## Classifiers and the definite article in Indonesian

**Summary** It has been said that languages with classifiers do not have overt definite articles (Chierchia 1998). Recent work by Jiang (2017) shows that Nuosu Yi has both classifiers and a definite article. Jiang (2017) derives definiteness in two ways in Nuosu Yi: with a covert type shifter (bare nouns can be definite) and an overt definite article. The Nuosu Yi data has been interpreted to show that classifier languages must exploit the classifier to combine with a definite article (Chierchia 2016). In this paper, we cite Indonesian data to show that nouns can be ambiguous between kind-denoting and property-denoting. We use data from (i) the distribution of the definite article *-nya*, (ii) the distribution of bare nouns, and (iii) the optionality of classifiers with numerals to support this ambiguity account.

**Definiteness marking and classifiers** Definiteness in Indonesian can be encoded in two ways: (i) NP plus the definite article *-nya* (Winarto 2016) and (ii) bare nouns. For instance, a bare noun or a NP plus *-nya* can both be used to mark unique nouns like 'sun' in (1). (See Winarto (2016) for diagnostics.)

(1) *Matahari(-nya) bersinar terik hari ini.* sun-DEF shines strong day this

'The sun shines very strongly today.'

On the other hand, bare nouns in Indonesian can get a kind interpretation (2a), generic interpretation (2b), indefinite and definite interpretation (2c).

(2)	a. Kucing sudah punah.	b. Anjing menggonggong.	c. Saya melihat mobil.		
	cat PRFV extinct	dog bark	I see car		
	'The cat is extinct.'	'Dogs bark.'	(i) 'I saw a car/cars.'		
			(ii) 'I saw the car(s).'		

Furthermore, Indonesian has been described as a classifier language (Dardjowidjojo 1978; Chung 2000), but as shown in (3), the classifier is optional. Prenominal classifiers also may never occur with -nya, as shown by the ungrammaticality of the general classifier *buah* with -nya in (4).

(3)	lima (buah)	mangga	(4)	* lima buah	n mangga <b>-nya</b>
	five CL	mango		five CL	mango-DEF
	'five mange	bes'		Intended:	'the five mangoes

**Analysis** To account for both the optionality of the classifiers and definite article, we propose that Indonesian nouns are ambiguous: one with a kind denotation and one denoting a set of individuals.

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a.	$\llbracket mangga_1 \rrbracket = \cap MANGO$	(the mango-kind)
b.	$\llbracket mangga_2 \rrbracket = \{x : ATOM(x) \& MANGO(x)\}$	(the set of individual mangoes)

The denotation for numerals in Indonesian is given in (6a). Classifiers in Indonesian are as Chierchia (1998) proposes for Mandarin: they shift kind-denoting nominals to sets of atoms (6b).

(6) Chierchia (1998)-style numerals and classifiers for Indonesian (simplified)

a. [[ *lima* ]] = λP : ATOMIC(P).{x : \*P(x) & μ<sub>#</sub>(x) = 5}
b. [[ *buah* ]] = <sup>∪</sup> (the function from kinds to sets of atoms)

There are two ways to combine numerals with nouns. Kind-denoting nouns must first combine with a classifier and then numeral (7). Property-denoting nominals do not need classifiers and therefore can combine directly with a numeral as in (8).

(7)  $[[lima]] ([[buah]] ([[mangga_1]])) = \{x : x \in {}^{* \cup \cap} MANGO \& \mu_{\#}(x) = 5\}$ 

 $(8) \quad [\![ \textit{ lima} ]\!] ([\![ \textit{mangga}_2 ]\!]) = \{ x : x \in \ ^* \{ \texttt{ATOM}(x) \And \texttt{MANGO}(x) \} \And \mu_{\#}(x) = 5 \}$ 

Within this mixed system, we propose that definiteness is encoded in two different ways: (i) in the system where nouns are kind-denoting, the covert definite operator combines with the bare noun, shifting the bare noun from kind-denoting ( $e^k$ ) to an argument of type e; (ii) in the system where nouns are sets of individuals, the overt definite article *-nya* combines with the property-denoting noun to shift it from property-denoting nominals to an argument of type e (*-nya* is thus type  $\langle \langle et \rangle e \rangle$ ).

**Extending the Nuosu Yi account?** Like in our proposal for Indonesian, Nuosu Yi has two operations to derive definiteness: (i) a covert one that applies at lower nominal levels converting kind-denoting nouns into object-level entities, as bare nouns in Nuosu Yi can get definite interpretations, and (ii) an overt one that converts property-denoting nouns into object-level entities. However, Jiang (2017) proposes that all nouns in Nuosu Yi are kind-denoting. If nouns are all kind-denoting in Indonesian as Jiang (2017) proposes for Nuosu Yi, then classifiers combine with kinds of type  $e^k$  and shifts them to  $\langle et \rangle$ . Definiteness would have to be encoded via free choice of covert or overt type-shifters, which combine either *-nya* or a covert element with the noun of type  $e^k$ . This would account for the incompatibility of *-nya* and the classifier in the language as *-nya* would have to compete with classifiers to combine with the kind-denoting nouns.

However, the unambiguous account for Nuosu Yi does not derive the optionality we see with classifiers in Indonesian. If all nouns are kind-denoting in Indonesian, then we would expect that they also must combine with classifiers before combining with numerals. However, as per (3), classifiers are optional.

**Evidence from plurals** Independent evidence for an ambiguity account can be found in how plurality is encoded in Indonesian (see also Chung (2000)). Indonesian has a reduplicative plural as in (9a). The reduplicative plural is not compatible with the classifier in (9b), indicating that classifiers and plural marking are in complementary distribution. The reduplicative plural is, however, compatible with the definite article *-nya* in (10).

- (9) a. *lima mangga-mangga itu* five mango-**REDUP** that 'those five mangoes'
  - b. \* *lima buah mangga-mangga itu* five CL mango-REDUP that Int.: 'those five mangoes'

 (10) *lima mangga-mangga-nya* five mango-REDUP-DEF 'the five mangoes'

For Chierchia (1998), plural marking is a property of non-classifier languages. But the Indonesian data show that a language can have two systems: one with determiners and plural marking and another with classifiers and no plural marking.

**Further implications** While the choice between bare NPs and the definite article to encode definiteness often appears to be free like in (1), bare nouns and NP-*nya* constructions are not always interchangeable. In the bridging context in (11), the associative anaphor requires -*nya*.

(11) Budi baru membeli sepasang sepatu. Designer\*(-nya) terkenal di Paris.
Budi just buy a.pair shoes designer-DEF famous in Paris
'Budi just bought a pair of shoes. The designer is famous in Paris.'

For anaphoric use, NP-nya is also used, sometimes interchangeably with the demonstrative itu.

- (12) Saya baru beli baju di Bandung, tapi baju-nya/itu sudah luntur.
  - I just buy clothes in Bandung, but clothes-DEF/-DEM already run

'I just bought some clothes in Bandung, but the colour on them has already run.'

This set of data is in line with recent work on the distinction between unique definites and anaphoric definites (Schwarz 2009; Arkoh & Matthewson 2013; Jenks To appear). In Indonesian, anaphoric nouns are marked as in (12): *baju* cannot be bare in the second mention in (12). Though, unlike in (12), only *-nya* can be used in the associative anaphor context in (11). This has implications on how to analyze definite-ness semantically. We therefore discuss how a simple two-dimensional (i.e., unique/anaphoric) approach to definiteness cannot fully capture the Indonesian data.

**Selected References** CHIERCHIA, GENNARO. 1998. Reference to kinds across language.  $NLS \bullet$  CHUNG, SANDRA. 2000. On reference to kinds in Indonesian.  $NLS \, 8.157 - 171 \bullet$  JIANG, LI JULIE. 2017. Definiteness in Nuosu Yi and the theory of argument formation.  $L\&P. \bullet$  WINARTO, EKARINA. 2016. The Indonesian DP. *The proceedings of AFLA 22*.