Higher order ignorance in Kipsigis epistemic indefinites*

Madeline Bossi

January 24, 2023

1 Introduction

Epistemic indefinites are indefinite pronouns or determiners that convey speaker ignorance with respect to the witness to the indefinite. For instance, the Spanish sentence in (1) expresses an existential claim: $\exists x[x$ is a student in the linguistics department & María married $x]$. Yet use of *algún* additionally indicates that the speaker does not know which linguistics student María married—in contrast to the basic Spanish indefinite *un*, which triggers no such inference.[1]

(1) *Spanish*   (Alonso-Ovalle & Menéndez-Benito 2010:ex. 1)
María se casó   con **algún** estudiante del   departamento de lingüística.
M.   SE married with ALGUN student   of.the department   of linguistics
'María married a linguistics student.'

A wide range of epistemic indefinites across languages are discussed in the literature, including: German *irgendein* (Kratzer & Shimoyama 2002), Italian *un qualsiasi* (Aloni & van Rooij 2004; Chierchia 2006) and *un qualche* (Zamparelli 2007), French *quelque* and *un quelconque* (Jayez & Tovena 2006, 2007), the Russian *-to* series (Kagan 2011), Romanian *vreun* (Farkas 2002; Fălăuş 2014), the Japanese *-ka* series (Alonso-Ovalle & Shimoyama 2014), the Czech *-si* series (Šimík 2015), and the Tiwa *-pha* and *-khi* series (Dawson 2018, 2020). While these epistemic indefinites all convey some form of ignorance, their empirical profiles differ and a range of analyses have been put forth to capture these unique behaviors.

For instance, the ignorance effects associated with these different epistemic indefinites gener-

[1]Abbreviations: 1=1st person, 2=2nd person, 3=3rd person, ACC=accusative, APPL=applicative, GEN=genitive, INF=infinitive, IPFV=imperfective aspect, PST=past tense, PL=plural, REFL=reflexive, REL=relativizer, SBJV=subjunctive, SEC=secondary suffix, SG=singular, TH=theme vowel, Q=yes/no question particle.

ally come in two flavors. First order ignorance, like that seen in (1) with Spanish *algún*, conveys that the speaker does not know which *individual* witnesses the indefinite. Higher order ignorance, on the other hand, conveys that the speaker is ignorant about some relevant *property* of the witness to the indefinite, even if they know exactly which individual it is. An example of this type of higher order ignorance can be seen with the *-khi* indefinite in (2) from Tiwa (Tibeto-Burman; India).

(2) *Tiwa*   (Dawson 2018:ex. 36)
Ang **shar-khí** India-ne   PM-go   lak mán-a lí-do.
1SG   who-KHI India-GEN PM-ACC meet-INF   go-IPFV
'I'm going to meet some Indian Prime Minister.'

In (2), there is no question on the speaker's part about who the Indian Prime Minister is; they know that he is the man named Narendra Modi. However, the speaker of (2) is necessarily ignorant about some contextually relevant property of this individual, ranging from his hair color to what he is wearing to something else entirely.

Dawson (2018) links these different types of ignorance effects to different analyses of the epistemic indefinites. In particular, she ties first order ignorance to domain widening semantics and higher order ignorance to choice functional indefinites. Here, however, I draw on original field data to show that epistemic indefinites in Kipsigis (Kalenjin; Kenya) can convey higher order ignorance but do not transparently warrant a choice functional analysis. Specifically, I show that Kipsigis epistemic indefinites are compatible with singleton domains of quantification but display scopal flexibility, which poses challenges for both domain widening and choice functional analyses of such indefinites. This constellation of facts calls into question the proposed link between analysis and ignorance type from Dawson (2018). Instead, I offer a new analysis for Kipsigis, according to which use of the epistemic indefinite is only licensed when there is variation in the salient properties that hold of possible witnesses to the indefinite. Then, ignorance effects—including first order and higher order ignorance—are derived pragmatically via competition with other Kipsigis indefinites.

The remainder of the paper is structured as follows. §2 overviews the Kipsigis nominal inventory. Then, in §3, I characterize the ignorance effects seen with Kipsigis epistemic indefinites. In §4, I provide evidence that these ignorance effects are pragmatically derived. §5 compares the predictions of existing accounts to the Kipsigis pattern. In light of this comparison, I offer a new analysis for Kipsigis in §6. In §7, I consider possible extensions of this analysis to English *some*. §8 concludes.

2   The Kipsigis nominal inventory

Kipsigis is a Nilo-Saharan language of the Kalenjin subgroup spoken in Western Kenya by a reported 1.9 million people (Eberhard et al. 2021). It is verb-initial with extensive postverbal word order flexibility determined by information structure (Bossi & Diercks 2019). Additionally, Kipsigis is a bare noun language; nouns can have both indefinite (3) and definite interpretations

(4) without the need for determiners.[2] For instance, in (3), the bare nouns *kaaneetiindet* 'teacher', *laakwɛɛt* 'child', and *ng'ookta* 'dog' are all indefinites that introduce new discourse referents. In (4), these same nouns act as anaphoric definites, referring back to the referents introduced in the previous sentence.

(3)   sooman-chiin **kaaneetiindet laakwɛɛt** kɪtabʊʊt ɑgobo **ng'ookta**.
       read-APPL.IPFV teacher   child   book   about dog
       'A teacher is reading a book about a dog to a child.'

(4)   teebeen **laakwɛɛt kaaneetiindet** kole tyan   oo **ng'ookta**.
       ask   child   teacher   C   how.much big dog
       'The child asks the teacher how big the dog is.'

Despite lacking overt determiners, these bare nouns are morphologically complex and fall into three number-based noun classes. Kipsigis bare nouns are either inherently singular, inherently plural, or numberless. While nouns of all classes contain a root, an optional thematic suffix, and a secondary suffix, whether or not a noun contains a number morpheme depends on its class and its plurality. Specifically, inherently singular nouns only contain a number morpheme in the plural (i.e. plural), inherently plural nouns only contain a number morpheme in the singular (i.e. singulative), and numberless nouns contain number morphemes in the singular and plural (Kouneli 2019, 2021). This general structure can be seen in (5) - (7), which exemplify nouns of each class.

(5)   Inherently singular noun (Kouneli 2021:ex. 5a)

     a. peet-u-it   → pêetúut   b. peet-uus-ya-ik → pêetùusyék
       day-TH-SEC   day-PL-TH-SEC
       'day'   'days'

(6)   Inherently plural noun (Kouneli 2021:ex. 5b)

     a. ngeend-yaan-ta-it → ngéendyáat   b. ngeend-a-ik → ngéendéek
       bean-SG-TH-SEC   bean-TH-SEC
       'bean'   'beans'

(7)   Numberless noun (Kouneli 2021:ex. 5c)

     a. sigis-yaan-ta-it → sìgìsyáat   b. sigis-iin-ik   → sìgìsìiník
       sock-SG-TH-SEC   sock-PL-SEC
       'sock'   'socks'

In addition to these bare nouns, the suffix *-yan* can replace a noun's secondary suffix to form a dedicated indefinite, as in the b. examples in (8) - (9), which are both built upon inherently singular nouns. While speakers translate bare nouns as 'the N' or 'a N' depending on the context,

---

[2]This is a slight simplification of the empirical pattern; bare noun interpretation in Kipsigis seems restricted in a way reminiscent of the pattern seen in other bare noun languages (e.g. Dayal 2004; Deal & Nee 2018), though it is not exactly the same. In particular, existential interpretations are more widely available in Kipsigis than in other bare noun languages like Hindi and Russian. See Bossi (2023):ch. 2 for a more detailed description of bare noun interpretation in Kipsigis.

forms with *-yan* are consistently translated as 'some N', which hints at their function as indefinites that signal some kind of speaker ignorance.

(8) a. kar-ɪ-ɪt → kàríít
      car-TH-SEC
      'the/a car' (Kouneli 2019:ex. 5c)
    b. kar-ɪ-yan
      car-TH-YAN
      'some car'

(9) a. laak-wa-ɪt → lààkwέέt
      child-TH-SEC
      'the/a child' (Kouneli 2019:ex. 5b)
    b. laak-wa-yan
      child-TH-YAN
      'some child'

However, before turning to the interpretation of *-yan* forms, it is important to point out that not all nouns can take the *-yan* suffix. First, only singular nouns have *-yan* forms. All nouns with *-yan* are interpreted as singular, and it is impossible for *-yan* to replace the secondary suffix on a plural noun. This restriction is particularly clear in (10), where *-yan* cannot surface alongside the plural morpheme *-oy*; instead, it must surface after the thematic vowel in the singular form, as seen in (9b).

(10) a. laak-oy-ɪk → lààgóók
      child-PL-SEC
      'children' (Kouneli 2019:ex. 12b)
    b. * laak-oy-yan
      child-PL-YAN
      Intended: 'some children'

Second, the set of nouns that *-yan* attaches to is lexically restricted. So far, I have found that the forms in (11) can contain *-yan*. While this list is not exhaustive, it highlights the important point that the diagnostics described in this paper cannot be applied to every nominal in the language. For this reason, the examples here make use of a relatively small set of nouns, though the reported patterns are also found with the other *-yan* forms in (11).

(11) **Non-exhaustive list of nouns with *-yan* forms**[3]

tagɪtarɪyan*	'doctor'	araawayan	'month'	tɔrayan	'boar'
kaaneetiindayan	'teacher'	sɛgɛnɛnɪyan	'stream'	ngɔkyayan	'chicken'
poiyan	'man'	pɔrɔstɛyan	'forest'	ngurwayan	'pig'
murenyan	'man'	keetiyan	'branch'	karɪyan*	'car'
chɔrwayan	'friend'	uyan	'somewhere'	ndisiyan**	'banana'
chepkerichan	'healer'	eetiyan	'bridge'	kitunguyan	'onion'
kirwaagiindoyan	'chief'	marɪndɛyan	'dress'	sʊgʊlɪyan*	'school'
laakwayan	'child'	artayan	'goat/sheep'	rʊʊmɪyan*	'room'
kaandoiindoyan	'leader'	mɔɪyan	'calf'		
kɪplagɔtɪyan	'hunter'	nyuumbuyan	'mule'		

Note that the addition of *-yan* is common with borrowed words—which speaks to its synchonric productivity—but also applies to native Kipsigis words. In addition, it crosscuts Kipsigis noun

---

[3]Forms marked with * and ** are English and Swahili borrowings, respectively.

classes, applying to inherently singular nouns and inherently plural nouns alike (cf. the inherently singular *-yan* forms *laakwayan* 'child', *artayan* 'goat/sheep' vs. the inherently plural *-yan* forms *kaaneetiindoyan* 'teacher', *kaandoiindoyan* 'leader'). This distribution indicates that *-yan* acts independently of the Kipsigis noun class system.

3   Characterizing the ignorance effects triggered by *-yan*

With this background in mind, this section justifies the claim that *-yan* forms are epistemic indefinites that signal speaker ignorance—both first order and higher order ignorance. First, it is infelicitous for a speaker to follow a *-yan* form with explicit identification of the witness to the indefinite (12); in using the *-yan* form, the speaker necessarily conveys ignorance.

(12)   Kibet and Chepkoech are playing hide-and-seek—Kibet is the seeker and Chepkoech could be hiding in any room in the house. Kibet says:
unye-gɛɛ Chɛɛpkɔɛch ɛɛn **rʊʊm-ɪ-yan**.   #Miit-een chigeet.
hide-REFL C.   in   room-TH-YAN COP-in   kitchen
'Chepkoech is hiding in some room. #She's in the kitchen.'
(contexted adapted from Alonso-Ovalle & Menéndez-Benito 2010)

Second, it is infelicitous to ask for identification of the witness to the indefinite in subsequent discourse after use of a *-yan* form. It is unnatural for a speaker to ask (13b) as a truly information-seeking question; if they do ask this question, speakers report that they should expect the answer *maangen* 'I don't know'.

(13)   Kibet and Chepkoech are playing hide-and-seek—Kibet is the seeker and Chepkoech could be hiding in any room in the house. Kibet says a. and his interlocutor asks b.

a. unye-gɛɛ Chɛɛpkɔɛch ɛɛn **rʊʊm-ɪ-yan**.
   hide-REFL C.   in   room-TH-YAN
   'Chepkoech is hiding in some room.'

b.   # ɑinon?
     which
     'Which one?'
     (context adapted from Alonso-Ovalle & Menéndez-Benito 2010)

Here *-yan* forms contrast with Kipsigis bare nouns; in these contexts, interlocutors can ask about the witness to the indefinite in subsequent discourse without any infelicity (14b).

(14)   Kibet and Chepkoech are playing hide-and-seek—Kibeet is the seeker and Chepkoech could be hiding in any room in the house. Kibet says a. and his interlocutor asks b.

a. unye-gɛɛ Chɛɛpkɔɛch ɛɛn **rʊʊm-ɪ-ɪt**.
   hide-REFL C.   in   room-TH-SEC
   'Chepkoech is hiding in a room.'

b. ɑinon?
    which
    'Which one?'

Last, *-yan* forms are unnatural when it is assumed that the speaker should not be ignorant about the witness to the indefinite or their properties. This effect is particularly clear in sentences with verbs like *tun* 'marry' and 1st person subjects, given the assumption that the speaker should be quite familiar with their spouse. In these cases, *-yan* forms are infelicitous, since they necessarily convey ignorance (15).

(15) # kii-ɑ-tun   **kɑɑneet-iin-dɑ-yɑn**.
       PST-1SG-marry teacher-SG-TH-YAN
       'I married some teacher.'

However, changing the person value of the subject (16) or swapping the *-yan* form for a bare noun (17) renders the sentence felicitous. This is because it is perfectly reasonable for the speaker to be ignorant about someone else's spouse, as in (16), or there simply are no more ignorance effects because there is no *-yan* form, as in (17).

(16) kii-tun   Kiproono **kɑɑneet-iin-dɑ-yɑn**.
      PST-marry K.   teacher-SG-TH-YAN
      'Kiprono married some teacher.'

(17) kii-ɑ-tun   **kɑɑneet-iin-dɑ-it** (kɑɑneetiindet).
      PST-1SG-marry teacher-SG-TH-SEC
      'I married a teacher.'

In this way, Kipsigis *-yan* forms are epistemic indefinites that signal speaker ignorance. Notably, though, these forms can convey both first order and higher order ignorance, meaning that a speaker can use a *-yan* form when they are ignorant about either: 1) the individual who witnesses the existential claim (18a), or 2) some salient property of the witness to the existential claim (18b). Use of the *-yan* form is only ruled out when the speaker can identify the witness and knows its salient properties (18c).

(18) Kibet and Chepkoech are playing hide-and-seek—Kibet is the seeker and Chepkoech is hiding. Kibet says to his babysitter:
      unye-gɛɛ Chɛɛpkɔɛch ɛɛn **rʊʊm-ɪ-yan**.
      hide-REFL C.   in room-TH-YAN
      'Chepkoech is hiding in some room.'
      (context adapted from Alonso-Ovalle & Menéndez-Benito 2010)
      a. ✓ Kibet and his babysitter know that Chepkoech is in the house, but Kibet doesn't know which room she's in, so he can't find her.
      b. ✓ Kibet and his babysitter know that Chepkoech is in the living room, but Kibet doesn't know where in the house the living room is, so he can't find her.

c. # Kibet cheated, so he knows that Chepkoech is in the living room, which he told his babysitter. He also knows where in the house the living room is, so he can find her.

Another example illustrating this higher order ignorance is found in (19). In this context, the speaker knows who witnesses the indefinite *choorwayan* 'friend' but is ignorant about what they are wearing, which is a key property that would enable them to find their friend in the crowded restaurant.

(19) I'm looking for my good friend in a crowded restaurant. I know exactly which friend I'm looking for, but I don't know what they're wearing today, so it's hard to find them in the restaurant. I say:

   a. a-chɛɛng'-ɛ   **choor-wa-yan**...
     1SG-look.for-IPFV friend-TH-YAN
     'I'm looking for a friend...'

   b. lakini toma-nyoor-u   ngamʊn mo-a-ngen   kiy   ne   i-laach-e.
     but   not.yet-find-DIR because NEG-1SG-know thing REL.SG 3-wear-IPFV
     'but I can't find them because I don't know what they're wearing.'
     (context adapted from Dawson 2018)

Together, the examples in (18) - (19) show that Kipsigis *-yan* forms can convey both first order and higher order ignorance. The following section addresses whether these ignorance effects are lexicalized in the *-yan* suffix itself or whether they arise via pragmatic reasoning and competition with other Kipsigis nominals.

4 Ignorance effects are pragmatically derived

In this section, I show that the ignorance effects associated with *-yan* forms are pragmatically derived, since they show the hallmarks of conversational implicature; in particular, they are reinforceable, cancellable with sufficient contextual support, and disappear in downward-entailing contexts. First, speakers often follow a sentence containing a *-yan* form with an explicit statement of ignorance, which indicates that the ignorance component is not part of the asserted content of the *-yan* form (20) - (21). Speakers note that, while such an addition is not strictly necessary to convey ignorance, it is not at all redundant.

(20) kɔɔ-al Kibeet **kar-ɪ-yan** ngandan maa-ngen   kole ainon.
    PST-buy K.   car-TH-YAN but   NEG.1SG-know C   which
    'Kibet bought some car, but I don't know which one.'

(21) mii-teen Kibeet ak   Chɛɛpkɔɛch **rʊʊm-ɪ-yan** ngandan maa-ngen   kole ainon.
    COP-in K.   and C.   room-TH-YAN but   NEG.1SG-know C   which
    'Kibet and Chepkoech are in some room, but I don't know which one.'

Second, the ignorance effects are cancellable, as long as there is sufficient contextual support for this cancellation. As seen previously in (12), a speaker cannot follow use of a *-yan* form with

explicit identification of the witness without any established reason to do so. Instead, there must be motivation for cancellation established in the discourse, in which case it is possible. In (22), for instance, the speaker is explicitly witholding information to avoid helping Kibet cheat in the game—in which case, cancellation of the ignorance effects is possible.

(22) Kibet and Chepkoech are playing hide-and-seek. Kibet is trying to cheat and get information from me, but I won't help him. I say:

    a. unye-gɛɛ Chɛɛpkɔɛch ɛɛn **rʊʊm-ɪ-yan**.
       hide-REFL C.   in room-TH-YAN
       'Chepkoech is hiding in some room.'

    b. ɑɑ-ngen ɑɑle rʊʊmɪɪt ɑinon ngandan mɑɑ-mwɑ-uun.
       1SG-know C   room   which but   NEG.1SG-say-2SG.IO
       'I know which one, but I won't tell you.'

Likewise, consultants report that A in the dialog in (23) is using the *-yan* form to be "cheeky" and to intentionally obscure how much information they know, even though they ultimately identify not only the witness to the epistemic indefinite *rʊʊmɪyan* 'some room' but also where in that room the children are hiding.

(23) A group of children is playing hide-and-seek. They are all hiding in the same room, and B is trying to find them. A is talking with B about the game.

    A: ʊnyɛ-gɛɛ laakwɛɛt agɛ tʊgʊl ɛɛn **rʊʊm-ɪ-yan**.
       hide-REFL child   every   in room-TH-YAN
       'Every child is hiding in some room.'

    B: ɑinon?
       which
       'Which one?'

    A: chiigeet.
       kitchen
       'The kitchen.'

    B: ɑno   ɛɛn chiigeet?
       where in kitchen
       'Where in the kitchen?'

    A: meeset ng'wɛny.
       table   under
       'Under the table.'

    Aloni & Port (2015) cite this difficulty in cancelling the ignorance effects associated with certain epistemic indefinites as evidence against a pragmatic analysis of these forms. However, the same pattern is also found with Tiwa *-khi* indefinites, which convey higher order ignorance like Kipsigis *-yan* forms and whose ignorance effects Dawson (2018) argues to be pragmatically derived. For instance, Tiwa *-khi* indefinites cannot be cancelled by simply adding 'I know who' after the statement with *-khi*; instead, the context must provide some motivation for withholding information, as seen in (24).

(24) *Tiwa* (Dawson 2018:ex. 8)
There is a man who is constantly bothering the speaker, which includes always asking her invasive questions about her recent activities.

Pakhál-khî lí-dom. Ang si-w pakhál, thêbo nága sóng os-ya.
when-KHI go-PST 1SG know-NEUT when but 2SG.DAT tell AUX-NEG
'I went sometime. I know when, but I won't tell you.'

This pattern suggests that difficulty in cancellation is a more widespread characteristic of implicated ignorance effects cross-linguistically, which might relate to the type of implicature at work. For instance, Dawson analyzes the implicature with *-khi* indefinites as a manner implicature, which Rett (2020) notes cannot typically be cancelled. In this way, cancellation is not a uniformly straightforward diagnostic for all types of implicatures.

Third, the ignorance effects typically triggered by *-yan* forms disappear in downward-entailing contexts; when the epistemic indefinite scopes under a conditional operator (25) or negation (26), there is no epistemic effect. In these sentences, which contain *-yan* forms, there is no epistemic effect, and the *-yan* form is best translated with 'any' instead. In fact, as Dawson (2018:353) points out, it is quite difficult to even imagine what ignorance effects would look like when the indefinite is in a downward-entailing context (e.g. 'it is not the case that Kibet swept any room, but/and I don't know which room he didn't sweep').

(25) Chepkoech and Kibet are playing hide-and-seek—Kibet is the seeker and Chepkoech is hiding. I say:

kot kɔ-ʊnyɛ-gɛɛ Chɛɛpkɔɛch ɛɛn **rʊʊm-ɪ-yan** ko-nyoor-u Kibeet.
if 3.SBJV-hide-REFL C. in room-TH-YAN 3.SBJV-find-DIR K.
'If Chepkoech is hiding in a room, Kibet will find her.'
✓ Whichever room Chepkoech is hiding in, Kibet's sure to find her. if > ∃

(26) You overhear your mom complaining and ask your sibling why she's so upset. Your sibling replies:

mɑ-i-buch Kibeet **rʊʊm-ɪ-yan**.
NEG-3-sweep K. room-TH-YAN
'Kibet didn't sweep a room'
✓ Kibet didn't sweep any room. ¬ > ∃

These facts challenge a view in which ignorance is lexically encoded (see e.g. Giannakidou & Quer 2011; Aloni & Port 2015). If ignorance were lexically encoded, the type of reinforcement seen in (20) - (21) would be redundant, since it would simply repeat part of the asserted content of the *-yan* form. Likewise, cancellation would lead to a contradiction, rather than simply constituting a marked discourse move that requires contextual justification. Finally, lexically encoded ignorance would not be predicted to disappear in downward-entailing contexts, as it is part of the form's asserted content.[4] Instead, these behaviors suggest that the ignorance effects triggered by *-yan* arise pragmatically as conversational implicature.

---

[4]An exception to this claim is found in Aloni & Port (2015), where they are able to capture the disappearance of ignorance effects within the scope of negation, even though they argue that these effects are lexically encoded. On their account, ignorance effects arise when the indefinite requires the witness to be identified in some non-standard

5 Kipsigis epistemic indefinites in analytic context

5.1 Pragmatic analyses of epistemic indefinites

In light of the data in §4, I assume that the ignorance effects associated with Kipsigis *-yan* forms are pragmatically derived. However, existing pragmatic analyses of epistemic indefinites fall into two classes: domain widening analyses (Kratzer & Shimoyama 2002; Chierchia 2006; Alonso-Ovalle & Menéndez-Benito 2010, 2013, 2017; Dawson 2018) and choice functional analyses (Reinhart 1997; Winter 1997; Kratzer 1998; Matthewson 1999; Yanovich 2005; Dawson 2018, 2020). Both of these types of accounts derive ignorance effects via competition between the epistemic indefinite and other nominals in the language (e.g. plain indefinites).

These different analyses have also been invoked to capture the different kinds of ignorance effects triggered by epistemic indefinites; in particular, Dawson (2018) links domain widening semantics to first order ignorance, and choice functions to higher order ignorance. However, these analyses also make different predictions about other behaviors of the epistemic indefinites beyond the type of ignorance conveyed. This section outlines these predictions and shows that Kipsigis *-yan* forms do not pattern neatly with either type of analysis, setting the stage for my novel account in §6.

5.2 Domain widening analyses

Domain widening analyses of epistemic indefinites (Kratzer & Shimoyama 2002; Chierchia 2006; Alonso-Ovalle & Menéndez-Benito 2010, 2013, 2017; Dawson 2018) impose requirements on the domain that the indefinite quantifies over, arguing that it must be expanded in some way. For instance, Kratzer & Shimoyama (2002) claim that German *irgendein* shows Free Choice effects, meaning that any individual that satisfies the indefinite's restrictor must be a possible witness for *irgendein* to be felicitous. These effects can be seen in (27), where *irgendein* is appropriate if all doctors are possible marriage options (27a) but infelicitous if only a subset of doctors are possible options (27b).[5] In light of this pattern, Kratzer & Shimoyama argue that *irgendein* is a maximal domain widener.

(27) *German*   (Kratzer & Shimoyama 2002:ex. 9)
      Mary muss **irgend-einen** Arzt   heiraten.
      M.   has.to IRGEND-a   doctor marry
      'Mary has to marry a doctor.'

---

way (e.g. via description rather than naming). However, when an existential occurs in the scope of negation, no question of identification arises; instead, they assume that indefinites can also trigger domain widening in these contexts. In this way, indefinites serve a fundamentally different role under negation—widening the domain rather than shifting how an individual is to be identified—which captures the disappearance of ignorance effects. Yet this type of analysis raises questions about the connection between the two functions that epistemic indefinites can have, and does not fully capture the Kipsigis pattern, since the ignorance effects seen with *-yan* forms show multiple hallmarks of conversational implicature.

[5]This is a slight simplification of the empirical picture; German *irgendein* can trigger weaker epistemic effects in some contexts (e.g. under epistemic rather than deontic modals). For more discussion, see Aloni & Port (2015).

a. ✓ There are lots of doctors in the world. Mary has to marry a doctor, and any doctor is a permitted option.

b. # There are lots of doctors in the world. Mary has to marry one of two doctors—Dr. Heintz or Dr. Dietz—and those are the only permitted options for her.

It is also possible for epistemic indefinites to place weaker requirements on their domain of quantification. For example, Alonso-Ovalle & Menéndez-Benito (2010) argue that Spanish *algún* imposes an anti-singleton constraint on its domain of quantification: it must contain at least two individuals, though it need not be maximal (28b). Alonso-Ovalle & Menéndez-Benito dub this weaker epistemic effect "modal variation" as opposed to Free Choice.

(28) *Spanish*   (Alonso-Ovalle & Menéndez-Benito 2010:ex. 14)
Juan tiene que estar en **alguna** habitación de la   casa.
J.   has   to   be   in ALGUN room   of the house
'Juan must be in a room of the house.'

a. ✓ Maria, Juan, and Pedro are playing hide-and-seek in their country house. Juan is hiding. Maria and Pedro haven't started looking for Juan yet. Pedro believes that Juan isn't hiding in the garden or in the barn: he's sure that Juan's inside the house. But as far as Pedro knows, Juan could be in **any room in the house**.

b. ✓ Maria, Juan, and Pedro are playing hide-and-seek in their country house. Juan is hiding. Maria and Pedro haven't started looking for Juan yet. Pedro believes that Juan isn't hiding in the garden or in the barn: he's sure that Juan's inside the house. Furthermore, Pedro's sure that Juan **isn't in the bathroom or in the kitchen**. As far as he knows, Juan could be in any of the other rooms in the house.

These domain widening analyses straightforwardly capture both Free choice effects and cases of weaker modal variation, and they naturally derive first order ignorance. If the domain of quantification necessarily contains two or more individuals, deriving ignorance about the individual witness to the indefinite is straightforward. However, these accounts necessarily rule out higher order ignorance; because the indefinite's domain of quantification must contain multiple individuals, it is impossible to derive a reading in which the speaker knows the precise witness but is instead ignorant about one or more of their salient properties.

These analyses also predict that domain widening epistemic indefinites should be incompatible with restrictors with singleton extensions (e.g. superlatives, inherently singular denoting nouns). This prediction is welcome for Spanish *algún*, which cannot co-occur with a superlative restrictor (29).

(29) *Spanish*   (Alonso-Ovalle & Menéndez-Benito 2010:ex. 47)
Juan compró **algún** libro que resultó   ser el más caro   de la librería.
  J.   bought ALGUN book that happened to.be the most expensive in the bookstore
'Juan bought a book that happened to be the most expensive one in the store.'

However, this prediction is incorrect for Kipsigis, where *-yan* can take a necessarily singleton, su-

perlative restrictor (30) - (31).[6] In these examples, the *-yan* form triggers higher order ignorance—in (30) about the car's make or model, and in (31) about where in the house the relevant room is. In both of these cases, the speaker is missing some crucial piece of information that prevents them from fully identifying the witness to the indefinite.

(30) I attended the auction where Linus bought the most expensive black car. I saw the car, but I didn't learn any more information about it like its make or model. I say:

kɔɔ-al Lınas **kar-ı-yan** ne tui ne koo-kɑli ɛɛn tʊgʊl ɛɛn ɔkshɛn.
PST-buy L. car-TH-YAN REL.SG black REL.SG PST-expensive in all in auction
'Linus bought the most expensive black car at the auction.'

(31) Kibet and Chepkoech are playing hide-and-seek—Kibet is the seeker and Chepkoech is hiding. Kibet was told that Chepkoech is in the biggest room in the house. He knows that the living room is typically biggest, so he thinks that Chepkoech must be there. But Kibet has never been here before, so he doesn't know where the living room is! He says:

ʊnyɛ-gɛɛ Chɛɛpkɔɛch ɛɛn **rʊʊm-ı-yan** ne oo ɛɛn tʊgʊl.
hide-REFL C. in room-TH-YAN REL.SG big in all
'Chepkoech is hiding in some room that is the biggest of all.'

In this way, a key prediction of domain widening analyses—that epistemic indefinites of this type should be incompatible with singleton domains of quantification—is not upheld in Kipsigis, though it is in German and Spanish.

5.3 Choice functional analyses

Unlike domain widening accounts, choice functional analyses involve existential quantification over choice functions (CFs) rather than over individuals directly (Reinhart 1997; Winter 1997; Kratzer 1998; Matthewson 1999; Yanovich 2005; Dawson 2018, 2020). For instance, Dawson (2018) claims that Tiwa *-khi* indefinites introduce a CF that ranges over the property denoted by their restrictor (32). A Tiwa sentence with a *-khi* indefinite like that in (33a) has the LF in (33b).

(32) ⟦wh-khi⟧ = $\lambda P. f(P)$, where f is a CF (Dawson 2018:ex. 29)

(33) *Tiwa* (Dawson 2018:ex. 37)

   a. **Shar-khí** phi-dom.
      who-KHI come-PST
      'Someone came.'

   b. $\exists f[\text{CH}(f)\ \&\ \text{came}(f(\text{human}))]$

When a speaker chooses to use this type of higher order quantification, interlocutors reason that they must be ignorant about how the witness is to be selected, rather than about its identity. This reasoning naturally derives higher order ignorance.

---

[6]Kipsigis does not have a dedicated morphological strategy for creating superlatives. Instead, speakers use a paraphrase like those in (30) - (31), which literally translates to 'N that is ADJ in all'. Although I do not provide a detailed semantic analysis of these constructions here, I assume that this paraphrase is similar enough to a morphological superlative to illustrate the point that *-yan* allows a singleton domain of quantification.

Importantly, because the choice functional indefinite places no requirements on the domain that it ranges over, it should be compatible with a singleton restrictor. This prediction meshes nicely with the Kipsigis facts in (30) - (31) and is upheld in Tiwa as well, seen in (34) with the inherently singular denoting noun *PM* 'Prime Minister'.

(34) *Tiwa*   (Dawson 2018:ex. 36)
Ang **shar-khí** India-ne   PM-go   lak mán-a lí-do.
1SG who-KHI India-GEN PM-ACC meet-INF go-IPFV
'I'm going to meet some Indian Prime Minister.'

However, many implementations of CFs predict that they should take exceptional wide scope—either because the CF variable is contextually resolved (Kratzer 1998) or because it is existentially closed wide (Matthewson 1999). Tiwa *-khi* indefinites show this predicted exceptional wide scope (35); forms with *-khi* must take wide scope, even out of islands.

(35) *Tiwa*   (Dawson 2018:ex. 30)
Maria **inda-khí** kashóng pre-ya-m.
M.   what-KHI dress   buy-NEG-PST
'Maria didn't buy some dress.'
   a. # There were no dresses.   *$\neg > \exists$
   b. ✓ There is a particular, unknown dress Maria didn't buy. $\exists > \neg$
      $\exists f[\text{CH}(f) \text{ \& } \neg\text{buy}(\text{Maria})(f(\text{dress}))]$

Kipsigis *-yan* forms, however, can generally scope below or above operators like universal quantifiers (36), modals (37), and attitude verbs (38).

(36) unye-gɛɛ laakwɛɛt agɛ tʊgʊl ɛɛn **rʊʊm-ɪ-yan**.
hide-REFL child   every   in room-TH-YAN
'Every child is hiding in some room.'
   ✓ Every child is hiding a different room. $\forall > \exists$
   ✓ There is a particular, unknown room that every child is hiding in. $\exists > \forall$

(37) nyalu ko-buuch   Kibeet **rʊʊm-ɪ-yan**.
must 3.SBJV-sweep K.   room-TH-YAN
'Kibet has to sweep some room.'
   ✓ Kibet has to sweep any room. $\square > \exists$
   ✓ There is a particular, unknown room that Kibet has to sweep. $\exists > \square$

(38) mach-e   kɔ-ʊnyɛ-gɛɛ   Chɛɛpkɔɛch ɛɛn **rʊʊm-ɪ-yan**.
want-IPFV 3.SBJV-hide-REFL C.   in room-TH-YAN
'Chepkoech wants to hide in some room.'
   ✓ Chepkoech wants to hide in any room.   want $> \exists$
   ✓ Chepkoech wants to hide in a particular, unknown room. $\exists >$ want

In fact, the exceptional wide scope seen with choice functional indefinites is predicted to hold even in contexts where indefinite scope is often restricted. For instance, many indefinites

like English *a* must scope below downward-entailing operators that bind into their restrictor (Brasoveanu & Farkas 2011). This restriction is known as the "Binder-Roof Constraint" and can be seen in (39) for English *a*. While *a* is usually scopally flexible, when the downward-entailing operator *no one* binds a pronoun in the restrictor of the indefinite, it can no longer scope above negation (39b).

(39) No one$_i$ sent **a** letter that they$_i$ wrote.

    a. ✓ Tim, Emily, Kyle, and Alex each wrote 2 letters, but no one sent any of their own letters.   no one $> \exists$

    b. # Tim, Emily, Kyle, and Alex each wrote 2 letters. They all sent one of their letters, but each person didn't send the other one of their letters.   *$\exists >$ no one

Once again, this predicted exceptional wide scope is welcome for Tiwa *-khi*, which shows the reverse of the English pattern (40); here, only the wide scope interpretation is available for the *-khi* indefinite, even though the downward-entailing operator *sharbo* 'no one' binds a pronoun in the indefinite's restrictor.

(40) *Tiwa*   (Dawson 2020:173)

Sharbo$_i$ [**pakhâ-khí** [$_{RC}$ othê$_i$ pre la-wa   ] khugrí] -gô marê ton-ya-m.
nobody which-KHI   REFL.GEN buy AUX-NMLZ dog   -ACC kill AUX-NEG-PST
'Nobody$_i$ killed a dog that he$_i$ bought.'

    a. # Each person bought several dogs. A rabies outbreak meant that all the dogs had to be killed. However, each person refused to kill their own dogs.   *no one $> \exists$

    b. ✓ Each person bought several dogs. Because of a rabies outbreak, each person killed all of their dogs, except for one. $\exists >$ no one

Yet, as previously, this is a bad prediction for Kipsigis *-yan*, which patterns with English *a* in obeying the Binder-Roof Constraint (41); here, only the narrow scope interpretation of the indefinite is possible.

(41) ma-mach-e   chi$_i$ ko-al-da   [**mariinde-yan** [$_{RC}$ ne   koo-nap-e$_i$]].
NEG-want-IPFV person 3.SBJV-buy-IT dress-YAN   REL.SG PST-make-IPFV
'No one$_i$ wanted to sell some dress that they$_i$ made.'

    a. ✓ Chepkoech, Cherono, and Cheptoo all made many dresses. Each woman was planning to sell all the dresses that she made, but eventually each woman decided that she didn't want to sell any of her own products.   no one $> \exists$

    b. # Chepkoech, Cherono, and Cheptoo all made many dresses. Each woman was planning to sell all the dresses that she made, but eventually each woman decided to keep one for herself.   *$\exists >$ no one

It is worth noting, however, that not all analyses of CFs make these scopal predictions. Scopal flexibility is possible if existential closure of the CF is permitted at various points in the structure (Reinhart 1997; Winter 1997; Yanovich 2005). Furthermore, the disappearance of this scopal flexibility in Binder-Roof Constraint contexts like (39) - (41) can be captured through stipulations that

14

require existential closure of the CF below operators that bind into the choice functional indefinite's restrictor (Chierchia 2001; Schwarz 2001). Nevertheless, analyzing English *a* or Kipsigis *-yan* as CFs introduces complications into the analysis—especially when all the predictions of a choice functional account are upheld in Tiwa. This leads Dawson (2020) to conclude that data like Tiwa (40) are the true hallmark of choice functional indefinites. In this way, Kipsigis *-yan* forms do not behave as expected for CFs.

Taken together, the data in this section show that the pattern seen with Kipsigis *-yan* does not align with the predictions of any existing analyses—neither domain widening ones nor choice functional ones. This state of affairs is summarized in Table 1.

Table 1: Kipsigis *-yan* vs. predictions of existing analyses and documented patterns

	Singleton domain?	Scopal flexibility?
Domain widening	no	yes
Choice functions	yes	no (modulo stipulations)
Kipsigis *-yan*	yes	yes
Spanish *algún*	no	yes
Tiwa *-khí*	yes	no

6 An analysis

6.1 A new kind of anti-singleton constraint

Against this backdrop, I offer a new type of analysis that brings together insights from the literature on domain widening and that on choice functional epistemic indefinites. In particular, building on Alonso-Ovalle & Menéndez-Benito (2010, 2017), I propose that *-yan* requires the set of sets of contextually salient properties of individuals that satisfy *-yan*'s restrictor to be non-singleton (42). At its core, *-yan* expresses a basic existential claim; however, use of *-yan* is only licensed when there is variation in the contextually salient properties of the individuals who satisfy the indefinite's restrictor across the speaker's doxastic alternatives.

(42) $[\![\text{-yan}]\!]^{c,w} = \lambda P_{\langle e,st \rangle}.\lambda Q_{\langle e,st \rangle} : \text{anti-singleton}(S_P) . \exists x[(P)(x)(w) \ \& \ Q(x)(w)]$
where S_P is the smallest set containing all sets of contextually salient properties of members of $\{x : \forall w' \in Dox(sp)(w) . P(x)(w') = 1\}$ across the speaker's doxastic alternatives

First, the restictor P undergoes contextual domain restriction, so that only the contextually relevant individuals with property P across the speaker's doxastic alternatives are considered. This contextual domain restriction yields the set $\{x : \forall w' \in Dox(sp)(w) . P(x)(w') = 1\}$ in (42), which I call the "individual set" for convenience, since it is made up of the contextually relevant *individuals* with property P. S_P is, then, the set containing the sets of contextually salient properties of the individual set's members across the speaker's doxastic alternatives.

In such a system, both first order and higher order ignorance can be derived in parallel ways. First order ignorance arises when the individual set contains multiple members whose contextu-

ally salient properties differ across the speaker's doxastic alternatives. By contrast, higher order ignorance arises when the individual set contains just one member whose contextually salient properties differ across the speaker's doxastic alternatives. Only in cases when the individual set contains just one member whose contextually salient properties are all known to the speaker is *-yan*'s presupposition unsatisfied; it is this—and only this—configuration that yields a singleton S_P.

To see this analysis in action, consider how the presupposition in (42) is or is not satisfied in a range of contexts. For simplicity, I assume that rooms have two salient properties in the context in (43): name and location. However, nothing crucial hinges on this assumption, and the same logic applies when the set of contextually salient properties is expanded.

(43)   Kibet and Chepkoech are playing hide-and-seek—Kibet is the seeker and Chepkoech is hiding. Kibet says to his babysitter:
unye-gɛɛ Chɛɛpkɔɛch ɛɛn **rʊʊm-ɪ-yan**.
hide-REFL C.   in room-TH-YAN
'Chepkoech is hiding in some room.'
   a.   ✓ Kibet and his babysitter know that Chepkoech is in the house, but Kibet doesn't know which room she's in, so he can't find her.
   b.   ✓ Kibet and his babysitter know that Chepkoech is in the living room, but Kibet doesn't know where in the house the living room is, so he can't find her.
   c.   # Kibet cheated, so he knows that Chepkoech is in the living room, which he told his babysitter. He also knows where in the house the living room is, so he can find her.

In situations like (43a), the contextual domain restriction on P yields an individual set containing all the rooms in the house, since the speaker does not have any more information about which rooms are contextually relevant. For instance, the individual set here might look like: {bedroom, living room, kitchen, bathroom, sunroom}. These individuals differ along many dimensions, including both name and location. Some sample properties of these candidate rooms are listed in (44).

(44)   a.   Properties of candidate room 1 = {*bedroom, upstairs*}
   b.   Properties of candidate room 2 = {*living-room, downstairs*}
   c.   Properties of candidate room 3 = {*kitchen, downstairs*}
   d.   etc. for each doxastic alternative

When these property sets are compiled into S_P, it is not singleton: {{*bedroom, upstairs*}, {*living-room, downstairs*}, {*sunroom, downstairs*}, ...}. In this way, *-yan*'s presupposition is met.

By contrast, in situations like (43b), the contextual domain restriction on P yields an individual set containing just one member, following Schwarzchild (2002). Here, the individual set is just {living room} because the speaker and their addressee know that only the living room is relevant in context. Yet even though the speaker knows that the one and only member of the

16

individual set has the *living-room* property, it differs in at least one other contextually salient property across the speaker's doxastic alternatives, as seen in (45).

(45) a. Properties of candidate living room 1 = {*living-room, upstairs*}
      b. Properties of candidate living room 2 = {*living-room, downstairs*}
      c. etc. for each doxastic alternative

As before, when these property sets are compiled into S_P, it is not a singleton: {{*living-room, upstairs*}, {*living-room, downstairs*}}. As a result, *-yan*'s presupposition is met again.

On the other hand, in situations like (43c), there is no variation in the contextually salient properties of the member of the individual set across the speaker's doxastic alternatives. As previously, the individual set contains just one member after contextual domain restriction: {living room}. However, given Kibet's knowledge of the house in this context, all possible living rooms across the speaker's doxastic alternatives share the same salient properties, as illustrated in (46).

(46) a. Properties of candidate living room 1 = {*living-room, downstairs*}
      b. Properties of candidate living room 2 = {*living-room, downstairs*}
      c. etc. for each doxastic alternative

When these property sets are compiled into S_P, it is singleton {{*living-room, downstairs*}}, containing just one set of properties. Consequently, in this—and only this—configuration, *-yan*'s presupposition is not met. This explains why *-yan* forms are not licensed in contexts like (43c), but are licensed in those like (43a) - (43b).

The semantics proposed in (42) differ from existing accounts, including the two approaches discussed in §5, while still adopting key insights from these bodies of literature. I follow work on choice functional epistemic indefinites in suggesting that *-yan* forms convey ignorance about how the witness to the indefinite is to be properly characterized, though I do not claim that *-yan* actually denotes a CF itself.[7] Instead, I suggest that it expresses a basic existential claim and presupposes a particular type of variation across the speaker's doxastic alternatives. This departure from the choice functional approach in Dawson (2018, 2020) is desirable, since *-yan* does not have the properties—particularly in terms of scope—that are straightforwardly expected from CFs.

The semantic analysis in (42) is more along the lines of that in Alonso-Ovalle & Menéndez-Benito (2010), as it makes use of an anti-singleton constraint, which mandates that a particular set must not contain just one member. However, the anti-singleton constraint proposed in Alonso-Ovalle & Menéndez-Benito (2010) applies directly to a set of individuals, as formalized in (47). Here, *f* is a subset selection function that picks out a subset of the individuals denoted by *algún*'s restrictor.

---

[7]The idea that epistemic indefinites convey ignorance about how the witness is to be identified also has roots in work on conceptual covers like that in Aloni & Port (2015). However, I do not discuss this approach in §5 because it treats ignorance as lexicalized rather than arising via implicature.

(47) $[\![\text{algún}]\!] = \lambda f_{\langle et,et \rangle}.\lambda P_{\langle e,t \rangle}.\lambda Q_{\langle e,t \rangle} : \text{anti-singleton}(f) . \exists x[f(P)(x) \,\&\, Q(x)]$
      (Alonso-Ovalle & Menéndez-Benito 2010:ex. 54)

The anti-singleton constraint in (47) is only satisfied when the subset of individuals with property P picked out by f contains more than one member. While I also propose an anti-singleton constraint for Kipsigis -*yan*, I argue that the Kipsigis constraint applies not to a set of individuals, but rather to a set of sets of properties. In this way, my analysis adopts the general idea put forth in Alonso-Ovalle & Menéndez-Benito (2010), but extends it to capture cases of higher-order ignorance by applying the constraint to a different type of set.

In fact, the analysis in (42) is most similar to the one sketched in Alonso-Ovalle & Menéndez-Benito (2017), which builds upon their 2010 work to capture an additional empirical observation about Spanish *algún*. In particular, *algún* is felicitous in some cases where it seems as though the indefinite's domain of quantification *is* restricted to one individual, contrary to the presupposition in (47). Such a scenario is found in (48), where *algún* is felicitous even though the speaker is able to identify that María is kissing a specific boy in a particular location in front of her.

(48) *Spanish*   (Alonso-Ovalle & Menéndez-Benito 2017:ex. 42a)
      P knows that all the first-year students wear a particular uniform. She is familiar with the uniform but she has never met the students. She looks out of the window and sees María kissing a boy wearing the first-year uniform. P cannot make out the boy's features. P says:
      ¡Mira! ¡María está besando a algún estudiante!
      Look! M.   is   kissing at ALGUN student
      'Look! María is kissing some student!'

In light of this, Alonso-Ovalle & Menéndez-Benito (2017) suggest that their 2010 account is not sufficiently fine-grained to capture the content of *algún*'s epistemic effect.

Instead, they offer a new intuition: that use of *algún* signals that the speaker is not restricting the indefinite's domain of quantification with an "identificational property", where an identificational property is one that picks out exactly one individual and that is stable across time. Their updated account is shown in (49) - (50), where (49) provides the denotation of *algún* and (50) defines an identificational property. Instead of imposing an anti-singleton constraint on the set picked out by a subset selection function, *algún* requires that the output of the property selection function f must not be an identificational property.

(49) $[\![\text{algún}]\!]^{c,w} = \lambda f_{\langle \langle s,et \rangle, \langle s,et \rangle \rangle}.\lambda P_{\langle s,et \rangle} : f(P)$ is not identificational for the speaker of c in $w.\lambda Q_{\langle s,et \rangle} . \exists x[f(P)(w)(x) \,\&\, Q(w)(x)]$
      where f is a property selection function that takes a function P of type $\langle s, et \rangle$ (a property) and yields a property Q that entails P
      (Alonso-Ovalle & Menéndez-Benito 2017:ex. 46-47)

(50) A property P is identificational for an individual d in w iff
      a. In all the worlds w' compatible with d's beliefs in w, $|\{x : f(w')(x)\}| = 1$, and

b. d believes in w that f is a stable property.
(Alonso-Ovalle & Menéndez-Benito 2017:ex. 48)

This account shares with my analysis of Kipsigis *-yan* direct reference to properties rather than just individuals. However, it does not extend wholesale to the Kipsigis pattern, since *-yan* forms are felicitous when the speaker can identify the witness to the indefinite via an identificational property, as long as they are ignorant about some other contextually salient property of this individual. The fact that *-yan* forms are felicitous in contexts like (43b) highlights this fact. Here, the speaker knows that Chepkoech is hiding in room named "living room", which is an identificational property because it necessarily picks out one room across each of the speaker's doxastic alternatives and is a stable property. Nevertheless, the epistemic indefinite is licensed because the speaker is lacking some other crucial piece of information about this room—namely, its location in the house. In this way, what really seems to matter in licensing Kipsigis epistemic indefinites are the properties that are particularly relevant in context for the speaker's conversational and real-world goals (i.e. finding Chepkoech in the game of hide-and-seek).

Yet a question that arises from the comparison between (42) and other existing accounts of epistemic indefinites is whether these baroque, language-specific analyses are necessary to capture the typology of epistemic indefinites. I believe that the answer to this question is yes and no. Following Dawson (2020), I assume that the main hallmark of choice functional indefinites is their scope profile—in particular, the exceptional wide scope that they show across a range of contexts. In this way, the scopal properties of some indefinites provide independent support for this line of analysis, which can naturally give rise to ignorance effects in competition with other indefinites. The existence of choice functional epistemic indefinites, then, is really a side effect of other properties of the indefinite and the nominal inventory of the language.

Turning to the analyses in Alonso-Ovalle & Menéndez-Benito (2010, 2017), I view the anti-singleton constraint in (47) for Spanish *algún* as parallel to the Kipsigis constraint in (42). The general structure of these two indefinite denotations is quite similar: the indefinites express a basic existential claim and enforce a presuppositional anti-singleton constraint. These meanings only differ with respect to the set that the anti-singleton constraint applies to. In this way, both analyses follow the same general scaffolding with language-specific differences in what sets are inserted into that scaffolding. This type of cross-linguistic variation does not seem unreasonably baroque, especially in light of the extensive empirical variation seen with epistemic indefinites across languages, and could potentially be linked to the different historical pathways that can give rise to epistemic indefinites.

6.2   Pragmatic competition with bare nouns

Given these semantics for *-yan*, I suggest that ignorance effects arise pragmatically via competition with Kipsigis bare nouns (§4), which impose no such anti-singleton constraint on the set of sets of salient properties of possible witnesses to the indefinite. Following Alonso-Ovalle & Menéndez-Benito (2010), I assume that the relevant instance of competition is between the *-yan* form and the bare noun on a reading where S_P is singleton; this is because—even though use of the bare noun does not require this extent of speaker knowledge (i.e. it is possible to use a bare

noun when the speaker does not know all the contextually salient properties of the witness)—the bare noun allows this possibility in a way that *-yan* does not.

For concreteness, consider again the sentence in (51a), repeated from (43). When the speaker says (51a), they could also say (51b) with the bare noun *rʊʊmɪɪt* 'room' with equivalent truth conditions: $\exists x[x$ is a room & Chepkoech is hiding in $x]$.

(51) Kibet and Chepkoech are playing hide-and-seek—Kibet is the seeker and Chepkoech is hiding. Kibet says to his babysitter:

    a. unye-gɛɛ Chɛɛpkɔɛch ɛɛn **rʊʊm-ɪ-yan**.
       hide-REFL C.   in   room-TH-YAN
       'Chepkoech is hiding in some room.'

    b. unye-gɛɛ Chɛɛpkɔɛch ɛɛn **rʊʊmɪɪt**.
       hide-REFL C.   in   room
       'Chepkoech is hiding in a room.'

In uttering (51b), it is possible that the speaker is in a maximally informed state and that they know the relevant room and all of its contextually salient properties. For instance, (51b) is compatible with a scenario in which the speaker knows that Chepkoech is hiding in the kitchen and that the kitchen is downstairs. This state of affairs renders S_P singleton: {{*kitchen, downstairs*}}. By contrast, in (51a), *-yan*'s presupposition explicitly rules out this possibility, encoding that the speaker is unable to describe the relevant room in all of the contextually salient ways. At minimum, S_P in this case would look something like {{*kitchen, downstairs*}, {*kitchen, upstairs*}}. In this way, use of the *-yan* form signals a weaker epistemic state than use of the bare noun, which can signal a stronger epistemic state.

Listeners then reason about why the speaker chose the epistemically weaker *-yan* form over the bare noun, which allows for the possibility of an epistemically stronger claim. Following Kratzer & Shimoyama (2002) and Alonso-Ovalle & Menéndez-Benito (2010), I assume that listeners conclude that the speaker uttered (51a) instead of (51b) to 1) avoid making a false claim or 2) prevent the hearer from drawing a false exhaustivity inference. The pragmatic reasoning described in the following paragraphs exactly parallels that in Alonso-Ovalle & Menéndez-Benito (2010), simply for sets of properties rather than for individuals directly.

First, upon using the *-yan* form in (51a), the speaker asserts that Chepkoech is hiding in a room characterized by one of the multiple property sets in S_P, as in (52a).[8] Yet the speaker could have asserted something stronger—that Chepkoech is hiding in a room with one particular set of properties. The listener reasons that the speaker made this choice to avoid a false claim: the speaker must not know enough to assert that Chepkoech is in the room called the kitchen that is downstairs, or that she is in the room called the kitchen that is upstairs. This gives rise to the implicature in (52b): the speaker cannot reasonably make a stronger assertion because they do not know if it is true.

---

[8] Following Kratzer & Shimoyama (2002) and Alonso-Ovalle & Menéndez-Benito (2010), I assume a covert assertoric operator represented by □.

(52) a. (51a) asserts: $\Box$[Chepkoech is in {*kitchen, downstairs*} $\lor$ {*kitchen, upstairs*}]

b. (51a) implicates: $\neg\Box$[Chepkoech is in {*kitchen, downstairs*}] & $\neg\Box$[Chepkoech is in {*kitchen, upstairs*}]

However, as noted by Kratzer & Shimoyama (2002) and Alonso-Ovalle & Menéndez-Benito (2010), a different line of reasoning is required under possibility modals, since one of the singleton S_P alternatives is necessarily true here. The sentence in (53) entails that at least one of the pragmatic competitors with a singleton S_P in (54) is true, so the listener cannot assume that the speaker takes all of these alternatives to be false, as before.

(53) Kibet and Chepkoech are playing hide-and-seek—Kibet is the seeker and Chepkoech is hiding. Kibet isn't sure where Chepkoech is; for all he knows, she might be in a room inside the house, or she might be outside the house. Kibet says to his babysitter:

a. toot   kɔ-ʊnyɛ-gɛɛ   Chɛɛpkɔɛch ɛɛn rʊʊm-ɪ-yan   ɛɛn kɑɑ.
   might   3.SBJV-hide-REFL C.   in   room-TH-YAN in   house
   'Chepkoech might be in some room in the house.' $\Diamond > \exists$
   (context adapted from Alonso-Ovalle & Menéndez-Benito 2010)

b. $\Diamond$[Chepkoech is in {*kitchen, downstairs*} $\lor$ {*kitchen, upstairs*}]

(54) a. $\Diamond$[Chepkoech is in {*kitchen, downstairs*}]

b. $\Diamond$[Chepkoech is in {*kitchen, upstairs*}]

Instead, Kratzer & Shimoyama (2002) and Alonso-Ovalle & Menéndez-Benito (2010) suggest that the listener reasons that the speaker has used a non-singleton S_P here to avoid a false exhaustivity inference. More specifically, the stronger singleton alternatives under possibility modals in (54) would lead the listener to draw an exhaustivity inference, since $\Diamond p$ implies $\neg\Diamond q$; for instance, (54a) implicates $\neg\Diamond$[Chepkoech is in {*kitchen, upstairs*}]. The listener reasons that the speaker is avoiding this inference by widening the domain with a necessarily non-singleton S_P; in this way, neither $\Diamond p$ (54a) or $\Diamond q$ (54b) are necessarily ruled out. As previously, this state of affairs implicates speaker ignorance. For more detailed discussion about this reasoning, see Alonso-Ovalle & Menéndez-Benito (2010:21-22).

6.3   Deriving the characteristics of conversational implicature

As illustrated in the previous section, the ignorance effects triggered by *-yan* arise pragmatically via competition with Kipsigis bare nouns, which are compatible with a singleton S_P. This analysis captures the empirical patterns discussed in §4, where I showed that *-yan*'s ignorance effects are reinforceable, cancellable, and disappear in downward-entailing contexts. In this section, I discuss how these behaviors are derived on the current analysis.

Yet before doing so, it is useful to highlight the intuition from the previous section that the use of *-yan* effectively introduces a disjunction (for a similar parallel between epistemic indefinites and disjunction, see Abenina-Adar 2020); a *-yan* form signals that, according to what the speaker knows, there are multiple different ways to characterize the member(s) of the individual set. It is this intuition that underlies the disjunction-containing LF in (52a) for the assertion in (51a). In this

way, the pragmatic derivation of ignorance effects with -*yan* forms parallels the derivation of such effects with disjunction (i.e. the inference of speaker ignorance about Emily's location given an English utterance like *Emily is in the kitchen or the bedroom*; McCawley 1978 among many others). Therefore, even though variation across the speaker's doxastic alternatives is lexically encoded in the meaning of -*yan*, ignorance effects themselves are pragmatically derived; this is because variation across the speaker's doxastic alternatives effectively generates the relevant disjuncts, while ignorance effects result from how listeners reason about the speaker's choice to use this disjunctive LF.

With this parallel in mind, consider the sentence in (55a) with the LF in (55b).

(55)   Kibet and Chepkoech are playing hide-and-seek—Kibet is the seeker and Chepkoech is hiding. Kibet and his babysitter know that Chepkoech is in the house, but Kibet doesn't know which room she's in. Kibet says to his babysitter:

    a. unye-gɛɛ Chɛɛpkɔɛch ɛɛn **rʊʊm-ɪ-yan**.
        hide-REFL C.   in room-TH-YAN
        'Chepkoech is hiding in some room.'

    b. □[Chepkoech is in {*kitchen, downstairs*} ∨ {*bedroom, upstairs*} ∨ {*living-room, downstairs*} ∨ {*bathroom, upstairs*} ∨ ...]

Here, variation across the speaker's doxastic alternatives about members of the individual set and their properties provides the disjuncts in (55b). Pragmatic reasoning about why the speaker used this disjunctive LF gives rise to ignorance effects. Because these effects are not themselves part of the asserted content of (55a), they can be reinforced without redundancy, as seen in §4 and in the felicitous continuation to (55a) in (56) below.

(56)   ... lagini maa-ngen   kole ainon.
       but   NEG.1SG-know C   which
    'but I don't know which one.'

Likewise, ignorance effects can be cancelled without contradiction, since ignorance is not part of the asserted content of an utterance with a -*yan* form. As noted in §4, in order for cancellation to be appropriate, there must be sufficient motivation for it established in the discourse. However, when the speaker has a reason to make this—admittedly unusual—discourse move, cancellation is possible, as shown in (57) repeated from (22).

(57)   Kibet and Chepkoech are playing hide-and-seek. Kibet is trying to cheat and get information from me, but I won't help him. I say:

    a. unye-gɛɛ Chɛɛpkɔɛch ɛɛn **rʊʊm-ɪ-yan**.
        hide-REFL C.   in room-TH-YAN
        'Chepkoech is hiding in some room.'

    b. aa-ngen   aale rʊʊmɪɪt ainon ngandan maa-mwa-uun.
        1SG-know C   room   which but   NEG.1SG-say-2SG.IO
        'I know which one, but I won't tell you.'

Finally, ignorance effects disappear in downward-entailing contexts because, in these situations, use of the *-yan* form with a necessarily non-singleton S_P actually makes a stronger epistemic claim than use of a bare noun with a singleton S_P. In contexts like (58) where *-yan* is within the scope of negation—repeated from (26)—use of the *-yan* form indicates that it is not the case that Kibet swept any room characterized by several different sets of properties (58b). The bare noun, on the other hand, can indicate merely that Kibet did not sweep a room characterized by one set of properties (58d).

(58)   You hear your mom complaining and ask your sibling why she's upset. Apparently, Kibet didn't do any of his chores; he didn't sweep a single room. Your sibling replies:

   a.   mɑ-i-buch   Kibeet **rʊʊm-ɪ-yan**.
        NEG-3-sweep K.   room-TH-YAN
        'Kibet didn't sweep any room'

   b. $\square\neg$[Kibet swept {*kitchen, downstairs*} $\vee$ {*bedroom, upstairs*} $\vee$ {*living-room, downstairs*} $\vee$ {*bathroom, upstairs*} $\vee$ ...]

   c.   mɑ-i-buch   Kibeet **rʊʊmɪɪt**.
        NEG-3-sweep K.   room
        'Kibet didn't sweep a room'

   d. $\square\neg$[Kibet swept {*kitchen, downstairs*}]

The switch in which form signals a stronger vs. weaker epistemic state leads to the disappearance of ignorance effects in downward-entailing contexts. This disappearance is possible in the first place because ignorance effects are not themselves lexically encoded in the meaning of *-yan*.

7   Extensions to English *some*

The translation of Kipsigis *-yan* forms with 'some' throughout the paper raises the question of whether English *some* warrants the same type of analysis offered here for Kipsigis. While the epistemic effects associated with *some* have received some attention in the literature (Becker 1999; Farkas 2002; Alonso Ovalle & Menendez Benito 2003; Weir 2012), to my knowledge, there is no unified overview of these effects or a consensus analysis of them. Here, I summarize the facts reported for *some* and suggest how the current analysis might extend to this pattern. A complete analysis of *some* is outside the scope of the current paper, but it is my hope that this section will lay the foundation for future work in this area.

7.1   Characterizing *some*'s ignorance effects

As noted as early as Strawson ([1974] 2004), *some* is an epistemic indefinite that signals a lack of relevant information about the witness to the indefinite. Just like with the other epistemic indefinites discussed in this paper, *some* is incompatible with explicit identification of the witness to the indefinite (59); in using *some* (59) instead of *a* (60), the speaker necessarily conveys

ignorance.[9]

(59) a. Susan rented **some** movie for us to watch yesterday.
b. #It was *The Maltese Falcon.*
(Farkas 2002:ex. 42)

(60) a. Susan rented **a** movie for us to watch yesterday.
b. It was *The Maltese Falcon.*

Likewise, it is infelicitous to ask for identification of the witness to the indefinite directly after use of *some* (61). This pattern contrasts with that seen for *a* (62), where it is natural to ask this type of follow-up question.

(61) a. **Some** cabinet minister has been shot.
b. #Who?
(Alonso Ovalle & Menendez Benito 2003:ex. 1; Strawson [1974] 2004)

(62) a. **A** cabinet minister has been shot.
b. Who?
(Alonso Ovalle & Menendez Benito 2003:ex. 2; Strawson [1974] 2004)

Finally, use of *some* is infelicitous when it is assumed that the speaker should not be ignorant about the witness to the indefinite or their properties. For instance, the sentence in (63a) with *some* is unnatural, since the speaker should presumably be familiar with their spouse in the relevant ways. As before, use of *a* does not trigger these same ignorance effects (63b).

(63) a. #I married **some** teacher.
b. I married **a** teacher.

In this way, *some* is an epistemic indefinite that conveys speaker ignorance—much like the other forms discussed thus far. Yet *some* can trigger both first order and higher order ignorance, making it similar to Kipsigis *-yan* and Tiwa *-khí* but differentiating it from German *irgendein* and Spanish *algún.* Examples of first order ignorance with *some* are provided in (64). Note that *some* is felicitous in cases when all possible individuals that satisfy the indefinite's restrictor are potential witnesses (64a) or when only a subset of those individuals are (64b). In this way, *some* does not display Free Choice effects like German *irgendein.*

(64) Mary is dating **some** linguist in the department.
a. ✓ There are five male linguists in the department: John, Bill, Charles, Richard, and Mike. I have heard, from a trustworthy source, that Mary is dating one of them. But that is all I know; I have **no idea which of them she is dating**.

---

[9]All English data come from cited sources or, when uncited, reflect my judgements as a native speaker of American English. Uncited judgements were also verified with at least four other native English speakers.

b. ✓ There are five male linguists in the department: John, Bill, Charles, Richard, and Mike. I have heard, from a trustworthy source, that Mary is dating a linguist in the department. I know she is not dating Mike, Richard, or Charles. So, according to what I know, **Mary can be dating John or Bill**.
(Alonso Ovalle & Menendez Benito 2003:ex. 8)

However, DPs with *some* also serve what have been dubbed "referential uses" in the literature. In sentences like those in (65), the speaker is not ignorant about which particular individual witnesses the existential claim, but instead lacks information about some salient property of this individual. In other words, *some* triggers higher order ignorance. For instance, the speaker of (65c) necessarily knows which growth is on their arm—given that it is attached to their body—but lacks other important information about this growth (e.g. its type or its cause).

(65)   a. I saw **some** contraption in the copy room this morning.
       b. I came home to find **some** plant growing through a hole in my wall.
       c. Doctor, **some** growth appeared on my arm. Should I be worried?
          (Weir 2012:ex. 2)

Another example of higher order ignorance with *some* is found in (66), which also shows that *some* is licensed even when the witness to the indefinite is directly visible to the speaker. Here, *some* is felicitous because the speaker does not know who the professor is, despite looking directly at them.

(66)   L and P are talking in the lounge of the Math department. Neither L nor P knows anybody there. All of a sudden, a burst of Brazilian music starts to play in an office. Believe it or not, there is a guy dancing lambada on his desk. Unbeknownst to L and P, the guy is Rino Cusper, the famous statistician. P says:
       Look! **Some** professor is dancing lambada on his table.
       (Alonso Ovalle & Menendez Benito 2003:ex. 9)

These data suggest that indefinites with *some* pattern with Kipsigis -*yan* forms and Tiwa -*khí* indefinites in the types of ignorance effects that they trigger. In particular, *some* is felicitous when the speaker is ignorant about either the individual who witnesses the existential claim or their contextually salient properties. DPs with *some* are only ruled out when there is no salient property of the witness to the indefinite that the speaker is ignorant about, as seen in (67) and first suggested by Farkas (2002).

(67)   a. Oh look! There's #**some** fly in my soup!
       b. #**Some** cab will be waiting for you at the airport.
          (Farkas 2002:ex. 43)

In these examples, there are no contextually salient properties of the witness that the speaker does not know—likely because flies and cabs have very few contextually salient properties in

these kinds of scenarios. As Farkas puts it: "We normally don't care which particular fly is in our soup once the soup is found not to be fly-free, and, similarly, we don't care which particular cab will be waiting for us at the airport, as long as we are assured we will not be left on our own" (2002:12). In these cases, *some* is infelicitous because the speaker can identify the witness to the indefinite and characterize it in all of the contextually salient ways.

7.2   Diagnosing an analysis of *some*

Having established that *some* is an epistemic indefinite that can convey first order and higher order ignorance, the question of how exactly to analyze it arises. In this section, I replicate the diagnostics from §4 and §5 as best as possible to show that, in most respects, English *some* directly parallels Kipsigis *-yan*. This parallelism motivates my suggestion that the analysis developed here for Kipsigis *-yan* extends to English *some*.

The ignorance effects seen with *some* display hallmarks of conversational implicature, suggesting that they are pragmatically derived via competition with the basic English indefinite *a*. In particular, these effects are reinforceable (68) and cancellable, as long as there is sufficient contextual support (69). As with other epistemic indefinites like Kipsigis *-yan* forms and Tiwa *-khí* indefinties, it is not possible to identify the witness to the indefinite without any reason to do so (59); rather, cancellation is only possible when the speaker has a reason for making this discourse move—for instance, to explicitly withhold information (69).

(68)   Susan rented **some** movie for us to watch, but I don't know which.

(69)   Juliette and Poppy are playing hide-and-seek. Juliette is trying to cheat and get information from me, but I won't help her. I say:
Poppy is hiding in **some** room; I know which one, but I won't tell you!

Unfortunately, it is impossible to test whether the ignorance effects triggered by *some* disappear in downward-entailing contexts because *some* is a Positive Polarity Item that is not licensed in the scope of downward-entailing operators. This scope pattern is discussed in more detail later in this section. In this way, the tests that are applicable to *some* suggest that its ignorance effects are pragmatically derived as conversational implicature.

Turning to diagnostics that distinguish between different pragmatic analyses of epistemic indefinites, I consider restrictions on *some*'s domain of quantification and its scopal properties. First, *some* is compatible with restrictors with singleton extensions like inherently singular denoting nouns (70) or superlatives (71). In (70), for instance, *some* ranges over the set of countries called Zambia, which is presumably singleton even for someone unfamiliar with Zambia. Likewise, in (71), it ranges over the singleton set containing the most expensive ring in the store.[10]

---

[10]I report the example in (71) as % because judgements about its felicity vary. Of the twelve speakers who I asked, six found the sentence natural, while the other six found it awkward and preferred the version with *a*. These divided judgements parallel the situation in Weir (2012:184), where he claims that *some* is borderline infelicitous with superlatives (reported as ?#). I include the sentence in (71) to be thorough, but for the purpose of the present discussion, the example in (70) illustrates the main point—that *some* is compatible with a singleton domain of quantification.

(70) Milo went to Zambia. He told me this, but I've never heard of Zambia before. I say:
Milo visited **some** country called Zambia.
(context adapted from Dawson 2018:ex. 34)

(71) Charlotte went jewelry shopping recently and ended up buying the most expensive ring in the jewelry store. However, I don't have any other details about the ring like what it looks like or what it's made of. I say:
% Charlotte bought some ring that was the most expensive one in the store.

As with Kipsigis *-yan* and Tiwa *-khí*, the use of *some* in these contexts triggers higher order ignorance about the properties of the witness to the indefinite. The compatibility of *some* with a singleton domain of quantification speaks against the type of domain widening analysis proposed in Alonso-Ovalle & Menéndez-Benito (2010) for Spanish *algún*, but is compatible with the account offered here for Kipsigis *-yan* or the choice functional account of Tiwa *-khí* in Dawson (2018).

Scopally, however, *some* patterns more closely with Kipsigis *-yan* than Tiwa *-khí*. In particular, *some* is generally scopally flexible, taking scope below or above other operators like universal quantifiers (72), modals (73), and conditional operators (74).

(72) Every Sunday they chose **some** hymn that was out of their range.
✓ Every Sunday they chose a different hymn. $\forall > \exists$
✓ There is a particular, unknown hymn that they chose every Sunday. $\exists > \forall$
(Farkas 2002:ex. 25a)

(73) I want to get **some** book about St. Petersburg because we are going there soon.
✓ I want to get any book about St. Petersburg. $\text{want} > \exists$
✓ There is a particular, unknown book that I want to get. $\exists > \text{want}$
(Farkas 2002:ex. 25e)

(74) If Ben solves **some** problem from this list, Mr. Koens will praise him.
✓ Ben will be praised if he solves any problem from this list. $\text{if} > \exists$
✓ There is a particular, unknown problem that Ben will be praised for solving. $\exists > \text{if}$
(Farkas 2002:ex. 25f)

In fact, *some* displays free upward scope and is compatible with narrow (75a), intermediate (75b), and wide scope (75c) in sentences with several scope-taking elements.

(75) Keith decided to buy every album that was published by **some** famous Hungarian photographer.
(Farkas 2002:ex. 26)
   a. ✓ Keith decided to buy every album from each of the Hungarian photographers known to him (e.g. Moholy-Nagy, Brassai, Capa, Hervé). $\text{decide} > \forall > \exists$
   b. ✓ Keith decided to choose one photographer from the group of Hungarian photographers known to him (e.g. Moholy-Nagy, Brassai, Capa, Hervé) but has not yet made up his mind which. $\text{decide} > \exists > \forall$

c. ✓ Keith decided to concentrate on a particular photographer (e.g. Lucien Hervé) and bought all of their albums. $\exists > \text{decide} > \forall$

These scopal behaviors parallel those seen with Kipsigis *-yan* but make for a marked contrast with choice functional Tiwa *-khí*, which must take exceptional wide scope (§5.3).

Furthermore, as noted by Dawson (2020), the most reliable scopal hallmark of choice functional indefinites is their exceptional wide scope, even in contexts where indefinite scope is often restricted. One such context is when an indefinite must scope below a downward-entailing operator that binds into its restrictor (i.e. the Binder-Roof Constraint discussed in §5.3; Brasoveanu & Farkas 2011). Such a configuration with *some* is provided in (76). In line with the Binder-Roof Constraint—but contrary to the pattern seen with Tiwa *-khí*—*some* cannot scope above the downward-entailing operator (76a).

(76) No one$_i$ sent **some** letter that they$_i$ wrote.
   a. # Tim, Emily, Kyle, and Alex each wrote 2 letters. They all sent one of their letters, but each person didn't send the other one of their letters. *$\exists > $ no one
   b. # Tim, Emily, Kyle, and Alex each wrote 2 letters, but no one sent any of their own letters. *no one $> \exists$

Additionally, *some* cannot take narrow scope below the downward-entailing operator (76b), since it is a Positive Polarity Item (PPI) and is, consequently, unlicensed in this environment. Example (77) illustrates this point, showing that *some* cannot generally surface within the immediate scope of negation (though see Szabolcsi 2004 for discussion of exceptional cases where this is possible).

(77) Mary didn't buy some apartment in San Francisco when she could have afforded it and now it's too late.
   (Farkas 2002:ex. 29)
   a. # Mary didn't buy any apartment. $\neg > \exists$
   b. ✓ There's a particular, unknown apartment that Mary didn't buy. $\exists > \neg$

While the fact that *some* is a PPI differentiates it from Kipsigis *-yan*—which can occur within the scope of a downward-entailing operator—the overall pattern seen with *some* most closely parallels the Kipsigis facts. Table 2 outlines this state of affairs, summarizing the predictions of domain widening, choice functional, and anti-singleton property analyses and the empirical facts reported for English, Kipsigis, Spanish, and Tiwa.

	Singleton domain?	Scopal flexibility?
Domain widening	no	yes
Choice functions	yes	no (modulo stipulations)
Anti-singleton property	**yes**	**yes**
English *some*	**yes**	**yes**
Kipsigis *-yan*	**yes**	**yes**
Spanish *algún*	no	yes
Tiwa *-khí*	yes	no

Table 2: English *some* vs. predications of existing analyses and documented patterns

7.3 Extending the current analysis

Given the parallels between English *some* and Kipsigis *-yan*, I suggest that the analysis developed here to capture the Kipsigis pattern extends to English as well. On such an account, *some* would have the denotation in (78), which is identical to the one for Kipsigis *-yan* in (42).

(78) $[\![\text{some}]\!]^{c,w} = \lambda P_{\langle e,st \rangle}.\lambda Q_{\langle e,st \rangle} : \text{anti-singleton}(S_P) . \exists x[(P)(x)(w) \ \& \ Q(x)(w)]$
where S_P is the smallest set containing all sets of contextually salient properties of members of $\{x : \forall w' \in Dox(sp)(w) . P(x)(w') = 1\}$ across the speaker's doxastic alternatives

Ignorance effects, then, arise pragmatically via competition between *some* and the basic English indefinite *a*, following the same logic outlined in §6.2 for Kipsigis. This type of account naturally explains why the ignorance effects triggered by *some* show hallmarks of conversational implicature and captures *some*'s compatibility with a singleton domain of quantification and the scopal flexibility that it displays.

The one fact about *some* that remains unexplained on this account is that it is a PPI, unlike Kipsigis *-yan*. However, if *some*'s PPI status can be derived via a separate licensing condition that applies in addition to the anti-singleton constraint presupposed in (78), then it is possible to capture this fact about *some*'s distribution, while still accounting for all of its epistemic effects.

Furthermore, even with this complication, the analysis here captures the empirical picture seen with *some* more completely than other existing accounts. For instance, Farkas (2002) derives *some*'s ignorance effects and its PPI status by building various constraints into the meaning of *some*. In particular, she suggests that *some* imposes constraints on the functions that assign a value to the variable introduced by *some* and the status of that variable relative to the output context (i.e. whether or not it is identified); the first type of constraint accounts for the PPI status of *some*, while the second captures ignorance effects. However, by lexicalizing ignorance in this way, the fact that the ignorance effects triggered by *some* show hallmarks of conversational implicature (68) - (69) remains unexplained. Weir (2012), on the other hand, adopts the domain widening analysis from Alonso-Ovalle & Menéndez-Benito (2010) and applies it to *some*. However, as discussed in the previous section, this approach predicts that *some* should be incompatible with singleton domains of quantification—contrary to fact (70) - (71).

In this way, the analysis developed in this paper for Kipsigis *-yan* extends relatively neatly

to English *some*. While I am unable to provide a full analysis of *some* here, it is my hope that this empirical overview and contextualization of *some* in the literature on epistemic indefinites across languages lays the groundwork for future research in this area. In particular, I leave it to future work to verify the novel English judgements reported here through a larger scale survey and to explore how the current analysis might be modified to capture the PPI status of *some*.

8   Conclusion

This paper documents and analyzes a novel case of higher order ignorance with Kipsigis epistemic indefinites. I show that Kipsigis *-yan* forms can be used to express ignorance about the individual who witnesses an existential claim (first order ignorance) or ignorance about the contextually salient properties of this individual witness (higher order ignorance). Dawson (2018) links these different types of ignorance effects to different semantic analyses of the epistemic indefinites; in particular, she ties first order ignorance to domain widening semantics and higher order ignorance to choice functional indefinites. However, the Kipsigis pattern challenges this correlation: while *-yan* forms are compatible with higher order ignorance, they display constrained scopal flexibility that is not straightforwardly predicted on any account of choice functional indefinites. In other words, while a choice functional analyses neatly captures the content of *-yan*'s epistemic effects, it makes incorrect predictions about other behaviors of the indefinite.

In light of this, I draw inspiration from the domain widening analyses in Alonso-Ovalle & Menéndez-Benito (2010, 2017) to argue that *-yan* imposes a new kind of anti-singleton constraint—one that applies to a set of sets of properties rather than to a set of individuals directly. In particular, I suggest that *-yan* requires there to be variation in the contextually salient properties of the individual(s) who satisfy the indefinite's restrictor across the speaker's doxastic alternatives. This analysis, in which *-yan* contributes basic existential quantification and a different kind of presupposed anti-singleton constraint, captures the full range of *-yan*'s behavior—from the content of its epistemic effects to its scopal behavior.

While higher order ignorance is less widely discussed in the literature on epistemic indefinites than first order ignorance, the Kipsigis facts add to a growing body of work showing that such effects are attested cross-linguistically and can co-occur with a diverse constellation of other behaviors (e.g. scope), which can serve as a proxy for the indefinite's semantic analysis. This decoupling of the type of ignorance effect and the semantic analysis of the epistemic indefinite raises the possibility of a new typology, as outlined in Table 3. Here, the semantic analysis is diagnosed using scope patterns and is orthogonal to the type of ignorance effect triggered. Spanish *algún* conveys first order ignorance and warrants a domain widening analysis, while Tiwa *-khí* represents the other end of the spectrum, conveying higher order ignorance and necessitating a choice functional account.[11] Kipsigis *-yan* fills in the bottom left cell in the typology, convey-

---

[11]The classification of Spanish *algún* as an epistemic indefinite that conveys purely first order ignorance is, perhaps, questionable; while *algún* is often used when the individual who witnesses the existential claim is unknown, it is possible to use *algún* when the speaker can identify this individual but not via a stable property (see §6.1 and Alonso-Ovalle & Menéndez-Benito 2013). However, the epistemic effects triggered by *algún* are still markedly different from those seen with Kipsigis *-yan* and Tiwa *-khí*; for instance, *algún* is not appropriate in the hide-and-seek context in (43b). This distinction motivates the classification in Table 3.

ing higher order ignorance while warranting a domain widening analysis rather than a choice functional one.

	Domain widening	Choice functional
(Purely) First order ignorance	Spanish *algún*	???
Higher order ignorance	Kipsigis *-yan*	Tiwa *-khí*

Table 3: Typology of epistemic indefinites and their properties

However, the remaining cell in the typology, which represents a choice functional indefinite that conveys purely first order ignorance, raises an interesting puzzle. On the one hand, it is an empirical question whether there are indefinites that show scope behaviors predicted on a choice functional account and that trigger only first order ignorance. To my knowledge, no such epistemic indefinite has been reported in the literature. Yet on the other hand, it is a theoretical question whether such a system could exist. As Dawson (2018) points out, the use of a choice functional indefinite over a generalized existential quantifier naturally gives rise to higher order ignorance, given how interlocutors reason about a speaker's choice to use higher order quantification. If this is the case, then in any language with a choice functional indefinite and a generalized existential quantifier, the choice functional indefinite should trigger higher order ignorance effects, which rules out the possibility of filling the top right cell in the typology. This leads to a reframing of the implication in Dawson (2018). Dawson proposes that if an epistemic indefinite triggers higher order ignorance, then it must be choice functional; instead, I suggest that if an epistemic indefinite is choice functional—and there is a generalized existential quantifier in the language—the choice functional indefinite must trigger higher order ignorance.

Word count: 13,142

References

Abenina-Adar, Maayan. 2020. *Expressing ignorance with determiner phrases.* Los Angeles, CA: UCLA dissertation.

Aloni, Maria & Angelika Port. 2015. Epistemic indefinites and methods of identification. In Luis Alonso-Ovalle & Paula Menéndez-Benito (eds.), *Epistemic indefinites: Exploring modality beyond the verbal domain*, 117–140. Oxford: Oxford University Press.

Aloni, Maria & Robert van Rooij. 2004. Free choice items and alternatives. In *Proceedings of the KNAW academy colloquium: Cognitive foundations of interpretation*, 5–6. Amsterdam: Edita KNAW.

Alonso Ovalle, Luis & Paula Menendez Benito. 2003. Some epistemic indefinites. In Makoto Kadowaki & Shigeto Kawahara (eds.), *Proceedings of nels33*, 1–12.

Alonso-Ovalle, Luis & Paula Menéndez-Benito. 2010. Modal indefinites. *Natural Language Semantics* 18. 1–31.

Alonso-Ovalle, Luis & Paula Menéndez-Benito. 2013. Two views on epistemic indefinites. *Language and Linguistics Compass* 7(2). 105–122.

Alonso-Ovalle, Luis & Paula Menéndez-Benito. 2017. Epistemic indefinites: On the content and distribution of the epistemic component. In Anna Arregui, María Luisa Rivero & Andrés Salanova (eds.), *Modality across syntactic categories*, 11–29. Oxford University Press.

Alonso-Ovalle, Luis & Junko Shimoyama. 2014. Expressing ignorance in the nominal domain: Japanese *Wh-ka*. In Robert Santana-Labarge (ed.), *Proceedings of WCCFL 31*, 11–20. Somerville, MA: Cascadilla Proceedings Project.

Becker, Misha. 1999. The *some* indefinites. In Gianluca Storto (ed.), *Syntax at Sunset 2*, vol. 3, 1–13. Los Angeles, CA: UCLA Working Papers in Linguistics.

Bossi, Madeline. 2023. *Epistemic modality across syntactic category in kipsigis.* Berkeley, CA: UC Berkeley dissertation.

Bossi, Madeline & Michael Diercks. 2019. V1 in Kipsigis: Head movement and discourse-based scrambling. *Glossa: a journal of general linguistics* 4(1).

Brasoveanu, Adrian & Donka Farkas. 2011. How indefinites choose their scope. *Linguistics and Philosophy* 34. 1–55.

Chierchia, Gennaro. 2001. A puzzle about indefinites. In Carlo Cecchetto, Gennaro Chierchia & Maria Teresa Guasti (eds.), *Semantic interfaces: reference, anaphora and aspect*, 51–89. Stanford, California: CSLI.

Chierchia, Gennaro. 2006. Broaden your views: Implicatures of domain widening and the "logicality" of language. *Linguistic Inquiry* 37(4). 535–590.

Dawson, Virginia. 2018. A new kind of epistemic indefinite. In Uli Sauerland & Stephanie Solt (eds.), *Proceedings of Sinn und Bedeutung 22*, vol. 1, 349–366. ZAS.

Dawson, Virginia. 2020. *Existential quantification in Tiwa: Disjunction and indefinites.* Berkeley, CA: UC Berkeley dissertation.

Dayal, Veneeta. 2004. Number marking and (in)definiteness in kind terms. *Linguistics and Philosophy* 27(4). 393–450.

Deal, Amy Rose & Julia Nee. 2018. Bare nouns, number, and definiteness in Teotitlán del Valle Zapotec. *Proceedings of Sinn und Bedeutung* 21(1). 317–334.

Eberhard, David M., Gary F. Simons & Charles D. Fennig. 2021. Kipsigis. In *Ethnologue: Languages of the world*, Dallas, TX: SIL International 24th edn.

Farkas, Donka. 2002. Varieties of indefinites. In Brendan Jackson (ed.), *Proceedings of SALT 12*, 59–83. Ithaca, NY: Cornell University.

Fălăuş, Anamaria. 2014. (partially) free choice of alternatives. *Linguistics and Philosophy* 37. 121–173.

Giannakidou, A. & Josep Quer. 2011. Against universal free choice: Free choice and referentially vague indefinites in Greek, Catalan, and Spanish. Unpublished manuscript.

Jayez, Jacques & Lucia Tovena. 2006. Epistemic determiners. *Journal of Semantics* 23(3). 217–250.

Jayez, Jacques & Lucia Tovena. 2007. Evidentiality and determination. In Atle Grønn (ed.), *Proceedings of Sinn und Bedeutung 12*, Oslo: ILOS.

Kagan, Olga. 2011. On speaker identifiability. *Journal of Slavic Linguistics* 19(1). 47–84.

Kouneli, Maria. 2019. *The syntax of number and modification: An investigation of the Kipsigis DP*. New York, NY: New York University dissertation.

Kouneli, Maria. 2021. Number-based noun classification: The view from Kipsigis. *Natural Language & Linguistic Theory* 39. 1195–1251.

Kratzer, Angelika. 1998. Scope or pseudoscope? Are there wide-scope indefinites? In Susan Rothstein (ed.), *Events and grammar*, 163–196. Dordrecht: Kluwer Academic Publishers.

Kratzer, Angelika & Junko Shimoyama. 2002. Indeterminate pronouns: The view from Japanese. In Yukio Otsu (ed.), *Proceedings of the Tokyo conference on psycholinguistics*, vol. 3, 1–25. Tokyo: Hituzi Syobo.

Matthewson, Lisa. 1999. On the interpretation of wide-scope indefinites. *Natural Language Semantics* 7(1). 79–134.

McCawley, James D. 1978. Conversational implicature and the lexicon. In Peter Cole (ed.), *Syntax and Semantics: Pragmatics*, vol. 9, 249–259. New York, NY: Academic Press.

Reinhart, Tanya. 1997. Quantifier scope: How labor is divided between QR and choice functions. *Linguistics and Philosophy* 20(4). 335–397.

Rett, Jessica. 2020. Manner implicatures and how to spot them. *International Review of Pragmatics* 12. 44–79.

Schwarz, Bernhard. 2001. Two kinds of long-distance indefinites. In R. van Rooy & M. Stokhof (eds.), *Proceedings of the 13th Amsterdam Colloquium*, 192–197. Amsterdam: ICCL.

Schwarzchild, Roger. 2002. Singleton indefinites. *Journal of Semantics* 19. 289–314.

Strawson, P.F. [1974] 2004. *Subject and predicate in logic and grammar*. London: Routledge.

Szabolcsi, Anna. 2004. Positive Polarity – Negative Polarity. *Natural Language & Linguistic Theory* 22. 409–452.

Šimík, Radek. 2015. Epistemic indefinites under epistemic modals in Czech. In G. Zybatow, P. Biskup, M Guhl, C. Hurtig, O. Mueller-Reichau & M. Yastrebova (eds.), *Slavic grammar from a formal perspective: Proceedings of the 10th Anniversary Conference on Formal Description of Slavic Languages*, 425–442. Frankfurt: Peter Lang.

Weir, Andrew. 2012. *Some*, speaker knowledge, and subkinds. In Rasmus K. Rendsvig & Sophia Katrenko (eds.), *ESSLLI 2012 Student Session Proceedings*, 180–190. CEUR Workshop Proceedings.

Winter, Yoad. 1997. Choice functions and the scopal semantics of indefinites. *Linguistics and*

Philosophy 20. 399–467.

Yanovich, Igor. 2005. Choice-functional series of indefinite pronouns and Hamblin semantics. In Effi Georgala & Jonathan Howell (eds.), *Proceedings of SALT XV*, 309–326. Ithaca, NY.

Zamparelli, Roberto. 2007. On singular existential quantifiers in Italian. In Ileana Comorovski & Klaus Heusinger (eds.), *Existence: Semantics and Syntax*, 293–328. Dordrecht: Springer.