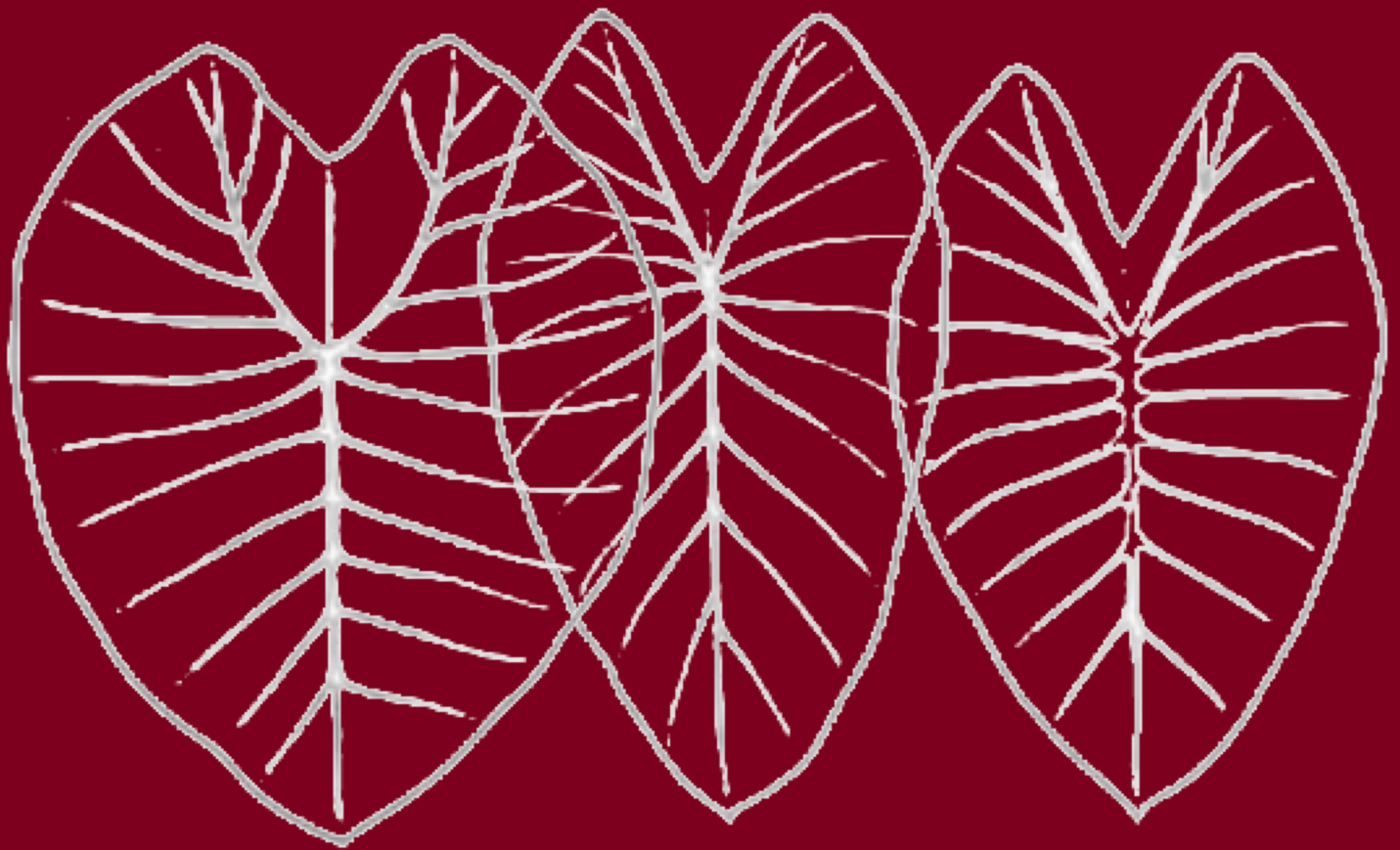


Proceedings of TripleA 7

Linguistic Fieldwork and Semantic Theory



Edited by Peng Liu, Erin Sjovall, Xue Sun,
Polina Berezovskaya and Vera Hohaus

*Proceedings of TripleA 7:
Linguistic Theory and Semantic Fieldwork*

Edited by Peng Liu, Erin Sjoval, Xue Sun, Polina Berezovskaya and Vera Hohaus
on behalf of Moritz Igel and Konstantin Sachs.

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Table of Contents

Rajesh Bhatt (University of Massachusetts, Amherst) –
Thinking of Rahul

1



Reginald Akuoko Duah
(Humboldt-Universität zu Berlin, University of Ghana, Legon),
Mira Grubic (Universität Potsdam)
& Agata Renans (Ruhr-Universität Bochum) –
*The Combination of Indefinite and
Definite Determiners in Akan*

7

John Gluckman (University of Kansas)
& Margit Bowler (The University of Manchester) –
Epistemic Marking on Nouns in Nyala East

23

Meghan Lim & Michael Yoshitaka Erlewine
(National University of Singapore) –
Definiteness and Indefiniteness in Burmese

34

Fabienne Martin (Humboldt-Universität zu Berlin),
Hongyuan Sun (Université de Picardie Jules-Verne),
Jinhong Liu (Huizhou University)
& Hamida Demirdache (Université de Nantes) –
*On the Zero-Change Construal of
Causative Simple Verbs in Mandarin Chinese*

51

Definiteness and Indefiniteness in Burmese¹

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Abstract. We report on the interpretation of different forms of singular argument nominals in Burmese, a language without articles, from original fieldwork. Like in Mandarin Chinese (Jenks, 2018), bare nouns are unique definites, with demonstratives used for anaphoric definites. Indefinites use the numeral ‘one’. We develop an analysis based on Jenks’ analysis of Mandarin Chinese definites, extended with a novel proposal for ‘one’-indefinites. Indefinites introduce an anti-uniqueness inference, which we derive from a Non-Vacuity constraint rather than Maximize Presupposition à la Heim (1991), with crucial evidence from anaphoric definites with ‘one.’ We also describe the availability of bare noun indefinite objects, which we analyze as a form of (pseudo) noun incorporation.

1 Introduction

In this paper, we report on the expression of (in)definiteness for singular referents in Burmese, a language without articles. The data represented in this paper reflects the Colloquial Burmese judgments of four native speakers from Yangon who currently reside in Singapore. In the basic case, singular definite descriptions in Burmese are bare, with no demonstrative or other marker (1), whereas singular indefinites require the numeral ‘one’ with an appropriate classifier (2).² This generalisation for (in)definiteness is complicated in object position, as we discuss below.

(1) **Situationally unique definites in subject position:**

K’wè=gá Maun Maun=go kaiq-ne-deh.
 dog=NOM Maung Maung=ACC bite-PROG-NFUT
 ‘The dog is biting Maung Maung.’

(2) **Indefinites in subject position:**

K’wè *(tǎ=kaun) =gá dǎgà=go c’iq-ne-deh.
 dog one-CL.animal =NOM door=ACC scratch-PROG-NFUT
 ‘A dog is scratching the door.’

¹We thank our speakers Kaung Mon Thu, Nyan Lin Htoo, Phyo Thi Han, and Phyo Thura Htay for patiently sharing their language with us. For helpful discussion which has informed the work here, we thank Kenyon Branan, James Collins, Hadas Kotek, Keely New, Ryan Walter Smith, and audiences at TripleA 7 and Semantics and Linguistic Theory (SALT) 30, especially Chris Davis, Vera Hohaus, and Jenneke van der Wal. We thank Wenkay Tay for detailed comments on an earlier draft. This research is supported by the Singapore Ministry of Education Academic Research Fund through MOE2017-T2-2-094, which is gratefully acknowledged.

²The numeral ‘one’ is *tiq* in citation form but reduces to *tǎ* with a classifier. Here we adopt the transcription system of Okell (1994, 2002); of note, the coda *q* indicates a glottal stop and *ǎ* reflects a schwa. We use the following abbreviations in glosses: ACC = accusative, ASP = aspect, CL = classifier, CONJ = conjunction, DEM = demonstrative, FUT = future, NOM = nominative, PL = plural, POSS = possessive, PROG = progressive, PRT = particle, and NFUT = non-future.

In addition, Burmese distinguishes anaphoric and unique definites in the availability of demonstratives: anaphoric definites, which refer to referents that have been mentioned in the prior discourse, may be introduced by an optional demonstrative *èhdi*, as in (3):

(3) **Anaphoric definites in subject position:**

MM=gá k'wè tǎ-kaun=néh caun tǎ-kaun=go hnaúnsheq-ne-deh.
 MM=NOM dog one-CL.animal=CONJ cat one-CL.animal=ACC bother-PROG-NFUT
 (Èhdi) k'wè=gá MM=go lai-q-ne-deh.
 DEM dog=NOM MM=ACC chase-PROG-NFUT
 'Maung Maung was chasing a dog and a cat. **The dog** is chasing MM.'

We present these generalizations regarding the expression of definite and indefinite nominals in detail, supported by judgments of the felicity of specific forms in context. This data is presented in section 3, following a brief introduction to relevant aspects of Burmese grammar in section 2.

We then provide a compositional semantics for definite and indefinite singular nominals in Burmese, in section 4. We first present an analysis for Burmese unique and anaphoric definites based especially on prior work by Schwarz (2009; 2013) and Jenks (2018). We then propose a new approach to the numeral 'one,' which makes Burmese 'one'-indefinites as in (2) a kind of choice function indefinite. We also argue there against an alternative approach where 'one' itself functions as an indefinite article, as is cross-linguistically common (Givón, 1981).

Section 5 turns to nominals in object position, where we see that bare nouns may be interpreted as indefinite as in (4), under certain circumstances. We analyse such bare noun indefinites as having undergone a process of pseudo-incorporation (see e.g. Massam, 2001; Dayal, 2011; Borik and Gehrke, 2015).

(4) **Indefinites in object position:**

Sàn Sà=gá youn [%](tǎ-kaun) (=go) weh-ne-deh.
 San San=NOM rabbit one-CL.animal =ACC buy-PROG-NFUT
 'San San is buying a rabbit.'

The behavior of the object in (4) contrasts from nominals in other positions, as in (2), where the numeral 'one' and classifier are necessary for the intended indefinite interpretation.

2 Background

2.1 Word Order and Case Marking

Burmese is a head-final language with default SOV word order and nominative-accusative case alignment. The case markers (nominative *ká/gá*, accusative *ko/gó*) encliticize to their noun phrases. Both case markers may be dropped, subject to some restrictions related to the word order of the

clause. Consider the examples of transitive clauses below, with canonical SOV word order in (5) and an OSV order in (6):

(5) **Canonical SOV order:**

Thămădá % (=gá) Maun Maun (=go) p'eiq-k'éh-deh.
 President =NOM Maung Maung =ACC invite-ASP-NFUT
 'The president invited Maung Maung.'

(6) **OSV order via scrambling:**

Maun Maun *(=go) Thămădá (=gá) ___ p'eiq-k'éh-deh.
 Maung Maung =ACC president =NOM invite-ASP-NFUT
 'The president invited Maung Maung.'

In these and other examples, we observe a general preference for case markers being strongly preferred between arguments and more optional between an argument and the verb.⁴ In these examples above, we see that the accusative case marker is optional in the canonical SOV order in (5), but becomes mandatory when the object is scrambled as in (6). Dropping the nominative case marker is judged as degraded by some speakers in canonical SOV order, but possible in OSV order.

It is cross-linguistically common for the presence or absence of case-marking to reflect differences in the nominal's interpretation; see for example Aissen (2003) and references there. In previous work on Burmese, Jenny and Hnin Tun (2013) report that both definiteness and animacy affect the presence or absence of case markers.⁵ However, in our investigation we observed no such correlations between the presence or absence of case markers with other factors, with their optionality being governed only by the positional factors mentioned above. In particular, for all examples that we report on in this paper, we systematically controlled for the presence or absence of case markers and found this to not affect the interpretation of the argument in question. In this paper, we therefore present all examples with case markers throughout. The one exception to this complete independence between case marking choice and interpretation is in the interpretation of objects, which we discuss in detail in section 5.

2.2 Noun Phrase Structure

A basic schema for the organization of noun phrases in Burmese is given in (7), based on descriptions in Soe (1999, ch. 3) and Simpson (2005).

(7) **Burmese noun phrase schema:**

(Dem) (RC) N (Adj) (PL) (Num-CL)

Most adjectives occur postnominally, though there are a few that can additionally occur prenominal with slightly modified morphology. For example, colour terms can occur in both positions, as

³The case markers are underlyingly *ká* and *ko* but appear as *gá* and *go* here in (5-6) and in many other environments due to regular word- and phrase-internal intervocalic voicing.

⁴Similar observations are reported by Jenny and Hnin Tun (2013, p. 721) and Lazareva (2014).

⁵For example: "P arguments with a definite human referent are normally marked by the object marker *ko*, but this is not necessarily the case with non-human or indefinite referents" (Jenny and Hnin Tun, 2013, p. 703).

seen in pairs such as *k'wè āneq* ‘black dog’ with postnominal ‘black’ and *āneq-yaun k'wè* ‘black colour dog’ with a prenominal modifier. Adjectives can also be the predicate of a relative clause, which then occurs prenominally.

Turning towards demonstratives, Burmese encodes a three-way contrast for proximity to the speaker with the demonstratives *di*, *èhdi*, and *ho*. None of the demonstratives are encoded for number. The proximal demonstrative *di* is used strictly in contexts where the referent is within reach of the speaker and is gestured to in some way, e.g. by pointing or with a head nod in that direction. The distal demonstrative *ho* may be used for referents that are not present in the speech situation. The medial demonstrative *èhdi* can be used deictically for referents that are out of reach, though speakers typically still require the referent to be visible to the interlocutors. Of interest in this paper is *èhdi* and its non-deictic use. Particularly, we see in section 3.2 its ability to be used in anaphoric definites, regardless of visibility to the interlocutors.

Definite and indefinite noun phrases that describe plural referents must use a plural marker such as *dwe* in *k'wè-dwe* ‘dogs.’ Here we concentrate on the use of noun phrases with singular referents, but we refer the reader to New (2020) for in-depth description and discussion of the semantics of Burmese plural markers.

Finally, numerals require a classifier when appearing with a nominal. In our investigation, we have only elicited nominals occurring in isolation in mathematical descriptions as in (8). Otherwise, numerals and classifiers always cooccur as one unit.

- (8) *Tiq=néh thòun paùn-yin lè yá-deh.*
 one=CONJ three add-if four get-NFUT
 ‘One plus three is four.’
 (Literally: ‘If you add 1 and 3, you get 4.’)

3 The Expression of (In)Definiteness

In this section, we present our core data on the expression of definiteness and indefiniteness in Burmese. Noun phrases describe particular individuals which may or may not be known or immediately identifiable for the speaker, addressee, or others. Different languages use different strategies to express such distinctions in the status of noun phrases and their referents. For example, English only distinguishes between definites and indefinites, using the articles *the* and *a* respectively.

- (9) **Nonspecific indefinite:**
 A dog is scratching the door, but I don’t know which dog.
- (10) **Specific indefinite:**
 A dog is scratching the door, and I know which dog it is.
- (11) **Unique definites:**
- a. **The** president is talking to Maung Maung. (Uttered in Myanmar.)
 - b. **The** teacher is scolding MM. (Uttered in a class with one teacher.)

(12) **Anaphoric definite:**

San San was looking at a dog and a cat. She is buying **the** cat.

The two-way morphological distinction in English between (9-10) and (11-12) belies additional, relevant semantic distinctions which can be drawn. The two indefinite noun phrases *a dog* in (9-10) may share the property of not having a unique referent for the description which can be identified by an addressee, but they differ in whether or not the speaker has a particular referent in mind, i.e. in (epistemic) specificity (see e.g. Farkas, 2002). The definite noun phrase *the dog* may be used both where there is a unique referent for the in the relevant situation, as in (11), as well as for referring back to a particular individual mentioned prior.

As we will see, Burmese is a language that morphologically distinguishes unique versus anaphoric definites, as many other languages do as well (Schwarz, 2013; Jenks, 2018). As an article-less language, Burmese uses the numeral ‘one’ and medial demonstrative *èhdi* to express (in)definiteness distinctions. In brief, we will see that singular indefinites are introduced with the numeral ‘one’, unique definites must be bare (without any demonstrative or numeral), and anaphoric definites may be bare or take the demonstrative *èhdi*. This basic pattern is however complicated in object position. As such, in this section, we discuss the general behavior of noun phrase interpretation in Burmese, with all supporting examples with noun phrases in subject position. We then discuss the behavior of noun phrases in object position in section 5.

3.1 Indefinites

Singular indefinites in non-object position require the numeral ‘one’ with an appropriate classifier. There is no distinction between non-specific indefinites (13) and specific indefinites (14).

(13) **Nonspecific indefinite:**

You work at a doggy daycare. There are multiple dogs outside and Hla Hla and you are in the back room. You hear a dog scratching on the door, but don't know which dog it is. You tell Hla Hla:

K'wè *(tǎ-kaun) =gá dǎgà=go c'iq-ne-deh.
 dog one-CL.animal =NOM door=ACC scratch-PROG-NFUT
 ‘A dog is scratching the door.’

(14) **Specific indefinite:**

You work in a doggy day care. There are multiple dogs in the room with you and you are on the phone with Hla Hla. You see one of the dogs scratching on the door. Hla Hla asks you what that noise is. You say:

K'wè *(tǎ-kaun) =gá dǎgà=go c'iq-ne-deh.
 dog one-CL.animal =NOM door=ACC scratch-PROG-NFUT
 ‘A dog is scratching the door.’

The contexts in both (13) and (14) make clear that there is no unique individual that satisfies the nominal description ‘dog’ in the context. Given this, a unique definite (bare noun) cannot be used. The examples differ with regards to whether the speaker has a specific referent in mind, but we see

that this is inconsequential to the expression of the indefinite in Burmese. What crucially matters instead is that the hearer, in this case *Hla Hla*, lacks knowledge of the individual being referred to.

3.2 Definites

Unique definites must be bare, without a demonstrative or numeral. Without a previous mention in the discourse, the demonstratives such as the medial *èhdi* can only be used deictically, i.e. with the speaker gesturing to the referent.

(15) **Immediate situation definite:**

You and Maung Maung (MM) are at Hla Hla's house. She has one dog, who is playing with MM. Neither of you can see them right now. You tell Hla Hla:

(*Èhdi) **K'wè** (*tǎ-kaun) =gá MM=go caiq-ne-deh.
 DEM dog one-CL.animal =NOM MM=ACC like-PROG-NFUT
 'The dog likes Maung Maung.'

The context in (15) specifies that there is a unique referent that all interlocutors are aware of, though it has not been previously mentioned and cannot be identified by gesture. In such a context, neither the demonstrative nor the numeral 'one' can be used felicitously.

Anaphoric definites, which refer to a prior discourse referent, are commonly expressed with the medial demonstrative *èhdi*, without any pointing gesture. This demonstrative is not required, allowing anaphoric definites to be bare, and thus potentially confusable with a unique definite form.

For illustration, consider the example in (16) below. The speaker's first sentence refers to a dog with the 'one'-indefinite *k'wè tǎ-kaun* 'a dog' (italicized). The second sentence then refers to that same dog with the anaphoric definite (*èhdi*) *k'wè* (in bold). Note that here, the bare variant *k'wè* must be an anaphoric definite and cannot be confused with a unique definite, as there is no situationally unique dog in the context.

(16) **Anaphoric definite:**

You go to an adoption drive with MM. There's an open area for the animals to hang out and people to mingle about. Up for adoption are a few dogs and cats. When MM causes trouble, you tell an organiser:

MM=gá *k'wè tǎ-kaun*=néh caun tǎ-kaun=go hnaúnsheq-ne-deh.
 MM=NOM dog one-CL.animal=CONJ cat one-CL.animal=ACC bother-PROG-NFUT
 (Èhdi) **k'wè**=gá MM=go lai-q-ne-deh.
 DEM dog=NOM MM=ACC chase-PROG-NFUT
 'MM was bothering a dog₃ and a cat. The dog₃ is chasing MM.'

3.3 Summary

From our data, we see that Burmese uses the presence or absence of the numeral 'one' to distinguish singular definites and indefinites. Additionally, Burmese also distinguishes unique and anaphoric definites through the availability of the medial demonstrative *èhdi*. The possible interpretations of these nominal forms is summarised in (17).

(17) **Summary of Burmese singular noun phrase forms:**

	indefinite	definite	
		unique	anaphoric
NP	×	○	○
NP one-CL	○	×	×
Dem NP	×	×	○

This pattern holds for all four of our speakers in subject position. While this pattern extends to object position for one speaker, nominals in object position behave differently for the other three.

4 Analysis

In this section, we develop an analysis for the interpretation of singular noun phrases in Burmese which accounts for the following features: (a) bare noun phrases are always definite, (b) anaphoric definites allow for demonstratives, and (c) noun phrases with ‘one’ are indefinite. Here we will describe Burmese noun phrases as categorically being DPs, although our analysis does not rely on this syntactic label. A notable property of our proposal is that we treat all DPs without quantifiers in Burmese as definite descriptions, *including* the indefinites with ‘one’ described above. ‘One’ will then be an intersective modifier that uses a choice function which is existentially bound above, thus building a choice function indefinite out of a definite description. Evidence for this approach — as opposed to an alternative where the numeral ‘one’ is analyzed as an indefinite article — will be presented below. We begin in section 4.1 with our analysis for the two forms of definite descriptions in Burmese, followed in section 4.2 with our analysis for indefinites with ‘one.’

4.1 Articulated Definiteness in Burmese

This section looks at the two morphologically distinct definites in Burmese: unique definites with a contextually unique referent and anaphoric definites which refer to a previously mentioned discourse referent. Again, here we will only discuss singular nominals and refer the reader to New (2020) for recent discussion of the semantics of plural expressions in Burmese. As seen in section 3, unique definites must be expressed bare, whereas anaphoric definites may optionally take the demonstrative *èhdi*. A similar pattern that morphologically distinguishes anaphoric definites with the use of demonstratives is found in Mandarin, another article-less language (Jenks, 2018). Taking inspiration from this work, we propose that all nominals without demonstratives or quantifiers involve the null definite determiner ι , defined in (18).⁶

(18) ι takes a situation argument (s):

$$\llbracket \iota \rrbracket = \lambda s_s . \lambda P_{\langle e, \{s, t\} \rangle} : \exists! x [P(x)(s)] . \iota x [P(x)(s)]$$

ι in (18) takes two arguments: a situation argument s which operationalises the contextual restriction on nominal domains, and the nominal property P . Situations (type s) can be thought of

⁶Jenks (2018) proposes that bare NPs in Mandarin undergo an ι -type shift, rather than assuming a null D head. Further work is necessary to empirically distinguish these approaches.

as subparts of possible worlds; see e.g. Kratzer (2019). The situation argument allows us to restrict the context of evaluation for the nominal property to a salient situation, such as the current room. The DP headed by ι in (19) can therefore be felicitously used in a scenario where there is a unique dog in a room (the immediate situation s), despite there being other individuals that hold the property of being a dog in the world extending beyond this situation.

(19) **A situationally unique, “bare NP” definite using ι :**

$$\llbracket [\text{DP } [\iota s] \text{ dog}] \rrbracket = \iota x [x \text{ dog in } s]$$

Presupposition: There is a unique dog in s

Anaphoric definites are headed by a distinct definite determiner, ι^x , which can be realised overtly as the demonstrative *èhdi*, or be null.⁷ In contrast to ι , which takes a situation argument s , ι^x in (20) takes an index argument y , represented syntactically by a simple pronoun, which refers to the prior discourse referent. The full DP in (21) then returns the unique individual that satisfies the nominal description in the evaluation world and which is equal to the index individual.

(20) **ι^x (*èhdi*) takes an index argument (y):**

$$\begin{aligned} \llbracket \iota^x \rrbracket &= \lambda y_e . \lambda P_{\langle e, \langle s, t \rangle \rangle} : \exists ! x [P(x)(w^*) \wedge x = y] . \iota x [P(x)(w^*) \wedge x = y] \\ &= \lambda y_e . \lambda P_{\langle e, \langle s, t \rangle \rangle} : P(y)(w^*) . y \end{aligned}$$

(21) **Anaphoric definite with *èhdi* using ι^x :**

$$\llbracket [\text{DP } [\iota^x (\textit{èhdi}) \textit{pro}_3] \text{ dog}] \rrbracket = \iota x [x \text{ dog in } w^* \wedge x = g(3)] = g(3)$$

Presupposition: $g(3)$ is a dog in w^*

We note that the semantics we propose for ι^x in (20) differs from that in Jenks (2018) and the ‘strong’ article of Schwarz (2009) in not taking a situation argument. We discuss and motivate this choice in Erlewine and Lim (2020).

4.2 Indefinites with ‘one’

Indefinites take the numeral ‘one’ with an appropriate classifier. At first glance this may suggest that the numeral ‘one’ has been grammaticalized into an indefinite article, as is well-attested cross-linguistically (Givón, 1981).⁸ We argue against such an approach from the fact that the numeral ‘one’ may appear in anaphoric definites, where it clearly does not force an indefinite interpretation. Consider example (22):

(22) **Anaphoric definites can take ‘one’:**

You go to an adoption drive with Maung Maung (MM). There’s an open area for the animals to hang out and people to mingle about. One dog and one cat are up for adoption, among other animals. When MM causes trouble, you tell an organizer:

⁷The proximal and distal demonstratives *di* and *ho* may be analyzed as variants of this same ι^x entry which introduce proximate or distal requirements on the referent. The demonstrative *èhdi*, which can be described as a “medial” demonstrative, is then simply the unmarked form.

⁸But see also Becker (2018, sect. 7.2) for discussion of concerns regarding the empirical basis for describing ‘one’ as an indefinite article in many languages. We thank Jenneke van der Wal for bringing this work to our attention.

MM=gá *k'wè* (**tǎ-kaun*) =néh caun=go hnaúnsheq-ne-deh. **Èhdi k'wè**
 MM=NOM dog one-CL.animal =CONJ cat=ACC bother-PROG-NFUT DEM dog
 (**tǎ-kaun**) =gá MM=go laiq-ne-deh.
 one-CL =NOM MM=ACC chase-PROG-NFUT
 ‘Maung Maung was bothering the dog₃ and the cat.
 The/that (one) dog₃ is chasing Maung Maung.’

Note that the extension of ‘dog’ is unique in this context, supporting the use of the bare noun definite *k'wè* (italicized) in the first sentence, but not an indefinite with ‘one.’ *Èhdi k'wè* in the second sentence (bolded) is anaphoric to this dog mentioned in the first sentence. What is of interest here is the fact that the anaphoric definite in the second sentence can optionally be modified with ‘one,’ with no change in meaning. Descriptively, adding ‘one’ to the DP in the first sentence is disallowed because doing so would form an indefinite, which is infelicitous in the context; however, adding ‘one’ to an anaphoric definite does *not* result in an indefinite meaning. See Erlewine and Lim (2020) for discussion of the source of this anti-uniqueness requirement on the use of indefinites with ‘one,’ and its apparent lack in the anaphoric definite.

We now turn to the compositional semantics of ‘one’-indefinites. We propose that ‘one’ with a classifier forms a modifier that restricts the nominal domain to a singleton set using a particular choice function f_{cf} . See (23) for this composite meaning. μ_{CL} is a measure function that takes an individual and returns the number of CL-atoms that it contains. Here we leave open the question of the precise division of labor between the numeral ‘one’ and the classifier that together make up the meaning in (23), and instead concentrate on their joint contribution.

$$(23) \quad \llbracket [\text{one}_f \text{ CL}] \rrbracket = \lambda P_{\langle e, \{s, t\} \rangle} \cdot \lambda x_e \cdot \lambda s_s \cdot x = f_{cf}(\lambda y \cdot P(y)(s) \wedge \mu_{CL}(y) = 1)$$

We propose that an indefinite such as *k'wè tǎ-kaun* ‘a dog’ has a structure as in (24). The structure is a singular definite description headed by the null definite determiner ι , and therefore will refer to a particular individual. However, that choice of individual will depend on the the choice function f_{cf} . As seen in the expansion of the denotation in (24), the DP denotes whichever individual f_{cf} returns, given the set of individuals that have the property of being an atomic dog in situation s . As long as the extension of the property in the relevant situation s is not empty, the uniqueness and existence requirements of ι will be satisfied, regardless of the choice of f_{cf} .

$$(24) \quad \llbracket [\text{DP} [\iota s] [\text{dog} [\text{one}_f \text{ CL}]]] \rrbracket = \iota x [x = f_{cf}(\lambda y \cdot y \text{ is an atomic dog in } s)] \\ = f_{cf}(\lambda y \cdot y \text{ is an atomic dog in } s)$$

Presupposition: There is an atomic dog in s

We propose that the choice function is then existentially bound from above, forming a choice function indefinite. ‘A dog is scratching the door’ in (13) and (14) could then be represented as in (25). In complex sentences, the existential binder $\exists f_{cf}$ could be adjoined at different heights, leading to variable scope-taking by the indefinite, which we show to be possible in section 5.3.

$$(25) \quad \textbf{Interpreting ‘A dog is scratching the door’ (13, 14):} \\ \exists f_{cf} [[\text{DP} [\iota s] [\text{dog} [\text{one}_f \text{ CL}]]] \text{ is scratching the door in } w^*] \\ = \exists f_{cf} [f(\lambda y \cdot y \text{ atomic dog in } s) \text{ is scratching the door in } w^*] \\ \rightsquigarrow 1 \text{ iff } a \text{ dog in } s \text{ is scratching the door in } w^*$$

Our proposal here offers a new approach to the compositional semantics of indefinites in an article-less language where bare NPs are definite: ‘one’ is an intersective modifier that restricts the nominal domain to a singleton set, using a choice function which is existentially bound above. A consequence of this approach as presented here is that, for a nominal property NP that has a unique referent in the relevant situation, the bare NP definite and the ‘one’-indefinite “NP one CL” are predicted to be equivalent. In practice, however, the use of the ‘one’-indefinite is blocked in such a context. In Erlewine and Lim (2020), we propose that modification by ‘one’ is subject to a Non-Vacuity constraint, which derives this anti-uniqueness requirement on the use of ‘one’-indefinites.

5 Indefinites in Object Position

The analysis just presented in section 4—and further elaborated on in Erlewine and Lim (2020)—derives the one-to-one correspondence between nominal form and interpretation presented in 3 above: singular (unique) definites are bare NPs whereas singular indefinites take the numeral ‘one.’ This clear pattern for the expression of (in)definiteness holds for all of our speakers in subject and oblique/prepositional argument positions. However, as mentioned above, the facts in object position are more complicated. In particular, for three of our four speakers, indefinites in object position can be bare, without the numeral ‘one.’

In this section, we describe this possibility of bare noun indefinites and the various restrictions that apply to them in the grammars of our speakers. We propose that bare noun indefinites are pseudo-incorporated (see e.g. Massam, 2001; Dayal, 2011; Borik and Gehrke, 2015), and document the variation amongst our speakers in the availability of pseudo-incorporation and conditions on its application. We also show that bare noun indefinites consistently take narrow scope with respect to other scope-taking operators, unlike ‘one’-indefinites, which is predicted by our account.

5.1 Restrictions on Bare Noun Indefinites

Consider the expression of an indefinite singular object. All four of our speakers allow for the use of an NP with ‘one’ as in (26) below. This reflects the generally available strategy of forming a choice function indefinite in the language, as described above.

(26) **‘One’-indefinite in object position:**

Sàn Sà=gá **youn tǎ-kaun** (=go) weh-ne-deh.
 San San=NOM rabbit one-CL.animal =ACC buy-PROG-NFUT
 ‘San San is buying a rabbit.’

For three of our four speakers, indefinites in object position can also be a bare NP without ‘one,’ as in example (27) below, but with certain restrictions.

(27) **Bare noun indefinite object, possible for three speakers:**

Sàn Sà=gá **youn** ([%]=go) weh-ne-deh.
 San San=NOM rabbit =ACC buy-PROG-NFUT
 ‘San San is buying a rabbit.’

In this section, we describe the various restrictions that hold of bare noun indefinites in object position. We therefore concentrate in this section on the judgments of our three speakers who allow for bare noun indefinites, and summarise the pattern of judgments for all four of our speakers at the end of this section. We note that all of the data that we report in this section reflect judgments of examples in contexts that support indefinite or unique definite interpretations of the singular nominals in question, just as we presented in section 3 above. However, to simplify the presentation here, we present our data without their supporting contexts and use English translations with *the* versus *a* to indicate intended nominal meanings as (unique) definite versus indefinite.

We begin by discussing the availability of accusative case marking. For the bare noun indefinite (27), the accusative marker *ko* is judged as dispreferred for all three speakers, albeit with some variation in the strength of this judgment, as we discuss below. Note that the accusative marker is completely optional for the ‘one’-indefinite in (26) for all our speakers. The bare NP object in (27) can also be interpreted as a definite ‘the rabbit’ for all speakers, with the accusative marker *ko* then being optional. Due to the marked status of accusative case marking on bare noun indefinites, we drop the accusative case from all objects in the examples we present in the remainder of this section.

Our example of a bare noun indefinite in (27) involves a description in the present progressive. It is worth noting that bare noun indefinites are not limited to clauses with particular tense/aspect specifications. Below we present examples in the past perfective, in (28), and with future tense, in (29). As with the present progressive example (27), the bare noun indefinite is ambiguous between being definite and indefinite.

(28) **Bare noun indefinite with past perfective:**

Maun Maun=gá p’à sha-twé-laiq-teh.
 Maung Maung=NOM frog search-find-ASP-NFUT
 ✓ ‘Maung Maung found a frog.’
 ✓ ‘Maung Maung found the frog.’

(29) **Bare noun indefinite with future:**

Maun Maun=gá youn weh-meh.
 Maung Maung=NOM rabbit buy-FUT
 ✓ ‘Maung Maung is going to buy a rabbit.’
 ✓ ‘Maung Maung is going to buy the rabbit.’

Modification of bare indefinites is also dispreferred, although again the strength of this judgment varies between our speakers. However, as bare indefinites are not strictly limited to unmodified nouns in the general case, we describe bare noun indefinites as having undergone pseudo-incorporation à la Massam (2001) rather than noun incorporation.

(30) **Some variation in the acceptability of modifiers:**

a. Sà̀n Sà̀n=gá caun ăp’yu ywè-ne-deh.
 San San=NOM cat white pick-PROG-NFUT
 % ‘San San is picking a white cat.’
 ✓ ‘San San is picking the white cat.’

- b. Maun Maun=gá c'i eĩnji weh-ne-deh.
 Maung Maung=NOM cotton shirt buy-PROG-NFUT
 % 'Maung Maung is buying a cotton shirt.'
 ✓ 'Maung Maung is buying the cotton shirt.'

As noted in section 2, nominal arguments in Burmese may be scrambled with generally no change in the meaning. However, this is not the case with bare noun indefinites. While 'one'-indefinites can be scrambled away from the verb, bare noun indefinites cannot. The scrambled bare NP object *caun* 'cat' in (31b) thus allows only a definite interpretation.

(31) **Bare noun indefinite cannot be scrambled:**

- a. Sàɴ Sàɴ=gá caun ywè-ne-deh.
 San San=NOM cat pick-PROG-NFUT
 ✓ 'San San is picking a cat.'
 ✓ 'San San is picking the cat.'
- b. Caun Sàɴ Sàɴ=gá ___ ywè-ne-deh.
 cat San San=NOM pick-PROG-NFUT
 * 'San San is picking a cat.'
 ✓ 'San San is picking the cat.'

Finally, we note that the availability of bare noun indefinites is limited specifically to object position.⁹ We have already seen that bare NPs must be definite in subject position for all of our speakers, in section 3. The same is true for objects of prepositions and other oblique nominal positions, as in (32).

(32) **Nominals in an adjunct phrase:**

- Aun=gá pàɴjan=go k'wè *(tǎ-kaun) =néh thwà-ne-deh.
 Aung=NOM park=ACC dog one-CL.animal =with go-PROG-NFUT
 'Aung is going to the park with a dog.'

When in the comitative phrase in (32), *k'wè* 'dog' once again requires the numeral 'one' and classifier *tǎ-kaun* to get an indefinite expression. This is true regardless of the position of the adjunct phrase in the clause.

We summarise our four speakers' judgments regarding the availability of indefinite interpretation without 'one' in different environments in the table in (33) below. We point to representative examples for each condition to the right of the table, but the patterns of judgments we report here reflect the judgments of numerous different examples across multiple sessions with each speaker.

⁹We have also attempted to determine whether the availability of bare noun indefinites track thematic patienthood or grammatical objecthood, i.e. by comparing the interpretation of unergative and unaccusative subjects. We have thus far been unsuccessful in eliciting clear and consistent judgments for the interpretation of bare noun patient subjects. Therefore, here, we tentatively report bare noun indefinites as limited to object position, but we leave open the possibility that the true generalization is that bare noun indefinites are possible for patients, rather than objects specifically.

(33) **Availability of indefinite interpretation for bare NP, by speaker:**¹⁰

	A	B	C	D	
subj's and other non-obj's	×	×	×	×	see §3, (32)
bare N without case	×	○	○	○	(27–29)
with case marking	×	×	(×)	??	(27) with <i>ko</i>
with modification	×	×	○	(○)	(30)
scrambled away from verb	×	×	×	×	(31)

Speaker A is our one speaker who consistently disallows singular indefinites without ‘one’ in all environments. Speakers B, C, and D are our three speakers who allow for bare noun indefinites, but with different restrictions on their shape and size. We attribute this variation to a particular interpretation strategy being possible for the latter three speakers, but with slightly distinct syntactic restrictions on its use. We describe the semantics of this operation in the following section.

5.2 Pseudo-Incorporation

We have seen that bare nouns may be indefinite for some of our speakers, with variable restrictions on their size and shape, but only in object position (or for patients; see footnote 9) and when adjacent to the verb. Nominals that receive indefinite interpretation under such conditions have been documented in a wide range of languages — see e.g. Massam (2001), Dayal (2011), the works in Borik and Gehrke (2015), and references therein — and following this literature, we refer to these nominals as having undergone *pseudo-incorporation*, also known as Pseudo Noun Incorporation. See the introduction to Borik and Gehrke (2015) for an overview of cross-linguistically common properties of pseudo-incorporation.

Here, for concreteness, we sketch one possible analysis for the semantics of pseudo-incorporated nominals based on Chung and Ladusaw (2004).¹¹ Chung and Ladusaw propose a composition rule called Restrict which allows a nominal predicate to compose with a predicate without saturating the argument. We take pseudo-incorporated nominals (bare noun indefinites) in Burmese to be NPs, rather than full DPs, and denote predicates of type $\langle e, t \rangle$. Composing the object NP with the verb will result in a predicate with a restricted but unsaturated internal argument. Existential closure then applies, necessarily low, at the predicate (e.g. VP) level. This results in so-called semantic incorporation: a necessarily narrow scope indefinite meaning for the pseudo-incorporated nominal. In the following section, we show that bare noun indefinites in Burmese indeed take obligatory narrow scope.

This proposal for the syntax/semantics of bare noun indefinites allows us to understand and model the variation as well as uniformities that we observe in our speakers’ grammars. For

¹⁰Judgments in parentheses: Speaker C judged most but not all examples with case marking to be unacceptable and speaker D judged most but not all examples with modification to be acceptable, with the intended indefinite interpretation. ?? judgment: Speaker D judged indefinite bare nouns with case marking inconsistently, but reports a preference for case drop when minimal pairs with and without case marking are presented.

¹¹Alternative approaches include type-shifting the predicate as in Geenhoven (1998) and the Derived Kind Predication of Chierchia (1998).

one speaker, all nominal arguments must be full DPs, so there are no NP nominals that pseudo-incorporation applies to. For our other speakers, NP arguments exist but vary in their possible size: e.g. some marginally allow accusative case marking and some allow adjectival modification. For all of these speakers, though, bare NPs scrambled away from the verb cannot be interpreted as indefinite. This mode of composition via Restrict cannot apply if the object moves away from the verb, leaving a trace of type *e*, explaining the adjacency requirement.

The semantics for pseudo-incorporation sketched above, as well as prominent alternatives (see footnote [11]), capture the fact that pseudo-incorporated nominals are necessarily narrow-scope indefinites. The end result, then, is that we predict bare NPs in Burmese to have two possible interpretations: definite (with covert definite determiner) or a narrow-scope indefinite (via pseudo-incorporation), but never a wide-scope indefinite. This pattern of interpretation for bare nominals is a cross-linguistically well-attested pattern in article-less languages (see e.g. Dayal, [2004], p. 404ff), although not the only possibility (see e.g. Šimík and Demian, [2020]). In the next section, we confirm the predictions of this theory by investigating the scope-taking behavior of bare noun indefinites.

5.3 The Scope of Indefinites

We have seen that Burmese allows for two types of indefinites in object position: indefinites with ‘one,’ which are available in any nominal position and which we have analyzed as choice function indefinites in section [4.2], and bare noun indefinites, which we proposed to analyze as pseudo-incorporated nominals. In this section, we investigate the scope-taking of these two classes of indefinite objects, reporting only judgments from our three speakers who allow for both types of indefinites. We will see that bare noun indefinites consistently take strictly narrow scope with respect to other scope-taking operators, whereas ‘one’-indefinites exhibit a great degree of flexibility in their scope-taking. This contrast is explained by and in turn supports our analysis for these two distinct types of indefinites in the language.

We describe the scope-taking of the two types of indefinite objects with respect to negation, the volitional auxiliary *c’in* ‘want,’ and conditional clauses, beginning with negation. In negative clauses, we see a clear distinction between the scope-taking behaviour of ‘one’-indefinites, which must scope over negation, and bare noun indefinites, which must scope below negation.^[12]

(34) **In negative clauses:**

- a. Sàɴ Sàɴ=gá **youn** **tǎ-kaun** (=go) **mǎ-weh-géh-bù.**
 San San=NOM rabbit one-CL.animal =ACC NEG-buy-ASP-NEG
 * ‘San San didn’t get any rabbits.’ * NEG > ∃
 ✓ ‘There’s a rabbit that San San didn’t get.’ ✓ ∃ > NEG
- b. Sàɴ Sàɴ=gá **youn** (=go) **mǎ-weh-géh-bù.**
 San San=NOM rabbit =ACC NEG-buy-ASP-NEG
 ✓ ‘San San didn’t get any rabbits.’ ✓ NEG > ∃
 * ‘There’s a rabbit that San San didn’t get.’ * ∃ > NEG

¹²Burmese also has NPIs of the form *wh-hma* (Erlewine and New, [2019]), which allows for the expression of NEG > ∃ even for speakers without bare noun indefinites.

Under the volitional auxiliary *c'in* ‘want,’ ‘one’-indefinites can take wide or narrow scope meanings, with *dhäht'è tǎ-yauq* ‘a rich man’ having either a specific referent or referring to any rich man. As in negative clauses above, the bare noun indefinite can only take the narrow scope reading.

(35) **Under modal verb ‘want’:**

- a. Sàɴ Sàɴ **dhäht'è tǎ-yauq** laqt'aq-**c'in**-deh.
 San San rich.man one-CL.person marry-want-NFUT
 ✓ ‘San San wants to marry a/any rich man.’ ✓ want > ∃
 ✓ ‘There’s a rich man that San San wants to marry.’ ✓ ∃ > want
- b. Sàɴ Sàɴ **dhäht'è** laqt'aq-**c'in**-deh.
 San San rich.man marry-want-NFUT
 ✓ ‘San San wants to marry a/any rich man.’ ✓ want > ∃
 * ‘There’s a rich man that San San wants to marry.’ * ∃ > want

Similar facts hold when we consider indefinite objects in conditional clauses. The ‘one’-indefinite can take wide and narrow scope, while the bare noun must take narrow scope within the conditional clause:

(36) **In conditional clause:**

- a. Nga=gá **ùlè tǎ-yauq** t'aq-**yin**, nga c'àn-t'à-meh.
 1SG=NOM uncle one-CL.human kill-if 1SG rich-ASP-FUT
 ✓ ‘If I kill an/any uncle of mine, I will be rich.’ ✓ if > ∃
 ✓ ‘There’s an uncle of mine, s.t., if I kill him, I will be rich.’ ✓ ∃ > if
- b. Nga=gá **ùlè** t'aq-**yin**, nga c'àn-t'à-meh.
 1SG=NOM uncle kill-if 1SG rich-ASP-FUT
 ✓ ‘If I kill an/any uncle of mine, I will be rich.’ ✓ if > ∃
 * ‘There’s an uncle of mine, s.t., if I kill him, I will be rich.’ * ∃ > if

As we can see, there is clear difference in the scope-taking abilities of ‘one’-indefinites and bare noun indefinites with respect to negation, the volitional auxiliary ‘want,’ and conditional clauses. We summarise these possibilities for our speakers who accept both types of indefinite objects in the table in (37):

(37) **Scope-taking possibilities of the two types of indefinite objects:**

bare NP	‘one’-indefinite
NEG > ∃	∃ > NEG
want > ∃	∃ > want, want > ∃
if > ∃	∃ > if, if > ∃

These differences in the scope-taking of ‘one’ versus bare indefinite objects is explained by our proposal. First, the semantics of pseudo-incorporation as in section 5.2 predicts that bare noun indefinites will necessarily take narrow scope with respect to all other scope-taking operators, as is the behavior of pseudo-incorporated nominals cross-linguistically. On the other hand, we

have proposed that ‘one’-indefinites are choice function indefinites whose quantificational scope will be determined by the height at which the existential choice function binder is merged. The pattern of scope-taking for ‘one’-indefinites in (37) is explained if this existential binder can only adjoin to clause boundaries, e.g. TPs. For example, in a conditional construction, the existential binder could adjoin within the conditional clause or to the top of the full clause, scoping over the conditional. If we analyze ‘want’ as involving an embedded (control) clause, but negative clauses to be monoclausal, we furthermore explain the scope ambiguity with respect to ‘want’ but scope rigidity with respect to negation.

6 Conclusion

The study of (in)definiteness in contemporary linguistics has developed largely, at least initially, based on the study of languages such as English, where morphological oppositions between articles such as *the* versus *a* demarcate categories of study. In languages without articles, there is a natural question of how corresponding semantic oppositions are expressed, if at all, and existing work has found that not all article-less behave the same in this regard (see e.g. Dayal, 2004; Šimík and Demian, 2020).

In this paper, we contribute to this growing literature on the typology of nominal interpretation in article-less languages, through our original elicitation work on Burmese. We have shown first that Burmese distinguishes unique and anaphoric definites (see also Schwarz 2009, 2013) through the availability of demonstratives for the latter but not the former, reminiscent of the pattern attested in Mandarin Chinese (Jenks, 2018). Singular indefinites generally must be marked with the numeral ‘one’ with an appropriate classifier. We argue against analyzing this use of the numeral ‘one’ as an indefinite article, through its availability in anaphoric definites, and instead develop a novel analysis for ‘one’ as an intersective modifier which builds definite descriptions that function as choice function indefinites; see Erlewine and Lim (2020) for further details on this aspect of our proposal. Finally, we also showed that Burmese allows for bare noun objects with indefinite interpretation via a pseudo-incorporation strategy that is available for some speakers, under certain circumstances, subject to substantial speaker variation.

We note furthermore that Burmese has morphological number marking, but here we limited our investigation to nominals with singular referents. We refer the reader to New (2020) for in-depth description and analysis of plural constructions in Burmese. The consideration of how the strategies for expressing (in)definiteness, investigated here, interact with plural marking is left open for future work.

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