

# RADICAL PRO-DROP IN NIUEAN\*

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Our research focuses on null arguments in Niuean, an Oceanic language with an ergative case-marking system. Seiter (1980:51) states that “pronouns in Niuean are frequently deleted” through a rule that is “optional, ungoverned, unbounded and available for NPs of every syntactic type”. In this paper we confirm Seiter’s claim, and contribute to the understanding of this class of languages.

## 1. Introduction

Barbosa (2011) (also Roberts and Holmberg 2010, Wratil and Gallman 2011) has developed a typology of null argument languages, which consists of four types. The first type comprises consistent null subject languages, such as Italian and Greek, in which subjects of any person in any tense may be realized as null pronouns. Null pronouns are more common than overt pronouns, and when overt pronouns do occur, they are interpreted as emphatic. These languages characteristically show rich verbal agreement with subjects, as in (1).

- (1) (Io) mang-io  
(I) eat -lps  
'I eat.' (Italian: Simpson 2005)

The second type are partial null subject languages, such as Finnish and Hebrew, allowing only certain types of null subjects, such as only 1st and 2nd person. In the third type, called semi pro-drop languages, such as Yiddish and Icelandic, only expletives may be null. The fourth type is discourse pro-drop languages, or radical pro-drop languages, which lack verbal agreement, but allow all arguments to be null, including non-subjects. Examples of such languages are Chinese and Korean.

- (2) Q: Ni xianzai yong [zhongwen ke biji] ma?  
You now using [Chinese class notes]Q?  
'Are you using [the Chinese class notes] now?'  
A: wo xianzai bu yong \_\_\_\_ .ni yong ba.  
I now not using \_\_\_\_ . you use Subj  
'I'm not using them now. You should use them.' (Chinese)<sup>1</sup>

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\* Thanks to the Research Opportunity Program, Faculty of Arts and Science, U. of Toronto, to SSHRC (SRG to Massam), to the syntax/semantics group at the U. of Toronto, to Donna Starks and Ofania Ikiua for use of the Niuean interview data, and to Bernalik (2011) and Nagy et al (2011) for starting us off.

<sup>1</sup> This example is taken from *Chinese Odyssey: Volume 1* by Xueying Wang, Li-chuang Chi, and Liping Feng (2005)

This last type is especially interesting due to the apparent freedom with which arguments may be dropped. Provided they are recoverable from context, subjects and objects may both be dropped; however, they are not parallel in their characteristics (Huang 1984).

Cummins and Roberge (2005) identify two categories of null arguments based on what kind of reference they have (see also Largavaara 2000). They show that French, although not typically held to be a null-argument language, very commonly has null objects, and that these null objects have either generic reference or definite reference.

- (3) Les écrivains attirent \_\_\_ sexuellement.  
'Writers attract \_\_\_ sexually.' (French: Lambrecht and Lemoine 1996 in Cummins and Roberge 2005)

In the example above, the transitive verb *attirent* requires an object, but does not have one. Supposing that a null object must be present, this null argument has generic reference, and there is no antecedent in the discourse.

- (4) Avant j'avais mon dossier à Jester, mais j'ai enlevé \_\_\_\_.  
'Before, I had my file at Jester, but I removed \_\_\_\_.' (French: Lambrecht and Lemoine 1996 in Cummins and Roberge 2005)

As in the previous example, the verb *enlevé* is transitive, and thus a null object is present here too; however, the null object refers to an element present in the discourse (*mon dossier*) and its reference is definite.

In our article, we present the results of a pilot study of Niuean that seeks to uncover the basic facts about Niuean pro-drop, and whether it exhibits any patterns that might shed light on ergative argument structure. Subjects and objects are known to drop differently in radical pro-drop languages, and Niuean is a particularly interesting because of its VSO order and ergativity, which exhibits DPs marked with the absolutive case as both subjects and objects. This creates the potential for absolutive subjects to behave similarly either to ergative subjects suggesting that subjects are syntactically similar in this ergative language, or to absolutive objects suggesting that absolutive arguments are syntactically similar in this ergative language. We briefly consider claims about other radical pro-drop Polynesian languages and about other radical pro-drop languages in general.

## 2. Methodology

In our study we surveyed 100 pages of data from two oral interviews conducted by a Niuean bilingual younger female, one of a Niuean monolingual female, the other of a bilingual male, in addition to data taken from 18 pages of four written texts, as cited in the References. For every verb in the data, each argument was recorded as being a pronoun, a null argument, or a DP. If the argument was null, we recorded whether it had a generic or definite interpretation. Lastly, each argument's grammatical role was recorded, following Dixon's terminology (Dixon 1994). The subject of a transitive clause is termed A; the subject of an intransitive clause is termed S; the object of a transitive clause is termed O. In advance of the actual results, ten possible categories of null arguments exist,

either "Definite" and "Generic", and further subcategorized into one of five argument roles, as shown in the VSO example models below. Note that in case of missing objects, the remaining overt argument might be *a priori*, in absolutive or ergative case, hence there are two types of missing O example models.

- |     |    |                                 |            |
|-----|----|---------------------------------|------------|
| (5) | a. | Generic missing A               | (V __ Abs) |
|     | b. | Generic missing O1              | (V Erg __) |
|     | c. | Generic missing O2              | (V Abs __) |
|     | d. | Generic missing S-unaccusative  | (V __)     |
|     | e. | Generic missing S-unergative    | (V __)     |
| (6) | a. | Definite missing A              | (V __ Abs) |
|     | b. | Definite missing O1             | (V Erg __) |
|     | c. | Definite missing O2             | (V Abs __) |
|     | d. | Definite missing S-unaccusative | (V __)     |
|     | e. | Definite missing S-unergative   | (V __)     |

Arguments outside of the A-S-O categories, such as indirect objects and obliques, were excluded from our analysis. As these arguments are optional even outside of radical pro-drop languages, there is no way to tell if they are represented by an empty category or simply not present. Likewise, structurally supported null arguments, that is, null arguments explained by well-understood phenomena such as relativization, conjunction, control, and imperatives, were also set aside since in these cases dropping the argument is mandatory and does not reflect a speaker decision.

One challenge we faced in identifying null categories was whether to assume that there is a null argument represented in the syntax or that there is simply no argument there at all. Generic null categories in particular are difficult to identify in Niuean for a number of reasons. Niuean lacks passive morphology, creating the possibility that a missing A sentence is actually an unmarked passive construction. In addition, reliable transitivity judgments for each verb are not available, meaning that both missing A's and missing O's could be the result of a transitivity alternation (particularly in (5a,c)). Missing S's could be impersonal constructions with null expletives. In order to address this problem, we have adopted the initial working hypothesis that all unexpressed arguments are null arguments represented in the syntax with the understanding that these ambiguous cases may be further analyzed later (cf. Cummins and Roberge's 2005 Transitivity Requirement). The assumed argument structure is thus based on the notional meaning of the verb, in consultation with Sperlich's (1997) dictionary entries.

### 3. Null Arguments in Niuean

In this section we present and discuss occurrences of null arguments in Niuean, beginning with sentences missing a definite pronoun in the object position as in (7). As noted above, in such sentences, the absence of the subject could also be due to passivization. But generally, *taofi* identifies as a transitive verb, and the context and translation further indicate direct agency hence we consider this sentence to include a null subject. (Note: P=proper, C=common)

(7) **Null A Definite** (NOFIP interview: see Bell et al 2003)

Kua taofi tuai te \_\_\_\_\_ e nako magoia.  
 Pst stop Perf (I) Abs.C thing just now.  
 ‘(I) stopped that thing [tape recorder] just now.’

An example of a generic null argument in the transitive subject position is shown in (8). The null subject of the verb *taute* is generic, in this case referring to “people” in general.

(8) **Null A Generic** (Manamana story: Asekona et al)

... ne taute \_\_\_\_\_ aki e tau fua akau  
 Pst make (people) Instr C Pl fruit tree  
 ‘...foods which (people) made from fruit trees...’

Let us next examine missing objects. As seen in (9), *kai* “eat”, a transitive verb, is followed only by the ergative A subject, and it lacks an absolutive object. The missing object is definite with an overt antecedent, making (9) a rather robust case of a null definite argument in object position.

(9) **Null O1 Definite** (Loeb)

Ko e mate hanefai a koe he kai e au \_\_\_\_\_!  
 Pred C die about-to Abs.P you when eat Erg.P I \_\_\_\_\_!  
 ‘You are about to die when I eat (you)!’

So far, the data exhibit no apparent cases of generic null O1 arguments (5b), nor definite null O2 arguments (6c). We provide preliminary hypotheses that account for the absence of both null argument scenarios. As seen in (5b), generic missing O1 has an ergatively marked subject. Given that no generic null O1s are found, we conclude that such clauses are truly intransitive, so the subject is absolutive, i.e. we find (5c) and not (5b).<sup>2</sup>

Similar reasoning also applies to definite null O2 arguments. As shown in the non occurring (6c), definite missing O2 has an absolutely marked subject. However, having a definite missing object is characteristic of a transitive sentence, one where the subject is ergative and the object is absolutive. Therefore, if there is a null definite object in the syntax and the sentence is truly transitive, the subject will be ergative, i.e we find (6b) and not (6c).

The last case of missing objects, as shown in (10), is generic in nature as the sentence demands no special emphasis on the objects being stolen but aims to describe a general habit of the act “stealing”.

<sup>2</sup> This reasoning needs further study, as there has to be an overt ergative argument syntactically for a case of missing O1. Several cases of missing generic objects in our data have missing subjects too (e.g. PRO), it is therefore ambiguous if the objects are to be categorized as O1 or O2.

(10). **Null O2 Generic** (Loeb) (Note: Nsp = nonspecific)

Ko e mena fai fakafiliaga e lago ka  
 Pred C thing make court.of.justice Abs.C fly Cond.Fut  
 kaihā taha tagata \_\_\_\_\_ [Abs→ NULL/ *taha*]  
 steal Sg.NSp man \_\_\_\_\_  
 ‘This was the way flies made justice when a man stole (things).’

In the following paragraphs we focus on missing arguments in the subject positions in intransitive sentences, further categorized as unaccusative and unergative. As seen in (11), *nofo* is not followed by an argument indicating its agent. The identity of the subject is understood to be "I" on account of contextual cues and the interview format of the data, thus resulting in a definite null argument in the subject position.

(11) **Null S<sub>ua</sub> Definite** (NOFIP Interview)

nofo \_\_\_\_\_ i Niue.  
 live \_\_\_\_\_ in Niue.  
 ‘(I) lived in Niue.’

(12) shows an unergative verb with a null definite argument, whose reference is established by the discourse. The generic null subject, seen in (13), receives its reference from common knowledge that it is "kids" who go to school.

(12) **Null S<sub>ue</sub> Definite** (NOFIP Interview)

ti mau nī \_\_\_\_\_ mo e ... (tagata Liku)  
 then marry just \_\_\_\_\_ with C... (man Liku)  
 ‘then (you) just married with ... (a Liku man).’

(13) **Null S<sub>ue</sub> Generic** (NOFIP Interview)

O hui nī \_\_\_\_\_ ti  
 Go(Pl) foot just \_\_\_\_\_ then  
 ‘(People) just walked then.’

In this section we have presented typical cases of null arguments in all the possible categories, as (5) and (6) put forward, and found that all types do exist in our data, with the exceptions of null generic O1 and null definite O2. In the next section, we present the overall analyzed results with a statistical emphasis and attempt to uncover patterns of frequency and distribution for null arguments in Niuean.

**4. Results Overall**

The results from the spoken data and the results from the written data display some differences. One defining pattern is that null arguments are used much more frequently in spoken data than in written data. For this reason, we focus on the spoken data in the following analysis.

According to the data, there does not appear to be any restriction as to where a null pronoun may appear as there are instances of null arguments in all positions in both transitive and intransitive sentences, as seen in (14). Nonetheless, there are some differences in frequency and type, as we will discuss below.

For transitive A and O arguments, there are roughly equal numbers of null and overt pronouns, and the majority of null arguments are definite rather than generic. There are many more intransitive verbs than transitive verbs in the spoken data, as shown in (14). Within these examples, there are twice as many overt pronouns as null pronouns. Null arguments exist in both definite and generic contexts, but there are significantly fewer generic ones so that null arguments in the spoken data consist almost entirely of definite missing S's.

(14) **NOFIP + NMMIP Arguments (Tallied Results: 100 pp approx)**

(Note: SSNA = structurally supported null arguments in coordinated clauses, relativized clauses, controlled clauses, imperatives, etc.)

(1) **a. Total transitive verbs:**

**A:**

NP:	16 (11.35%)	
Overt Pr:	38 (26.95%)	
Null-Def:	39 (27.66%)	(72 (51.06%) but 33 are SSNA)
Null-Gen:	15 (10.64%)	

-65.25% nulls (that are not NP or SSNA)  
 - Roughly same number overt and null  
 -Few generics

**O:**

NP:	66 (46.81%)	
Overt Pr:	21 (14.89%)	
Null-Def:	19 (13.48%)	(43 (30.50%) but 24 are SSNA)
Null-Gen:	11 (7.80%)	

-36.15% nulls (not NAP or SSNA)  
 -Roughly same number overt and null  
 -Few generics

**b. Total intransitive verbs: 743**

**S:**

NP:	97 (13.06%)	
Overt Pr:	344 (46.30%)	
Null-Def:	176 (23.69%)	(300 (40.38%) but 124 are SSNA)
Null-Gen:	2 (0.27%)	

- 70.26% nulls (not NP or SSNA)
- Twice as many overt to null
- Very few generics

c. **Summary of Results:**

Definite Nulls:

- A: 27.66% of A arguments are null def (excluding SSNA, 51.06% altogether)
- O: 13.48% of O arguments are null def (excluding SSNA, 30.50% altogether)
- S: 23.69% of S arguments are null def (excluding SSNA, 40.38% altogether)

Generic Nulls:

- A: 10.64% of A arguments are null gen
- O: 7.80% of O arguments are null gen
- S: 0.27% of S arguments are null gen

In the next section we discuss these results.

## 5. Discussion

The data indicate that Niuean argument drop is optional and that use of a pronoun is not limited to emphatic contexts, in line with the classification of Niuean as a radical pro drop language. In addition, we see that null arguments are more frequent in oral speech than in written texts. A further informal observation is that null arguments seem to become more frequent as the interviews progress, suggesting level of formality is a factor.

When we turn to examine grammatical factors, we see first that intransitive clauses are in general far more common than transitive ones, as also observed by Biggs (1974), Hooper (2000), and Sperlich (1997). With respect to null arguments, we can see that all persons and numbers can be null, although relative frequency rates have not been examined. With respect to the question whether Niuean argument drop follows an ergative or a nominative pattern, the results are somewhat mixed, at first glance. Two patterns can be discerned, as in (15).

- (15) A and O pattern together in rate of generic drop: 11%A, 8% O vs .3% S  
 A and S pattern together in rate of drop: 28% A, 24% S, vs 13% O

We can make some speculations about the patterns in (15). It is possible that null generic A's are in fact not there at all, but instead we have a null-marked Passive construction, or a transitivity alternation, so that in (8), the translation should be "food that is made from fruit trees" or the (ungrammatical in English) "food that makes from fruit trees". This would explain why there appear to be so many null generic A's, as in fact, there are not so many, as most cases are in fact Passives. In addition, we can speculate that null generic O's are

likewise not there at all, but instead we have a true unergative intransitive, so that an example such as (10) would be translated as “when a man stole” or “when a man was a thief”.<sup>3</sup> This means that that number of A and O generics can be reduced to be more equal to those for S (.3%), indicating a virtual lack of generic *pro* across all three argument types.

This leaves us with the second pattern, with A and S together in contrast with O, suggesting that ergative and intransitive absolutive arguments form a class of subject, vs transitive O (see Massam 2006 for discussion). This suggests that case is not a factor for *pro*-drop frequency (Otsuka 2000).

A final point can be made about recoverability of null arguments. It is clear that definite pronouns can be recovered through non-linguistic context (7), or they can have an antecedent earlier in the sentence (9), or in the discourse (12).

Although little work has been done on null arguments in Polynesian languages, there are some observations in the literature. Dukes (undated) (and cf. Sailor 2011, and Bauer 1997 on Maori) states that 3<sup>rd</sup> person singular is more commonly dropped in Tongan, especially for inanimates, while Otsuka (2000) claims only 3<sup>rd</sup> person pronouns can be dropped. Mosel and Hovdhaugen (1992) state that in Samoan, null O's require an antecedent while null S's can be pragmatically recovered. And Besnier (2000) writes that in Tuvaluan 3<sup>rd</sup> person inanimates are most prone to being null, followed by 3<sup>rd</sup> singular human arguments, then by 3<sup>rd</sup> plural arguments, then 1<sup>st</sup> person arguments, then 2<sup>nd</sup> person arguments. We have not yet compared the rates of drop for arguments with different person and number features in Niuean.

In general, Niuean seems to fit with Neeleman and Szendrői's (2007) claim that radical *pro* drop languages have agglutinative pronoun systems for case, number or some other nominal feature, as Niuean pronouns essentially have the form: Case + Person + Number. On the other hand, they do not support Tomioka's (2003) claim that radical *pro* drop language allow bare NP nominals, since Niuean nominals must have at least number, proper/common value, and Case (at least in non-incorporated contexts) (Massam 2001, 2009). As with Chinese (Huang 1994), Niuean null arguments display more null subjects (ergative and absolutive) than null objects, although we have not yet determined if null objects can appear in islands in Niuean (Nakamura 1991). If they cannot, this might suggest they are structurally distinct in some way from null subjects. Finally, our results are compatible with claims of Speas (1994, 1996).

In conclusion, our study supports a view of Niuean as a radical *pro* drop language in its general behaviour and morphological type. Niuean provides support for the view that definite null arguments are overtly represented with full null argument such as *pro*, whereas generic null arguments have a different status and are not represented with *pro*. It also supports a subject/object asymmetry for rates of argument drop. Our work thus contributes to attempts to better understand the range and characteristics of this type of language.

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<sup>3</sup> We do not take a theoretical stand on the issue of whether such non-arguments are present in the syntax in some reduced form, such as a bare N or Phi (as in Cummins and Roberge 2005, Landau 2010), what is important for us is that they are not ‘*pro*’, and they do not count for transitivity.



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