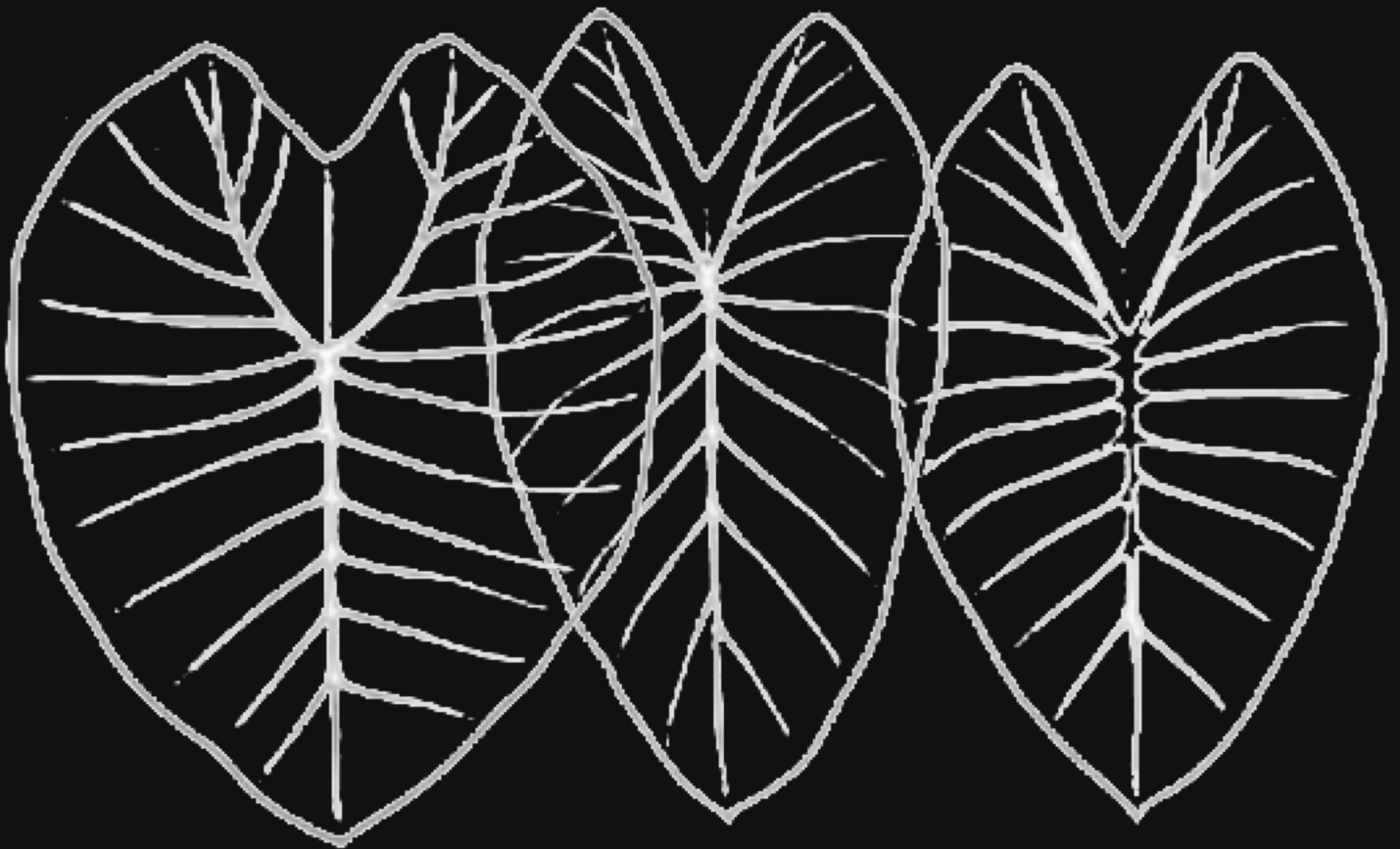# Proceedings of TripleA 3

Fieldwork Perspectives on the
Semantics of African, Asian and Austronesian Languages

Ed. by Vera Hohaus & Wanda Rothe

# Table of Contents

## Austronesian

# Indefinites in Daakaka (Vanuatu)[1]

Kilu von Prince — Humboldt-Universität zu Berlin

**Abstract.**   There are two indefinite articles in the Oceanic language Daakaka, *tuswa* and *swa*. Like weak NPIs or unspecific indefinites in many other languages, *tuswa* is excluded from positive assertions about the episodic past or present. In this paper, I try to locate them within the cross-linguistic space of indefinites and NPIs and sketch out an approach to account for their differences.

## 1   Introduction

### 1.1   Background

Daakaka is an Oceanic language of Vanuatu, spoken by about one thousand speakers on the island of Ambrym. The basic word order is SVO. The nuclear clause consists of a subject marker with a TAM enclitic and the verb. An example is given in (1):

(1)   *Ee, ya=**m**    myan silye  nye  kyun*
       no  3PL=REAL laugh pluck 1SG just
       'No, they're just laughing at me.' (0482)[2]

There is no subject marker for third person singular, in which case the TAM marker is realized as a monosyllabic word instead:

(2)   *vyanten swa **mwe**   nii   pwer yen booli   lee*
       person   one REAL hide stay   in   hole.in tree
       'Someone was hiding in the hole of a tree.' (0163)

Word class distinctions are quite strict and there is a correspondingly rich system of derivations (von Prince, accepted). Like many other languages in the region, Daakaka has obligatorily possessed, inflected nouns (von Prince, 2016) and serial verb constructions (von Prince, 2015).

The data come from my own fieldwork between 2009 and 2012. Example sentences that come from my corpus of transcribed, translated and glossed recordings come with a corresponding reference. Other examples were either elicited by translation from Bislama or altered versions of sentences from the corpus that were subjected to judgment tasks. Negative data in particular have

[2]Glosses: 1SG – first person singular; 2SG – second person singular; 3PL – third person plural; 3SG – third person singular; ASR – assertion marker; CL2 – (possessive) class 2; COMP – complementizer; CONJ – conjunction; CONT – continuous; COP – copula; DISC – discourse marker; DIST – distal TAM; INDEF – indefinite; NEG.ASR – negative assertion marker; NEG.POT – negative potential; NEG.REAL – negative realis marker; NM – nominalizer; POSS – possessive; POT – positive potential; REAL – positive realis; REDUP – reduplication; SWA – *swa*, specific indefinite article; TOP – topicalizer; TUSWA – *tuswa*, non-specific indefinite article.

resulted from the last method. I consulted on each case with at least one informant on at least two separate occasions.

## 1.2 Indefinites in Daakaka

The two indefinite articles *swa* (also 'one') and *tuswa* overlap widely in their distribution. Roughly speaking, *swa* receives a specific interpretation, *tuswa* an unspecific one:

(3)   Negative assertions, questions:

    a.   *Wotop   swa to      pwer.*
       breadfruit SWA NEG.REAL stay
       'One breadfruit is missing.'

    b.   *Wotop   tuswa to      pwer.*
       breadfruit TUSWA NEG.REAL stay
       'There is no breadfruit.'

(4)   Conditional clauses:

    a.   *ka    vyanten **tuswa** te  me  te  saka   ko=n     sóró myane*
       COMP person   TUSWA DIST come DISC NEG.ASR 2SG=NEG.POT speak with
       'If anyone comes, don't talk to them.'

    b.   *ka    vyanten **swa** te  me  te  saka   ko=n     sóró myane*
       COMP person   SWA DIST come DISC NEG.ASR 2SG=NEG.POT speak with
       'If someone comes, don't speak to him/ her.' (I have someone specific in mind.)

(5)   a.   *webung **tuswa** yaapu  ka  we kueli me*
       day     TUSWA big.man ASR POT return come
       'One day, God will return.'

    b. #?*webung **swa** yaapu  ka  we kueli me*
       day     SWA big.man ASR POT return come
       'On a certain day, God will return (namely next Tuesday).'

The only environment in which the distribution of the two markers does not coincide are positive assertions about the episodic past or present, as illustrated by the following examples (we will see later that *swa* is also permitted in questions):

(6)   a.   *Wotop   swa mwe pwer.*
       breadfruit SWA REAL stay
       'One breadfruit remains.'

    b.   *Wotop   tuswa  mwe pwer?*
       breadfruit TUSWA REAL stay
       'Is there a breadfruit (left)?'

    c. #*Wotop   tuswa  mwe pwer.*
       breadfruit TUSWA REAL stay
       intended: 'There is one breadfruit left.'

*Swa* and *tuswa* can be seen as part of a larger paradigm of quantifier pairs:

| Specific | Nonspecific | Meaning |
|----------|-------------|---------|
| *swa* | *tuswa* | 'a' |
| *murswa* | *mursi* | 'some' (plus mass noun) |
| *wuoswa* | *tisyu* | 'some' (plus count noun) |

Table 1: Two sets of articles in Daakaka

As you can see in table 1, the syllable *swa* features prominently in several of them. *Murswa* 'some, a little' can be reconstructed from *mur* 'piece' plus *swa*; *wuoswa* goes back to *wuo* 'heap' plus *swa*. Their indefinite counterparts *mursi* and *tisyu* are not equally transparent. As for *tuswa*, it is likely that this item goes back to a combination of a TAM marker *tu* and *swa*. One indication is that it is not unusual for Daakaka numerals to be preceded by a TAM marker and the copula even when they are used as attributes in a noun phrase:

(7)  *na=m*      *tilya gyes-an* **mw=i**   **sii**  *ma*   *sukuo*
     1SG=REAL take  work-NM REAL=COP three REAL be.together
     'I went, I had three professions altogether.' (0754)

In future environments, the numeral may be preceded by the potential marker *w-*; in conditionals the distal marker *t-* may be used:

(8)  a.  *barar* **w=i**    *ló*  *te*   *ka*  *wa* *wese* *ka*    *na=p*    *gene sok*
         pig     POT=COP two DISC ASR POT enough COMP 1SG=POT make 1SG.POSS
         *nyur-nyur-an*
         REDUP-think-NM
         'Two pigs will be enough for me to realize my plan.' (5476)
     b.  *ya=m*    *mitye teve-sye*    *ka*   **t=i**    *ló*  *mo*  *nok*  *te*    *wilyakate*
         3p=REAL split   side.of-3SG.POSS COMP DIST=COP two REAL finish DISC peel
         'They break them into two (lit. when they are two), then they peel them.' (2898)

A similar picture has been described for other Oceanic languages of the region, such as Unua (Pearce, 2010). In sum, *tuswa* can not be analyzed as a combination of *swa* with a preceding TAM marker, because in that case, the TAM marker would have to combine with the copula. But it is plausible that *tuswa* may have evolved from such a structure diachronically.

## 2   Categorizing *Swa* and *Tuswa*

Cross-linguistically, indefinite articles vary widely in terms of their range of applications. They may be strong or weak Negative Polarity Items (NPIs) (Giannakidou, 2011), specific or non-specific, or epistemic indefinites signaling ignorance on the side of the speaker (Aloni & Port, 2006; Alonso-Ovalle & Menéndez-Benito, 2015). To narrow down the meaning of *swa* and *tuswa*, we will therefore first discuss their relation to these categories to see which one is the closest match.

## 2.1 Epistemic Indefiniteness

In this section, we will briefly review the phenomenon of epistemic indefinites, only to rule out that either *swa*, *tuswa* or the contrast between the two can be described as such. In Haspelmath (1997)'s typology, specific indefinites can be further distinguished depending on whether referents are known to the speaker. He identifies the *-to* series of Russian indefinite pronouns as referring to specific referents unknown to the speaker. The second of the following two examples is therefore a little odd since it implies that the speaker has already forgotten who she met earlier.

(9)  *Maša vstretilas' s* **kem-to** *okolo universiteta.*
     Maša met      with who-INDEF near   university
     'Maša met with somebody near the university.'
     (Haspelmath, 1997, 46, ex. (96-a))

(10) ?*Ja vstretilas's* **kem-to** *segodnjav 19 časov.*
     I   met.with   who-INDEF today      19 hours
     'I met with someone [unknown to me] today at 19 hours.'
     (Haspelmath, 1997, 46, ex. (97-a))

This phenomenon has been discussed under the label of *epistemic indefiniteness* in some detail in the context of several other expressions from European languages, including German *irgend-* and Spanish *algún* (Aloni & Port, 2006; Alonso-Ovalle & Menéndez-Benito, 2015). However, speaker knowledge does not appear to be a relevant category for Daakaka *swa* and *tuswa*: *tuswa* is simply ruled out from positive assertions about the episodic past and present. And *swa* in these contexts is used irrespective of whether the speaker can identify the referent. The following example shows that the speaker does not have to be familiar with a referent in order to use *swa*:

(11) *temeli mwe ka, waawu,    dulu sye*      **swa** *sa  bwe  me   te*
     child   REAL say grandparent sound something one TOP CONT come here
     'The boy said, "Granny, a sound is coming".' (lit. 'the sound of a thing')(4929)

## 2.2 Negative Polarity

Since *tuswa* occurs very often in negative assertions, questions and conditionals, it seems plausible to assume that it could belong to the cross-linguistically large and varied group of negative polarity items (NPIs). NPIs can be further distinguished into strong and weak NPIs, depending on their exact distribution. However, both strong NPIs such as English *ever* and weak NPIs such as English *any* differ from *tuswa* when it comes to positive assertions about the future, imperatives and similar environments. Generally speaking, *ever* is just bad in predictions and imperatives (#*Ever go to Paris!*, #*You have to ever taste laplap*). As for *any*, it is well-known that this English item only occurs in positive future environments when stressed, with a free-choice interpretation (#*When I'm in Vanuatu, I'll eat ANYthing*) (Krifka, 1994). The same does not apply to *tuswa*, as illustrated by the following example. This sentence is from a description of the biological properties of various insects, among them a caterpillar that becomes a butterfly after transforming inside its cocoon:

(12)  . . . *te wese*    *w=i*    *bwii*    *tuswa*
      DISC be.enough POT=COP butterfly one
      '. . . then it can become #any/ a butterfly.'

According to Giannakidou (2011), weak NPIs can further be distinguished into scalar and non-scalar ones. English *any* is scalar, but Greek *tipota* is non-scalar. Daakaka *tuswa* appears to be similar to Greek *tipota* in that both can occur anywhere except in positive statements about the episodic past and present, and neither is used as a free-choice item in positive assertions about future or possible events such as in (12). I will therefore review Giannakidou (1998)'s approach to non-scalar NPIs in more detail below to see how well it can handle the data.

## 3   A Veridicality-Based Approach

Giannakidou (1998, 2001, 2011) suggests to approach both scalar and non-scalar NPIs from the perspective of veridicality. Veridicality is understood as a property of sentence-embedding operators.

(13)  A propositional operator $F$ is **veridical** iff $Fp$ entails or presupposes that (the belief-holder is committed to the truth of) $p$.

NPIs are said to be disallowed from veridical environments because of their referential deficiency – they are said to be dependent existential quantifiers in the following sense:

(14)  An existential quantifier $\exists x_d$ is **dependent** iff the variable $x_d$ it contributes does not introduce a discourse referent in the main context. (ex. (97) in Giannakidou, 2011)

Further, Giannakidou (2011) writes:

> Generally, then, dependent variables of this kind will be fine in the scope of non-veridical operators, because these ensure that $x_d$ will not be forced to introduce, or be associate [sic] with, a discourse referent in the main context.

The inventory of non-veridical operators is supposed to cover negation, modal expressions, conditionals, questions, future assertions and habituals. It is however not entirely clear how this follows from the definition, especially in the case of future and habitual contexts. As Gajewski (under review) points out:

> How to extend nonveridicality to non-propositional operators is a matter that has never fully been resolved.

For future and habitual assertions, Giannakidou (2002) develops the following definition of veridicality:

(15)  (Non-)veridicality for temporal/ aspectual operators
      Let $F$ be a temporal/ aspectual operator; $t$ an instant or an interval.
      i.    $F$ is *veridical* iff for $Fp$ to be true at a time $t$, $p$ must be true at a (contextually relevant) time $t' \leq t$. Otherwise $Op$ [sic] is *nonveridical*.[3]

---

[3]I am skipping (ii) here which is about antiveridicality.

    iii.   If $F$ is true of an interval $t$, then $F$ is veridical iff for all (contextually relevant) $t' \subseteq t$, $p$ is true at $t'$. Otherwise, $F$ is nonveridical.

This account is problematic for several reasons. For example, the definition in (15) is designed to ensure that habituals count as non-veridical, but it also seems to cover continuous contexts:

(16)    *A: What were you doing between 8pm and 10pm on Thursday night?*
        *B: I was reading a book.*

Surely, B's answer can count as true even if she did not spend every single moment of that interval reading, for example if she put her book aside to pour herself some tea or glance out of the window for a little while. Yet, it is quite clearly not an environment that licenses NPIs of any kind and should not be categorized as nonveridical.

    More fundamentally, the veridicality-based approach does not appear to go much beyond description. Its main merit lies in finding a semantic core that combines different types of NPIs and indefinite non-specific expressions, and in identifying additional factors such as scalarity that are responsible for the differences between them. Beyond that, however, the approach boils down to labeling individual expressions as 'dependent existential quantifiers' and asserting that they are not compatible with veridical environments. Exactly how that mismatch comes about does not become clear from the mechanics of the definitions involved. So, at this point, the approach does not allow to generate more interesting predictions. Crucially for our quest, it also does not give us much insight into the semantic contrast between non-specific *tuswa* and its specific counterpart *swa*.

    In the following section, I will therefore sketch out a theory that intends to capture intuitions similar to those that inspired the veridicality-based account, but with more concrete definitions against which to test our data.

# 4   A Modality-Based Approach

## 4.1   Basic Assumptions

This approach attempts to capture both the intuitions behind the concept of veridicality and the split in realis and non-realis modalities that is prominent in Daakaka, as in many other languages of the region.[4] The Daakaka TAM markers broadly separate into the positive and negative realis marker for the actual past and present; the potential marker for possible futures; and the distal marker for the (discontinuous) actual past and counterfactuals (compare Krifka, 2016; von Prince, in prep). This three-way distinction corresponds quite closely to the tripartite structure generated by a branching-times framework.

    The basic definition of branching times follows Thomason (1984), except that I speak of indices $i$ rather than times to keep them separate from clock times.

(17)    a.   A branching-times structure is a pair $\langle I, < \rangle$, where $I$ is a nonempty set and $<$ is a transitive ordering on $I$ such that if $i_1 < i$ and $i_2 < i$, then either $i_1 = i_2$ or $i_1 < i_2$ or $i_2 < i_1$.

---

[4]The following approach has been developed in part as joint work with Manfred Krifka. All shortcomings are my own.

b. For any two indices $i_1, i_2$, there is a common predecessor $i_3$.

c. A **branch** through $i$ is a maximal linearly ordered subset of $I$ containing $i$.

This definition creates the tripartite structure in figure 1. The three different domains created by the precedence relation <:

(18)    a.    the actual (past or present): $\{i | i \leq i_c\}$

b.    the counterfactual (past, present or future): $\{i | i \nleq i_c, i_c \nless i\}$
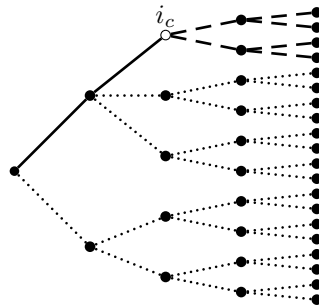
c.    the possible (future): $\{i | i_c < i\}$



Figure 1: The branching-times structure with three distinct domains; solid: the actual; dotted: the counterfactual; dashed: the possible futures.

Unlike Thomason (1984) and, to my knowledge, all other semanticists to work with this structure, I do not assume that quantification is restricted to those branches that are identical up to the actual present $i_c$. Instead, I suggest that natural language expressions can restrict quantification to any of the three domains, as well as combinations or subsets thereof.

I suggest further that *swa* and *tuswa* both introduce existential quantifiers and assert that a certain property holds of an individual in different temporal-modal domains: While *swa* asserts that a property $P$ holds of an individual for the actual past and present, *tuswa* only asserts this for non-actual indices.

(19)    a.    $[\![swa]\!]^{g,c} = \lambda i \lambda R \lambda P. \exists i' : i' \in R_I, i' \leq i_c. \exists x, R(x)(i'), P(x)(i)$, where $R_I$ is a contextual relevance restriction on indices;

b.    $[\![tuswa]\!]^{g,c} = \lambda i \lambda R \lambda P. \exists i' \in R_I. \exists x R(x)(i'), P(x)(i)$

In words: *swa* takes an index and two properties of type $\langle s \langle e, t \rangle \rangle$, $R$ and $P$, and asserts that there is an $x$ such that $R$ holds of $x$ at actual indices; *tuswa* has the same type, but asserts only that $R$ holds of $x$ at non-actual indices.

## 4.2 Excluding *Tuswa* From Positive Episodic Past Contexts

First we need to address the incompatibility of *tuswa* with positive assertions about the episodic past. The relevant example is repeated below:

(6-c)  #*Wotop*   ***tuswa*** *mwe pwer.*
      breadfruit TUSWA REAL stay
      intended: 'There is one breadfruit left.'

I assume that the realis marker restricts quantification over indices to those that are predecessors of or identical with the actual present $i_c$:

(20)    $[\![\text{REAL}]\!] = \lambda i : i \in R_I, i \le i_c.i$

Then, we would get the following derivation for (6-c):

(21)    $[\![\textbf{breadfruit } \text{TUSWA}]\!]([\![\text{REAL } \textbf{be.there}]\!])$
       $= \lambda i : i \in R_I, i \le i_c.\exists i' \in R_I.\exists x.\textbf{breadfruit}(x)(i'), \textbf{be.there}(x)(i)$

This would mean that there is an individual which might be a breadfruit and is in fact present in an actual situation of the past or present. This appears to be intuitively sufficiently odd to explain its unacceptability. In addition to intuitive oddity, we can also appeal to **Maximize Presupposition** (going back to Heim, 1992) to explain why the meaning in (6-c) cannot be taken to express that there is an actual breadfruit: The definition of *tuswa* in (19-b) does not itself rule out that a property apply in the actual world. It simply does not give any restrictions for the domain of $i'$. By contrast, *swa* specifies that a property $P$ has to hold at indices that are part of an actual development. *Swa* therefore has a stronger presupposition than *tuswa* and since this is the only way in which the two differ, and they form part of a paradigm, we expect Maximize Presupposition to rule out the use of *tuswa* whenever *swa* could also have been truthfully used.

## 4.3 The Scope of Negation

A crucial piece to the puzzle for any analysis of the difference between *swa* and *tuswa* will have to come from their behavior in negative contexts, so we will now take stock of whether the definitions of (19) can handle those. We have seen that with *swa*, the negative realis TAM marker is interpreted as having narrow scope, while it takes wide scope over *tuswa*. The relevant pair of examples is repeated below:

(3)    a.  *Wotop*   ***swa*** *to*   *pwer.*
          breadfruit SWA NEG.REAL stay
          'One breadfruit is missing.'
    b.  *Wotop*   ***tuswa*** *to*   *pwer.*
          breadfruit TUSWA NEG.REAL stay
          'There is no breadfruit.'

Let us assume that the negative realis marker can generally be interpreted as having either narrow scope or wide scope. The corresponding definitions are given below:

(22)    Negative Realis
      a.  Wide scope: $[\![\text{NEG.REAL}]\!]^{g,c} = \lambda p.\neg\exists i \in R_I, i \le i_c, p(i)$
      b.  Narrow scope: $[\![\text{NEG.REAL}]\!]^{g,c} = \lambda P\lambda x.\neg\exists i \in R_I, i \le i_c, P(x)(i)$

When we apply the narrow-scope negation to (3-a), we get the following meaning:

(23)  $[\![\mathbf{breadfruit}\ \textsc{swa}]\!]([\![\textsc{neg.real}\ \mathbf{be.present}]\!])$
$= \exists i : i \in R_I, i \le i_c. \exists x.\mathbf{breadfruit}(x)(i), \neg\exists i' : i' \in R_I, i' \le i_c.\mathbf{be.present}(x)(i')$

This amounts to saying that there is an individual which is a breadfruit in the actual world and in the relevant period of time, there is no moment in the actual world such that this individual is present. This meaning appears to be a perfectly reasonable representation of the actual meaning.

Moving on to *tuswa*, we will first see what happens when we try to apply the narrow-scope negation to it:

(24)  $\#[\![\mathbf{breadfruit}\ \textsc{tuswa}]\!]([\![\textsc{neg.real}\ \mathbf{be.present}]\!]) = \exists i : i \in R_I. \exists x.\mathbf{breadfruit}(x)(i),$
$\neg\exists i'.i' \in R_I, i' \le i_c.\mathbf{be.present}(x)(i')$

This would roughly mean that there is something that might be breadfruit, but it is not actually present in the relevant period of time in the actual world. It is hard to imagine a situation in which someone would want to say something like this, which fits with the observation that a narrow-scope reading with *tuswa* is not available.

The wide-scope version of (3-b) is given in (25):

(25)  $[\![\textsc{neg.real}]\!]([\![\mathbf{breadfruit}\ \textsc{tuswa}\ \mathbf{be.present}]\!])=$
$\neg\exists i : i \in R_I, i \le i_c.\exists i' : i' \in R_I, i' \not\le i_c.\exists x.\mathbf{breadfruit}(x)(i'), \mathbf{be.present}(x)(i)$

This can be paraphrased as saying that there is no moment in the relevant span of time in the actual world such that a hypothetical breadfruit is present; which is a good match with the truth conditions of (3-b) and arguably not the worst possible way to get this particular meaning across.

## 4.4 The Specificity Contrast

We have seen that *swa* and *tuswa* differ not only in their distribution and in their interaction with negation, but also in their interpretation in other contexts where both elements can occur. I will now turn to conditionals to examine how my approach applies to these contexts.

(4)  a. *ka       vyanten* **tuswa** *te    me    te    saka    ko=n        sóró myane*
         COMP person   TUSWA DIST come DISC NEG.ASR 2SG=NEG.POT speak with
         'If anyone comes, don't talk to them.'
     b. *ka       vyanten* **swa** *te    me    te    saka    ko=n        sóró myane*
         COMP person   SWA DIST come DISC NEG.ASR 2SG=NEG.POT speak with
         'If someone comes, don't speak to him/ her.' (I have someone specific in mind.)

We assume that the distal marker introduces a presupposition on an index argument $i$ which specifies that $i$ cannot be the actual present $i_c$:

(26)  $[\![\textsc{dist}]\!]^{g,c} = \lambda i : i \in R_I, i \ne i_c.i$

Considering the protasis of the two sentences in (4), we then get the following respective meanings:

(27)  (if) someone specific comes:
      (4-b): $\lambda i.i \in R_I, i \ne i_c, \exists i' : i' \in R_I, i' \le i_c.\exists_{i'}x.\mathbf{person}(x)(i'), \mathbf{come}(x)(i)\dots$

(28)  (if) anyone comes:
      (4-a): $\lambda i.i \in R_I, i \not\le i_c, \exists i' \in R_I.\exists x.\mathbf{person}(x)(i'), \mathbf{come}(x)(i)\dots$

This means that the sentence with the specific *swa* is about an actually existing individual $x$ which is a person in the actual world and may come by; whereas the sentence with the non-specific *tuswa* is about someone who might be a person and who may come by. There is a slight oddity in this phrasing which has to do with the fact that *tuswa* and *swa* only restrict the domain of a property $P$ of $x$, but not the existence of $x$ itself. I will come back to this in section 4.5.

Let us briefly take stock of what we have accomplished so far: We have developed an approach of *swa* and *tuswa* that accounts for their different behaviors. We have captured not only their differences in distribution and interaction with negation, but also derived the difference in interpretation depending on which article occurs in the antecedent of a conditional. At least in this last point, our approach is superior to a veridicality-based approach, since that would give us at most an explanation for the behavior of *tuswa*, but not of *swa* and therefore their differing interpretations would go unaccounted for. At the same time, the mechanics of our framework are relatively straightforward and transparent. We do not have to appeal to some unspecified notion of referential deficiency or dependence but can instead attribute the observed restrictions to mismatches in the temporal-modal domains to which the two main predicates of a sentence apply.

This approach is however not without its problems. I will sketch out some of them in the following section.

## 4.5  Potential Problems

There are two types of potential problems, empirical and theoretical. I will first address some of the theoretical problems and finish with a possible counterexample to the account as proposed so far. The main complex of theoretical problems revolves around the questions of identity across worlds and the notion of existence. In the approach developed here, both the specific and the non-specific indefinite assert the existence of an individual; but only the specific indefinite asserts that a certain property holds of that individual in the actual world, whereas the non-specific *tuswa* only asserts that this property holds in some world, at some time. Now, there is something inherently odd about saying something like *there is an object and it might be a breadfruit*. It seems intuitively that what *tuswa* does is not to leave the modal-temporal domain of a property of $x$ underspecified; but rather that it weakens the assertion of existence itself by saying that $x$ only exists at some indices that are not necessarily actual ones. This would also correspond more closely to Giannakidou's approach of a dependent existential quantifier.

It is conceptually possible to relativize the existential quantifier to a certain domain ($\exists_{i'} x.P(x)$). However, this move would require a thorough exploration of the concept of existence, identity across worlds, existence of individuals vs. existence of indices and related questions – which we are not able to accomplish here.

Having said that, there is also empirical evidence that might speak to the practical difference between restricting the domain of a predicate $P$ vs. restricting the domain of existence of an individual and might favor the latter approach. The following example comes from a story in which a woman talks to her husband on her deathbed and gives him instructions about where and how to bury her. She tells him that on her grave beside their house, there will grow a plant with many beneficial properties:

(29)　　*barvinye **swa** ka　we　luk　tevesye m-ada　　em*
　　　　　grass　　one ASR POT grow side.of CL2-1D.IN house
　　　　　'A plant will grow at the side of our house.'

Under my current approach, this example is problematic, because it would assert the existence of an individual which is already a plant. But since the speaker of the sentence will only later become this plant, the property of being a plant does not apply to her yet. If the domain restriction of *swa* were to apply to the existential quantifier instead, we could end up with a meaning that is compatible with (29): There already exists an individual which will in the future be a plant and grow beside the house. This is therefore a potentially fruitful and relevant line of reasoning that should be explored by further research.

# 5　Conclusion

I have introduced data on the Daakaka indefinite articles *swa* and *tuswa* and determined that *tuswa* shows similar behavior as Giannakidou (2011)'s weak, non-scalar NPIs. I have then discussed Giannakidou (2011)'s veridicality-based approach and argued that, while it held some important insights about the distributional restrictions of elements like *tuswa* and their relation to other NPIs, it could not account for the semantic differences between *swa* and *tuswa* and a lack of clarity on the compositional details made it hard to derive further predictions. I have then developed a modality-based approach that could not only derive the distributional restrictions of *tuswa*, but also the differences in interpretation between *swa* and *tuswa*. I have then identified potential problems with this approach and outlined a possible direction for further investigation.

# References

Aloni, Maria, & Port, Angelika. 2006. Epistemic indefinites crosslinguistically. *Pages 1–14 of:* Elfner, Emily, & Walkow, Martin (eds), *Proceedings of NELS*, vol. 36.

Alonso-Ovalle, Luis, & Menéndez-Benito, Paula (eds). 2015. *Epistemic Indefinites*. Oxford: Oxford University Press.

Gajewski, Jon. under review. *A note on licensing strong NPIs*. Ms.

Giannakidou, Anastasia. 1998. *Polarity Sensitivity as (Non)veridical Dependency*. Amsterdam: John Benjamins.

Giannakidou, Anastasia. 2001. Varieties of polarity items and the (non)veridicality hypothesis. *Pages 99–127 of:* Hoeksma, Jack, Rullmann, Hotze, & Sánchez-Valencia, Víctor (eds), *Perspectives on Negation and Polarity Items*. Amsterdam: John Benjamins.

Giannakidou, Anastasia. 2002. Licensing and sensitivity in polarity items: From downward entailment to nonveridicality. *Pages 29–54 of:* Andronis, Maria, Pycha, Anne, & Yoshimura, Keiko (eds), *CLS proceedings*, vol. 38.

Giannakidou, Anastasia. 2011. Negative and positive polarity items. *Pages 1160–1712 of:* Maienborn, Claudia, von Heusinger, Klaus, & Portner, Paul (eds), *Semantics: An International Handbook of Natural Language Meaning*, vol. 2. de Gruyter.

Haspelmath, Martin. 1997. *Indefinite Pronouns*. Clarendon Press.

Heim, Irene. 1992. Presupposition projection and the semantics of attitude verbs. *Journal of Semantics*, **9**, 183–221.

Krifka, Manfred. 1994. The semantics and pragmatics of weak and strong polarity items in assertions. *Pages 195–219 of:* Harvey, Mandy, & Santelmann, Lynn (eds), *Proceedings of SALT*, vol. 4.

Krifka, Manfred. 2016. Realis and non-realis modalities in Daakie (Ambrym, Vanuatu). *Pages 546–565 of:* Moroney, Mary, Little, Carol-Rose, Collard, Jacob, & Burgdorf, Dan (eds), *Proceedings of SALT*, vol. 26.

Pearce, Elizabeth. 2010. Irrealis and indefinites in Unua. *Oceanic Linguistics*, **49**, 21–43.

von Prince, Kilu. 2015. *A Grammar of Daakaka*. Berlin: de Gruyter.

von Prince, Kilu. 2016. Alienability as control: The case of Daakaka. *Lingua*, **182**, 69–87.

von Prince, Kilu. accepted. Dozing eyes and drunken faces: Nominalized psych-collocations in Daakaka. *Studies in Language*.

von Prince, Kilu. in prep. Paradigm-induced implicatures in TAM-expression: A view from the Daakaka distal. *In: Proceedings of SuB*, vol. 21.

Thomason, Richmond H. 1984. Combinations of tense and modality. *Pages 135–165 of:* Gabbay, Dov M., & Guenthner, Franz (eds), *Handbook of Philosophical Logic*, vol. 2. Dordrecht: Reidel.