This paper examines question formation in the Tucanoan languages of South America from a comparative and diachronic point of view. We argue that these languages exhibit a historical and semantic relationship between nominalizations and questions. Our hypothesis is primarily based on the formal identity of their markers and on the fact that the interrogative verbal forms resemble nominalizations being formally less finite than their declarative counterparts because they lack the normal subject agreement suffixes. We claim that the interrogative verbal forms originate from nominalized predications used to form an inferential or mirative construction that were upgraded to the status of independent utterances through copula deletion. Semantically, the interrogative meaning must have become conventionalized via stages expressing doubt or surprise.

Key words: Tucanoan languages; South America; nominalization; finiteness; interrogative markers; questions; evidentiality; mirativity; historical linguistics; copula deletion; interrogative construction; verbal affixes; interrogative suffix.
1. Introduction

Dubravko Kuč Anda knew very well that interrogative pronouns may have non-interrogative functions, as relative pronouns or as complementizers (see van der Auwera & Kuč Anda 1985 and Kuč Anda & van der Auwera 1987 on Croatian and Serbian što). This paper is also about the polyfunctionality of interrogative constructions, though not about pronouns. At least for pronouns, the general understanding has greatly advanced due to Haspelmath (1997), Bhat (2004) and Idiatov (2007). This paper is about interrogative verbal affixes, more particularly about the ones found in the Tucanoan languages of Brazil and Columbia. These affixes are special in that they are formally similar or identical to nominalization suffixes and we will argue that this is not an accident. We will further argue that the nominalizer is the older form, that the interrogative suffix is a later development and that this development thus involves the upgrading of a subordinate construction to independent utterance status. For reasons of space we restrict the study to a description of three Tucanoan languages, viz. the Eastern Tucanoan languages Desano and Wanano, and the Western Tucanoan language Secoya, but we believe that the relevant generalizations also hold for other Tucanoan languages (see also Idiatov & van der Auwera 2004). The emphasis will be on the formal and functional similarities between the relevant question and nominalization markers.

2. Question formation and nominalization

2.1. Desano

Desano has an inanimate nominalizer -ri. It is used for inanimate action nominalizations, which almost always occur with one or more arguments, and generally function as the object of the matrix clause (1), but it can also be the subject (2).

---

1 We gratefully acknowledge the GOA (Geconcerteerde Onderzoeksactie) “Mood and Modality” project of the University of Antwerp and the project P6/44 (Belgian Federal Government Interuniversity Attraction Poles) for financial support. We would like to thank Elsa Gómez-Imbert, Mark van de Velde, Mily Crevels, Jon Landaburu, Jim Shephard, and Kristine Stenzel.

2 The Tucanoan language family is traditionally subdivided into two groups, Eastern and Western. The Eastern ones are spoken in the north-western Amazon Basin in the state of Vaupés, Colombia, and in the state of Amazonas, Brazil. The Western ones are spoken in south-western Colombia and in the neighbouring regions of Ecuador and Peru.
(1) kãrêyã ěrá dore opra-ri-re ěrá ěgã
chicken 3pl sickness have-nmlz.inan-spç 3pl beak

wirita-ri-re ěrá-re eho-ri-re
cut-NMLZ.INAN-SPÇ 3PL-SPÇ feed-NMLZ.INAN-SPÇ

baha bu?e-bi
a.lot study-NON3AN.PAST

‘We studied a lot of things: the sickness chickens have, cutting their
beaks, and feeding them’ (Miller 1999: 143)

(2) ěhõ baye-ri ě?rã-a
flu chant-NMLZ.INAN be-NON3AN.PRES

‘There is chanting for the flu (lit.: ‘flu chanting’)’ (Miller 1999: 142)

It can also be used for inanimate patient nominalizations (3) and instrument
nominalizations (4).

(3) gasiru ko’ã-bu-ri-ru
canoe throw.away-POT-NMLZ.INAN-CLS

‘The canoe that is to be thrown away’ (Miller 1999: 144)

(4) wí-ri-ru
fly-NMLZ.INAN-CLS

‘airplane (instrument for flying)’ (Miller 1999: 144)

The verb phrase marked by the deverbalizing -ri can be followed by a noun clas-
sifier, thus reinforcing its nominal function, as in (3) and (4). Clausal nominali-
zations are widely used in Desano to encode clausal complements, as in (5).

(5) bjiã bãbã-rã pee-bãsî-ke bjiã-re
2PL be.NEW-NMLZ.AN.PL hear-know-IMP 2PL-SPÇ

pi?ri-ge wa-bu-ri-re!
after-LOC go-POT-NMLZ.INAN-SPÇ

‘You young people, think and know what is going to happen to you
later!’ (Miller 1999: 145)

A nominalized clause made up of a nominalized verb with its arguments can
also be used as an adnominal modifier.
So much for the nominalizing -ri. It turns out that Desano also has a polar question marker -ri, which functions as a suffix that “occurs at the end of the main verb and replaces the person, number, and gender subject agreement suffixes that would have occurred there” (Miller 1999: 8), cf. (6) vs. (7). It follows all other verbal suffixes, such as those marking evidentiality, tense, mood, aspect, direction and negation.

(6) yì tìgò gahi-bákà-ge árì-ku-bô?
   1SG older.sister other-town-LOC be-ASSUMED.PRES-3SG.F
   ‘My sister is at another town’ (Miller 1999: 49)

(7) igo segundo curso ii-báši-ku-ri?
   3SG.F second course do-ABILITATIVE-ASSUMED.PRES-Q
   ‘Can/May she do the second course?’ (Miller 1999: 129)

Constituent questions, as in (8) and (9), are formed by using the interrogative pronouns, which either begin the sentence or directly follow the topic, and by the interrogative marker -ri known from polar questions. Question words can also be used in statements “as a quantifier or indefinite relative pronoun” (Miller 1999: 133).

(8) dòà-re ía-yu-ri?
   who-SPC see-HEARSAY.PAST-Q
   ‘Whom did they see?’
   (Miller 1999: 131)

(9) dòàò-ge waà-ri?
   where-LOC go-Q
   ‘Where did he go?’
   (Miller 1999: 34)

Summing up, one form -ri is used in Desano both as the inanimate nominalizer and the question marker. In addition, questions formally resemble nominalizations in that they are also formally less finite than the declarative verb forms because they lack the normal subject agreement suffixes found in the latter forms. Of course, from a functional point of view questions are just as finite as the declarative verb forms because both carry the sentence typing morphology and both are prototypically used as independent clauses.

2.2. Wanano

In Wanano polar questions and constituent questions are marked by means of suffixing an interrogative marker to the end of the verb, in most cases removing the (aspect-)evidential suffixes found in declarative clauses. The basic form of the interrogative marker in Wanano is -ri (Stenzel 2004: 383). As far as subject
agreement is concerned, Wanano resembles Desano in that it does not mark the subject agreement in questions, even though the overall organization of the subject agreement on the main verb is quite different in Wanano (see Stenzel 2004: 210, 378-381).

Let us now turn to Wanano nominalizations. Nominalizations can be used as subjects, objects, postposed adnominal modifiers and complements in copular constructions. They distinguish then between animate and inanimate singular and plural referents just as ordinary nouns. Animate nominalizations in Wanano are based on the model \([V + -ri + \text{nominal animate gender-number markers}]\) and inanimate ones on the model \([V + (-ri) + \text{cls or nominal inanimate number markers}]\) (Stenzel 2004: 150, 153). A special case of clausal nominalizations is found in the Wanano inference evidential construction, where the nominalizer -ri is consistently used irrespectively of the person, number and gender values (Stenzel 2004: 238). The clausal nominalization is here the complement of the verb hi- ‘to be’ which functions as an auxiliary, as illustrated in (9-10).

(9) \[\text{yoa-ta-pu} \quad \text{wiha-tu’su-ri}\]

\[\text{be.far-REFERENTIAL-LOC move.outward-just.complete-NMLZ}\]

\[\text{hi-ra} \quad \text{be-VISUAL.IPFV.NON1}\]

‘[“...some men going to a longhouse to capture women for brides arrive to find only empty hammocks. They conclude that the women they were hoping to capture have fled.”] They’ve gone’ (Stenzel 2004: 238, 358)

(10) \[\text{yu’u} \quad \text{khári-yu’du-a}\quad \text{wa’a-ri} \quad \text{hi-ka}\]

\[1SG \quad \text{sleep-INTENSIFIER-AFFECTED go-NMLZ be-ASSERTION.IPFV}\]

‘[“...after the man has returned to the place where the evil being had fallen. By slicing into the ground there, the man somehow revives the evil being, releasing it from a deathlike sleep. When it arises and finds itself awake again, it says:”] I (must have) slept a long time’ (Stenzel 2004: 103, 361-362)

The inference evidential construction is “used in utterances in which the speaker is presenting a conclusion about an event or state based on directly perceived results, inferring what happened based on the current evidence” (Stenzel 2004: 357). Furthermore, this construction can also code “mirativity, or ‘unexpected information’”, surprise (Stenzel 2004: 362). For the term “mirativity” Stenzel refers to DeLancey (1997).
The following conclusions can be made for Wanano. As in Desano, the basic question marker turns out to be identical to one of the nominalizers and neither questions nor nominalizations mark subject agreement. Wanano also shows the use of nominalizations in evidential and mirative constructions, in which case the nominalizations occur as complements to a copula.

2.3. Secoya

In Secoya declarative clauses, two paradigms of subject agreement suffixes are distinguished according to evidentiality status, or “perspectiva” as Johnson & Levinsohn (1990) call it in Spanish: (i) the witnessed evidential (“perspectiva involucramiento”), by means of which the speaker asserts his participation at, or physical presence in, the events s/he is talking about (Johnson & Levinsohn 1990: 66), and (ii) the non-witnessed evidential (“perspectiva de separación”), by means of which the speaker indicates his/her ignorance or lack of direct evidence of the events s/he is talking about (Johnson & Levinsohn 1990: 69). Table 1 summarizes the subject agreement suffixes of the declarative mood of the witnessed evidential category for present and immediate past tenses, which for convenience sake will be labelled as Set I suffixes.

<table>
<thead>
<tr>
<th></th>
<th>Present</th>
<th>Immediate Past</th>
</tr>
</thead>
<tbody>
<tr>
<td>3SG.M</td>
<td>-hi</td>
<td>-pi/-hi/i</td>
</tr>
<tr>
<td>3SG.F</td>
<td>-ko</td>
<td>-ko/-ko/i</td>
</tr>
<tr>
<td>“the rest”</td>
<td>-ji</td>
<td>-wi/-i</td>
</tr>
<tr>
<td>(N3SG.AN)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1. Secoya present and immediate past Set I suffixes
(based on Johnson & Levinsohn 1990: 66)

Table 2 summarizes the subject agreement suffixes used on an independent verb in anything else than the declarative mood of the witnessed evidential category or the imperative mood. In other words, these suffixes are used in the case of the non-witnessed evidential category of the declarative mood and in the case of interrogative mood for both polar questions and constituent questions. For convenience, these suffixes will be labelled as Set II suffixes.
Table 2. Secoya imperfective and perfective Set II suffixes  
(based on Johnson & Levinsohn 1990: 69)

<table>
<thead>
<tr>
<th></th>
<th>Imperfective</th>
<th>Perfective</th>
</tr>
</thead>
<tbody>
<tr>
<td>3SG.M</td>
<td>-i/-î/-u</td>
<td>-ki</td>
</tr>
<tr>
<td>3SG.F</td>
<td>-o</td>
<td>-ko</td>
</tr>
<tr>
<td>“the rest”</td>
<td>-je</td>
<td>-de/-te</td>
</tr>
</tbody>
</table>

The forms of the imperfective subject agreement suffixes seem to result from lenition of the initial consonants of their perfective counterparts with subsequent deletion of the lenited consonants for the 3SG.M and 3SG.F forms. A similar lenition in the forms of the perfective subject agreement suffixes must have been blocked by a completive aspect (“aspecto completo”) marker -si, which has disappeared later. Compare, for instance, the perfective non-agentive nominalizer -señe (< -si + -je/-de/-te) in Table 3 below. See also Wheeler (1992a, 1992b).

Set II suffixes are followed by an additional suffix -jã in the case of non-witnessed evidential, as in (11), whereas polar questions are marked by Set II suffixes only, as in (12).

(11) jâsê wa?i-pi jeha-dâ tô mê-jé-jâ
    toucan PL-SUBJECT ground-to fall go.down-NON3SG.AN.IPFV-SEP
    ‘The toucans have fallen on the ground [but the speaker did not see them falling]’ (Johnson & Levinsohn 1990: 70)

(12) mõ-û jude?
    to.fish-M.SG.IPFV now
    ‘Is he fishing now?’ (Johnson & Levinsohn 1990: 71)

Constituent questions are marked by Set II suffixes followed by a suffix -ʔdî, which is said to mark doubt (see (14) for -ʔdî in a non-interrogative clause), as in (13).

(13) hedo-pi tidi-oʔdî?
    where-from grumble-3SG.F.IPFV-DUBITATIVE
    ‘Where is she grumbling from?’ (Johnson & Levinsohn 1990: 72), or maybe better ‘Where might she be grumbling from?’
Johnson & Levinsohn (1990: 71) report that polar question verb forms in Secoya can also be used with a non-interrogative meaning, namely to express a feeling of probability or uncertainty, as in (14).

(14) hāhē paʔi-to, jiki hopo koʔi-de
    so be-if 1PL.EXCLUSIVE half turn.back-NON3SG.AN.PFV
    ‘If it were like this, we had probably turned back halfway’ (Johnson & Levinsohn 1990: 71)

In addition, a negative suffix -mãʔ can be used to increase the uncertainty of the event (Johnson & Levinsohn 1990: 71), as in (15-16). An adverb jeke ‘perhaps, maybe’ or the dubitative suffix -ʔdĩ can also be added (Johnson & Levinsohn 1990:71), as in (16).

(15) haʔje paʔi-mãʔ-ki
    near be-NEGATIVE-3SG.M.PFV
    ‘He may be nearby’ (Johnson & Levinsohn 1990: 71)

(16) kūʔi-mãʔ-ki-ʔdĩ
    bite-NEGATIVE-3SG.M.PFV-DUBITATIVE
    ‘He will possibly bite (her/him)’ (Johnson & Levinsohn 1990: 71)

Let us now turn to the Secoya nominalizers summarized in Table 3.

<table>
<thead>
<tr>
<th></th>
<th>Agentive</th>
<th>Non-agentive</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Imperfective</td>
<td>Perfective</td>
</tr>
<tr>
<td>M.SG</td>
<td>-i/-i/-u</td>
<td>-ki</td>
</tr>
<tr>
<td>F.SG</td>
<td>-o</td>
<td>-ko</td>
</tr>
<tr>
<td></td>
<td>-je</td>
<td></td>
</tr>
<tr>
<td>PL</td>
<td>-o waʔi</td>
<td>-ko waʔi</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-seʔe (&lt;*-si + -je'-de' -te)</td>
</tr>
</tbody>
</table>

Table 3. Secoya nominalizers (based on Johnson & Levinsohn 1990: 35)

As can readily be observed, they show a striking resemblance to the evidential/interrogative suffixes of Set II in Table 5. The non-lenited perfective nominalizers in Table 6 should be considered as basic, like the perfective markers of Set II in Table 5. As indirect evidence for the basic status of the non-lenited forms, one can adduce the Secoya nominal human gender suffixes, -ki M.SG, -ko
F.SG, and -ko wa?i PL (Johnson & Levinsohn 1990: 26), which have unvoiced initial consonants free from any possible additional morphonological conditioning.

The agentive F.SG marker is in fact best described as a singular non-masculine agentive nominalizer because it is also used for agentive nominalizations when the nominalization is inanimate and as a part of the agentive plural nominalizer for both animate (M/F) and inanimate nominalizations. The non-agentive nominalizations do not make any distinction between animate/inanimate and singular/plural. The term non-agentive (“no-agentivo”) implies an abstract or non-active construction (“una construcción abstracta o no activa”, Johnson & Levinsohn 1990: 37), as in (17-19).

(17) jā-ð siwa-je-té kuasa-hi
that-NMLZ.A.F.SG.IPFV be.happy-NMLZ.NONA.IPFV-OBJ think-3SG.M.PRES
‘He is thinking about her happiness’ (Johnson & Levinsohn 1990: 37)

(18) kuepe-se?e-pi ko?a-hi
get.drunk-NMLZ.NA.PFV-because.of be.happy-NMLZ.NA.IPFV-OBJ
ji?i-de
1SG-OBJ
‘I feel bad (now) because I got drunk (then)’ (Johnson & Levinsohn 1990: 37)

(19) jo?o-je
do-NMLZ.NA.IPFV
‘[the fact, the event of] being done’ (Wheeler 1992b: 63)

To summarize, in Secoya, the same forms are used in three different functions:

(a) to mark subject agreement and non-visual evidentiality (when followed by -jā),
(b) to mark subject agreement and interrogative mood,
(c) to mark subject agreement and doubt.

These markers are furthermore clearly related to the nominalization markers.
3. From a nominalizer to an interrogative suffix

Above, we have seen that in Desano, Wanano and Secoya, a question marker may be very similar or even identical to a nominalizer. We have also seen that in Wanano, the nominalization marker can serve to express evidentiality and mirativity, when occurring as the complement of a copula. In Secoya, there is a small paradigm of markers serving both in questions and in nominalizations. The relevant markers are also used in evidential constructions, like in Wanano, but unlike in Wanano, there is no copula, and the markers can additionally also express doubt or uncertainty. We have seen that in each language questions further resemble nominalizations in that they lack the normal subject agreement suffixes found in the latter forms. Finally, in Desano and Wanano, the questions are as non-finite as the nominalizations.

Are all of these similarities a coincidence? On the one hand, one could be inclined to say yes. Tucanoan language typically have a small phonological inventory and a very simple (C)V syllabic structure, so the chance of having groups of homophonous suffixes is very real (cf. Cysouw 2001). Furthermore, even though the nominalizing and interrogative suffixes appear to bear a strong formal resemblance in most of the Tucanoan languages, apart from Johnson & Levinsohn (1990: 69) not a single grammarian that we consulted comments on it.3 On the other hand, the very fact that the formal similarity is pervasive throughout the family, even though the details will differ from one language to the next, at least invites one to take it more seriously. Furthermore, the fact that we are dealing with more than just the formal similarity or identity of two suffixes but also, at least in Desano and Wanano, with a lack or decrease of finiteness makes clear that there is more to the similarity than just the homophony of identity of suffixes. To wit, one can understand why a nominalization is less finite than an independent clause. But why should a question be less finite, and in the same way as the nominalization? Unless, of course, the interrogative con-

---

struction historically derives from a nominalization. The further challenge is therefore to explain the nature of this derivation.

We propose that the key elements in the analysis of the path from nominalizations to questions are the evidential and mirative uses illustrated for Wanano and Secoya. These uses are interesting because they might link up easily with the proposed original function (nominalization) but also with the new, derived one (question). On the one hand, it is plausible that in these constructions the relevant forms have their hypothesized original nominalizing function. At least for Wanano, this hypothesis seems uncontroversial: the evidential uses require a copula, to which nominalizations function as complements. For Secoya, there are no copulas (any more) but there are still optional wide-scope modal markers. On the other hand, the constructions as a whole can implicate questions, and all we need to add for explaining the interrogative function is that the implicated function became conventionalized.

Let us now see how evidential and mirative constructions have the potential of implicating questions. Let us start with evidentials: when one is not an eyewitness of an event, one cannot normally be completely sure about the event’s circumstances. That is, an inference is normally somewhere halfway between certainty and ignorance. Thus (20) is less strong than (21) and it can be considered an expression of doubt.

(20) He must have been here yesterday

(21) He was here yesterday

And as an expression of doubt one can easily intend it as indirect appeal for help and trigger the implicature to confirm or to correct one’s inference.

(22) – He must have been here yesterday.
    – No, I think he was too tired to come here.

The implicature is a request for information, that is, a kind of question.

The development from mirative to interrogative would be just as natural as that from dubitative to interrogative. Note, for instance, that fairly often an exclamation in the style of (23-24) may implicate something like ‘Please, confirm

---

4 A process of copula deletion yielding independent clauses out of nominalizations to copulas has been posited for other languages (see Evans 2007: 384-385, referring to Jacobs 1975 and Gildea 1998).
whether $p$ is indeed the case or not/explain how $p$ is in fact possible/who has made $p$ possible.’

(23) Oh, I didn’t know that $p$

(24) Oh, I cannot believe that $p$

However, due to the Secoya data we are inclined to conclude that even if the development was indeed from mirative to interrogative, there has been an intermediate (or at least, concomitant) dubitative stage.

The proposed hypothesis could account not only for the development of polar questions, but also for that of constituent questions. Thus, if question words also function as indefinites, which is indeed the case at least in Desano, then a fairly natural conversational implicature of an expression of surprise like (25) or an expression of inference or doubt like (26-27) would be ‘I would like to know where he has gone’, thus inviting the interlocutor to fill this gap in the speaker’s knowledge.

(25) Oh, he has gone somewhere!

(26) He must have gone somewhere

(27) He has probably gone somewhere

4. Conclusion

In the present article, we have argued that the Tucanoan languages exhibit a historical and semantic relationship between nominalizations and questions. We have also tried to demonstrate that formally the latter originate from the former through a process of upgrading a nominalized predication to the status of an independent utterance from an inferential or mirative construction. Semantically, the interrogative meaning must have become conventionalized via stages expressing doubt or surprise.
Abbreviations

A    agentive
AN   animate
CLS  classifier
F    feminine
IMP  imperative
INAN inanimate
IPFV imperfective
LOC  locative
M    masculine
N    neuter
NMLZ nominalizer
OBJ  object
PFV  perfective
PL   plural
POT  potential
PRES present
Q    question
SEP  “perspectiva de separación” (cf. 3.2)
SG   singular
SPC  specifier
1    first person
2    second person
3    third person

References


OD NOMINALIZACIJA DO PITANJA –
NA PRIMJERU TUKANOANSKIH JEZIKA

Ovaj rad predstavlja komparativan i dijakronijski osvrt na problem postavljanja pitanja u južnoameričkim jezicima iz tukanoanske porodice. U tim smo jezicima postulirali povijesnu i semantičku vezu između nominalizacije i pitanja. Naša se hipoteza prvenstveno temelji na formalnoj istovjetnosti njihovih obilježa kao i na činjenici da upitni oblici glagola podsjećaju na nominalizacije utoliko što su manje finitivnoga oblika od njihovih izjavnih parnjaka, odnosno nedostaju im uobičajeni sufiksi kojima se označava sročnost sa subjektom. Pritom smo argumentirali da su upitni glagolski oblici nastali iz nominaliziranih predikacija koje su se upotrebljavale u inferencijalnim ili mirativnim konstrukcijama, a koje su brisanjem kopule stekle status nezavisnih iskaza. U semantičkome smislu, upitno se značenje najvjerojatnije konvencionaliziralo postupno tijekom faza u kojima se izražava sumnja ili iznenađenje.

Ključne riječi: tukanoanski jezici; Južna Amerika; nominalizacija; finitivnost; obilježja upitnosti; pitanja; evidencijalnost; mirativnost; historijska lingvistika; brisanje kopule; upitna konstrukcija; glagolski afiksi; upitni sufiks.