 1.

Givón, Talmy 1971. Historical syntax and synchronic morphology: an archaeologist's field trip. *Chicago Linguistic Society* 7: 394-415.

Heine, Bernd, Ulrike Claudi & Friederike Hünemeyer 1991. *Grammaticalization: a conceptual framework*. Chicago: University of Chicago Press.

Hopper, Paul J. & Elizabeth C. Traugott 2003. *Grammaticalization*. Cambridge: Cambridge University Press.

Methodology

(1) Crosslinguistic regularities on grammatical evolution

Heine, Bernd and Tania Kuteva 2002. *World Lexicon of Grammaticalization*. Cambridge: Cambridge University Press.

(2) Internal reconstruction on the basis of knowledge on these regularities

Givón, T. 2000. Internal reconstruction: As method, as theory. In Gildea, Spike (ed.) 2000. *Reconstructing Grammar: Comparative Linguistics and Grammaticalization*. Amsterdam: John Benjamins.

An example

English	A	He kept the money.	Verb
	B	He kept complaining.	Durative
	A	He used all the money.	Verb
	B	He used to come.	Habitual
	A	He's going to town.	Verb
	B	He's going to come.	Future

At some earlier stage in the history of English there was A but not B.

(3) French

A Il **va** à la maison.
he goes to the house
'He's going home.'

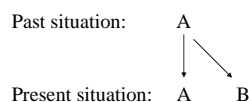
B Il **va** venir bientôt.
he goes to.come soon
'He is going to come soon.'

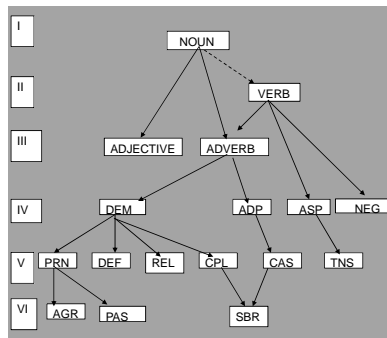
At some earlier stage in the history of French there was A but not B.

(4) Generalizations

- There are two homophonous items A and B in language L, where A serves as a lexical verb and B as an auxiliary marking grammatical functions such as tense, aspect, or modality.
- While A has a noun as the nucleus of its complement, B has a non-finite verb instead.
- While A is typically (though not necessarily) an action verb, B is an auxiliary expressing concepts of tense, aspect, or modality.
- B is historically derived from A.
- The process from A to B is unidirectional; that is, it is unlikely that there is a language where A is derived from B.
- In accordance with (d) and (e), there was an earlier situation in language L where there was A but not B.

(5) Principle of reconstruction





Layers of grammatical development.

Evolution of NP-and. On the basis of crosslinguistic evidence presented in Heine and Kuteva (2002), the data provided by Brown and Dryer (2008) suggest that the 'and'-construction of Walman is the product of an evolution that can be described by the following chain of grammaticalization (where 'NP-AND' = conjunction 'and' conjoining noun phrases, 'S-AND' = conjunction 'and' conjoining clauses):

verb > comitative marker > NP-AND > S-AND

The Walman data

The 'and'-verb *-aro-* is historically derived from the 'homophonous' verb *-aro-* meaning 'take, touch, catch, grab, pick up' (Brown and Dryer 2008: 549), in accordance with the evolutionary pathway sketched above. Evidence for this reconstruction is of the following kind:

- a There are some contexts where *-aro-* can in principle be ambiguous between verbal 'take, etc.' and conjunctive 'and'. There is a structural difference between the two in that *-aro-* as an 'and'-verb does not occur with first- or second-person objects while *-aro-* as a verb for 'take, etc.' does. This difference is in accordance with the grammaticalization parameter of decategorialization, which has the effect that the forms and constructions undergoing grammaticalization lose in freedom to be used in all contexts, that is, their occurrence is morphologically and syntactically constrained.
- b Second, the morphosyntax of *-aro-* as an 'and'-verb exhibits a couple of features that are in accordance with the pathway sketched earlier: On the one hand there is the verbal subject and object agreement morphology which can be taken to bear witness to the origin of *-aro-* as a transitive verb; on the other hand there are syntactic properties that are suggestive of a use of *-aro-* as a comitative preposition:

Evidence for comitative source:

In examples such as the following, there is a comitative-like construction (though not meaning): there can be **singular agreement** rather than plural agreement, which would be expected under a conjunction analysis.

Talman (Torricelli; Brown and Dryer 2008: 536)

Runon n- orou Achapei n- a- n **Xavier.**
 3.SG.M 3.SG.M- go Aitape 3.SG.M- and- 3.SG.M Xavier

'He and Xavier went to Aitape.'

[Syntactically: 'He went to Aitape with Xavier.']

Evidence for comitative source ctd:

In fact, it is possible for various sorts of material to **intervene between the subject and the and-verb**. Some of these suggest that the 'and'-verbs are syntactically comitative prepositions, where the 'and'-verb followed by the 'second conjunct' give the impression of a comitative phrase, being **separated** by the main verb **from the 'first conjunct'**.

Crosslinguistic evidence for the pathway

Verb > COM > NP-AND

Parameters of grammaticalization:

- Extension
 - Desemantization
 - Decategorialization
 - Erosion

Heine, Bernd and Tania Kuteva 2007. The Genesis of Grammar: A Reconstruction. Oxford University Press. Chapter 1.

Verb > comitative marker > NP-and

The Chinese verb *gong* 'to share (with)' was grammaticalized in Late Archaic Chinese (5th - 2nd century BC) to an adverb meaning 'together', and since the Early Medieval period (2nd - 6th century AD) it developed into a comitative preposition, e.g.,

Early Medieval Chinese (*Bai yu jing*; Peyraube 1996: 189)
gong duo ren zhong zuo yu shi zhong.
 with many people crowd sit at room in
 '(We) sat inside the room with a crowd of many people.'

The first attested example of *gong* as an NP-and conjunction is found in the Song period:

Song period Chinese (*Qi guo chunqiu pinghua* 7; Peyraube 1996)

wu lai jiu Sunzi an die gong Yuan Da.
 I come help Sunzi I father and Yuan Da
 'I came to help Sunzi, my father and Yuan Da.'

Furthermore, Peyraube (1996: 189) argues that Chinese *he* was a verb meaning 'to mix (up)' and later 'to stick together'. Since the beginning of the Tang period it came to mean 'included' and later on to be used as a comitative preposition 'with'. Already around the mid-Tang period, *he* is said to have become an NP-conjunction.

In a similar fashion, the Chinese verb *tong* meaning 'to share with', 'to accompany' was grammaticalized probably during the Tang period to a comitative preposition. In Contemporary Chinese, i.e. from the 19th century onward, *tong* began to function as a coordinating conjunction (Peyraube 1996a: 190-1).

Verb > comitative marker

Presumably the most common verbal sources for comitative adpositions are items meaning 'meet', 'accompany', 'take, grab', and 'follow' (Heine, Claudi and Hünemeyer 1991; Lord 1989: 134ff.; Heine and Kuteva 2002). For example, the comitative suffix *-ú* of the Khoisan language Nama or the comitative marker *de* of the Twi language of Ghana can be traced back historically to a verb meaning 'to take', e.g.,

Twi (Lord 1989: 137)
 ɔ́- de né nnípa fòro bépow
 he- (take) his men ascend mountain
 'He ascends a mountain with his men.'

Other examples are provided by Muysken and Veenstra (1995: 290) from pidgins and creole languages.

Comitative > NP-and > S-and

The Common Celtic form **aggus* was presumably a locative preposition ('at') which gave rise among others to the Welsh comitative marker, that is, the comitative preposition *a* ← , which then became an NP-conjunction and an S-conjunction (Stolz 1998a: 119-20).

Traditionally, Pipil had no formal S-conjunction, that is, clause-conjoining ('and') was not formally marked. But there is a 'relational noun' *-wan* in Pipil serving as a C-marker; it requires a possessive pronominal prefix as a modifier, thus having the appearance of a possessed noun (Campbell 1987: 256). Under the influence of Spanish, Pipil speakers developed *-wan* into a comitative marker, the preposition *wan* 'with', and *wan* has further developed into NP-and, although it still appears to allow for a comitative interpretation, as example (a) suggests. Eventually, *-wan* was further grammaticalized to an S-conjunction 'and', i.e., its use was extended to also conjoin clauses, cf. (b).

Pipil (Aztec, Uto-Aztec; Campbell 1987: 257)

a Juan i- **wan** Maria COM, NP-and
 John her- with Mary
 'John and Mary' or 'John with Mary'

b Pipil (Aztec, Uto-Aztec; Harris & Campbell 1995: 130) S-and
 ne ta: kat k- itskih ne mich **wan** ki- kwah.
 the man it- caught the fish and it- ate
 'The man caught the fish and ate it.'

Stages in the evolution COM > NP-and > S-and in some creoles

Stage	Function	Context	Structure
i	Comitative adposition 'with' (COM)	Heading NPs	with NP
i	NP-conjunction 'and' (NP-and)	Linking two NPs	NP ₁ and NP ₂
ii	VP-conjunction 'and' (VP-and)	Linking two VPs	VP ₁ and VP ₂
iii	Clause conjunction 'and' (S-and)	Linking clauses	S ₁ and S ₂

French COM (*avec*) > Ind. Ocean cr. NP-and (*ek*) > S-and (*ek*)

French

Il est venu avec sa femme. COM
 he is come with his wife
 'He came with his wife.'

Seychelles CF (Corne 1977: 58)

sô lebra **ek** lipie NP-and
 his arm with leg
 'his arms and legs'

Mauritius CF (Boretzky 1983: 261)

Linze ti al Iden **ek** Zorz ti al Budyari. S-and
 Linze TAM go Eden with George TAM go
 Bhujharry
 'Lindsay went to Eden (College) and George to Bhujharry.'

What then happened on the way of Walman *-aro* from action verb to NP-conjoining conjunction? And how to answer the questions posed earlier?

**Structural changes in the evolution COM > NP-and
 (green = the situation in Walman)**

Comitative phrases	Parameter	And-conjuncts
Cooperative meaning	Desemantization (= generalization)	Both cooperative and distributive meaning
NPs typically animate	Desemantization	No restrictions on animacy
NPs differ in their case roles	Decategorialization	NPs have the same case role
NPs (can) occur separated from each other	Decategorialization	NPs cannot occur separated from each other
No plural (or dual) agreement on verbs	Decategorialization	Plural (or dual) agreement on verbs

Answers

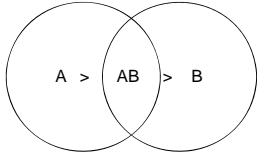
- a Why does *-aro* have the morphology of a verb, exhibiting subject and object agreement exactly like non-volitional transitive verbs, but have the meaning of a conjunction?
 Because it is diachronically a verb.
- b Why does *-aro* in some of its uses translate as a comitative marker ('be with' or 'accompany') but in others as an NP-conjoining conjunction?
 Because grammaticalized structures tend to retain earlier uses in certain contexts.
- c If *-aro* is a conjunction, why can it occur without nominal conjuncts, that is, as a conjunction without conjuncts?
 Because verbs in Walman can occur without nominal or pronominal arguments, and this property has survived the grammaticalization process from verb to conjunction.

- e Why does *-aro* exhibit the structure of an AB-category?
 Because all three stages of grammaticalization survive in the synchronic structure of Walman in the form of overlapping structures.

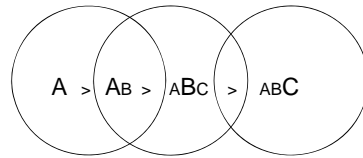
Implicational probabilistic predictions (serving as a basis for reconstruction):

- 1 If in a given language the same form is used for a verb meaning 'meet', 'accompany', 'grab, take' and as a comitative adposition then very likely the latter is historically derived from the former.
- 2 If the same form is used as a comitative adposition and an NP-conjoining conjunction 'and' then very likely the latter is historically derived from the former.
- 3 If the same form is used as NP-conjoining conjunction 'and' and as clause-conjoining 'and' then very likely the latter is historically derived from the former.

Explaining the fact that there are three types of uses of the 'and'-construction in Walman, namely one supporting a clausal analysis (A), one supporting a conjunction analysis (B), and one supporting both (A/B): a grammaticalization chain.



Chain of grammaticalization > verb (A) > COM (B) > NP-and (C)



I was confined in this talk to the evolution marked by the green labels

