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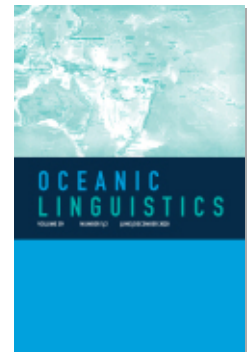
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The Development of the Verb SAY in Central Cordilleran Languages, Northern Philippines

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This article focuses on the development of *kan*, a “say” verb in Central Cordilleran languages. The article deals with the possible historical development of this verb, and then discusses the unusual development of the locative voice suffix *-an* that it requires, which loses its final consonant only when singular pronouns are added, but not when plural pronouns are added. This is true for all locative and patient voice suffixes in Central Cordilleran languages. When a noun is the agent of the verb, there is a genitive enclitic before it, but only when the preceding word ends in a vowel, otherwise there is no genitive marking. This is discussed with reference to quotative indexes and the claim is made that the historical change of quotative index nominals to verbs results in the unusual development of “say” verbs and other verbs with locative and patient voice suffixes.

1. INTRODUCTION.¹ This paper examines the structure and development of “say” verbs in Guina-ang Bontok and associated languages in the Central Cordilleran (CCo) group, part of the Northern Luzon subgroup of Philippine languages (see figures 1 and 2 and maps 1 and 2). Although there are a number of utterance verbs in the languages, we will focus on *kan* ‘say’, a monosyllabic form with lexical meaning, which is somewhat unique among CCo languages. Many monosyllabic forms occur as function words in the languages. The only other monosyllabic forms with lexical meaning in Central Bontok are the homophonous *kan* ‘eat’, *ey* /ʔəy/ ‘go’, *tey* /təy/ ‘die’, and *a* /ʔa/ ‘come’. The two homophonous *kan* forms are distinguished by *kan* ‘say’ having a locative

1. This is a retitled and rewritten article of a paper presented to the 24th International Conference on Historical Linguistics originally titled ‘Abductive Spread of Reanalyzed Quotative Index Forms’. I wish to thank the people who commented on it, especially Malcolm Ross and Hsiu-chuan Liao who sent me written reviews after the conference. The paper retitled as ‘Historical Reanalysis: Voice Suffixes in Northern Philippine Languages’ has been anonymously reviewed by two people, for which I send my thanks. Their detailed comments have resulted in a restructured paper and retitled paper, but they are not responsible for any errors that are mine alone.

FIGURE 1. CENTRAL CORDILLERAN AS A SUBGROUP (REID 1974: 574).

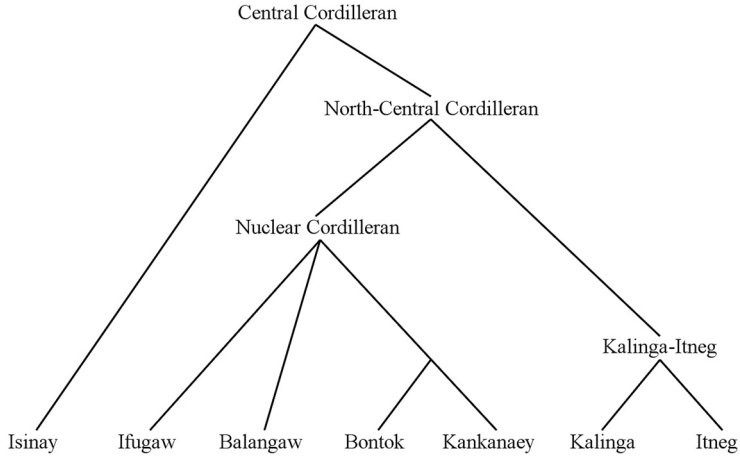
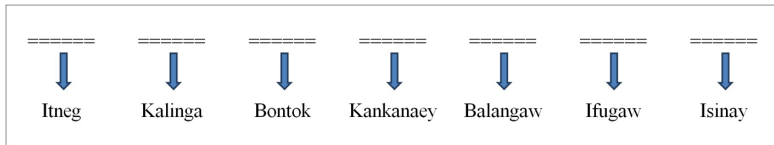


FIGURE 2. CENTRAL CORDILLERAN AS A LINKAGE (REID 2019).



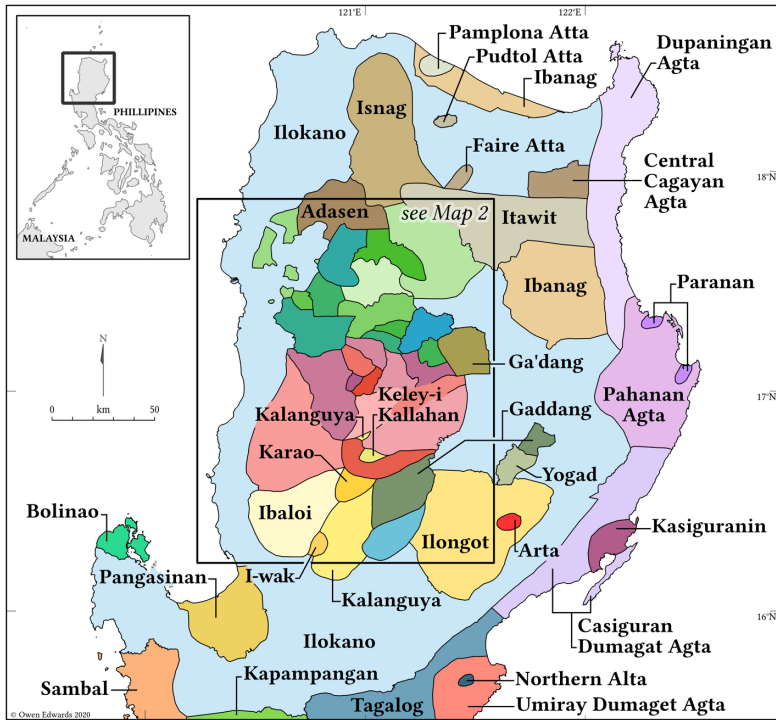
voice suffix (*kanán* ‘to say s.t.’),² while *kan* ‘eat’ has a patient voice suffix (*kanán* ‘to eat s.t.’).³

CCo is a group of approximately thirty languages in the northern Philippines, which is now analyzed as a linked network of languages (Reid 2019). They are commonly known as Itneg, Kalinga, Bontok, Kankanaey, Balangao, Ifugao, and Isinay, each of which has many component languages and dialects.

2. There are several so-called voice affixes in Philippine-type languages depending on the analyst. These were formerly called focus affixes. The suffixes are patient voice, Proto-Malayo-Polynesian (PMP) *-ən, and locative voice, PMP *-an. In addition, there is a prefixal conveyance voice, PMP *ʔi-, and a benefactive voice, which in CCo languages is typically a combination of the prefix, which otherwise marks conveyance voice, and the suffix, which otherwise marks locative voice, PMP *ʔi- + -an. See Himmelmann (2002) and Ross (2006).

3. A note is in order about the orthographic representations of PMP *ə and glottal stop. PMP *ə (or its variant, a high central unrounded vowel *i) is represented as *e in many reconstructions and is represented as e in many languages that have it, for example (in the Northern Luzon languages), some dialects of Ilokano, Central Bontok, and Kankanaey/Kankanaey. It is represented as ě (e dieresis) in the national orthography promoted by the Institute for National Language. Glottal stop has a variety of representations. In most Philippine languages, it is not represented initially and between vowels. Following a consonant, it is often represented as a hyphen. In all Cordilleran languages, at the end of a syllable, PMP *ʔ (glottal stop) has become zero. In some of these languages, PMP *k has become a glottal stop, and this glottal stop has various orthographic representations.

MAP 1. NORTHERN PHILIPPINE LANGUAGES.



There are two facts that need to be considered when discussing the developments of *kan* ‘say’ in CCo languages. In these languages and for many others in the Austronesian language family, genitive/ergative pronouns and noun phrases employ a single form for two functions. The first is possessive (i.e., genitive) and the second is the agent of transitive verbs (i.e., ergative). In this paper, both distributions will be labeled as genitive (GEN). Another fact that is important here is that in most Northern Luzon languages (not only CCo languages),⁴ when genitive first- and second-person singular pronouns occur on vowel-final words, whether noun or verb, they are reduced from their full forms =*ku* and =*mu* to =*k* and =*m* (or their cognates), respectively, see table 1.

This paper will be organized as follows. Section 2 will discuss the possible historical development of the form **kan* ‘say’. Section 3 will discuss the unique morphological features of *kan* and (possibly by extension) of all transitive verbs with *-ən* or *-an* suffixes, which lose their final *-n* when singular agent pronouns

4. Including Ilokano, most of the Cagayan Valley languages—Malaweg, Ibanag, Itawis, Isnag, Atta, Central Cagayan Agta, Ga’dang and Gaddang; and the Meso-Cordilleran languages (i.e., the Alta languages, all of the Southern Cordilleran languages—Ilongot, Ibaloi, I’wak, Pangasinan, Kalanguya, and the Central Cordilleran languages). Arta (Reid 1989:67), and the negrito languages of the east coast of Luzon do not abbreviate the pronouns.

MAP 2. CENTRAL CORDILLERAN LANGUAGES.

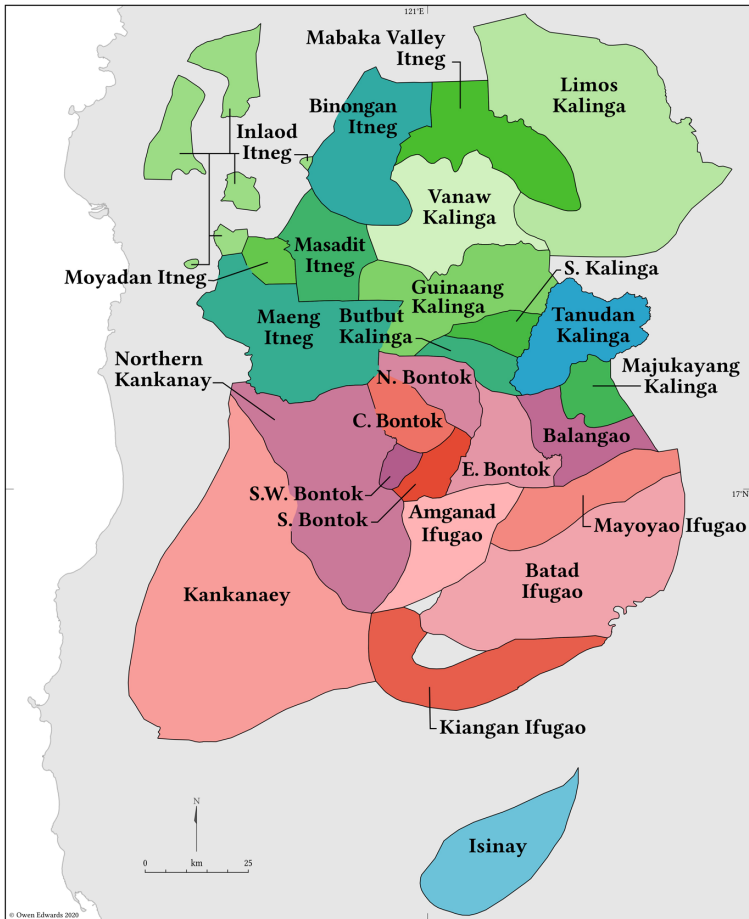


TABLE 1. CENTRAL BONTOK FIRST- AND SECOND-PERSON PRONOUN REDUCTION FOLLOWING VOWEL-FINAL WORDS.

	Vowel-final nouns	Gloss	Vowel-final verbs	Gloss
1SG	ásu=k	my dogs	inára=k	I got (s.t.)
2SG	ásu=m	your (sg.) dogs	inára=m	you (sg.) got (s.t.)
3SG	ásu=na	his/her dogs	inára=na	he/she got (s.t.)
1/2SG	ásu=ta	our (two) dogs	inára=ta	we (two) got (s.t.)
1PL.EX	ásu=mi	our (ex.) dogs	inára=mi	we (ex.) got (s.t.)
1PL.IN	ásu=takú	our (in.) dogs	inára=takú	we (in.) got (s.t.)
2PL	ásu=yu	your (pl.) dogs	inára=yu	you (pl.) got (s.t.)
3PL	ásu=cha	their dogs	inára=cha	they got (s.t.)

are added. Section 4 will discuss the syntax of genitive noun phrases following patient and locative voice verbs that has relevance to the suggested development of *kan* ‘say’. Section 5 will provide a discussion of quotative indexes that are possible reanalyses that result in the reduction of the verb suffixes and the syntax of genitive noun phrases. Section 6 will discuss Ilokano, the only other language apart from the CCo languages that reduces suffixes similar to CCo languages. Section 7 will be a summary and conclusion.

2. POSSIBLE HISTORICAL DEVELOPMENT OF PROTO-CENTRAL CORDILLERAN *KAN. In this section, possible historical developments of Proto-Central Cordilleran (PCCo) **kan* ‘say’ are discussed. There are a wide range of report verbs or nouns in Austronesian languages many of which show similar forms across the family and for which reconstructions have been proposed. Central Bontok lexical items, in addition to *kanán* ‘to say s.t.’, include *kanó* ‘it is said’, *kowá* ‘possession’, forms that are relatively widespread in Philippine languages. The reconstructed forms include Proto-Austronesian (PAN) **kuwas* ‘say’ (Wolff 2010:878),⁵ Proto-Western Malayo-Polynesian **kua-n* ‘quotative’ and **kua*₁ ‘whatchamacallit, filler for word that cannot be recollected’ (Blust and Trussel ongoing);⁶ Proto-Oceanic (POC) **k^wa-i* ‘to say’ (Ross 2011), and so on. Among the commonest are the reflexes of PMP **kuhá* ‘say’,⁷ with a wide range of forms and associated meanings from the Batanic languages in the north of the Philippines to Oceanic languages.

It is possible that PCCo **kan* ‘say’ is a development from **kuwa-ʔán* ‘say-patient voice’, with reduction to **kan* since the sequence **aʔ* is abbreviated in another widespread word, PMP **kaʔən* > *kan* ‘eat’, but since utterance verbs are typically featured with an *ʔi- conveyance voice prefix, not with a patient voice suffix (see the list of Central Bontok utterance verbs in section 5), this reconstruction is unlikely.⁸ It is possible that the final *-n* of PCCo **kan* is all that remains of PMP **kuhá=ni* ‘say=genitive marker’. The genitive marker

5. The final *-s* would be *-S* in Blust’s orthography (Blust 1999:43).

6. One of the anonymous reviewers pointed out that there are a number of reconstructed forms in Blust and Trussel (ongoing) that are possibly connected (although the reviewer noted that the source does not treat them as such). The forms cited in this paper are considered possibly relevant and should be considered in any paper that examines the development of “say” verbs in the Austronesian family of languages. Incidentally, Central Bontok does not have the widespread reflex of **kua*₁ ‘whatchamacallit, filler for word that cannot be recollected’, it has replaced it with a Tagalog form *anoká* ‘what say’ or ‘what are you’.

7. The reflex of PMP **h* from PAN **S* was lost between vowels in Batanic and Northern Philippine languages but is retained in others, such as Tagalog with semantic change, for example, Tag. *magkúha* ‘to get’. Some reconstructed forms retain only the vowel sequence following the consonant, based on evidence such as Ilokano *kuá*. Others consider that a semivowel was present in the data, for example, Ibaloi *kuwá*. Some reconstructions show a stress pattern on PMP reconstructions, others do not. The reconstructions, other than those that are noted by others, are by the author, based on the evidence that he believes is applicable.

8. However, given the presence of the perfective form *kinwáni* ‘said’ (see section 5), which appears to have an infix following the initial consonant that is the normal form for the perfective of a patient voice verb, also the Itneg *kumek* from a patient voice suffix, mentioned in footnote 31, and the Ilokano *kinuná*, discussed in section 6, **kuwa-ʔán* ‘say-patient voice’ is a possible origin of **kan*.

appears on some pronouns in languages to the south of the Northern Luzon group of languages, such as Tagalog *niyá* ‘he/she/it’ (Blust 1977, 2003:363).

Apart from the uses of PCCo *kan and its reflexes as a predicative verb ‘say’, there are a large number of nonverbal forms that appear to be developments of this word. Heine and Kuteva (2002) give the following eight developments that have been described as grammaticalizations of ‘say’: cause, complementizer, conditional, evidential, purpose, quotative, simile, and subordinator. Most of these developments are also found in Formosan and Philippine languages, but in addition we also find developments as various kinds of attitudinal adverbs, aspectual verbs, interrogative and request forms, indefinite nouns and verbs, possessive pronouns, adverbs of immediacy, and possibly case markers and exonyms. Examples are Bon. *kan* ‘possessor’, for example, *Sino nan kan-áfong siná?* ‘Who is the owner of the house here?’, and *kowá* ‘possession’, for example, *Kowámi sa*. ‘That is ours’.

3. TRANSITIVE VERB SUFFIX REDUCTION IN CCo LANGUAGES.

In this section, we will discuss first the reduction of voice suffixes with *kanán* ‘to say s.t.’ in Central Bontok and then give examples of it in all transitive verbs in the same language. One of the unique characteristics of PCCo *kanán is that in all the daughter languages of this group, the final *-n* of the suffix is lost, but only when pronominal agent pronouns are singular. Table 2 provides examples of singular and plural pronominal agents in Central Bontok [lbk]⁹ as spoken in the village of Guinaang. In these and the following examples, the forms of interest are bolded.

This is true not only of *kanán*, but all verbs with suffixes that are reflexes of PMP *-ən ‘patient voice’ and *-an ‘locative voice’ are reduced when singular agentive genitive pronouns are added. In section 5, I argue that this is an extension of the reanalysis of PCCo *kanan. The reduction of voice suffixes has been mentioned in several places in the literature (Brainard 1985:125; Newell and Poligon 1993:134), but no explanation has been given. The genitive noun phrase structure containing a common noun or personal name following verbs and nouns is also unique to this family (discussed in section 4).

These processes are found throughout the CCo languages of which Bontok is a member. Bontok (bnc) is classed as a macrolanguage by Eberhard et al. (2019). The constituent members are Northern, Central, Eastern, South-Western, and

9. Three-letter abbreviations in square brackets following a language name are ISO-3 abbreviations (see Eberhard et al. 2019). Sometimes the language abbreviations show different names from those in this article, for example, [knb] in *Ethnologue* is given as Lubuagan Kalinga (of which Guinaang [editor note: Guinaang is listed without a hyphen in Kalinga] is listed as a dialect); however, in this article, [knb] is given as Guinaang Kalinga, because data are taken from Guinaang publications. Similarly [bjx] in *Ethnologue* is Banao Itneg; however in this article, [bjx] is given as Vanaw Kalinga because the language cited is spoken in Balbalasang, Kalinga which is on the border of Abra and Kalinga and is also spoken in some areas of Abra. The abbreviation [bjx] is also used for Buwaya Kalinga, spoken in an area of Balbalan, Kalinga, where a dialect of Vanaw Kalinga is also spoken, because data are taken from De Raedt (1989).

**TABLE 2. CENTRAL BONTOK REDUCTION OF THE VERB
kanán ‘TO SAY SOMETHING.’**

1SG	kan-á-k ¹⁰	I say s.t.
2SG	kan-á-m	you (sg.) say s.t.
3SG	kan-á-na	he/she says s.t.
1/2SG¹¹	kan-án=ta	we (two) say s.t.
1PL.EX	kan-án=mi	we (ex.) say s.t.
1PL.IN	kan-án=takú	we (in.) say s.t.
2PL	kan-án=yu	you (pl.) say s.t.
3PL	kan-án=cha	they say s.t.

Southern Bontok.¹² The examples in (1) are Central Bontok transitive sentences with plural pronominal agents and with the full suffixes *-an* and *-en*.¹³

(1) CENTRAL BONTOK verbs with plural agents¹⁴

- a. As for **wanmi**¹⁵ nan limami.
 ʔas fuɸu-**wán**=mi nan líma=mi
 FUT wash.hand-LV=GEN.1PL.EX SPEC hand=GEN.1PL.EX
 ‘We (excl.) will wash our hands’.
- b. Ara-**enyo**¹⁶ nan aso.
 ʔaɸá-**ʔən**=yu nan ʔásu
 get-PV=GEN.2PL SPEC dog
 ‘You (pl.) get the dog’.

10. The difference between agent pronouns with a hyphen and those with an enclitic sign preceding them is based on distribution. A transitive verb with a reduced form of the reflex of PMP *-ən or *-an is an incomplete word when it occurs without a singular agent pronoun as a suffix. In effect, the pronoun is person marking on the verb. However, the plural forms are enclitics and do not result in an incomplete word when they are not present.

11. The pronoun 1/2SG ‘dual’ refers to two people and requires the full form of the suffixes.

12. A list of communities of each of the constituent languages of the macrolanguage Bontok can be found in Reid (online: introduction, figure 1).

13. All Guina-ang Bontok examples are from more than ten years of living in Guina-ang by the author and have been checked with native speakers.

14. Line 1 in each example is given in either the local orthography or the source transcription. Line 2 is a morpheme-by-morpheme breakdown of the first line (where different from the source text), given in phonemic transcription; hyphens separate the prefixes and suffixes; angle brackets mark infixes and appear before their root words; clitics are marked with an equal sign (=). Line 3 is a morpheme-by-morpheme translation of Line 2. Line 4 is a free translation of Line 1. Lines 2–4 are systematized by the author to enable consistency. Most abbreviations follow the Leipzig Glossing Rules. Other abbreviations are 1/2SG first-person inclusive dual pronoun; AGT, agent; AV, actor voice; COM, comitative; CV, conveyance voice; DFNT, definite article; LIG, ligature; LV, locative voice; NEU, neutral; PRON, pronoun; PV, patient voice; QUA, abstract quality; RDP, reduplication; SPEC, specifier; s.o., someone; s.t., something; STNC, stance.

15. Central Bontok has a single back vowel that is represented by *o* and requires a semivowel glide following a high vowel before a suffix that begins with a low vowel. This is interpreted as a syllable initial consonant. Central Bontok, like many other languages in the Philippines, has lexical stress distinguishing disyllabic words that have different meanings. When a transitive suffix is added, stress moves one syllable to the right. This stress position is marked in Line 2 with an acute accent over the vowel. For example, the root /furu/ ‘wash hands’ has stress on the final syllable, while /ʔaɸa/ ‘get’ has stress on the initial syllable. This is represented by some analysts as length, since there is a contrast between long and short open penultimate syllables. A “stressed” open penultimate syllable is invariably longer than one that does not have “stress.”

16. Central Bontok requires a glottal stop between two vowels, the first of which is not a high vowel (as in the example), and also between identical vowels, including identical high vowels. This glottal stop is represented in the local orthography by a hyphen.

- c. As ara-**encha**¹⁷ nan aso.
 ʔas ʔaʔá-ʔən=tʰa nan ʔásu
 FUT get-PV=GEN.3PL SPEC dog
 ‘They will get the dog’.

The examples in (2) are the same Central Bontok transitive sentences but with the suffixes *-an* and *-en* reduced to *-a* and *-e*, respectively, and with the required singular, pronominal agent person marking. The person-marking forms are suffixes and follow the reduced transitive suffixes.

(2) CENTRAL BONTOK verbs with singular agents

- a. As forow**wak** nan limak.
 ʔas fu.ʔu-wá-k nan líma=k
 FUT wash.hand-LV-GEN.1SG SPEC hand=GEN.1SG
 ‘I will wash my hands’.
- b. Ara-**em** nan aso.
 ʔaʔá-ʔə-m nan ʔásu
 get-PV-GEN.2SG SPEC dog
 ‘You get the dog’.
- c. As ara-**ena** nan aso.
 ʔas ʔaʔá-ʔə-na nan ʔásu
 FUT get-PV-GEN.3SG SPEC dog
 ‘He/She will get the dog’.
- d. Pay-**enas** forrayaw
 pa-ʔəy-ə-na=s¹⁸ fuɰɰayaw
 CAUS-go-PV-GEN.3SG=SPEC shooting.star
 ‘He will put a shooting star (in the sky)’.

(Reid 2006:20)

Examples (3)–(7) provide sentences from texts and other sources that show the same phenomena from some of the other CCo languages.

(3) ITNEG [itb] transitive verbs with singular agents

- a. Napiya sit kankanek kantowe
 na-piya sit kan-kan-ə-k kan-tuwe
 PFV.STAT-good SPEC RDP-eat-PV-GEN.1SG LOC-DEM₁
 ‘I am eating well here’.
- b. Sengam kadi, Piit, no awad payyan ta pagay kanta alang.
 sən-a-m kadi piʔit nu ʔawad payyan ta pagay kan=ta ʔalaŋ
 see-LV-GEN.2SG now Piit if EXIST still SPEC rice LOC=SPEC granary
 ‘Piit, see if there is still rice in the granary’.

(Walton 1975:28)

(Walton 1975:5)

17. The presence of syllable initial /f/, /tʰ/, and /k^h/ while originally syllable initial allophones of /b/, /d/, and /g/, respectively, is now fully phonemic because of the influx of loanwords in the language. Similarly, the voiced retroflexed approximate /ɺ/ was an allophone of /l/ but is now considered phonemic and is represented by *r* (see Reid 2005).

18. The form of the verb has the first vowel of ‘go’ deleted, and then the sequence of glottal stop consonant is metathesized. The glottal stop is part of the root word and is not part of the suffix as in the previous example.

- c. Ay Apo, bagis met sit sengana.
 ?ay ?apu bagis mət sit səŋ-a-na
 Oh Lord intestine also SPEC see LV-GEN.3SG
 ‘Oh Lord, intestines only are what she saw’. (Walton 1975:5)
- (4) BUWAYA KALINGA [bjx] transitive verbs with singular agents
- a. al-allawidok sika
 ?a-?allawid-o-k sika
 RDP-entreat-PV-GEN.1SG NEU.2SG
 ‘I am entreating you’. (De Raedt 1989:52)
- b. lokba-om singandayan
 lokba?-o-m sijandayan
 cut.loose-PV-GEN.2SG death.chair
 ‘cut loose the death chair’ (De Raedt 1989:47)
- c. nu kabalinana
 nu kabalin-a-na
 if possible-LV-GEN.3SG
 ‘if it is possible’ (De Raedt 1989:63)
- (5) UPPER TANUDAN KALINGA [kml] transitive verbs with singular agents
- a. sissiwaok nan sinapalitni
 sis-siwa-o-k nan <in>sapalit=ni
 RDP-bless-PV-GEN.1SG SPEC <PFV>new.rice=GEN.1PL.EX
 ‘I am praying for you to bless the new rice that we have harvested’
 (Brainard 1985:27)
- b. ngilinom te kanande mangilin
 ŋilin-o-m tay kan-an=day ma-ŋilin
 taboo-PV-GEN.2SG because say-LV-GEN.3PL.LIG STAT-taboo
 ‘You treat it as taboo, because they say it is taboo’. (Brainard 1985:53)
- c. dadaana kanu da asuna
 dada-?a-na kanu da ?asu=na
 call-LV-GEN.3SG REP PL dog=GEN.3SG
 ‘he called his dogs, it is said’ (Brainard 1985:2)
- (6) LIMOS KALINGA [kmk] transitive verb with singular agent
- dinakmaana dit iman Juan
 <in>dakma-?a-na dit ?ima=n huwan
 <PFV>grab-LV-GEN.3SG SPEC hand=GEN Juan
 ‘he grabbed John’s hand’ (Wiens 1990:24)
- (6) KANKANA EY [kne] transitive verb with singular agent
- a. sinoy alaek
 sinuy ?alá-?ə-k
 what=LIG get-PV-GEN.1SG
 ‘What will I get’ (Allen 1978b:82)
- b. taliyam nan omili
 tali-yá-m nan ?umili
 rope-LV-GEN.2SG SPEC villager
 ‘Tie up the villagers’. (Koway 1978:30)

- c. *sigaaana* di *balat*
sigá-ʔá-na di *balát*
 dislike-LV-GEN.3SG SPEC banana
 ‘He dislikes bananas’. (Allen 1978a:75)
- (7) BALANGAO [blw] transitive verbs with singular agents
- a. *Pakay lakayém* *haén*.¹⁹
pakay lakay-ǝ-m *haʔǝn*
 why old.man-PV-GEN.2SG NEU.1SG
 ‘Why do you make me old?’ (Shetler 1976:63)
- b. *hen antoy inada,* *laydena* *way*²⁰ *adida* *matey*
hen ʔanto=y ʔiná=da *layd-ǝ-na* *ʔay* *ʔadí=da* *matáy*
 SPEC this=LIG mother=GEN.3PL like-PV-GEN.3SG LIG NEG=NOM.3PL die
hen antoy duway *anànay* *enekkat*.
hen ʔanto=y duwá=y *ʔanáʔ=na=y* *ʔenekkat*
 SPEC this=LIG two=LIG child=GEN.3SG=LIG small.PL
 ‘This mother of theirs, she wanted that her two small children would not die’. (Canao 1978:1)
- (8) ISINAY ([inn], Dupax del Sur dialect) transitive verbs with singular agents
- a. *Apupúwo*²¹ *si’á*.
ʔapupú-wo-ʔ *siʔá*
 embrace-PV-GEN.1SG NEU.2SG
 ‘I will embrace you’. (Reid ongoing)
- b. *Amutánam niye tahuwár an ma’ánur*.
ʔamután-a-m niye tahu=wár ʔan ma-ʔánur
 help-LV-GEN.2SG DEM3²² man=DFNT LIG STAT-swept.downstream
 ‘Help that man who is being swept downstream’. (Reid ongoing)
- c. *Opasána niye páhon di nuwángar*.
ʔopas-á-na niye páho=n di nuwáng=ar
 put.down-LV-GEN.3SG DEM3 yoke=GEN SPEC water.buffalo=DFNT
 ‘He is putting down that yoke of the water buffalo’. (Reid ongoing)

4. SYNTAX OF GENITIVE NOUN PHRASES. It is necessary to discuss the syntax of genitive noun phrases in order to understand the possible development of the reduction of voice suffixes on *kanán* and other transitive verbs. It is assumed that this process is directly related to the loss of the final *-n* on the voice suffixes of transitive verbs before singular pronouns. Reid (2006) claims that in all CCO languages, genitive noun phrases differ between those that

19. Neutral is a set of pronouns that are free forms, not marked for case, and have multiple functions, following the terminology of Ross (2006:524). In the CCO languages, one of the functions of the neutral pronouns is the nominative pronoun of transitive clauses.

20. Balangao uses one of the variants of the ligature, *way*, to represent all free forms of the ligature including /ʔay/ (Shetler 1976:128, 218–23).

21. The reflexes of PMP *ə and *k are Isinay /o/ and /ʔ/, respectively.

22. Philippine languages typically have at least three demonstratives, the first (DEM1) is proximate, or close to the speaker, the second (DEM2) is medial, or close to the hearer, and the third (DEM3) is distal, away from the speaker and hearer.

- h. *linpas cha Tomag-ong*
 <in>ləpás tʰa tumagʔuŋ
 <PFV>finish PL Tomag-ong
 ‘Tomag-ong and his companion finished it’.
 (CENTRAL BONTOK, Reid 1992:S08–77)
- i. *sin-ed nan laráki sak-en*
 <in>səʔód nan laʔáki sakʔən
 <PFV>wait SPEC man NEU.1SG
 ‘The man waited for me’.
 (CENTRAL BONTOK, Reid 2006:14)
- j. *ya eyoy na onga hen onas*
ya ʔe-yoy na ʔuŋa hen ʔunas
 and CV-go/come SPEC child SPEC sugarcane
 ‘and the child brings the sugarcane’. (EASTERN BONTOK, Fukuda 1980:72)
- k. *inyapuy inlagwi*
 <in>ʔi-ʔapuy ʔinlagwi
 <PFV>CV-fire inlagwi
 ‘Inlagwi ignited (the fire)’.
 (BATAD IFUGAO [ifb], Newell and Poligon 1993:14)
- l. *indat Aligūyon*
 <in>ʔ-dāwat ʔAligūyon
 <PFV>CV-give Aligūyon
 ‘Aligūyon gave (the meat)’. (BATAD IFUGAO, Newell and Poligon 1993:15)

On transitive verbs ending with a vowel, genitive is marked with =*n*, which is assumed to be the ditropic enclitic of PMP **ni* ‘genitive case marker’.²³ Examples (10a–c) show the presence of the genitive enclitic =*n* following a vowel in Central Bontok. There is a specifier in the first example that is identical to that which marks any definite noun in any noun phrase structure in the language (see Reid 2006). There is no marker in the second example apart from the genitive enclitic since the agentive actor of the verb is a personal noun. In the third example, the personal noun is pluralized. These structures are the same in all CCo languages (except Itneg, which has been strongly influenced by Ilokano and borrows Ilokano *ni* ‘personal noun marker’).²⁴

- (10) Genitive constructions in Central Bontok verbal clauses following a vowel
- a. *kinwanin²⁵ nan sagkhongcha*
 <in>kuwáni=**n** nan sagk^huŋ=tʰa
 <PFV>say=GEN SPEC neighbor=GEN.3PL
 ‘their neighbor said . . .’ (CENTRAL BONTOK, Reid 1992:K02–7)

23. When a word ends in a vowel, a consonant syntactically marking the following noun phrase is attached as an enclitic. They are ditropic enclitics (Cysouw 2005). It should be emphasized that while ditropic enclitics are phonologically dependent on the preceding form, they syntactically mark the following noun phrase.

24. Ilokano uses its reflex of PMP **ni* to mark all singular personal names, whether genitive, nominative, or oblique/locative.

25. See discussion of the perfective form of *kanan* in section 5.

- b. inaran Chayakchak.
 <in>ʔáʔa=n tʰayaktʰak
 <PFV>get=GEN Chayakchak
 ‘Chayakchak got it’.
 (Perfective example of CENTRAL BONTOK, Reid 1992:S04–10)
- c. inaran cha Takcheg nan payewna.
 <in>ʔáʔa=n tʰa taktʰəg nan payów=na
 <PFV>get=GEN PL Takcheg SPEC pond.field=GEN.3SG
 ‘Takcheg and his friends got the pond field’.
 (CENTRAL BONTOK, Reid 2006:41)

Since genitive constructions are identical in their forms between agents of transitive verbs and possessors of nouns, possessive constructions show precisely the same phenomena. Following a consonant, there is no genitive marking, as seen in (11).

- (11) CCO languages with non-marked possessor following a consonant
- a. natayan Juljulyaw
 death.place Juljulyaw
 ‘the place where Juljulyaw died’ (VANAW KALINGA, Juljulyaw story, Scott Saboy pers. comm.)
- b. luwang Caesar
 water.buffalo Caesar
 ‘Caesar’s water buffalo’ (VANAW KALINGA, Scott Saboy pers. comm.)
- c. boloy Gumibu
 house Gumibu
 ‘Gumibu’s house’ (BUWAYA KALINGA, De Raedt 1989:149)
- d. lagdaw Mudaw
 lobster Mudaw
 ‘Mudaw’s lobster’ (BUWAYA KALINGA, De Raedt 1989:151)
- e. pongod di waʔil
 source SPEC stream
 ‘source of the stream’ (GUINAANG KALINGA, Geiser 1963)
- f. baey alapoda²⁶
 baʔəy ʔalapu=da
 house grandparents=GEN.3PL
 ‘house of their grandparents, (NORTHERN KANKANAY, Ap-apid 1978:24)
- g. kanen nan beteg
 kanən SPEC bətəg
 food the pig
 ‘food of the pig’ (NORTHERN KANKANAY, Ap-apid 1978:24)
- h. etey Farrong
 ʔətəy faɽɽɿŋ
 death Farrong
 ‘(the) death of Farrong’ (CENTRAL BONTOK, Reid 1992:S04–02)

26. Kinship relationship terms in Philippine languages are commonly treated as personal nouns.

- i. kawad di losong
place the mortar
'place of the mortar' (EASTERN BONTOK, Fukuda 1980:82)
- j. páhul Aligúyon
spear Aligúyon
'Aligúyon's spear' (KIANGAN IFUGAO [ifk], Lambrecht 1978:xvii)

Possessors that follow a vowel-final word require a genitive enclitic, =*n*, as in (12).

- (12) CCo languages with genitively marked possessor following a vowel
- a. aman Uyyama
ʔama=*n* ʔuyyama
father=*GEN* Uyyama
'Uyyama's father' (BALANGAO, Shetler 1976:237)
- b. gawan di labi
gawa=*n* di labi
middle=*GEN* SPEC night
'middle of the night' (BALANGAO, Canao 1978:4)
- c. tobon di baat
túbu=*n* di báyat
leaf=*GEN* SPEC banana.plant
'leaf of a banana plant' (NORTHERN KANKANAY, Hettick and Kent 1967)
- d. inan Ubban
ʔina=*n* ʔubban
mother=*GEN* Ubban
'Ubban's mother' (BATAD IFUGAO, Newell and Poligon 1993:15)
- e. a'ungan Agināya
ʔa-ʔuŋa=*n* ʔagināya
QUA-child=*GEN* Agināya
'Agināya's youth' (BATAD IFUGAO, Newell and Poligon 1993:14)
- f. adwan di algaw
ʔadwa=*n* di algaw
second=*GEN* SPEC day
'second of the days' (BATAD IFUGAO, Newell and Poligon 1993:106)
- g. ampúyon di áki
ʔampúyo=*n* di ʔaki
skirt=*GEN* SPEC little.girl
'skirt of the little girl' (KIANGAN IFUGAO, Lambrecht 1978:120)
- h. páyon hannán babái
páyo=*n* han=na=*n* babáʔi
pond.field=*GEN* SPEC=DEM3=LIG woman
'the pond-field of that woman' (KIANGAN IFUGAO, Lambrecht 1978: viii)

The question is how did the CCo languages lose genitive marking following a word-final consonant but not following a word-final vowel, and how did voice suffixes lose their final nasal, not only with *kanan* 'to say s.t.', in the presence of singular agentive pronouns but not before plural pronominal

agents? It is suggested here that these processes are probably the result of a single reanalysis of a “quotative index,” that has influenced a wide range of phenomena, including locative voice verbs, patient voice verbs, and possessive constructions. This will be discussed in the following sections.

5. QUOTATIVE INDEXES. This term is borrowed from Güldemann (2008) and is used here to indicate the structure used to mark quoted speech in conversation. A quotative index is distinct from the reported evidential *kanú* ‘it is said’, although this is clearly related having an initial *kan*, as well as from the quotative =*en* (/ən/) or =*n* ‘QUOT’ that optionally appears directly before quotes in all CCo languages, as shown in (13).

- (13) CCo quotative forms before quotations
- a. ot kana **kanun**, “Na-id na-ilam kan tukak?”
 ʔot ka-na **kanu=n** naʔid na-ʔila-m kan tukak
 SEQ say=GEN.3SG REP=QUOT EXIST PFT.STAT-see-GEN.2SG OBL frog
 ‘Then he said, it is said, “Have you seen the frog?”’
 (VANAW KALINGA, Frog story, Scott Saboy pers. comm.)
- b. ammi **on**, “anna ami.”
 ʔan=mi =**yon** ʔanna =ʔami
 said=GEN.1PL.EX =QUOT LOC.DEM1 =NOM.1PL.EX
 ‘We said, “We are here.”’ (GUINA-ANG KALINGA, Gieser 1987:4)
- c. ngem achina kankanan **en** otot
 ŋəm ʔatʰi=na kan-kanán =**ən** ʔútut
 but not=GEN.3SG RDP-say =QUOT rat
 ‘but she didn’t say that it was a rat’ (CENTRAL BONTOK, Reid 1992:S01–27)

The quotative index forms are phrases that typically follow quoted speech. Apparently, they developed from an earlier form **kuwá* by some route, but they are not typical utterance verbs. As Güldemann (2008:vi) says, “the formal properties of quotative indexes . . . cannot be taken automatically to be true utterance verbs.” The following are typical utterance verbs, and these contrast with quotative indexes based on the form *kan* ‘say’. Typical utterance verbs in Central Bontok as spoken in the village of Guina-ang are *fakha* (/fakʰá/) ‘tell’, *fokhaw* (/fúkʰaw/) ‘shout’, *arasa-as* (/ʔaʔasáʔas/) ‘whisper’, and *tot-oya* (/tutʔuyá/) ‘converse’. Such verbs can occur with transitive voice affixes, typically with an *i-* (/ʔi-/) conveyance voice prefix, marking the speech quoted as the conveyed event, for example, *ifakha* ‘to tell (s.t.)’, *ifokhaw* ‘to shout (s.t.)’, and *iyarasa-as* ‘to whisper (s.t.)’. They can also occur with a perfective infix,²⁷ for example, *infakha* ‘to have told (s.t.)’, *infokhaw* ‘to have shouted (s.t.)’, and *inyarasa-as* ‘to have whispered (s.t.)’. They can occur with aspectual reduplication (always prefixal), indicating ongoing activity, except the form *tot-oya*, which is always reduplicated, indicating back and forth conversation, for example, *fagfakha* ‘telling’, *fogfokhaw* ‘shouting’, and *ar-arasa-as* ‘whispering’.

27. Remember that all forms that appear to start with a vowel actually begin with a glottal stop. The perfective of the conveyance voice prefix *ʔi- is infixed <in> following the glottal stop, where the glottal stop is all that remains of the conveyance voice.

TABLE 3. GUINA-ANG BONTOK REANALYSIS OF “SAY”
NOMINAL FORMS AS LOCATIVE VOICE VERBS.

	Nominal form	Gloss		Verbal form	Gloss
Basic	kaná= n	(someone’s) saying	>	kan-á- n	(someone) says s.t.
1SG	kaná= k	my saying	>	kan-á- k	I say s.t.
2SG	kaná= m	your saying	>	kan-á- m	you say s.t.
3SG	kaná= na	his/her saying	>	kan-á- na	he/she says s.t.

The proposed reconstructed form of the quotative index is PCCo *kana ‘saying’.²⁸ It cannot carry voice affixation, neither can it carry a perfective affix. It was originally a nominal expression and still could be analyzed as a nominal expression if we do not include its extension to all locative voice and patient voice verbs and possessive constructions. Since it ends in a vowel, it requires a genitive enclitic =*n* (a reduced form of the reflex of PMP *ni ‘genitive specifier’) to introduce the agent, as in (14).

- (14) GUINA-ANG BONTOK with quote followed by a possible quotative index²⁹
 “Siya sas khab-en takos far-ak yo,” **kanan** alita-o³⁰ cha
 siyá sa=s k^habʔ-en=takú=s faʔak=yu **kaná=n** ʔalitáʔu=tʰa
 it DEM2=FUT make-PV =GEN.1PL.IN=OBL spear=GEN.2PL **saying**=GEN Uncle =GEN.3PL
 “That is what we will make your spear out of,” said their Uncle’.
 (Reid 1992:K05, sentence 72)

Henceforth, *kanán* will be shown not in its nominal form with a genitive enclitic, as in (14), but in its presumed reanalyzed form, as a verb *kan* with a locative voice suffix.³¹ Following Deutscher (2002:482), “Reanalysis is the change in the underlying structure of an utterance which does not involve modifications on the surface. In other words, it is the attribution of a ‘wrong analysis’ to a surface utterance.” Analogical extension is the incrementation or spread of a misanalysis to a wider set of forms or contexts. In the case of the “say” nominal, the noun is reanalyzed as a verb with a locative voice suffix, and its incrementation extended the reanalysis to all verbs with locative voice suffixes and presumably at the same time also to verbs with patient voice suffixes and possessed noun structures. This is a striking change, presumably stemming from a single reanalysis and ultimately affecting not only the morphology but also the syntax of several languages, but no other reanalysis that I know fits the data. Table 3 shows the process of reanalysis of the nominal form

28. The form has apparently developed from PCCo *kan ‘say’, which is found throughout the CCo group, but with various derived forms.

29. Ditropic enclitics in (14), apart from genitive pronouns, include =s ‘future marker; =s ‘oblique marker’; and =*n* ‘genitive marker’.

30. This is a kinship relationship term that is treated as a personal noun.

31. Binongan Itneg is the only CCo language that has apparently replaced the inherited *kan* with a borrowing of the base of Ilk. *kuna* ‘say’. This language replaces the locative voice suffix with patient voice, for example, *kunek* ‘I say’ (Walton 1975:56), but following Ilokano, reduces the suffix from *-en* to *-e*. Itneg is heavily influenced by Ilokano.

kaná with a genitive enclitic =*n* and with shortened forms of the first- and second-person singular genitive pronouns that were already present in the parent language. The final vowel of *kaná* is analyzed as the first vowel of the locative voice suffix *-an*, and genitive pronouns now form agentive person markers. Since the genitive enclitic =*n* of the original form is retained as the final *-n* of the locative voice verb, a following noun phrase no longer requires any genitive marking.

Quotative indexes only followed quotations.³² Following reanalysis, what were originally quotative indexes were allowed to occur preceding a quote as verbs, as in (16).

- (16) CENTRAL BONTOK with quote preceded by a reanalyzed quotative verb
 Kanan alita-o cha, “As manet anoka pay,
 kan-án ʔalitáʔu =tʰa ʔas man=ót anaká pay
 say-LV uncle =GEN.3PL FUT STNC=SEQ what’s.it moreover
 fasokhen =tako =s sa.”
 fasúk^h-ən =takú =s sa
 sharpen-PV =GEN.1PL.IN =LOC DEM2
 ‘Their uncle said, “Now we need (to get our sticks) for sharpening there.”’
 (Reid 1992:K05, sentence 60)

Central Bontok and Kankanaey have developed a suppletive verb as a perfective form of the reanalyzed *kanán*, namely, *kinwáni* ‘said’. It is considered suppletive because it does not fit the regular pattern of aspect marking although it apparently comes from the same source as *kan*. This form always occurs with the perfective infix <*in*> replacing the unstressed vowel (probably **u*) that historically must have occurred between the first and second consonants. The base of the verb is the northern Philippine reflex of PMP **kuhá* ‘say’, which is **kuwá* in CCo languages and other Philippine subgroups.³³ This verb *kinwáni* is a historically reanalyzed verb, since Bontok and Kankanaey retain the full genitive **ni* as part of the verb (*kinwáni*). When a agentive noun follows *kinwáni*, a reflex of the genitive form **ni* is added as a ditropic enclitic (=n) to *kinwáni*, as in (17).

- (17) CENTRAL BONTOK with quote preceded by a reanalyzed perfective aspect “say” verb
 Kinwanin alita-o cha, “Sak-en man chiyay!”
 <in>kwáni=n ʔalitáʔu =tʰa sakʔən man tʰi=yay
 <PFV>say=GEN uncle=GEN.3PL NEU.1SG STNC DEM3=EMP
 ‘Their uncle said, “That was me!”’ (Reid 1992:K05, sentence 41)

The locative voice verb *kanán* ‘to say s.t.’ occurring at the beginning of a sentence could be modified following a ligature, as in (18a,b). The

32. Tagalog also requires its quotative index *ka* to follow a quotation, for example, “*Huwag*” *kako*. /*huwág ká=ko*/ “‘Don’t’ I said”, although it can be fronted by inversion with the typical linker *ay/y*, for example, *Kakoy* “*Huwag*.”

33. The languages in the northern Philippines include the Ivatan (ivv) quotative form *kwa=na* ‘he said’, and Ibaloi [ib] *kowan=to* ‘he said’, *ʔi-kowan* / *ʔinkowan* ‘to say, tell’ (Ruffolo 2004).

modification includes, in Central Bontok, a nominalized (gerundive) form *mangwáni* ‘saying’ (or its perfective form *nangwáni* ‘said’), as in all the examples in (18). These gerundive forms developed from *maN-* + *kuwáni*, by nasal substitution, with *k* of the verbal form deleted because of *maN-* (see Blust 2004), and the following unstressed vowel is deleted. Bontok also has a stative verb based on this form, with the prefix *ma-*, *makwáni* ‘it is said’. Other languages in the group, such as Kiangang Ifugao, use *kinali*, a perfective form of PCCO *kali-án < PMP *kaRi ‘word, speech, language’ (Lambrecht 1978:266, 271). This form does not occur in Batad Ifugao. In this language, ‘*ali* is a noun, ‘voice, cry of an animal’, and also occurs as an actor voice verb ‘to call out, cry out’ (Newell and Poligon 1993:120), which is the meaning of the cognate in Bontok, shown in (18d) below.

(18) CENTRAL BONTOK sentences in which utterance verbs appear before the quote

a. Ya kanan cha ay mangwani en, “Linpas cha Tomag-ong.”
 ya kan-án =tʰa =ʔay maŋwáni =yən <in>ləpás tʰa tumagʔuŋ
 and say-LV =GEN.3PL =LIG saying =QUOT <PFV>finish PL Tomag-ong
 ‘And they said, saying “Tomag-ong and his companion finished it.”’

(Reid 1992:S09, sentence 66)

b. Kanan mi ay mangwani ay intot-oya en, “Satat
 kan-án =mi =yay maŋwáni =yay ʔin-tutʔuyá =ʔən sá=ta=t
 say-LV =GEN.1PL.EX =LIG saying =LIG AV-chatting =QUOT FUT=GEN.1/2SG=SEQ
 pototen nan losi=n tosa!”
 putút-ən nan lúsi=n tusá
 cut.off-PV SPEC penis=GEN person.DEM2

‘We said, saying while we were chatting, “Let’s cut off that man’s penis!”’

(Reid 1992:S09, sentence 37)

c. Inmey chas Filig, nar-os nan ib-ana ay
 <in-m>ʔəy tʰa=s filig na-ʔus nan ʔibʔá=na =ʔay
 <PFV-AF>go =GEN.3PL=LOC mountain PFV.STAT-leave SPEC companion=GEN.3SG =LIG
 chowa, infokhaw ay mangwani en “Ay into kayo man?”
 tʰuwá <in>ʔ-fúkʰaw =ay maŋwáni =yən ʔay ʔintu =kayú man
 two <PFV>CV-shout =LIG saying =QUOT INT where =NOM.2PL STNC
 ‘They went to the mountain Filig, (and because) her two companions had gone, she shouted saying, “Where are you?”’

(Reid 1992:S01, sentence 03)

d. Kinwanina kano en, “Khawis tay inkaliyak, ‘Ay into kayo
 <in>kwáni=na kanú =wən kʰawís tay ʔin-kalí=yak ʔay ʔintu =kayú
 <PFV>say=GEN.3SG REP =QUOT good because AV-call=NOM.1SG INT where =NOM.2PL
 man,’ ya kanak en chakayo nan nangwani en, ‘Akas
 man ya kan-á-k =ən tʰakayú nan naŋwáni =yən ʔá=ka=s
 STNC and say-LV-GEN.1SG =QUOT NEU.2PL SPCF PFV.said =QUOT come=NOM.2SG=LOC
 na,’ ya omeyak et faken ipokhaw, ay otot.
 na ya <um>ʔəy=ak =ət fakən ʔipukʰáw ʔay ʔútut
 DEM1 and <AV>go=NOM.1SG =SEQ not person LIG rat

‘She said, “It was good because I called out, ‘Where are you,’ and I thought you were the ones saying, ‘Come here,’ and I went and it wasn’t a person, it was a rat.”’ (Reid 1992:S01, sentence 39)

The close sister language of Bontok, Kankanaey [kne],³⁴ not only has the perfective form *kinwáni*, but also expands the use of the verb **kuwáni*, forming an intransitive form with an actor voice prefix, *menkawani* /*mənkawáni*/ ‘to tell, say, announce, warn, inform, give notice’ (Vanoverbergh 1933:202).³⁵ This form with added *-ni* is apparently restricted to Bontok and Kankanaey/Kankanaey; it is not found in the Kalinga languages, Balangao, nor in the Ifugao languages.³⁶ Some Kalinga languages, such as Vanaw, the language of Balbalasang, Kalinga, have *mangwa* ‘do’, or its perfective form *nangwa*, from *maN-* + *kuwá*, by nasal substitution, see (19). This form, *kuwá*, is apparently semantically derived with the meaning ‘do’, as in *kaw-on* /*kawʔon*/ ‘to do s.t.’

(19) VANAW KALINGA sentence with semantically modified quote verb

Ot ha **nangwa** ja kanu “Masapul a matoy nat iyu un annat,”
 ʔot ha **naŋwa** =ja kanu masapul =a ma-toy nat ʔiyu ʔun ʔannat
 SEQ SPEC PFV.do =GEN.3PL REP need =LIG STAT-die DEM2 eel LIG DEM2

kan ja kanu.

kan =ja kanu

say =GEN.3PL REP

‘And then what they did was, it is said, “That eel needs to die,”’ they said, it is said’. (Eel story, pers. comm., Scott Saboy)

Some languages in Kalinga province show the same reanalysis of the *kana* quotative index as described above. For example, in Lubo Kalinga, the forms *kanak*, *kanam*, and *kanana* are used (Scott Saboy pers. comm.), and in Limos Kalinga, *kanana* ‘he said’ is reported (Wiens 1990:24). In addition, the Kalinga song cycle or epic known as Ullalim has many instances of *kanan* ‘say’, and the standard introductory statement of all Ullalim is *Kanan, kanu, di ullalim eee*. ‘The *ullalim* says, it is said’ (Billiet and Lambrecht 1970:98, footnote 2). But, in some Kalinga languages, Vanaw Kalinga, see (19), and Guinaang Kalinga [knb], see (20), as well as in Balangao, shortened forms of *kanan*, *kanak*, *kanam*, *kanana* as *kan*, *kak*, *kam*, *kana* occur, respectively.

(20) GUINAANG KALINGA sentences with abbreviated *kanán*³⁷

a. “**Ammi** on, anna ami.”

ʔan=mi =yon ʔanna =ʔami

said=GEN.1PL.EX QUOT LOC.DEM1 =NOM.1PL.EX

‘We said, “We are here.”’

(Gieser 1987:49, sentence 27)

34. The name Kankanaey (/kankanáʔəy/) is probably an exonym, based on a reduplicated form of *kaná* ‘saying’ with added /əy/, since sequences of /ay/ typically become /əy/ in this and other CCo languages; thus, ‘(they) always say /əy/’.

35. This is significant because it demonstrates vowel harmony (unstressed /u/ > /a/, in a syllable preceding a stressed/lengthened /á/, and could relate to the change of **kuná* (see section 6 below) to **kaná*.

36. An apparently homophonous form *kinwáni* ‘an abstract time-indicating form’ used in *hudhud* epics is listed by Lambrecht (1978:285) where he relates the final two syllables to *adwáni* ‘now, today’.

37. In both Guinaang Kalinga and Balangao, *k > /ʔ/.

- b. Summanga pon si Kabunyan, ana, “Guminek ayu
 <um.m>sanga pon si kabunyan ʔa-na <um>ginek =ʔayu
 <AV.PFV>angry STNC SPEC Kabunyan say-GEN.3SG <AV>quiet =NOM.2PL
 nan sissiwit.”
 nan sis-siwit.
 SPEC RDP-bird
 ‘Kabunyan became angry, he said, “You be quiet, birds.”’
 (Gieser 1987:11, sentence 11)

In the texts from Upper Tanudan Kalinga (Brainard 1985), there are a variety of full forms and abbreviated forms, with one person using full forms all the time in one of the texts, others restricting the full form when *-na* is attached (*kanana* ‘he says/said’), but using the abbreviated form when *-da* is attached (*kanda* or *kan da*) ‘they say/said’. However, some texts have a variety of forms, with full and reduced forms, regardless of the pronoun. One text has several reduplicated forms, *kankan da* or *kankanan da*, which could be plural forms because the pronoun is plural.

While a quotative index form in Central Bontok, following reanalysis, has no verbal forms apart from the suffix *-an*, aspectual reduplication is present in two examples in the texts, shown in (21). In these examples, the full form of the suffix is present because the pronoun *-na* is fronted to the negative *achi*, a regular process in the language.

- (21) CENTRAL BONTOK with reanalyzed say with reduplicative aspect
- a. ngem achina kankanan en otot
 ŋəm ʔatʰi=na kan-kanán =ən ʔútut
 but not=GEN.3SG RDP-say QUOT rat
 ‘but she didn’t say that it was a rat’ (Reid 1992:S01, sentence 27)
- b. tay achina ammo nan kankananmi.
 tay ʔatʰi=na ʔammu nan kan-kanán=mi
 because not=GEN.3SG know the RDP-say=GEN.1PL.EX
 ‘because he didn’t know what we were saying’
 (Reid 1992:S09, sentence 38)

Following reanalysis of the ‘say’ word in CCo languages, it is assumed that analogical extension spread the reanalysis to all verbs with locative voice suffixes and eventually also to verbs with a patient voice suffix, as in tables 4 and 5, but only with singular pronominal agents. The bases of the locative voice verbs are *kan* /kan/ ‘say’, *áfang* /ʔáfaf/ ‘rent’, *éwes* /ʔəwəs/ ‘blanket’, *afán* /ʔafán/ ‘carrying blanket’, *chátil* /ʔátíl/ ‘pave’, and *fog-is* /fugʔis/ ‘sprinkle with rice beer’. The bases of the patient voice verbs are *kan* /kan/ ‘eat’, *afér* /ʔafəʔ/ ‘weave’, *cháwis* /ʔáwis/ ‘broil’, *á-ew* /ʔáʔəw/ ‘shadow’, *amma* /ʔamma/ ‘do, make’, and *etád* /ʔətád/ ‘divide in half’.

A possible sound change suggested by one of the anonymous reviewers is much simpler than the above reanalysis. The reviewer suggests “a relatively simple, natural, and unremarkable reduction in a common functional affix from **-an* > *-a*, **-en* > *-e* before a C-initial enclitic.” However, this solution is problematic, because there is no reduction before C-initial enclitics of plural pronouns. Since

TABLE 4. CENTRAL BONTOK VERBS SHOWING ANALOGICAL EXTENSION OF REANALYZED LOCATIVE VOICE.

	Locative voice verbs	Gloss	Locative voice verbs	Gloss
1SG	kan-á-k	I say (s.t.)	ʔafan-á-k	I carry (s.o.) in a blanket
2SG	kan-á-m	you say (s.t.)	ʔafan-á-m	you carry (s.o.) in a blanket
3SG	kan-á-na	he/she says (s.t.)	ʔafan-á-na	he/she carries (s.o.) in a blanket
1SG	ʔafāŋ-a-k	I rent (s.t.)	t ^s atíl-a-k	I pave (s.t.) with a flat rock
2SG	ʔafāŋ-a-m	you rent (s.t.)	t ^s atíl-a-m	you pave (s.t.) with a flat rock
3SG	ʔafāŋ-a-na	he/she rents (s.t.)	t ^s atíl-a-na	he/she paves (s.t.) with a flat rock
1SG	ʔəws-á-k	I cover (s.o.)	fugʔis-a-k	I sprinkle (s.t.) with rice beer
2SG	ʔəws-á-m	you cover (s.o.)	fugʔis-a-m	you sprinkle (s.t.) with rice beer
3SG	ʔəws-á-na	he/she covers (s.o.)	fugʔis-a-na	he/she sprinkles (s.t.) with rice beer

TABLE 5. CENTRAL BONTOK VERBS SHOWING ANALOGICAL EXTENSION OF REANALYZED PATIENT VOICE.

	Patient voice verbs	Gloss	Patient voice verbs	Gloss
1SG	kan-ó-k	I eat (s.t.)	ʔaʔəw-ə-k	I shade (s.o.)
2SG	kan-ó-m	you eat (s.t.)	ʔaʔəw-ə-m	you shade (s.o.)
3SG	kan-ó-na	he/she eats (s.t.)	ʔaʔəw-ə-na	he/she shades (s.o.)
1SG	ʔabɿ-ó-k	I weave (s.t.)	ʔamma-ó-k	I make (s.t.)
2SG	ʔabɿ-ó-m	you weave (s.t.)	ʔamma-ó-m	you make (s.t.)
3SG	ʔabɿ-ó-na	he/she weaves (s.t.)	ʔamma-ó-na	he/she makes (s.t.)
1SG	t ^s awis-ə-k	I broil (s.t.)	ʔətat ^s -ó-k	I divide (s.t.) in half
2SG	t ^s awis-ə-m	you broil (s.t.)	ʔətat ^s -ó-m	you divide (s.t.) in half
3SG	t ^s awis-ə-na	he/she broils (s.t.)	ʔətat ^s -ó-na	he/she divides (s.t.) in half

reduction occurs before *-k* ‘genitive first-person singular pronoun’, one would expect that reduction would happen before all voiceless (or voiced) stops, such as *=t/d* initial enclitics (*=taku* ‘genitive first-person inclusive plural pronoun’ and *=da* ‘genitive third-person plural pronoun’). There is reduction before *-m* ‘genitive second-person singular pronoun’, but not before *=mi* ‘genitive first-person exclusive pronoun’, with the same initial consonant. Another related issue is nouns with a final *-an* that are not (presently) a reflex of PMP **-an* ‘locative voice’. Such forms (although not ending with a common functional affix) do not reduce the *-n* before singular clitics, in any of the CCo languages, see table 6. Other examples, such as *laman* ‘wild pig’, could be cited.

6. ILOKANO. This language is a first-order subgroup of Northern Luzon languages and is not directly related to the CCo languages. Ilokano is the only other language apart from the CCo languages that reduces locative voice and patient voice suffixes but the change was incomplete, in that the suffixes reduce only when first- and second-person singular pronouns occur as agents, but they are not reduced when a third-person singular pronoun occurs as an agent. Ilokano also requires the reflex of PMP **ni* to occur

TABLE 6. CENTRAL BONTOK NOUNS WITH UNREDUCED FINAL *-an*.

	Noun with <i>-an</i>	Gloss	Noun with <i>-an</i>	Gloss
1SG	ngachan-ko	my name	pongan-ko	my blanket
2SG	ngachan-mo	your name	pongan-mo	your blanket
3SG	ngachan-na	her/his name	pongan-na	her/his blanket

before all personal noun phrases that function as agents of the verb and as possessors.³⁸ Ilokano has a quotative index, *kuná*, shown in (22), which is nominal like other Northern Luzon languages and typically follows direct quotes, but has not been reanalyzed as in the CCo languages quotative index *kaná*.

(22) ILOKANO (Northern Luzon)

1SG	<i>kuná=k</i>
2SG	<i>kuná=m</i>
3SG	<i>kuná=na</i>
1/2SG	<i>kuná=ta</i>
1PL.EX	<i>kuná=mi</i>
1PL.IN	<i>kuná=tayó</i>
2PL	<i>kuná=yo</i>
3PL	<i>kuná=da</i>

Although this form does not presently have a nonperfective patient voice transitive verb, which would be /*kunaʔən*/ ‘to say (s.t.)’, it has developed a regular perfective verbal form, *kinuná* ‘said (s.t.)’, with <in> perfective infix, and regular zero patient voice suffix. It has also developed intransitive forms, with prefix *ag-* (*agkuná*) or its perfective form *nag-* (*nagkuná*).

Ilokano is presently the lingua franca across all the areas where Northern Luzon languages are spoken, but it clearly did not have this status at the time of PCCo. Ilokano examples where the voice suffixes are reduced are provided in (23). It should be noted that this occurs only where the genitive agent of the verb is first- and second-person singular.

(23) ILOKANO (Northern Luzon) transitive verbs with first- and second-person singular agents

a. Basaek.

basá-ʔa-k
read-PV-GEN.1SG
‘I’ll read (it)’.

(Rubino 2000:230)

b. Aláam ni Maria ití limá nga pìsos
ʔalá-ʔa-m ni mariya ʔiti limá ŋa pìsus
get-LV-GEN.2SG SPCF Maria OBL.SPEC five LIG peso
‘Get P5.00 from Maria’.

(Geladé 1993:14)

38. The absence of genitive marking before personal names following consonant-final words in CCo languages (discussed above) is not found in Ilokano.

- c. Ikkam iti úging.
 ?ikk-a-m ?iti ?úging
 put-LV-GEN.2SG OBL.SPEC charcoal
 ‘Place charcoal on or in (something)’. (Geladé 1993:242).

The reduction does not occur when the genitive agent of the verb is third-person singular, as shown in (24).

- (24) ILOKANO (Northern Luzon) with third-person singular agents
- a. Dimsaag ti kutsero ket inatibay ken tinulonganna
 <im>dsa?ag ti kutséro kət <in>?atíbay kən <in>tulúŋ-an=na
 <PFV.AV>get.down SPEC driver SEQ <PFV>assist and <PFV>help-lv=GEN.3SG
 ti kabalio iti ruburob a kalsada.
 ti kabalyo ?iti rubúrob =a kalsáda
 SPEC horse OBL.SPEC dusty LIG road
 ‘The driver got down then assisted and helped the horse on
 the dusty road’. (Bragado 1968:4–7)
- b. ‘Kabagyannakami amin,’ kunak manen.³⁹
 ka-bagi-án=na=kami ámin kuná=k manən.
 COM-share-LV=GEN.2/3SG=NOM.1PL all say=GEN.1SG again
 ‘“He will share it with us all,” I say again’. (Bragado 1968:2–9)
- c. Tulongannak man.
 tulúŋ-an=n=ak man
 help-LV=GEN.2/3SG=NOM.1SG STNC
 ‘Please help me’. (Rubino 2000:375)
- d. Baútennak.
 ba?út-ən=n=ak
 whip-PV=GEN.2/3SG=NOM.1SG
 ‘You whip me’. (Geladé 1993:414)

The reduction of the voice suffixes was present in the earliest Spanish documentation of Ilokano (López 1627) as described by Rodríguez (2014). She presents her table 2, which are the forms of the Ilokano verb *anugetec* translated by López as ‘to obey’ (Rodríguez 2014:58).⁴⁰ The table includes forms such as *anugetec ida* ‘I obey them’ and *anugetenna ida* ‘You obey them’. The first is actually the first-person form, with an *-en* suffix (less the final *-n*) and first-person genitive pronoun *-c* (the Spanish equivalent for *-k*), as the meaning indicates. There is no second-person form in the table, but it has a *-na* form (with the final *-n* of *-en* unreduced), which is homophonous between genitive second-person and third-person singular pronouns when followed by a nominative pronoun (see footnote 37).

39. Ilokano has combination pronouns, which include agentive genitive marking and nominative marking, such as *=na=kami* in (24b) and *=n=ak* in (24c,d). In these examples, they are ambiguous in interpretation. In (24c,d), it is interpreted as second person ‘you, sg’. However, it could be interpreted as third-person singular. So, (24c) could be interpreted as ‘He whips me’, and (24d) could be interpreted as ‘He helps me’. First-person agentive pronouns in combination with nominative pronouns are always zero.

40. The root today is *annúgot* ‘obedient, submissive’, with *annuguten* ‘to fulfill one’s duty or responsibility’, according to Rubino (2000:43)

TABLE 7. NORTHERN LUZON LANGUAGES BEFORE THE DEVELOPMENT OF PCCo.

	Vowel-final stem	Locative voice agents
NP	CVCV ni Pablo	CVCV-an ni Pablo
1SG	CVCV=k	CVCV-an=ku
2SG	CVCV=m	CVCV-an=mu
3SG	CVCV=na	CVCV-an=na

TABLE 8. CENTRAL CORDILLERAN LANGUAGES FOLLOWING THE INNOVATIVE DEVELOPMENTS.

	Vowel-final stem	Locative voice agents
NP	CVCV=n Pablo	CVCV-an Pablo
1SG	CVCV=k	CVCV-a=k
2SG	CVCV=m	CVCV-a=m
3SG	CVCV=na	CVCV-a=na

TABLE 9. ILOKANO.

	Vowel-final stem	Locative voice agents
NP	CVCV ni Pablo	CVCV-an ni Pablo
1SG	CVCV=k	CVCV-a=k
2SG	CVCV=m	CVCV-a=m
3SG	CVCV=na	CVCV-an=na

Since reduction of the voice suffixes only occurs in CCo languages and in no other language of the Northern Luzon family, apart from Ilokano, the question is whether the parent of Ilokano is the source of the innovation, from which it spread to PCCo, or was PCCo the source and the innovation spread to Ilokano. In order for one to understand clearly the developments, tables 7–9 are included.

Table 7 shows the situation prior to the development of PCCo, with the full form of the genitive specifier required for a noun phrase and the final vowel of the first two genitive pronouns appearing as single enclitic consonants following a vowel-final stem (see footnote 4 for the list of Northern Luzon languages where this occurs).⁴¹ Locative voice verbs had a suffix *-an* attached, and their agents required the full form of the genitive specifier and the full form of the genitive pronoun enclitics.

Table 8 shows PCCo after the innovative development following the reanalysis of the nominal quotative index *kana ‘saying’. Genitive noun phrases now had an enclitic =*n* before a personal noun following a vowel-final word (presumably from PMP *ni); however, following a consonant, as at the end of words with a final *-an* ‘locative voice suffix’, there was no genitive specifier. This was also true of patient voice suffixes. The table also shows the reduction of the final *-n* of the suffix, before the enclitic genitive singular pronouns.

41. The personal noun Pablo was clearly not a name used at that time, being borrowed from Spanish following the Spanish occupation of the Philippines.

Table 9 shows the Ilokano pattern. Ilokano retains *ni* as the genitive specifier both following vowel-final stems, as well as the marker of personal genitive nouns following the *-an* ‘locative voice suffix’. Ilokano reduces the final *-n* of the suffix of locative voice verbs (and patient voice verbs), only before first- and second-person genitive pronouns.

7. CONCLUSION. This paper has examined the development of the form *kan* ‘say’ in Central Bontok and other languages of the CCo group from its reconstructed form to the reductions that occur when first, second-, and third-person singular agentive pronouns are added to the locative voice *-an* suffix. The locative voice suffix is only *-a*, when singular agentive pronouns are added; the final *-n* is reduced. This has spread by analogical extension to all verbs that occur with the locative voice suffix, as well as to verbs with the patient voice suffix *-en /-ən/* that also has its final *-n* reduced when singular agentive pronouns are added. In addition, there is no genitive marking for agentive noun phrases when the preceding form ends with a consonant, but has a ditropic enclitic *=n*, presumably from PMP **ni* when the preceding form ends with a vowel. This is true also of nouns, since genitive pronouns and noun phrases structures are the same between verbs and possessive noun phrases. The presumed reason for these vastly different processes is the historical reanalysis of a nominal quotative index **kaná=n* ‘say=genitive’, whereby the final vowel and enclitic were treated as the locative suffix **-an*. The suggested reanalysis involved treating the nominal form *kaná* as verbal, with the base *kan* and a locative voice suffix *-an*. Following reanalysis, this was spread by analogical extension, reducing all verbs that ended with *-n*, when singular agents were involved. The original possessive pronouns became person markers on the verb. This reduction also affected possessive constructions, since identical marking for agentive pronouns and noun phrases is found in each of the languages. The only language apart from all the CCo languages that shows some of these changes is Ilokano. Ilokano is a first-order subgroup of the Northern Luzon languages and is not directly related to the CCo languages.

Ilokano differs from CCo languages in that only first- and second-person singular pronominal agent marking occurs with reduced forms of the suffixes in Ilokano. Third-person singular pronominal agents require the full form of the suffixes. In addition, Ilokano requires a full genitive marker before all singular personal nouns (but see footnote 24). The claim is that PCCo influenced Ilokano rather than vice versa; however, the influence was incomplete, in that the Ilokano quotative index *kuná* did not change its structure to a verb with locative voice, as PCCo did.

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