Introduction: The noun classifier system of Chuj (Mayan) and other Q'anjob'alan languages has received considerable attention in the descriptive literature (see e.g. Buenrostro et al. 1989; Craig 1986; Zavala 2000), but little study in formal linguistics. This paper fills that gap and, in doing so, argues for an analysis of classifiers as pronominal variables, which restrict the domain of a quantifier to a singleton. Under the proposed analysis, Chuj classifiers provide novel overt evidence for two claims about quantifier domain restriction.

Data: Like other Q'anjob'alan languages (Craig 1986; Zavala 2000), Chuj features a set of 16 noun classifiers (not to be confused with *numeral* classifiers, see Zavala), and classify nouns with respect to physical or social attributes. These classifiers are often characterized as definite determiners on the basis of examples such as (1) where the classifier occurs with an NP, and the observed meaning is definite (Buenrostro et al. 1989; García Pablo & Domingo Pascual 2007). However, there is reason to believe that this characterization is not entirely correct, as they exhibit a broader distribution than expected from a definite analysis. Notably, they also occur with indefinite quantifiers (2), and alone as pronouns (3).

(1) Saksak [**k'en** uj   ].
    white   CLF moon
    'The moon is white.'

(2) Ay [*jun* **nok'** tz'i'] t'atik.
    EXT INDF CLF dog   here
    'There's a dog here.'

(3) Saksak [**nok'**].
    INDF   CLF
    'It's (the dog) white.'

Additionally, when noun classifiers occur with an indefinite quantifier, as in (2), the result is a specific indefinite. Evidence for this claim may be observed from the fact that whenever combined with an indefinite quantifier, noun classifiers give rise to an interpretation where the indefinite necessarily takes wide scope over an intensional predicate (be happy in (4)). The scope fact in 4 is equally consistent with Farkas' (2002) characterization of specificity as "anti-variation": the witness of the elder is constant across all of Malins happy-worlds. In example (4), speakers could choose to omit the use of a classifier. In that case, the scope of the indefinite relative to 'be happy' is ambiguous. Hence, it clearly is the classifier that disambiguates to a specific/wide-scope reading.

Example (5) provides further evidence that indefinites with a classifier obligatorily take wide scope, this time with the indefinite scoping over a universal quantifier over individuals.

(4) Context A: *There is an elder called Xun, and Malin will be happy if he comes.*
    Context B: *Malin wants an elder to come tonight, but she doesn't care which.*
    Speaker judgment: context A: good; context B: unacceptable.

    Ha' ix   Malin tejunk'o'olal ix   tato s-jaw   *jun* **winh** icham
    TOP CLF Malin happy   CLF if   A3S-come INDF CLF elder
    Malin will be happy if an elder comes.

(5) Context A: *Every night, the same woman works in a store.*
    Context B: *Every night, only one woman works in a store, but who can vary (e.g. Monday, Sue, Tuesday, Mary).*
    a. Speaker judgment: context A: acceptable, context B: unacceptable.
       Ay jun **ix** ix   tz-munlaj t'a   masanil k'ikb'alil.
       EXT INDF CLF woman IPFV-work PREP every   night
       'A woman works every night.'
    b. Speaker judgment: both contexts A and B acceptable.
       Ay jun ix   tz-munlaj t'a masanil k'ikb'alil.
       EXT INDF woman IPFV-works prep every   night
       'A woman works every night.'

Proposal: I propose that the basic case revealing the analysis of noun classifiers is their occurrence as pronouns: classifiers are interpreted as free variables of type *e*. Accordingly, they pick out a particular contextually salient entity, as determined by the variable assignment (Heim & Kratzer 1998). **Singleton indefinites:** I propose that Chuj uses the very same pronoun to restrict the domain of a quantifier, the effect being a *singleton indefinite* (Schwarzschild 2002). The LF for (2) is (6). In order to compose with *dog* the classifier must be of type $<e,t>$. In (6), the classifier Ident shifts from type *e* to $<e,t>$ (Partee

1987), returning a predicate true of just one entity: the one picked out by the classifier pronoun, (7). *Jun* is interpreted simply as an existential quantifier. Whereas English draws upon a covert variable in the restrictor of quantifiers, I propose that Chuj uses the very same pronoun as in (3). The LF for (2) is thus:

(6)   [*jun* [Ident CLF$_i$] [*dog*]]   (7) $[\![$ Ident CLF$_i$ $]\!]^g = \lambda$x. x $= [\![$ CLF$_i$ $]\!]^g$

The proposed analysis of INDF-CLF as a singleton indefinite receives further support. First, the classifier cannot occur with epistemic indefinites (8), which have been shown to have an anti-singleton constraint on their domains (Alonso-Ovalle & Menéndez-Benito 2018). Second, noun classifiers are impossible with wh-words (see 9), which have been analyzed as existential quantifiers (e.g. Karttunen 1977, Heim 2005, Fox 2013) (also illicit with unbiased yes-no questions). Third, noun classifiers cannot occur with negative existentials. Negative existentials assert that there is no witness to their restrictor, but the classifier, being a pronoun, would have to pick out a particular witness.

(8)   Yalnhej-tas **(*anh)** itaj-il   ix-in-yam-a'.
       FC-WH   CLF   herb-SUF PFV-B1S-pick-TV
       'I picked a random herb.'

(9)   Tas **(*anh)** itaj-il   ha-gana?
       WH CLF   herb-SUF A2S-desire
       'What herb do you want?'

Since classifiers create specific indefinites, it is natural to consider whether they could denote choice function variables (of type $<et,e>$). Reinhart (1997) proposed that indefinite determiners denote existentially bound choice functions variables. The scope of an indefinite is then determined by the site of existential closure, which can occur at different points in the structure. A choice function analysis of classifiers, however, faces complications. First, classifiers are not the indefinite determiner proper, but occur external to the determiner *jun*. This analysis would thus require the stipulation that there are two existential quantifiers. If the classifier were of type $<et,e>$ it would apply to the NP to return a type *e* meaning, which is not the right type to be taken as the argument of *jun*. Even if that type *e* meaning could type-shift to $<e,t>$, the analysis would only predict that classifier-indefinites *can* take wide scope, not that they *must*. Finally, a choice-function analysis would not straightforwardly extend to the data in (3), where the classifier appears alone.

The remaining data point to explain is (1), where only the classifier and an NP are overt. If the classifier is a (type-shifted) pronoun, then (1) must include an additional covert determiner. I propose the LF in (10), which features a covert definite determiner ι, as in e.g. Chierchia 1998 and Jenks to appear. Chuj lacks an overt definite article, and Chierchia and Jenks propose that ι is allowed in the absence of an overt definite.

(10)   [ι [CLF$_i$ [moon]]]

Further support for there being an additional determiner in these data external to the classifier comes from (11). Schwarz (2013) proposes that certain "weak" definite determiners encode uniqueness, but not familiarity, while "strong" definite determiners encode both. While Chuj lacks an overt weak determiner, it does have an overt strong determiner (*chi*) (or demonstrative), which obligatorily surfaces in (11):

(11)   T'a s-pat   ix hin-nun,   ay [**jun nok' tz'i'**]$_i$. Fido s-b'i'   [**nok' tz'i' #(chi)**]$_i$.
        PREP A3S-house CLF A1S-mother, EXT INDF CLF dog.   Fido A3S-name CLF   dog DEM
        'In my mother's house, there's a dog. It's name is Fido.'

Outlook: This account of noun classifiers may have implications for a general theory of classifiers across languages. For example, it has been noted by many authors that classifiers mark notions of specificity in Southeast Asian languages such as Vietnamese, Malay, and Cantonese (Pacioni 1996; Aikhenvald 2000). Perhaps specificity effects are in general a consequence of classifiers being interpreted as free pronouns. The cross-linguistic generalization of this perspective remains to be explored.

Selected references: **Alonso-Ovalle, L. and P. Menéndez-Benito (2018)**, Projecting possibilities in the nominal domain: Spanish *uno cualquiera*, *Journal of Semantics*; **Buenrostro, C., J. Díaz, and R. Zavala (1989)** Sistema de clasificación nominal del chuj, in *Memorias del segundo congreso internacional de mayistas*; **von Fintel, Kai. 1994**, Restrictions on quantifier domains. PhD thesis; **Jenks, P. (to appear)**, Articulated definiteness without articles, *Linguistic Inquiry*; **Reinhart, T. (1997)**, How labor is divided between QR and choice functions, *Linguistics and Philosophy*; **Schwarzschild, R. (2002)**, Singleton indefinites, *Journal of Semantics*.