



Variation in Countability Properties and Noun Classes

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Abstract

This paper establishes that Sorani Kurdish has a mass/count distinction that can be distinguished by looking at, which nouns occur with plural morphology (-an), optional classifiers (e.g. dane, CLinainmate), unit denominators (yek, 'one'), fuzzy denominators (nsikay panja 'about fifty'), and other denominators (herdû 'both'). Moreover, properties of countability in Sorani Kurdish can be used to distinguish six classes of nouns that differ with respect to their acceptability with the aforementioned properties, examples of nouns in each class being setyare ('car'), polis ('police'), miqes ('scissors'), manga ('cattle'), çiyakanî Himalaya ('Himalayas'), and xîn ('blood'). This data was gathered by comparing Sorani Kurdish near equivalents to English countability properties found in previous studies, and asking five speakers of Sorani Kurdish for their judgments, following semantic fieldwork methodology. This research expands what is found about countability in Sorani Kurdish grammar books. This paper shows that Sorani Kurdish has both a rich classifier system and mass/count distinction, a combination that has not yet been documented. Knowing these characteristics of Sorani Kurdish helps to create a clearer picture of the linguistic variation regarding countability and suggests a relationship between the number of countability properties and countability classes in a given language.

Keywords: Sorani Kurdish, countability, mass nouns, Kurdish Grammar

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1. Introduction

Sorani Kurdish is estimated to be spoken by more than nine million people across Iran and Iraq, and is in the Western Iranian group of languages in the Indo-Iranian branch of Indo-European (Thackston 2006). Characteristic of Sorani Kurdish grammar have been codified in grammar books like Kim (2010) and Thackston (2006), though these texts have only basic properties of countability like the fact that there are optional classifiers, as discussed further below.

Countability has to do with how nouns are counted and how groups of nouns that differ in how they are counted and used across morphosyntactic environments related to countability in a given language. For example, in English, the nouns *books* and *dirt* are counted in different ways: *books* is combined directly with a number word (1a), but *dirt* is generally combined with a number word if some sort of measuring unit is used in between, as exemplified in (1b).

(1). a. four books b. four pieces of dirt

The nouns *books* and *dirt* also differ in how they are used in morphosyntactic environments related to countability, such as quantifier phrases. For example, *books* is used with the quantifier *many*, but *dirt* is not, while *dirt* is used with the quantifier *much*, while *books* is not.

(2) a. many books b. much dirt

Because *books* is combined directly with number words, it is categorized as a ‘count noun’, while *dirt* is categorized as a ‘mass noun’ (sometimes called ‘non-count noun’), because it is not directly combined with a number word.

Countability is an often discussed topic in several areas of linguistic research including formal semantics, syntax, language acquisition, and second language acquisition (see, e.g. Kiss et al., 2021; Moltmann 2021), though countability is not often addressed in grammars of languages other than English; compare Quirk et al.’s (1985) grammar of English and grammars of Kurdish such as Kim (2010) and Thackston (2006). Despite the fact that numeral systems, numeral classifiers, and plural marking are attended to by typologists (see, e.g. Dryer & Haspelmath,

2013), it has been shown that there are several ways that countability can be manifest across languages (see, e.g. Chierchia, 1998; Grimm 2012; Krifka, 1995) though these studies look at very small numbers of languages. Researching countability in Sorani Kurdish therefore provides the opportunity to better understand differences in countability across languages. Though Doetjes (2012) and Lima and Rothstein (2020) constitute significant steps towards making countability a linguistic category considered by typologists, a great deal more information about countability in the world's languages is needed for a broader perspective of how countability can be encoded.

This paper fills in this gap in empirical research by providing a detailed description of countability in Sorani Kurdish. The investigation shows that, in addition to having optional classifiers, Sorani Kurdish has a mass/count distinction and at least five countability classes—i.e. five classes of nouns that vary in respect to which countability properties they demonstrate. The fact that Sorani Kurdish has both of these counting constructions available makes this sort of system less rare than previously known, given this system is only discussed with respect to its occurrence in Hungarian (see, e.g. Schvarcz & Rothstein 2017). This research on Sorani Kurdish provides further evidence of the diversity that exists across languages in the way that countability is manifested.

2. Literature review

This section sets the stage for investigating the typological characteristics of countability in Sorani Kurdish by first giving an overview of countability and then an overview of what is known about countability in Sorani Kurdish.

2.1. Literature on countability

While countability is neither often discussed by typologists nor discussed in much if any detail in the grammar books of languages other than English, countability has been long discussed with respect to its manifestation in English (e.g. McCawley, 1975; Quine, 1960), though Rothstein (2010) provides one of the most straightforward and detailed descriptions of countability in English. Rothstein (2010) lists the properties of countability in (3) and explains that not all of

these properties have to exist in a language in which count nouns and mass nouns can be distinguished; she gives Turkish as one example because plural morphology is not used in counting constructions.

- (3) a. Count nouns are directly combined with number words; mass nouns are not.
- b. Count nouns are marked with plural morphology, mass nouns are not.
- c. Count nouns are not normally used in the singular with classifiers; mass nouns are.
- d. Some determiners are only used with count nouns.
- e. Some determiners are only used with mass nouns.
- f. Some determiners are used with both mass nouns and plural count nouns.
- g. Some determiners are used with mass, nouns and all count nouns.

(Rothstein, 2010, p. 346-347)

Note that it has been shown that countability in English is much more complex than a simple division between count nouns and mass nouns, for example Allan (1980) shows that it is possible to distinguish at least eight categories of countability between fully count and fully non-count (mass) with respect to a certain set of combinatorial properties in English. Some of these combinatorial properties are subsets of those listed by others as simply determiners that are only used with count nouns. For example, one of the properties Allan (1980) uses to distinguish eight countability categories in English is whether nouns are used with determiners like each, a second property is the whether nouns are used with what Allan (1980) calls “fuzzy denumerators”, which include several and about fifty, and a third property is whether nouns are used with the indefinite article a(n). Each of these properties are put in a single group by other linguists as properties of count nouns, thereby leading to the more coarse analyses of countability categories by those like Rothstein (2010). Another property that Allan (1980) uses to distinguish countability categories is whether all is used with a noun in its singular form, which yields a mass reading and therefore might be likened to (4e). Allan’s (1980) final property is whether the noun is used with external plural reference with a pronoun like them. With the 10 properties distinguished by both Rothstein (2010) and Allen (1980), it should be possible to identify, not only if Sorani Kurdish has a mass/count distinction, but also how many countability categories exist within this distinction.

Another possibility is that we see little or no evidence of a mass/count distinction in Sorani Kurdish. Rothstein (2010) shows, following Chierchia (1998) and Krifka (1995) that, in some languages, all nouns behave like mass nouns in counting constructions, meaning that all counting constructions require a classifier. An example of such a language is Mandarin in which all things, for example bears, require a classifier when counted, whether in terms of groups, individuals, or species. In example (5), the classifier *qún* ('herd') is used for counting groups of bears, *zhí* is used for counting individual bears, and *zhǒng* is used for counting species of bears.

- | | | |
|-------------------------|-------------------------|---------------------------|
| a. <i>sān qún xióng</i> | b. <i>sān zhí xióng</i> | c. <i>sān zhǒng xióng</i> |
| three herds bear | three CL bear | three CL bear |
| 'three herds of bears' | 'three bears' (objects) | 'three bears' (species) |
- (4) Mandarin (Krifka 1995, pp. 398-399)

Because all nouns are counted with classifiers in Mandarin, it and other languages in which this is the case are sometimes referred to as 'classifier languages' (e.g. Rothstein, 2010). While a class of count nouns and a class of mass nouns can be distinguished in English with the set of properties listed in (3), it is often assumed that all nouns behave like mass nouns in classifier languages because of data like (4) (e.g. Chierchia, 1998; Rothstein, 2010), though there is also some research suggesting that classifier languages might in fact have mass nouns and count nouns (e.g. Doetjes, 2012; Sudo, 2015). In either case, without the present investigation to show that Sorani Kurdish has some properties capable of distinguishing mass nouns and count nouns, looking at grammars of Sorani Kurdish might lead someone to believe that all nouns behave only like mass nouns.

2.2. Countability in Grammars of Sorani Kurdish

Aside from descriptions of the use of classifiers, countability is not directly addressed in grammars of Sorani Kurdish in the grammar books reviewed in this research (i.e. Kim, 2010; Thackston, 2006). While Sorani Kurdish is known to have a great deal of variety with as many as 10 subdialects (Eberhard et al., 2021), grammar books treat it fairly uniformly.

Thackston (2006) and Kim (2010) provide some description of counting in Sorani Kurdish. According to Thackston (2006), counting in Sorani Kurdish occurs with classifiers like *dane* (CLanimate), which is the classifier for inanimate things, and according to Kim (2010), using *dane* (CLanimate) is optional, that is to say that the classifier does not need to be used.

- (5) a. *çwâr dane ktaw* b. *çwâr ktaw*
 four CLanimate book four book
 ‘four books’ ‘four books’

In addition to *dane* (CLanimate) being described as the classifier for inanimate things, *safor* (CLanimate) is described as the classifier for animate beings other than people, and *nafar* (CLhuman) is the classifier for people. Note that the data in this section comes from Thackston (2006), though the spelling has been modified to conform with the Hawar alphabet, and the glosses are the contribution of the authors of the present paper.

- (6) a. *de ser meř* b. *penc nefer*
 ten CLanimate sheep five CLhuman
 ‘ten sheep’ ‘five people’

While it is reported that *dane* (CLanimate) is optional, Kim (2010) reports that *safor* (CLanimate) and *nafar* (CLhuman) are used in most cases, suggesting that these classifiers are optional to some degree as well. What is unclear is if the optionality of classifiers applies to nouns that refer to substances like dirt and oil, which would be surprising given this is only reported to happen in one language, Yudja (Lima 2010).

In addition to counting constructions that use classifiers, Thackston (2006) describes certain nouns that can occur in counting constructions without classifiers. Nouns that pertain to “time and instance” occur directly with number words, as in (7).

- (7) a. *dû roj* b. *shash mâng* c. *sad* *sât*
 two day six month one.hundred year
 ‘two days’ ‘six months’ ‘one hundred years’

Beyond counting constructions, Thackson (2006) also reviews several of the key grammatical properties of a language that can distinguish count nouns and mass nouns, including determiners and plural morphology. Nouns like *derga* ('door') can be marked indefinite with the affix *-(y)ek*, and the indefinite plural is marked with *-ân* (or *-yân* if the stem ends with *a*).

- (8) a. *derga* b. *derga-yek* c. *derga-yan*
 door door-INDF door-INDF.PL
 'door' 'a door' '(some) doors'

Definite singular is marked with *-(a)ke* and definite plural is marked with *-(a)kan*.

- (9) a. *derga-ke* b. *derga-k-an*
 door-DEF door-DEF-PL
 'the door' 'the doors'

Quantities of things can be discussed with modifiers like *çend* ('few'), *hemû* ('every'), *her* ('each'), and *zor* ('a lot of'), each of which require the noun to be marked indefinite.

- (10) a. *çend pyaw-êk* b. *hamû roj-êk* few men-INDF every day-INDF
 'a few men' 'every day'
- c. *har le-yek* d. *kurd-êk-i.zor* each direction-INDF Kurd-INDF-very
 'each direction' 'a lot of Kurds'

Each of these modifiers constituted a point at which the mass/count distinction might be identifiable in Sorani Kurdish, if countability is indeed encoded in nouns in this language.

The descriptions of the nominal system in Sorani Kurdish in Kim (2010) and Thackston (2006) do not directly address countability, but a picture emerges that suggests it is entirely possible that Sorani Kurdish has a mass/count distinction. While the Kim (2010) and Thackston (2006) discuss counting, indefinite morphology, plural morphology, and demonstrative pronouns, the grammars do not discuss if there is a class of mass nouns, or several categories of nouns, that are not used with these grammatical features. In other words, grammars of Sorani Kurdish do not discuss whether or not the language has a mass/count distinction or several categories of nouns with different levels of countability. The translations of the modifiers as a few, every, each, and many/a lot of suggest that it might be the case that there is a mass/count distinction since each of them, except a lot of, are only used with count nouns in English. The translations should not be taken for granted as indicators of countability, because differences in translation are easy to find. Kim (2010), for example translates *hemû* as both ‘every’ and ‘all’, suggesting that it might not be only used with count nouns after all since *all* is used with both count and mass nouns in English. It is therefore the case that finding out whether Sorani Kurdish has both count nouns, mass nouns, and or several categories in between requires further investigation into which nouns these modifiers are used with. This investigation, together with seeing which nouns can occur directly next to number words in counting constructions, would show whether or not Sorani Kurdish has both classifiers and a mass/count distinction. If there is a mass/count distinction, this investigation can also show how many categories of countability there might be in Sorani Kurdish. Furthermore, by investigating the extent to which each of these phenomena occur, we get a clearer picture of the types of countability systems that exist across languages.

3. Method

The data in the following section was gathered in consultation with five native speakers of the Hewleri subdialect Sorani Kurdish. Using the methodology for semantic fieldwork (Matthewson, 2004), consultants were presented with sentences and asked for a judgment about whether or not each sentence made sense and sounded like it was a well formed sentence. The sentences were constructed following the methodology in Allan (1980), where sentences were constructed using particular nouns with particular countability properties. The nouns used for the present study were the closest equivalents possible in Sorani Kurdish to those described in Allan (1980). The

fieldwork too place in Sornai Kurdish and the native-speaking co-author took notes about consultant judgments. Each consultant participated in two sets of elicitations. The first set of elicitations tested whether or not Sorani Kurdish has a mass/count distinction. The results of this set of elicitations, detailed below, show that Sorani Kurdish has a mass/count distinction. The second set of elicitations tested whether or not Sorani Kurdish has more than two countability categories—i.e. whether there are only mass nouns and count nouns or there are several categories of countability, like those in English (Allan, 1980).

4. Data

In the first set of elicitations, a selection of nouns that refer to discrete objects—e.g. *qondre* ('shoe')—and nouns that refer to non-solid substances—e.g. *aw* ('water')—were used in sentences with each of the aforementioned morphosyntactic features that have the potential to indicate whether a noun is count or mass. This is assumed to show whether or not Sornai Kurdish has a binary mass/count distinction, because nouns that refer to discrete objects are generally count noun in languages with a mass/count distinction, and nouns that refer to non-solid substances are generally mass noun. The data below show a clear distinction between count nouns—e.g. *qondre* ('shoe')—and mass nouns—e.g. *aw* ('water').

As Kim (2010) and Thackston (2006) state, classifiers do not always need to be used. One test for countability in Sorani Kurdish, therefore, may be whether or not classifiers are optional with all nouns, in which case there would be no distinction between count and mass, or whether only some nouns can be counted without a classifier being present. What was found in consultation with native speakers is that nouns that refer to discrete objects can be counted without a classifier, as shown in (11).

(11) *Sê qondre-y de-bîn-im le.sar ardî.* three shoe-OBL IPFV-see.PRS-1SG:A on floor
'I see three shoes on the floor.'

Nouns that refer to non-solid substances are not counted without a classifier, as shown in (12) where *gom* ('puddle') is used as a classifier. Consultants reported that the same sentence without the classifier is not something that a speaker of Sorani Kurdish would be likely to say in this situation.

- (12) Sê gom-aw-ê la.ser ardî de-bîn-im
 three puddle-water-OBL on floor IPFV-see.PRS-1SG:A
 ‘I see three puddles of water on the floor.’

By looking at counting constructions that do not require classifiers, it is possible to distinguish between count nouns, in this case qondre (‘shoe’), and mass nouns, in this case aw (‘water’).

From grammars of Sorani Kurdish like Thackston (2006), it is known that nouns that refer to discrete objects, like derga (‘door’), can be used with the indefinite and definite morphology, but what is not known is if this suffix is used on nouns that refer to substances like befr (‘snow’) and hummus (‘hummus’). In our investigation we found that consultants would not use these sorts of nouns with plural suffixes, even in situations where a large amount of the substance was somehow on the floor of their home, for example someone wears snowy clothes into the house and snow falls all over the floor, or someone spills a large bowl of hummus all over the kitchen floor.

- (13) Befr-î de-bîn-im le ardi! snow IPFV-see.PRS-1SG:A on floor.OBL ‘I see snow on the floor!’

- (14) Hummus-î de-bîn-im le ardi! hummus-OBL IPFV-see.PRS-1SG:A on floor ‘I see hummus on the floor!’

These sorts of examples are relevant because in languages like Greek, speakers often use plural morphology on mass nouns when a substance has been spilled or tracked in on the floor. Such an example is shown in (15), where nera (‘waters’) is the plural form of nero (‘water’).

- (15) Greek (Tsoulas 2008, p. 133) To patoma itan gemato nera. the floor was full waters ‘The floor was full of water.’

- (16) Greek (Tsoulas 2008, p. 133)

Me tosa nera ke xomata pos na mi gemisi to spiti laspes? with so-many-PL water-PL and earth-PL how SM not fill-3 the house mud-PL

‘With so much water and earth how do you expect not to fill the house with mud?’

Because speakers of Sorani Kurdish use plural morphology on nouns referring to discrete objects, like dargâ (‘door’) but not with nouns that refer to substances, like bafr (‘snow’) and hummus (‘hummus’), it seems like whether or not a noun can be used with plural morphology is a good test for the mass/count distinction: count nouns are those that are used with plural morphology, and mass nouns are those that are not used with plural morphology.

In addition to plural morphology, Kim (2010) and Thackston (2006) mention several modifiers that are used to discuss quantities of things and these too must be checked to determine whether or not they are used only with count nouns, only with mass nouns, or with both count nouns and mass nouns. Çend (‘few’), can be used with nouns that refer to discrete objects, like derga (‘door’), and nouns that refer to substances, like bafr (‘snow’). This shows that çend cannot be used to distinguish between count nouns and mass nouns the way few can in English, and since this is the case, it might be better to gloss çend (‘few’/‘little’).

(17) Le çend derga-yak-m da heta ewê rast-eke-m dît-ewe.

on few door-IDNF-1SG:A give.PST until that correct-DEF-1SG found.PST-PV ‘I knocked on a few doors before I found the right one’

(18) Çend befr barî ew şhew(-w). little snow rain.PST.3SG this night(-DEM) ‘Little snow fell over night.’

The modifier hemû (‘every’) can be used with both nouns that refer to discrete objects like çaqo (‘knife’) and nouns that refer to substances like hengwîn (‘honey’), so it does not distinguish between count nouns and mass nouns and might be best translated as ‘all’ rather than ‘every’. However, it is crucial to note that, in (19) hamu (‘all’) is not used with for zaqu (‘knife’) in a singular form, rather the definite plural suffix kan (DEF.PL) is used on the noun, so it might be the case that hemû (‘all’) can be used to distinguish between further categories of countability in the second set of elicitation.

(19) Şef-eke hemû çaqo-ak-an-î tiş kird. chef-DEF all knife-DEF-PL-1SG:A sharp make
‘The chef sharpened all the knives.’

(20) Hemû hengwîn-eke-t sirî-we le.sar mêz-î? all honey-DEF-2SG:A wipe.off.PST-
PRF from.on table-OBL ‘Did you wipe all the honey off the table?’

Zor (‘a lot of’) can be used with nouns that refer to discrete objects, like mleke (‘spoon’), and it can be used with nouns that refer to substances, like shîr (‘milk’). This data suggests that zor (‘a lot of’), like the corresponding English phrase, does not distinguish between count nouns (mleke ‘spoon’) and mass nouns (shîr ‘milk’), rather it is used acceptably with all nouns.

(21) Zor mleke-k-an beser bûn le metbex-eke-y. a.lot.of spoon-DEF-PL
disappear LV.PST-3PL from kitchen-DEF-OBL ‘Somehow, many spoons have disappeared from the kitchen.’

(22) Zor shîr-î le.naw qawe-ke-y kird. a.lot.of milk-3SG in coffee-DEF-3SG:GEN
make.PST She poured a lot of milk in her coffee.

While her is translated as ‘each’ by Thackston (2006), the data we gathered from our consultants suggests it might be better translated as ‘all of the’ on account of the fact that it can be acceptably used with nouns that refer to discrete objects, like minal (‘child’), as well as nouns that refer to substances like pîsatî (‘dirt’). In other words, her (‘all’) does not distinguish between count nouns and mass nouns.

(23) Qebûl-im kird her minal-êk leger leŕbe-y geme-y bi-ka.
allow-1SG LV.PST all child-INDF with toy-OBL play-OBL SUBJ-do.PRS.3SG
‘I allowed all of the children to play with the toy.’

(24) Her pîsatî-yek-im le.ser qondre-m xawên kird. all dirt-INDF.1SG:A on shoe
clean LV.PST ‘I cleaned all of the dirt off of my shoes.’

Because both *her* ('all') and *hemû* ('all') both occur with both count nouns and mass nouns, future research is needed to determine the difference in use of these two modifiers.

In addition to the modifiers mentioned by grammar books, there are several other noun modifiers used to discuss quantities that also might distinguish between count nouns and mass nouns. These quantifiers include *Herdû* ('both'), *kemeyek* ('a small amount of'), and *yek yek* ('one-by-one'). *Herdû* ('both') is used with nouns that refer to discrete objects, like *seyyare* ('car') but it is not used with nouns that refer to substances, like *areq* ('sweat'), which shows that it is a morphosyntactic property that occurs with count nouns (*seyyare* 'car') but not mass nouns (*areq* 'sweat').

(25) *Herdû seyyare-k-an feynen si'fer (e).*

both car-DEF-PL same price COP.PRS.3SG

'Both cars cost the same amount.'

(26) # *Herdû areq-ek-an ket-n e.naw çaw-m.*

both sweat-DEF-PL fall.PST-3PL into eye-1SG:GEN # 'Both sweats stung my eyes.'

Kemeyek ('a small amount of') can be used with nouns that refer to discrete objects, like *name* ('letter'), and with nouns that refer to substances, like *gur* ('mud'), so it does not appear to distinguish between count nouns and mass nouns.

(27) *Ewro keme-yek name-m lo hat.*

today small.amount-INDF letters-1SG:R BEN:APPL come.PST.3SG 'I got a small amount of letters today.'

(28) *Ewro keme-yek gur ket e.sar qondra nwê-ka-m. today small.amount-INDF mud fall on shoes.EZ new-DEF-1SG:GEN 'I got a small amount of mud on my new shoes today'*

Yek yek ('one-by-one'), the reduplicated number word *yek* ('one'), is used with nouns that refer to discrete objects, like *defr* ('pot') but it is not used with nouns that refer to substances like *xîn*

(‘blood’), suggesting that it is a property that occurs with count nouns (defr ‘pot’) but not mass nouns (xîn ‘blood’).

(29) Pêş hafle-ke-y şîw-im lê-na û yek yek defr-ek-an-m bekar hêna. before party-DEF-OBL food-1SG PV-cook and one one pot-DEF-PL-1SG:A PV use.PST ‘I cooked all day before the party, and I used the pots I own one-by-one.’

(30) # Yek yek xîn-ek-an ka de-baxshreta xastaxana-y, one one blood-DEF-PL that IPFV-donate.PAS.PRS.3SG hospital-OBL

de-twandre lo mawe-y 10 sal la frîzer-ek-an hel-bi-jîrê.

IPFV-can.PAS.PRS.3SG for remain-EZ 10 year in freezer-DEF-PL PV-SBJ-choose.PAS.PRS.3SG

#‘One-by-one, the blood donated to the hospital can be stored for 10 years in freezers.’

By looking at which nouns are used in counting constructions without classifiers, with plural morphology, and with certain modifiers that discuss quantity, it is possible to identify count nouns in Sorani Kurdish. Nouns that do not occur with these properties are mass nouns. The Findings are summarized in Table 1, where the checkmark ✓ indicates a particular modifier is used with a particular kind of noun, and # indicates that a particular modifier is not straightforwardly used with a particular kind of noun.

	discrete object nouns	non-solid substance nouns
numbers without classifier	✓	#
plural suffixes	✓	#
çend (‘few’/‘litte’)	✓	✓
hemû (‘all’)	✓	✓
zor (‘a lot of’)	✓	✓
her (‘all’)	✓	✓
herdû (‘both’)	✓	#

kemeyek ('a small amount of')	✓	✓
yek yek ('one-by-one')	✓	#

Table 1: Summary of modifier use with two noun categories

Briefly, four of the nine modifiers we tested with nouns that refer to discrete objects and nouns that refer to non-solid substances were found to be acceptable only with the nouns that refer to discrete objects. This shows not only that Sorani Kurdish has the grammatical reflexes of a lexical mass/count distinction, but that it has far less morphosyntax sensitive to countability than a language like English.

The second set of elicitations sought to determine whether or not there are more than two countability categories in Sorani Kurdish. Because of the grammatical differences between Sorani Kurdish and English discussed below, it is not possible to straightforwardly use the properties that Allan (1980) used to test countability in English to also test countability categories in Sorani Kurdish. For example, while Allan's (1980) example of the "Other Denominator" category was each, the equivalents in Sorani Kurdish are either acceptable with both count nouns and mass nouns—e.g. hamu ('all') and her ('all')—or they might be semantically too similar to the number yek ('one')—e.g. yek yek, ('one-by-one') is the reduplicated number one. Because no equivalent to each is documented in Sorani Kurdish, we use herdû ('both') instead as in (31). For "Fuzzy Denominators", we used approximate number constructions like nsikay panja ('about fifty'), as in (32), since the use of chand ('a few'/'little') does not seem to distinguish between count nouns and mass nouns. Because Sorani Kurdish does not have an indefinite article, rather it has singular and plural indefinite suffixes, we were restricted to using yek ('one') for the unit denominator, as in (33). For external plural registration, we used ewan ('they') as our plural pronoun, as in (34).

(31) mindal-eke herdû berd-î da mamosta-yeke-y. student-DEF both stone-3SG:A
give.PST teacher-DEF-OBL 'The student gave the teacher both stones.'

(32) cûtyar-eke nizîkey penca manga-y dît-ewe le daristan-eke-y. farmer-DEF about fifty cattle-3SG:A give.PST-PV in forest-DEF-OBL ‘The farmer found about fifty cattle in the forest.’

(32)

(33) تنها yek çiya-k-an-î Himalayan he-ye — jêyakede wakî wî nî-ya.
only one mountains Himalayas exist-3SG place like it.OBL COP.PRS.NEG-3SG
‘There is only one Himalayasno where else is like it.’ (33)

(34) berewber-eke miqes-î dawa kird û ewan hendêk-yan sor bû-n.
manager-DEF scissors-3SG:A order LV.PST and they some-3PL:GEN red COP.PST-3PL
‘The manager ordered scissors and some of them were red.’

A crucial difference between Sorani Kurdish and English that prevents this investigation into countability classes from being identical to that in Allan (1980) is the fact that countable nouns are not marked with plural morphology when they are used with modifiers like hemû (‘all’). This difference means that it is not possible to use hemû (‘all’) or any of the other modifiers mentioned above in the same way that all is used with singular English nouns in Allan (1980), and used to distinguish between countability classes including fully countable nouns like car as opposed to nouns, like stone, that are fully countable and are also used in the singular with all. Because hemû (‘all’) occurs with both countable nouns without plural morphology and non-countable nouns, it cannot be used to show whether or not seyyare (‘car’) and berd (‘stone’) belong to different countability classes, as their English counterparts do.

Despite the typological differences that prevent each type of test for countability classes in Allan (1980) being used in Sorani Kurdish, there are a number of countability classes that can be distinguished with respect to whether or not nouns are acceptable across a range of countability contexts. Nouns like seyyare (‘car’), mindal (‘student’), berd (‘stone’), and waraqay (‘paper’) are all acceptably used with external plural pronouns as in (35), the unit denominator yek (‘one’) as in (36), the fuzzy denominator nizîkey penca (‘about fifty’) as in (37), and the other denominator herdû (‘both’), as in (31).

(35) mindal-eke penca berd-î dît-ewe le baxçe-ke-y, û ewan child-DEF fifty
stones-3SG:A found.PST-PV in garden-OBL and them

hendêk-yan granît bû-n.

some-3PL:GEN granite COP.PST-3PL

‘The child found fifty stones in the garden, and some of them were granite.’

(36) mindal-eke yek sonde-y dît-ewe le kantor-î.

child-DEF one rope-3SG:A found.PST-PV in closet-OBL ‘The child found one rope in the closet.’

(37) mindal-eke nizîkey penca waraqa-y dît-ewe le kantor-î. child-DEF about fifty papers-
3SG:A found.PST-PV in closet-OBL ‘The child found about fifty papers in the closet.’

Nouns like *polîs* (‘police’) and *mrovayhty* (‘mankind’) have two countability properties, namely external plural registration (38) and countability with fuzzy enumerators (39). The other countability properties, occurring with the unit denominator *yek* (‘one’) and other denominator *herdû* (‘both’), are not considered acceptable as shown in (39) and (41).

(38) Polîs debî xo-yan bi-gorê-n çûnke ewan hendêk-yan azeati
mirovî

police must self-3PL:GEN SBJ-change.PRS-3PL:A because they some-3PL:GEN hurt people

‘The police need to change because some of them hurt people.’

(39) # bawir de-ke-m ke yek mrovayhty bash e.

believe IPFV-LV.PRS-1SG:A that one mankind good COP.PRS.3SG

‘I believe in one mankind that is good.’

(40) nizîkey penca polîs aga-yan le xalk-î bû.

about fifty police protect-3PL:A in people-OBL LV.PST.3SG ‘About fifty police protected the people.’

(41) # herdû mrovayhty xetaber bû-n le.bo germ.bûn-î gardûnî. both mankind
 fault.bearer COP.PST-3PL for warming-EZ global
 # ‘Both mankind are responsible for global warming.’

Nouns like *miqes* (‘scissors’) and *aynaki* (‘sunglasses’) have all of the countability properties except being counted with fuzzy denominators like *nsikay panja* (‘about fifty’), as shown in (34) and (42) through (44).

(42) Mamosta-yeke yek aynaki kri. teacher-DEF one sunglasses
 ‘The teacher bought one pair of sunglasses’

(43) # Berewber-eke nizîkey penca pantori dawa kird. manager-DEF about fifty pants
 order LV.PST
 # ‘The manager ordered about fifty pants.’

(44) Mindal-eke herdû durbini da mamosta-yeke-y. student-DEF both binoculars give.PST
 teacher-DEF-OBL ‘The child gave the teacher both pairs of binoculars.’

Nouns like *manga* (‘cattle’) and *samani azhali* (‘livestock’) are used with fuzzy denominators like *nsikay panja* (‘about fifty’) as shown in (32) and other denominators like *herdû* (‘both’), but they are not used with external plural pronouns or the unit denominator *yek* (‘one’) as shown in (45) through (47).

(45) cûtyar-eke hendêk manga-y dît-eweले daristan-eke-y, bes تنها ewan farmer-DEF some
 cattle-3SG:A found.PST-PV in forest-DEF-OBL but only them
 hendêk-yan î wî bû-n.
 some.3PL:GEN belong.to him COP.PST-3PL
 ‘The farmer found some cattle in the forest, but only some of them were his.’

(46) # cûtyar-eke yek saman-î azhal-î le daristan-eke-y dît-ewe. farmer-DEF one property-EZ animal-3SG:A in forest-DEF-OBL found.PST-PV

‘The farmer found one livestock in the forest.’

(47) cûtyar-eke herdû saman-î ajel-ek-an-î da dixtor-eke-y. farmer-DEF both property-EZ animal-DEF-PL-3SG:A give.PST doctor-DEF-OBL ‘The farmer gave the veterinarian both livestock.’

Nouns like çiyakanî Himalayayan (‘Himalayas’) and nîmçedûrgey Galapagosyan (‘Galapagos Islands’) are only acceptably used with yek (‘one’), as in (34) above, but they do not display any of the other properties of countability as shown in (48) through (50).

(48) # xêzan-eke nîmçedûrge-y Galapagos-yan dît-îye, تنها ewan hendêk-yan. family-DEF island-EZ Galapagos-PL. see.PST-PFV.3SG only them some-3PL:GEN

‘The family visited the Galapagos Islands, but only some of them.’

(49) # xêzan-eke teqrîban penc nîmçedûrge-y Canary dît-îye.

family-DEF about five islands-EZ Canary see.PST-PFV.3SG # ‘The family visited about five Canary Islands.’

(50) # xêzan-eke herdû çiya-k-an-î Himalaya-yan dît-îye.

family-DEF both mountain-DEF-PL-EZ Himalayas-PL see.PST-PFV.3SG # ‘The family visited both Himalayas.’

As discussed in the previous subsection, nouns like xîn (‘blood’) and gur (‘mud’) do not display any of the countability properties and therefore might be considered fully uncountable nouns.

These results of our elicitation testing to see how acceptable nouns from each class are in these different syntactic environments are summarized below in Table 2, which shows that there are six distinct classes of nouns established by these countability properties.

seyrare miqes polîs manga çiyakanî xîn

	(‘car’)	(‘scissors’)	(‘police’)	(‘cattle’)	Himalayaya
(‘Himalayas’)					
(‘blood’)					
External Plural		+	+	+	
yek (‘one’)	+	+		+	
nsikay panja					
(‘about fifty’)	+		+	+	
herdû (‘both’)	+	+		+	

Table 2: Summary of Countability classes in the style of Allan (1980)

As in English, it is not expected that the other countability properties—classifiers only occur with certain nouns, some determiners occur with mass nouns and plural count nouns, plural morphology only occurs on certain nouns—would change the results, though further research might show otherwise.

One countability class not discussed in Allan (1980) is the class of “naturally atomic mass nouns”, which have been shown to occur with certain adjectives that mass nouns like xina (‘blood’) do not occur with (Rothstein 2010). For example Rothstein (2010) discusses how, in English, furniture can be described as big as in (51), showing that it refers to “individual units”.

(51) (Rothstein 2010, p. 360)

The furniture in our house is big.

The implication is that mass nouns like mud are not described as big because they do not refer to individual units. It can therefore be assumed that, similar to the way modifiers like many and much show whether a noun is countable or not, adjectives like big, small, round, etc. show whether or not a noun refers to individual units. Furthermore, this means that uncountable nouns are of at least two types, naturally atomic and not naturally atomic.

To test whether any of the fully uncountable nouns in Sorani Kurdish might be considered “naturally atomic mass nouns” we tested to see whether or not consultants found sentences with certain mass nouns being described with adjectives like big, to be acceptable. Bawîl (‘luggage’) for example, intuitively refers to discrete objects, and it is also a mass noun because it not

acceptable when combined directly with numbers or with the modifier *herdû* ('both'), which has been shown to only be acceptable with count nouns, (52).

(52) # *her pîsatî-yek-im le.ser herdû bawîl-î-m xawên kird. all dirt-INDF-1SG:A on both luggage-OBL1SG:GEN cleanLV.PST*
'I cleaned all of the dirt off of both luggage.'

Furthermore, it is acceptable to describe *bawîl* ('luggage') with adjectives like *gewre* ('large'/'big'), as shown in (53).

(53) *Dashte bawîl-î gewre-y ha-ya. Dashte luggage-EZ large3SG:GEN exist-3SG*
'Dashte has large luggage.'

The acceptability of being described with adjectives like *gawara* ('large'/'big') but not with modifiers like *herdû* ('both') shows that *bawîl* ('luggage') refers to individual units and is also a mass noun. Together, these two properties show that *bawîl* ('luggage') meets the criteria to be

considered a "naturally atomic mass noun." Further research is needed to see how many mass nouns other than *bawîl* ('luggage') might be classified as naturally atomic.

In having naturally atomic mass nouns on top of a variety of countability classes as tested in the style of Allan (1980), as well as several modifiers that distinguish countable nouns from non countable nouns the nominal system in Sorani Kurdish is quite complex with respect to which nouns are used with which modifiers. It has been shown that plural morphology, direct counting, *herdû* ('both') and *yek yek* ('one-by-one') are not used with all nouns, especially those that refer to non-solid substances. At the same time, it has been shown that referring anaphorically to nouns with a plural pronoun, enumerating a single unit with *yek* ('one'), using the fuzzy denominator *nsikay panja* ('about fifty'), and the other denominator *herdû* ('both'), are each acceptable or not in different combinations with different classes of nouns; example nouns from these respective classes being *setyare* ('car'), *polîs* ('police'), *miqes* ('scissors'), *manga* ('cattle'), *çiyakanî Himalaya* ('Himalayas'), and *xîn* ('blood'). Lastly, within the class of uncountable nouns, it seems that there are "naturally atomic mass nouns" like *bawîl* ('luggage'), which refers to

individual units but is nevertheless not directly countable. In summary, this data section has shown that Sorani Kurdish has at least four properties of countability that distinguish nouns that are fully countable or not, or somewhere in between.

4. Discussion

The data plainly shows that Sorani Kurdish has a mass/count distinction with several countability classes and at least one subclass, naturally atomic mass nouns, within the class of fully uncountable nouns. The nouns that are counted without a classifier, that occur with plural morphology, and that occur with the modifiers *herdû* ('both') and *yek yek* ('each') are count nouns, and the nouns that do not have any of these morphosyntactic properties are mass nouns. Compared to the number of morphosyntactic properties that might distinguish between count nouns and mass nouns, only a relatively small number of these properties are those that are only used with count nouns but not mass nouns, and none of these properties are only used with mass nouns but not count nouns, like much in English.

The data also supports the idea from Allan (1980) that countability is far from a simple, bi-partite notion despite often being discussed as such (see, e.g. Chierchia, 2010; Link, 1983; Krifka, 1995; Rothstein, 2010), rather countability is quite complex and involves multiple countability classes (see also Grimm 2012), whether the language has a large number of properties that distinguish countability like English or the language has a smaller number of properties that distinguish countability like Sorani Kurdish. At the same time, however, it seems that there may be some relationship between the number of properties that distinguish countability, and the number of countability classes. English countability properties include direct counting, plural morphology, several determiners used only with count nouns, and a few determiners used only with mass nouns, and Allan (1980) showed that English has at least eight countability classes. Sorani Kurdish countability properties include direct counting, plural morphology, and two determiners used only with count nouns, and we have shown that Sorani Kurdish has at least six countability classes.

Following Matthewson (2022) in which complexity is discussed in terms of semantic domains being divided up in more or fewer ways, it might be said that the English count/mass distinction is more complex than that in Sorani Kurdish, because English has more ways of dividing up this

semantic domain with more grammatical reflexes and more classes of nouns. At the same time, Sorani Kurdish has the added complexity of having an optional classifier system, and given the conditions under which speakers choose to use classifiers are unknown, more research is required to understand the full complexity of the Sorani Kurdish countability system.

Comparing Sorani Kurdish to other languages in which countability has been investigated clarifies the picture of how countability can be manifest across languages. On one hand, the nominal system of English has many morphosyntactic properties that reveal the countability of a noun, as described in the background section above: there are many modifiers that are used only with count nouns, and small number that are only used with mass nouns (Chierchia, 1998). On the other hand, the nominal systems of languages like Mandarin have very few, if any, properties that distinguish between mass nouns and count nouns (Cheng & Sybesma, 1998). Sorani Kurdish is much closer to Mandarin in this respect in having a very small number of morphosyntactic properties that have to do with the countability of nouns. Unlike Mandarin, classifiers are optional in Sorani Kurdish counting constructions and there is plural morphology that is obligatory in certain contexts. Furthermore, the data shows that there are modifiers that are only used with count nouns.

The properties found here in Sorani Kurdish are very similar to those seen in Hungarian. Schvarcz and Rothstein (2017) show that Hungarian also has optional classifiers, plural morphology, and modifiers that only occur with count nouns. Sorani Kurdish might be labeled a 'mixed' language, as Schvarcz and Rothstein (2017) label Hungarian, since it has properties like plural morphology and nouns that are used directly with numbers, which also occur in English, and it also has properties like a classifier system for counting all nouns and very few countability properties in general, which is also the case in Mandarin. One might also consider that there could be a sort of continuum between languages like English and languages like Mandarin, with decreasing numbers of countability properties, and that Sorani Kurdish and Hungarian both exist between these two extreme ends of the continuum. Whichever way the nominal system in Sorani Kurdish is classified relative to those in these other languages, what has been shown here is that the properties seen in Sorani Kurdish and Hungarian may not be particularly rare or unusual as they can be found in languages from other families, Sorani Kurdish being Indo-European and Hungarian being Uralic. Questions that follow from this line of research include the following: Is the use of classifiers straightforwardly optional or are there certain conditions in which classifiers

are more frequently used than others? For example, is the use of classifiers required in some social contexts, such as more formal language use, but not used in casual language use? Or, is the optionality a matter of whether or not the speaker feels it is necessary to specify one counting unit or another?

5. Conclusion

This paper has taken a closer look at countability in Sorani Kurdish and its place within the typology of countability systems. Chierchia (1998), Rothstein (201) and many others have shown English to have many countability properties and Chinese to have relatively few, while Doetjes (2012) and Lima and Rothstein (2020) have shown countability properties in several other languages. Sorani Kurdish has been shown to have a mass/count distinction that can be seen by looking at the types of nouns that can be counted without classifiers—e.g. *qondre* ('shoe')—and those that cannot—e.g. *aw* ('water'), the types of nouns that can be used with plural morphology—e.g. *dargâ* ('door')—and those that cannot—*bafr* ('snow'), and the types of nouns that can be used with quantity modifiers *yek yek* ('one-by-one') and *herdû* ('both'). Moreover, the properties of Sorani Kurdish countability are similar to those in Hungarian (cf. Schvarcz & Rothstein, 2017), who categorize Hungarian as 'mixed' on account of the fact that it has mixture of properties from languages like Mandarin (cf. Cheng & Sybesma 1998), in which classifiers are used for counting all nouns, and language like English (cf. Chierchia 1998), in which classifiers are only obligatory for counting mass nouns, and there are a number of properties that reveal the mass/count distinction. Furthermore, following Lima and Rothstein (2020), it has been shown that countability properties are highly language specific in that the same properties that Allan (1980) used to uncover eight countability classes in English cannot be used in Sorani Kurdish. Rather, alternative properties were established to uncover six countability classes in Sorani Kurdish; these classes are respectively exemplified with the nouns *setyare* ('car'), *polîs* ('police'), *miqes* ('scissors'), *manga* ('cattle'), *çiyakanî Himalaya* ('Himalayas'), and *xîn* ('blood'). The correlation between the number of countability properties and countability classes—ten properties and eight classes in English, compared to seven properties and six classes in Sorani Kurdish—suggests that there may be a correspondence between the number of countability

properties in a language and the number of countability classes in a language though a great deal more work on countability across languages is needed to test this hypothesis.

Abbreviations

1 = first person, 2 = second person, 3 = third person, A = agent, APPL = applicative, BEN = benefactive, CL = classifier, COP = copula, DEF = definite, DEM = demonstrative, EZ = ezafe (construct state), GEN = genitive, INDF = indefinite, IPFV = imperfective, LV = light-verb stem, OBL = oblique, PAS = passive, PFV = perfective, PL = plural, PRF = perfect, PRS = present, PST = past, PV = preverb, R = oblique indexing the applied object, SG = singular, SM = subjunctive

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