Definiteness in Shan⋆

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Abstract. Shan, a Southwestern Tai language spoken in Myanmar, Thailand, and nearby countries, uses bare nouns to express both unique and anaphoric definiteness, as identified by [11]. This novel data pattern from the author's fieldwork can be analyzed by adding an anaphoric type shifter, ι^x, to the available type shifting operations defined by [2] and [3]. It also demonstrates that the consistency test is not sufficient to determine what counts as a definite determiner for a language.

Keywords: definiteness · type-shifting · Tai language.

1 Introduction

[11] proposes that there are two types of definiteness expressed by German, corresponding to the contracted (*weak*) and non-contracted (*strong*) preposition + definite article combinations—e.g., *vom* ('by the', *weak*) and *von dem* ('by the', *strong*). In (1), the speaker and listener know that there is only one mayor in the context. Since the mayor is unique in the context, the weak definite article form, *vom* ('by the') is used and the strong form is infelicitous.

(1) WEAK VERSUS STRONG ARTICLES IN GERMAN ([11]: (42))
Der Empfang wurde **vom** / #**von dem** Bürgermeister
the reception was by-the$_{weak}$ / by the$_{strong}$ mayor
eröffnet.
opened

'The reception was opened by the mayor.'

[11] claims that the split between strong and weak definite forms fits well with the types of definiteness described by [5], which grouped definiteness into four categories: immediate situation (current non-linguistic context), larger situation (broader non-linguistic context), anaphoric/familiar, and bridging (associative anaphora). [11] says that when a noun is unique in an immediate situation or larger situation context, German uses the weak form of the definite article, and

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in anaphoric contexts it uses the strong form. For the bridging category, he discusses two types: producer-product and part-whole bridging, which I will call 'product-producer' and 'whole-part' bridging, respectively.[1] The strong form is used in product-producer situations and the weak form is used in whole-part bridging. In addition to the categories discussed by [5], [11] adds that donkey anaphora uses the strong form of the definite article. Table 1 gives examples of these categories and the article form used for German. These will be discussed more in the following section.

Table 1. Types of definiteness described by [11], citing [5]

Type of Definite Use	Example	German
Unique in immediate situation	the desk (uttered in a room with exactly one desk)	weak
Unique in larger situation	the prime minister (uttered in the UK)	weak
Anaphoric	John bought a book and a magazine. The book was expensive.	strong
Bridging: Product-producer	John bought a book today. The author is French.	strong
Bridging: Whole-part	John was driving down the street. The steering wheel was cold.	weak
Donkey anaphora	Every farmer who owns a donkey hits the donkey	strong

2 Uniqueness and Anaphoricity

[11] claims that the weak definite article in German expresses *uniqueness*. This can be uniqueness in an immediate situation, as in (2), or in a larger or global context, described further below. In (2), there is only one glass cabinet in the immediate context, so the weak definite must be used.

(2)   GERMAN: UNIQUE IN IMMEDIATE SITUATION ([11]: (40))
      Das Buch, das du suchst, steht   **im**   / **#in dem**
      the book that you look-for stands in-the$_{weak}$ / in   the$_{strong}$
      Glasschrank.
      glass-cabinet
      'The book that you are looking for is in the glass-cabinet.'

The strong definite article expresses *familiarity/anaphoricity*. In (3), the first sentence introduces a writer and a politician into the discourse context. In the second sentence *von dem Politiker* ('from the politician') is used to refer back to the politician. The strong definite form must be used in this context.

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[1] A review noted that what [11] calls 'part-whole' bridging would more correctly be called 'whole-part' bridging, and agreeing with their assessment, I will use that and 'product-producer' instead of 'producer-product' for the same reasons.

(3) GERMAN: ANAPHORA ([11]: (23))

Hans hat einen Schriftsteller und **einen Politiker** interviewt. Er hat
Hans has a   writer   and a   politician interviewed He has
#vom   / **von dem**   **Politiker** keine interessanten Antworten
from-the$_{weak}$ / from the$_{strong}$ politician no   interesting   answers
bekommen.
gotten

'Hans interviewed a writer and a politician. He didn't get any interesting
answers from the politician.'

Looking at Mandarin and Thai, [7] and [8] show that these languages use bare
nouns in the same places where German would use the weak definite article, and
noun phrases modified by a classifier and demonstrative where German would
use the strong definite article. Examples (4) and (5) show the use of the bare
noun in a unique situation in Mandarin and Thai, respectively.

(4) MANDARIN: UNIQUE IN IMMEDIATE SITUATION ([7]: (12b), citing [1]:
     (10))
     Gou yao guo malu.
     dog want cross road

     'The dog(s) want to cross the road.'

(5) THAI: UNIQUE IN IMMEDIATE SITUATION ([8]: (2))
     măa kamlaŋ hàw.
     dog PROG   bark
     'The dog is barking.'

In (6) and (7), are the Mandarin and Thai examples using demonstratives
to express familiarity/anaphoricity. In (6a), a boy and a girl are introduced into
the discourse context. (6b) and (6c) use *na ge nasheng* ('the/that boy'), a noun
modified by a classifier and demonstrative, to refer back to the boy. In Mandarin
there is a contrast between the subject and object position. The classifier and
demonstrative are optional in subject position, but not in object position, as
shown in (6b) and (6c). [7] claims that this is because the Mandarin subject is
a topic, which negates the need for an antecedent index.

(6) MANDARIN: NARRATIVE SEQUENCE (ANAPHORIC) ([7]: (16a,b,d))
     a. jiaoshi   li   zuo-zhe **yi ge nansheng** he **yi ge**
        classroom inside sit-PROG one CLF boy   and one CLF
        nüsheng,
        girl
        'There is a boy and a girl sitting in the classroom...'
     b. Wo zuotian   yudao #(**na ge**) **nansheng**
        I   yesterday meet   that CLF boy
        'I met the boy yesterday.'
     c. (**na ge**) **nansheng** kan-qi-lai you er-shi sui zuoyou.
        that CLF boy   look   have two-ten year or-so
        'The boy looks twenty-years-old or so.'

In the Thai example in (7), (7a) introduces a student into the discourse context. In (7a), *nákrian khon nán* ('that boy') is used to refer to the boy. (7b) suggests that the demonstrative is required even in subject position for Thai.

(7)   THAI: NARRATIVE SEQUENCE (ANAPHORIC) ([8]: (17))
      mîawaan phŏm cəə   kàp **nákrian khon nɨŋ**.
      yesterday 1ST   meet with student CLF   INDEF
      'Yesterday I met a student'

   a. (**nákrian**) **khon nán** / (**kháw**) chalàat mâak.
       student   CLF   that / 3P   clever   very

       'That student/(s)he was very clever.'

   b. #**nákrian** chalàat mâak.
       student   clever   very

       'Student are very clever.'

2.1   Associative Anaphora (Bridging)

[11] shows that in German, there is a split between whole-part and product-producer bridging in terms of definiteness marking: whole-part bridging uses the weak definite and product-producer bridging uses the strong definite. [7] and [8] show that Mandarin and Thai patterns with German, using the bare noun in whole-part examples (weak definiteness) and the demonstrative in product-producer examples (strong definiteness). In this section and the following one, only the Thai data is shown to conserve space. In (8), *thábian* ('sticker') cannot be modified by a demonstrative. This parallels the use of the weak definite for whole-part bridging in German.

(8)   THAI: WHOLE-PART BRIDGING ([8]: (11))
      rót khan nán thùuk   tamrùat sàkàt   phrɔ́ʔ mâj.dâj tìt
      car CLF   that ADV.PAS police   intercept because NEG   attach
      satikəə wáj thîi **thábian** (#**baj nán**).
      sticker keep at license   CLF   that

      'The car was stopped by police because there was no sticker on the license.'

In (9), the producer *náktèɛŋklɔɔn* ('poet') must be modified by a demonstrative. This parallels German's use of the strong definite for product-producer bridging.

(9)   THAI: PRODUCT-PRODUCER BRIDGING ([8]: (12))
      ʔɔɔl khít   wâa **klɔɔn** bòt nán prɔ́ʔ   mâak, mêɛ-wâa kháw cà
      Paul thinks COMP poem CLF that melodious very   although 3P   IRR
      mâj chɔ̂ɔp **náktèɛŋklɔɔn** #(**khon nán**).
      NEG like   poet   CLF   that

      'Paul thinks that poem is beautiful, though he doesn't really like the poet.'

2.2 Donkey anaphora

In cases of donkey anaphora, [11] claims that German uses the strong article to refer to nouns introduced in the first part of the construction. Similarly, in Thai and Mandarin, a demonstrative is required in those positions ([7]; [8]). For the Thai example in (10), using the bare noun to refer back to the buffalo gives the sentence a generic meaning 'Every farmer that has a buffalo hits buffalo'.

(10) THAI: DONKEY ANAPHORA ([8]: (23))

chaawnaa thúk khon thîi mii **khwaai tua nïŋ**   tii **khwaai tua**
farmer   every CLF that have buffalo CLF INDEF hit buffalo CLF
nán
that

'Every farmer that has a buffalo hits it.'

Table 2 summarizes the patterns of definiteness expression in German, Thai, and Mandarin. Examples of all the contexts described by [11] cannot be included due to space limitations, but they can be found in the cited sources.

Table 2. Expressions of definiteness in German, Thai, and Mandarin

Type of Definite Use	German ([11])	Thai ([8])	Mandarin ([7])
Immediate situation	weak	bare	bare
Larger situation	weak	bare	bare
Anaphoric	strong	dem.	dem.
Bridging: Product-producer	strong	dem.	dem.
Bridging: Whole-part	weak	bare	bare
Donkey anaphora	strong	dem.	dem.

3   Shan

Like Mandarin and Thai, Shan, a Southwestern Tai language spoken in Myanmar, uses the bare noun in unique situations, as shown in (11) and (12).[2,3] In (11), there is a single teacher in the context, so it must be referred to using a bare noun. In (12), world knowledge tells us that there is only one sun, so a bare noun is used to refer to the sun. The demonstrative is not felicitous in either case.

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[2] Data for this paper comes from the author's fieldwork in Chiang Mai, Thailand from January 2018 to present, working with a speaker from Keng Tawng City in Shan State, Myanmar, who has lived in Thailand for over 10 years. Data was collected using a variety of elicitation methods: story translation, stories based on storyboards, felicity judgments on grammatical sentences in specific contexts.

[3] Glossing conventions: 1: first person, 3: third person, CL: classifier, COMP: complementizer, IMPF: imperfect, NEG: negation, SG: singular

(11) Shan: Unique in immediate situation
      (Context: classroom with just one teacher)

      Náaŋ Lr̆n ʔàm tsaaŋ kwàa hăa **khúsɔ̆n** (**#kɔ̂   nân**)
      Ms. Lun neg able go   find teacher cl.person that

      'Ms. Lun cannot find the teacher.'

(12) Shan: Unique in larger situation

      kăaŋwán (**#hòj   nân**) lŏŋ hɤ   sɔ̀ŋ.
      sun   cl.round that very bright glitter

      'The sun is very bright.'
      (Speaker comment on the demonstrative: there is more than one sun)

3.1   Anaphora

Unlike Mandarin and Thai, Shan can use the bare noun in anaphoric contexts
such as a narrative sequence. In (13), the first sentence introduces a man into
the discourse context. In following sentences, the man can be referred back to
either using a bare noun, *phu-tsáaj* ('man'), or using a bare noun modified by a
classifier and demonstrative, *phu-tsáaj kɔ̂ nân* ('that man').[4]

(13) Shan: Narrative Sequence (Anaphora)

      phu-tsáaj kɔ̂   nɯɯŋ kwàa ti hâan khăaj măa tàa sɯ̂ maă
      person-man cl.person one   go   at store sell   dog for buy dog
      ʔɔ̀n   tŏ   nɯɯŋ păn luk jíŋ mán-tsáaj... **phu-tsáaj**
      small cl.animal one   give child girl 3-man   person-man
      (**kɔ̂   nân**) khɯ́m tɔ̀p   waa,
      cl.person that back respond that

      'A man went to a dog store to buy a puppy for his daughter... The/that
      man replied,'

In (14), the first sentence introduces a notebook and cup of water into the
discourse context. The second sentence refers back to each of them using a bare
noun. Here the anaphoric nouns are in object position, but this position does
not require that a demonstrative be used. In this way, Shan is different from
Mandarin or Thai. The demonstrative is allowed, but it sounds awkward to use
a demonstrative for both the water cup and notebook in the second sentence.

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[4] A reviewer noted that the examples from Mandarin and Thai are not equivalent in
that the Mandarin one introduces two individuals apart from the speaker, and the
Thai one only introduces one other individual. For Shan, I have included both types
of examples. In (13) there is only one individual, and in (14) there are two.

(14) Shan: Narrative Sequence (Anaphora)

pâp măaj lɛ **kɔ́k nâm** jù   wâj nɣ̌ phɣ̌n. khaa qăw **kɔ́k nâm**
book note   and cup water IMPF stay on desk   1.SG take cup water

(**nân**) he sàj/saùɪ **pâp**   (**nân**).
spill   in book   CL.BOOK that

'There is a notebook and a cup of water on the desk. I spilled the/that
cup of water onto the/that notebook.'

3.2 Bridging

Mandarin, Thai, and German use the weak/bare form of the nominal in whole-
part bridging and the strong/demonstrative form in product-producer bridging.
Shan, instead, does not use different nominal expressions in whole-part bridging
versus product-producer bridging. A bare noun can be used in both situations.
(15) shows that a bare noun is possible for whole-part bridging in Shan.

(15) Shan: Whole-part bridging

khúsvɔn kwàa tsú **hɣ́ntɣk** lăŋ   nân sě tɔ̀j   **pháktŭ**
teacher go   to building CL.BUILDING that and knocked door

hɔ̂ŋ tsaw   hɣ́n
call owner building

'The teacher approaches that building and knocked on the door to call
the owner.'

Whole-part bridging constructions in Shan often have the 'whole' as part of
the word for the 'part'. It is not always clear whether it simply anaphoric with the
'whole' possessing the part or involves bridging to a real noun compound. (16)
shows an example of this where *naasɣ pâplik* ('book cover') contains the word
pâplik ('book'). While it is possible to modify the noun with a demonstrative,
the demonstrative is referring to the book rather than the cover. It does not
seem possible to modify the bridged noun with a demonstrative.

(16) Shan: Whole-part bridging

mέw wěnkjɔ́k sàj nɣ̌ **pâplik** ʔăn   mí   nɣ̌ phɣ̌n măa kwàa tsɔ́m
cat jump   in on book   COMP exist on table dog go   follow

thɛŋ. thŭ̃ŋ ti   hét haj **naasɣ pâplik** (**nân**) kokòmkolĭn kwàa
again until COMP do cause cover book   that   dirty   go

seŋ
completely

'The cat jumped onto the book that was on the table. The dog followed
again which made the book cover/cover of that book completely dirty.'

(17) shows that a demonstrative is not necessary for product-producer bridg-
ing either. The 'producer', *kɔ́ntɛmlik* ('author') can be bare or modified by the
demonstrative, *kɔ̂ nân*. From the classifier we can tell that this demonstrative
modifies 'author' not 'book'.

(17) SHAN: PRODUCT-PRODUCER BRIDGING

mɰwáa   khú   ʔàan **pâplik pɯ́m   táj**. khúsɔ̌n pĕn ʔójkɔ̂ kăn
yesterday teacher read book   history Tai teacher be   friend together

táŋ   **kɔ́ntɛmlik** (**kɔ̂**   **nân**)
with author   CL.PERSON that

'Yesterday, the teacher read a Tai (Shan) history book. The teacher is friends with the/that author.'

3.3 Donkey anaphora

German, Thai, and Mandarin use the strong/demonstrative form of the nominal to refer anaphorically to a nominal in donkey anaphora. Unlike the other languages, Shan does not use a demonstrative or strong definite article in this situation. In (18), when 'cat' (*mɛ́w*) is referred to anaphorically, a bare noun is used. It is not felicitous to modify it with a demonstrative because that forces a singular reading, which sounds awkward in this sort of generic sentence.

(18) SHAN: DONKEY ANAPHORA

măa ku   tŏ   nâj pɔ́   hăn **mɛ́w** năj tĕ lɯp   lám
dog every CL.ANIMAL this if/when see cat   then will follow chase

mɛ́w (***tŏ**   **nân**) tàasè
cat   CL.ANIMAL that always

'Every dog, if it sees a cat will always chase the cat.'

If we wanted to use a demonstrative in this sort of example, a structure like (19) would be possible, but, again, the classifier-demonstrative modification is not necessary. The difference between these two examples is that in (18) it is dogs being quantified over, leaving 'cat' as unspecified for plurality and thus awkward with a singular anaphor. In (19), *tŏ lăj* ('which one') quantifies over individual cats making it compatible with a singular anaphor.

(19) SHAN: DONKEY ANAPHORA

măa nâj hăn **mɛ́w tŏ**   **lăj**   kɔ tĕ lɯp   **mɛ́w**
dog this see cat   CL.ANIMAL which even will follow cat

(**tŏ**   **nân**) tàasè
CL.ANIMAL that always

'Dogs, whichever cat they see they will always chase the/that cat'

Table 3 summarizes the different expressions of definiteness found in German, Thai, Mandarin, and Shan. This section has investigated the pattern of definiteness found in Shan in specific contexts that have shown different patterns of expression across languages. Shan allows for the bare noun to be used in all of the contexts described by [11]. Even contexts like anaphora and product-producer bridging allow for bare nouns where Thai and Mandarin do not. For contexts were the noun is unique in a situation or with whole-part bridging, a demonstrative cannot modify the noun, just like in Thai and Mandarin.

Table 3. Expressions of definiteness in German, Thai, Mandarin, and Shan

Type of Definite Use	German ([11])	Thai ([8])	Mandarin ([7])	Shan
Immediate situation	weak	bare	bare	bare (11)
Larger situation	weak	bare	bare	bare (12)
Anaphoric	strong	dem.	dem.	**bare** (13-14)
Bridging: Product-producer	strong	dem.	dem.	**bare** (17)
Bridging: Whole-part	weak	bare	bare	bare (16)
Donkey anaphora	strong	dem.	dem.	**bare** (18-19)

4   Analysis

Following [2] and [3], [4] summarizes the available interpretations of bare nouns in languages without articles, claiming they can have a kind reading, a narrow scope existential reading, and a definite reading. This appears to be consistent with what is found in Shan. [2] claims that bare nouns in article-less languages without number marking, like Shan, obligatorily have an e-type, kind denotation. However, [4] allows for these mass nouns to undergo type shifting using $^{\cup}$ so they can then type-shift using ι to get a definite reading separate from the kind reading. For now, I will assume this, following [4], but this topic should be considered in future work. The type-shifting operators described by [2] and [3], $\cap$, ι, and $\exists$, are defined below:

(20)   TYPE SHIFTING OPERATORS ([3]): $\langle e, t \rangle \to e / \langle \langle e, t \rangle, t \rangle$

    a. $\cap$: $\lambda P \lambda s \iota x [P_s(x)]$

    b. ι: $\lambda P \iota x [P_s(x)]$

    c. $\exists$: $\lambda P \lambda Q \exists x [P_s(x) \wedge Q(x)]$

[3], revising [2], proposes that the type shifting operators follow a hierarchy, where kind-forming $\cap$ and entity forming ι must be ruled out before $\exists$ becomes available, this is described in (21). The justification is that using $\cap$ or ι is a less drastic change because it does not introduce quantificational force. [3] claims that bare nouns are equally allowed to form kinds or entities, so they must be ranked equally. [3] and [2] use the Blocking Principle, defined in (22), to identify what type shifting is available in what language. If a language has an overt determiner form of a type shifter—e.g., *the* in English is said to correspond to ι—then covert type shifting using that operator is unavailable.[5]

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[5] In a language where there are are no determiners, you would expect all type shifting operations to be available, but according to [3], $\exists$-type shifting does not occur in these languages because of the ranking described in Meaning Preservation below. The existential interpretation comes form Derived Kind Predication. This is an interesting subject for future investigation, but not addressed here.

(21) MEANING PRESERVATION: $\{\cap, \iota\} > \exists$

(22) BLOCKING PRINCIPLE [3]: For any type shifting operation π and any X: *$\pi(X)$ if there is a determiner D such that for any set X in its domain, $D(X) = \pi(X)$.

[7] follows [11] in claiming the existence of two types of definiteness. In trying to account for the obligatory use of the demonstrative in some definite environments in Mandarin, [7] defines the unique and anaphoric definites as in (23), where (23a) is the type shifting operation ι and (23b) is the denotation of the demonstrative in Mandarin.[6] [8] claims that since English expresses both unique and anaphoric definites using *the*, *the* is ambiguous for the unique and anaphoric definite meaning.

(23) a. UNIQUE DEFINITE ARTICLE:
        $[\![\iota]\!] = \lambda s_r.\lambda P_{\langle e, \langle s, t \rangle \rangle}. : \exists! x[P(x)(s_r)].\iota x P(x)(s_r)$
     b. ANAPHORIC DEFINITE ARTICLE: ι^x
        $[\![\iota^x]\!] = \lambda s_r.\lambda P_{\langle e, \langle s, t \rangle \rangle}.\lambda Q_{\langle e, t \rangle}. : \exists! x[P(x)(s_r) \wedge Q(x)].\iota x P(x)(s_r)$

It is clear from the data that the Shan demonstrative does not fill the roll of anaphoric definite determiner since it is not obligatory in all anaphoric contexts as in Thai. I propose, instead that Shan has a null anaphoric type shifter ι^x in addition to the ι type shifter.

This analysis raises the question: Why does the Shan demonstrative not count as a determiner for the purposes of the Blocking Principle, but the Thai and Mandarin ones do? We might expect the Shan demonstrative to pattern differently from the Mandarin and Thai demonstratives in terms of the Consistency test. [3] uses the Consistency test from [9] to distinguish between demonstratives and true definites. For demonstratives, you can introduce two of the same NPs modified by the demonstrative with contradictory predicates, and there is no contradiction. For definite determiners, doing this would create a contradiction. According to this test, Shan has a demonstrative, not a definite determiner, as shown in (24). However, the Thai demonstrative also passes this test, as in (25).[7]

(24) SHAN: CONSISTENCY TEST
     (Context: I am holding a white cup and a black cup.)
     kɔ́k hòj   **nâj** pěn sǐ   khǎaw. **kɔ́k hòj**   **nâj** pěn sǐ
     cup CL.ROUND this be   color white   cup CL.ROUND this be   color
     lǎm.
     black
     'This cup is white. This cup is black.'

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[6] This definition differs from [11] in that the index is defined as a property rather than an individual, but I will not be concerned with this distinction for this analysis.

[7] Mandarin passes the consistency test too, but the data is not included here to conserve space.

(25)   THAI: CONSISTENCY TEST ([8], citing [10])

dèk khon nán nɔɔn yùu   tɛ̀ɛ **dèk khon nán** mâi.dâi nɔɔn yùu.
child CLF   that sleep IMPF but child CLF   that NEG   sleep IMPF

'That child is sleeping but that child is not sleeping.' (cf. #the)

According to a native Thai speaker, (25) sounds contradictory out of the blue, but fine with deixis. This test does not seem sufficient to distinguish between what counts as a definite for the Blocking principle. This is not that surprising since the consistency test relies on deixis which is not something that comes into play in anaphoric uses of demonstratives.

I would argue that the Shan bare noun/demonstrative contrast parallels the English *the*/demonstrative contrast. The difference comes from the fact that the bare noun in Shan can denote a broader range of things, which might lead to more disambiguation using the demonstrative. We would then expect the use of the demonstrative in Shan to convey some special meaning beyond ι in the same way the English demonstrative can.

5   Conclusion

Shan can use a bare noun to express both unique and anaphoric definiteness. In fact, the bare noun in Shan behaves much like the English article *the*. Though languages like Thai and Mandarin are similar to Shan in lacking overt definite articles and plural morphology, Shan does not pattern together with these two languages in that its demonstrative does not function as the primary marking of anaphoric definiteness. The pattern in Shan is likely to be found in other languages without articles, like Japanese and Russian.

This paper has also shown that the Consistency test does not seem able to distinguish what words count as determiners, so future work should address distinguishing between demonstratives and definite determiners. In Mandarin and Thai, the demonstrative counts as the determiner denoting ι^x, so the demonstrative is obligatory in expressing this meaning. I argue that in Shan the demonstrative does not count as a determiner ι^x, so a bare noun can type shift using ι^x. It seems, then, that the anaphoric definite, ι^x, could be included as one of the available type shifting operations.

This work in conjunction with the work by [11], [8], and [7] brings up the connection between form and meaning. In Mandarin, Thai, and German there seems to be a connection between the obligatory use of a strong determiner/demonstrative and the need for an anaphoric index in the meaning. In Shan, that connection is unidirectional: if there is a demonstrative there must be an anaphoric index, but the lack of a demonstrative does not mean there is no anaphora involved. We might then wonder if we want to say there are two covert ι's in this language. The importance of separating them is apparent in contexts where their meanings are different. In German, it is possible to see an overt contrast between the unique and anaphoric reading, as in (26).

(26) Two definite articles in German ([11]: 268)

Wenn [**ein ausländischer Präsident**]$_1$ [**Barack Obama**]$_2$ im
when a   foreign   president   Barack Obama   in-the$_{weak}$
WeißHaus besuch, wird **vom**$_1$ / **von dem**$_2$ **Präsidenten** eine
White   House   visits by-the$_{weak}$ / by   the$_{strong}$ president   a
Rede   gehalten
speech given

'When a foreign president visits Barack Obama in the White House, the
president gives a speech.'

The English translation is also ambiguous, as is the Shan version. This ambiguity must come from differences in the semantic denotations, which could correspond to ι and ι^x. Without some sort of distinction we cannot explain why such examples are ambiguous. The goal of investigating data of this sort is to identify which features to model in order to capture the range of expressions of definiteness across languages. Using these different type shifters is one way we can do this. It opens the question: how many type-shifters do we need to account for definiteness? Future work would be to integrate this analysis into a complete analysis of the interpretation of Shan nouns and further compare with other languages.

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