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Fourteen tests for Breton collectives, an inquiry on number an numerotisty

Mélanie JOUITTEAU and Milan REZAC
CNRS-IKER

Abstract: We report on an inquiry into the mapping between the syntax and semantics of number in so-called collective nouns in Breton. First, the collective system of Breton is described. Next, we lay out the theory of numerosity (semantic) and number (syntactic) in terms of which we formulate particular diagnostics. We compare collectives to better or worse understood classes of nouns in the numerosity-number system, including group, count, and different varieties of mass nouns, focusing on those with anomalous number behavior recalling those of collectives. Each diagnostic is accompanied by the results of a pilot study. We review the methodological, comparative, and theoretical results we have and their current limits.[1]

1. Introduction

1.1. Breton Collectives and the numerosity-number relationship

The descriptive literature on Breton, the Brythonic Celtic language spoken in Brittany, gives ***collectives*** as one of the categories of nominal number, along with singulars, duals and plurals. Singulars and plurals, to a good first approximation, have the behavior and uses one would expect of English: for instance existential, generic, and kind uses of a bare plural like ***koadoù*** 'forests', ***kizhier*** 'cats', with plural agreement and anaphora, of the singular ***koad, kazh***. Collectives are lexical items that behave in this respect like neither singular nor plural; they may be isolated by properties we illustrate for ***gwenan*** 'bees', ***gwez*** 'trees', ***stered*** 'stars' (e.g. Kervella 1947, Trépos 1957, Anderson 1986, Press 1986, 2010, Favereau 1997).

1. This article benefited from the great patience and generosity of J. Jade, A-M. Louboutin and M. Lincoln. Be they duly thanked here. The elicitation results and on line at the *Elicitation Center* in http://arbres.iker.cnrs.fr

Morphology: collectives are not the inflectional plurals of any singular and often have no recognisable plural morphology, though historically some like ***stered*** are old plurals with lost singulars. Further, morphologically many collectives stand in a derivational relationship to ***singulatives*** formed from them by the suffix ***-enn***, ***gwenan-enn*** 'bee', ***gwez-enn*** 'tree', ***stered-enn*** 'star', which are themselves formally regular count nouns and pluralisable.[2]

Syntax: Collectives control strictly plural agreement. They also strictly antecede plural pronominal anaphora in any local or non-local relationship, a matter that at least partly belongs to syntax, and entirely on some approaches, for instance the reason that anaphora to *scissors* are plural is because they have the covert NP *scissors* (cf. Elbourne 2013).[3]

(1) A-boan ma 'z eo en em zastumet mad **ar gwenan** el leac'h ma **sonjont** ober
barely that PRT is REFL gathered well the bees in.the place that think.3p make
o demeuranz, ma **komansont** raktal da labourat evid kempen **o** zi.
their dwelling that begin.3p straightway to work for prepare their house
As soon as bees have gathered in the place where they think to make their dwelling, they begin straightway to work in order to prepare their house. (Henri 1906)

Semantics: collectives are, well, «collective», in some sense that it is our aim to study. To a first approximation formed by descriptions and usage, the collective ***gwez*** is somewhere between and inclusive of 'trees' and 'forest', whilst the plural of the singulative ***gwezennoù*** is in its turn more restricted than one would expect given other count plurals. To hazard an impression, generic and kind ***Trees are tall (here)***, and vague existential ***Trees surround my house***, as well as vague definite ***My house is in the trees***, would all use ***gwez***, while ***gwezennoù*** might

2. Regular plurals in Breton are typically formed with the suffix *-où*, but for certain categories *-ed, -ien/-ion* are regular, while a variety of plurals are semi-regular in attaching a recurrent suffix to the singular base or an umlauted variant of it, while others like *tud* 'people' are not related to any singular base. Collectives are either plainly unmarked, like *gwez* 'trees', or bear several recurrent markers that do not synchronically relate them to a distinct base but often historically are plurals, e.g. *-ent* in *skevent* 'lungs', singulative *skeventenn* 'lung'; *-ien, -ion* in *kelien* 'flies', *glasien* 'greenery', cf. *glas* 'green'; *bili* 'shingle(s)', an old internal plural. Some suffixes are semi-productive: *-ez*, in *kerez* 'cherries', attaches to borrowings, *banan-ez* 'bananas', singulative *bananezenn*; *-en*, *salad-en* 'salad(s)', singulative *saladenenn*. See Kervella (1947), Favereau (1997).
3. We omit the intricacies of Breton agreement; roughly, verbs and prepositions are 3s with any overt subject, save the verb *have* that agrees with them, but both have inflectional morphology reflecting the phi-features of silent subjects, demonstrably pronouns; for verbs this includes pre-negation subjects resumed by a silent pronoun. See Jouitteau and Rezac (2006, 2008) with literature.

be used for ***Some trees surround my house, Look: here we planted (your) trees***. If that is right, analogues are known in the literature, even going by the term collective-distributive (Corbett 2004). At the same time, it is an impression, and one among others, notably a similarity between collectives and lexical plurals like ***oats, clothes*** (Acquaviva 2008), and plural-agreeing groups like ***The herd were grazing peacefully*** (Allan 1980).

Our interest is what the collective meaning of collectives might be in the gamut of number-related meanings, or ***numerosity***, and how it relates to their syntactic plurality, or ***number***. One way to approach the question is through a formal study based on the study of the distinctions of numerosity and number in other systems, the theories thereof, and the tests thereby made available for the study of unknown categories. To take an example, the nature of so-called object-mass or aggregate nouns like ***furniture*** is not a priori clear: in some ways they resemble prototypical mass nouns like ***water*** and in others plural count nouns like ***chairs***. We can then pit it against properties on which masses and pluralities differ, like quantification, ***too much/*many furniture***, and reciprocity, ****The furniture resembles each other***, for both of which it is like ***water*** and not ***chairs***, and distributive predicates, ***The furniture is square***, where it is like ***chairs*** because it each piece of furniture must be square and unlike ***water*** that here makes no sense. From there, one can draw conclusions both descriptive and theoretical about the numerosity of ***furniture*** and its relationship to its singular number. Such studies have targeted one mystery category after another (***Their committee is too small, Their clothes are too small***, ****Their wits are too small***), contributing to the understanding of numerosity and number.

We report the tools we have so far found useful in such an inquiry into Breton collectives and report on a pilot study. Yet at this point, we are largely finding our way through territory some well mapped but new to us, some little explored.[4]

1.2. Breton collectives among Breton nouns

The descriptive literature leaves a certain ambiguity in what collectives are: necessarily, they are nouns that combine with plural agreement and anaphora without being the morphological plurals of singular counterparts, but depending on how one construes the idea of being a morphological plural of something else, that might or might not include the relationship of English ***person-people*** and its counterpart in Breton ***den-tud***, usually distinguished from collectives (e.g. Kervella 1947: 336), though sometimes included (Trépos 1957: 122). Among nouns given as collectives are:

4. Corbett (2004) reviews numerosity and number cross-linguistically; we will frequently advert to their relationship across the count-mass divide, where general overviews of the cross-linguistic situation include Wierzbicka (1988), Acquaviva in (2008), Doetjes (2011), Massam (2013, ed.).

Plants and fruits: ***plant, trinchin*** 'sorrel', ***ed,*** 'cereal, wheat', ***gwinizh,*** 'wheat', ***mais,*** 'corn', ***mouar*** '', ***sivi***, 'strawberries', ***kraoñ-kelvez***, 'hazelnuts', ***gwez***, 'trees'...

Small animals: ***fubu***, 'midges', ***merien***, 'ants', ***kelien,*** 'flies', ***buzug***, 'earthworms', ***gwenan***, 'bees', ***logod***, 'mice', ***laou*** 'louse',...

Large animals: ***moc'h***, 'pigs' or ***chatal***, 'cattle'...

Small items: ***nez*** 'louse eggs', ***had lana*** 'seeds gorse'...

Inanimates: ***blev***, 'hair', ***reun***, 'horse hair', ***brujun***, 'crumbs', ***dilhad***, 'clothes', ***pilhoù/truilhoù***, 'over-used clothes', ***bili***, 'shingles', ***krampouezh***, 'crepes'...

The classes are revealing both for what they contain and what they do not, in comparison to English and French object mass nouns and lexical plurals with clear sizable pieces (***furniture, furnishings, clothing, clothes***), or small granular ones (***rice, oats, shingles***), or meshes (***hair***), perhaps biased towards the biological but ranging over inanimate nature and artefacts as well, but usually not substances (like ***water***, ***fumes***), abstracts (like ***courage, wits***), or spatiotemporal extents (like ***space, barrens, vacations***).

Trépos (1957: 219) describes the meaning of collectives as «confused mass, in which it is difficult to discern units», illustrating with 'hair', 'ants', 'shingles', but also 'trees'.[5] It seems vain to go looking for a physical or cultural property deterministically coupled to whether a noun is collective, as much as in the familiar count-mass divide. We assume that one cannot say much about the botany from the massiness of *fruit* but not *vegetable*, nor the dietary habits of English as opposed to French speakers, or at best pose as a question whether the plurality of *oats* might «point to oats being eaten originally in the grains, not, like wheat and barley, in the form of meal or flour» (*Oxford English Dictionary* s.v. *oats*). So it is for collectives: if *logod* is a prototypically collective, *razh* 'rat' is a prototypical count singular with a regular plural *razhed*, and though reanalysis does occur in varieties of Breton to shift their categories, we suspect it does not speak to these animals population statitics. At best, collectives are used for objects that tend to be construed in groups (Irslinger 2014: 95), to the same degree one can make similar generalisation of masses in English or French.

Accordingly, the classes into which collectives fall are not exclusively the purview of collectives in Breton, for it also has the counterpart of count and mass singularia tantum that English and French use here:

Group count singulars: Breton has regular, pluralisable count nouns used for groups, *familh* 'family', but also productive suffixes forming group nouns, notably *-ad*, general as in *stroll-ad* 'collect-ion, group', *bandenn-ad* 'group-ful, group', *dorn-ad* 'hand-ful', and *-eg* particularly forming names of collections of plants; *drez* collective 'brambles', *drez-eg* both 'a plant of brambles' and 'blackberry-bush'.

5. Translations are ours.

Mass singularia tantum: Collectives often correspond in meaning to mass nouns, but inversely, there are mass singulars with meanings similar to collectives, *gwer* 'glass' (Acquaviva 2008: 257), *keneud* 'dry wood' (Trépos 1957: 122), *foen* 'hay' (Kervella 1947: §336), *bezin* 'seaweed' in (2). Plant names like *ed* 'cereal, wheat' show variation between being collectives and singularia tantum, recalling the English type *garlic* count and mass (Favereau 1997: §78). We do not know how far the comparison goes: *koad* is both a substance singulare tantum 'wood' and a collective 'trees', close to the ambiguity of *wood* itself (Plourin 1982: 552, confirmed by M3), but not identical as collective *koad* but not count *wood* may be used of a tree-row (4). [6]

(2) *Ar bezin 'oa goulenn dezhañ.*
the seaweed was request of.him
'There was a demand for seaweed.'
Merser (2011:13)

(3) *Ar c'hoad-se ne zeu tamm gor ebet diouto.*
the wood-here neg comes piece heat at.all from.them
'This wood does not make good firewood.' (Menard and Kadored, 2001:'koad')

(4) *ul lec'h bordet a goad tilh*
a place edged of wood lime
'a place bordered with lime trees.' *idem.*

(5) *An ed n' {int/eo} ket azw. Ar mais n' { int/eo} ket uhel awalc'h.*
the cereal neg are/is not ripe. the corn neg are/is not high enough.
'The cereals are not ripe. The corn is not high enough.' Favereau (1997:§78)

Perhaps the commonest formal diagnostics given for collectives, distinguishing them from the ***den*** 'person' - ***tud*** 'people' pair, is their association with singulatives derived from them by the suffix ***-enn*** and meaning the objects that are assembled in the collective. However, ***-enn*** is a general derivational suffix, attaching not only to collectives, but also to ordinary count singulars, count plurals, and mass singulars, subject to caprices of meaning across these categories, and not automatically available with any (Favereau 1997: §77ff., Jouitteau 2009-2015 s.v. ***-enn***). Prevalently, collectives like ***gwez*** 'trees', masculine as all collectives, do have singulatives in ***-enn***, feminine, which pick out what they seem to collect, ***gwezenn*** 'tree'. Some

6. The 'gold' substance is not usually treated as collective, but cf. the plural anaphor in (i)
(i) *Honnez, hag e ve leiz an daol a aour, na fiñvo ket anezho.* (Treger, Gros 1970b: §'leiz')
this.one and R is full the table of gold neg move neg P.them
'This one, even if the table was covered with gold, would not touch it (#them)'.

collectives however do not have singulatives in this sense: ***arc'hant*** 'money' is considered as a typical collective, being an underived plural-agreeing noun, but ***arc'hant-enn*** does not mean 'coin, bill'; it can mean 'roundel argent' (a heraldic motive), likely as absent from many mental lexicons as roundel argents were from ours. In turn, ***-enn*** attaches with this meaning or an idiosyncratic one to count singulars, ***kalon*** 'heart' - ***kalon-enn***, ***lod*** 'part' - ***lod-enn***, with about the same meaning; rarely (semi-)regular count plurals, ***razh-ed*** 'rat-s', ***razhed-enn*** 'rat'; irregular count plurals, ***tud*** 'people' - ***tudenn*** 'character, personage'; mass singulars, ***traezh-enn*** 'sand, beach' - ***traezhenn*** about the same but more commonly beach, ***boued*** 'food' - ***boued-enn*** 'edible part (of a shellfish)' (examples from Kervella 1947, Trépos 1957, Favereau 1997, Goyat 2012). Similarly, the object that a collective collects may be extracted by means of a classifier-like noun like ***pezh*** 'piece', ***penn*** 'head', ***loen*** 'animal', but this too does not discriminate between collectives and plurals. Traditionally collective ***ognon*** 'ognion(s)', traditionally semi-regular plural ***deñved*** 'sheep' and irregular plural ***kezeg*** 'horse', form ***penn-ognon, penn-deñved, penn-kezeg*** for a single 'ognon', 'sheep', 'horse' (ibid.).

Morphosyntactic criteria then leave it open whether there is any distinction between ***den*** 'person' - ***tud*** 'people' and collectives, and more generally, whether collectives might not simply be plain count plurals that are simply pluralia tantum, that is that are idiosyncratically missing count singulars, as ***people*** might be. Yet this very example illustrates one possibility of what might lie behind the distinction. While ***people*** seems now to behave as a plural count noun semantically, prescriptive grammars prefer to count with ***persons***, and that difficulty with counting is synchronically very clear with ***cattle***, more so with ***police***, though other tests will reveal these are very close to count plurals, neither mass nor group. Something like this might be reflected in the repeated mentions of the collectivity and indiscernability of collectives. Descriptions do not go further, or go further into mysteries: to take Trépos (1957: 252), the standard singulative plural ***steredennoù*** of the standard collective ***stered*** 'stars' gives «greater individuality», as apparently does in Trépos's own Plozévet dialect ***stered*** itself (a collective or plural of ***ster*** 'star', as it is historically?) compared to collective ***steyr*** (historically, another plural of ***ster***). Against this insistence on the distinction between collectives and count plurals, there is to be set that in other ways they are closer to regular count plurals than the plurals of their singulatives ***N-ennoù***, for these show a curious restriction to small, discrete quantities recalling the distributive-collective systems like that of Mohawk (Corbett 2004: 4.4). A common translation of the singulative plural is with an explicit 'some': Le Roux (1927: map ***étoile(s)***) glosses ***steredennoù*** '***quelques étoiles***, some stars', Favereau (1997: §83) gives (6), and Kervella (1947: §338) says «A collective is thus used as a general plural, and the plural of the singulative as a narrow plural. To say ***koumoulennoù*** [plural singulative of ***koumoul*** 'clouds'] is as if to say … a few clouds». Henri's (1906) manual of bee-keeping never once uses the plural of the singulative ***gwenanenn*** 'bees' since his talk of bees in all of kinds and generalisations, for which the collective ***gwenan*** is used, though for ordinary count nouns the plurals have these uses.

(6) «Le sens de -ennoù peut être de ***quelques***…
ur yar wenn gant pluñv-enn-où du war he goûg»
a chicken white with feather.coll-SG-PL black on her neck
'a white chicken with some black feathers on her neck' (Favereau 1997: §83)

1.3. Where are the collectives?

Grammars give the impression of a stalwart category of collectives with collective-singulative-singulative plural triplets and a substantial core of shared items. We aim to look first at such triplets, in order to single out the traditional class of collectives, and to compare the collective not only with regular count plural, but with the plural of its singulative ***N-ennoù***.

We have not found it as easy as that to find triplets, a perhaps unsurprising fact: a closer look at corpora reveals that plural singulatives are rare, and the pairing of a plural-agreeing underived noun with a singulative itself may come and go from dialect to dialect and period to period. An example of such variation is the dialectal and diachronic variation of collective ***stered*** 'stars', originally the plural of ***ster*** 'star', in the table in (7). The historical situation here is unclear, but revolves around ***ster*** 'stars', ***stered*** formed on it as if by a common plural suffix ***-ed***, ***stir*** another originally common plural with i-umlaut, and derivatives in ***-enn*** to all these as if singulatives of collectives (see e.g. Trépos 1957: 252). The following table resumes the situation in a number of sources, illustrating the independence of the ***-enn*** formation from any of the collective bases.

(7) Documented forms for the noun denoting 'star(s)'

	'stars'	'a star'	'(some) stars'
	N	+SG	+PL
Le Bayon (1878)	*stir*	*stiren*	*stired*
Gwened according to Le Roux (1927)	*ster* *stir* *chtir*	*sterenn* *chtirenn*	 *stireneù* *chtirenneù*
ancient KLT & some Kerne areas	*ster*		
de Rostrenen (1732)	*stered*	*sterenn*	*sterennoù*
Trépos (1957:252), *Plozévet*	*stéyr*	*?*	*stered*
Goyat (2012:189), *Plozévet*	*stered*	*steredenn*	
actual standard & KLT	*stered*	*steredenn*	*steredennoù*

Up to this point, we have interviewed three native speakers of the KLT western dialects, of different localities and ages. Our first elicitation with ***J.***, 87, from Mahalon/Esquibien (Kerne), did not identify any triplets, with typical ones like that of ***logod*** 'mice' missing one or another member. Our second, with ***A-M.***, 80, from Locronan (Kerne), also failed for most triplets, ***steredennoù*** in particular being given as known but not used by the speaker. A control count plural, ***razh*** 'rat' - ***razh-ed*** 'rat-s', turned out to yield what seems to be a collective triplet: the old singular ***razh*** is missing, and the plural ***rayed*** [= standard ***razhed***] is coupled with count singular ***rayedenn***, plural ***rayedennoù*** (cf. Le Roux 1927: map 545, Favereau 1997: §80).

(8) In search of tripartite oppositions for A-M. (Locronan)

	N	+SG	+PL
pear(s)	*per*	*perenn*	* *perennoù*
mouse, mice	*logod*	*logodenn*	* *logodennoù*
star(s)	*stered*	*steredenn*	* *steredennoù*
rat(s)	*raed*	*rayedenn*	*rayedennoù*

The third speaker *M.*, 26 from the Leon dialect, had some plural-agreeing underived lexemes that are traditional collectives, but without singulative plurals in *-enn-où*: *buzug*, 'earthworms', *kelien*, 'flies', *gwenan*, 'bees' or *istr*, 'oysters'. She had plurals in *-enn-où* missing a potentially collective base (*klogorennoù*/**klogor* 'blisters' and *orjalennoù*/**orjal* 'wires'), or lexemes missing the singulative singular (she reported discomfort with the singulative form *frouezhenn* 'fruit'). Some double plurals lacked the singulative *brujun(*enn)où* 'crumbs'. We did end up with the following triplets over three sessions:

(9) In search of tripartite oppositions for M. (Leon/Diwan)

	N	+SG	+PL
pear	*per*	*perenn*	*perennoù*
hair	*blev*	*blevenn*	*blevennoù*
plant(s)	*plant*	*plantenn*	*plantennoù*
midge(s)	*fubu*	*fubuenn*	*fubuennoù*
star(s)	*stered*	*steredenn*	*steredennoù*
crumbs	*brujun*	*brujunenn*	*brujunoù*

Of these, we tend to set aside here *blev* 'hair(s)', because of a mix of singular and plural behavior rather than plural alone, which we take as a sign *blev* has for her occasional mass uses. We remain suspicious of the results for the recent French borrowing *plant* 'plants' because of apparent ambiguity with a count singular 'plant' (cf. French *plante* 'plant' count only). Hence the overweening role played in our report by *fubu* 'midges'.

2. Numerosity

To formulate tests for numerosity, we will need to talk in terms of a particular theory of it. This section aims at providing a sketch of one approach to count nouns and two to mass

nouns, which we pick as the ones that seem to us to be the most widely familiar.

For count nouns, we use the the lattice theory of Link (1983), modified by the theory of groups of Barker (1992); more formal overviews and comparisons with alternatives are Nouwen (2015), Scha and Winter (to appear). All nouns are properties of objects from the ***domain of individuals*** D_e, which thus includes individuals in the denotation of each of ***dwarf, dwarves, group of dwarves, infantry, water, space, beauty, kilo***. The domain of individuals is closed under the binary operation ***sum***, notated +, so that for any two individuals in it, say **Gwen** and **Edurne**, there is a uniuqe third individual that is their sum, **Gwen+Edurne**; plausibly, these are the denotations of the words *Gwen, Edurne*, and *Gwen and Edurne*. Sum yields 'flat' structures, so that **Gwen+Edurne** with **Wapun** is **Gwen+Edurne+Wapun**, like the sum of **Gwen** with **Edurne+Wapun**.[7] Sum induces a partial order on the domain of individuals, the part-of relation, symbolised ≤, whereby **Gwen+Edurne+Wapun** has as parts any individual it is summed with to give itself and all their parts: **Gwen+Edurne+Wapun**, **Gwen+Edurne**, **Gwen+Wapun**, **Gwen**, **Edurne**, and **Wapun**. Individuals that have themselves as their only part are atoms with respect to ≤. All others, or proper sums, we shall call pluralities. Together, atoms and pluralities are sums.

The denotation of a plain singular *count noun* like *woman* is a property of atoms, such as **Gwen**. The *cumulative operator* * gets us to the denotation of the plural *women*. * takes a predicate, say the denotation of *woman* that in a particular situation holds of {**Gwen**, **Edurne**, **Wapun**}, and closes it under sum, to give {**Gwen, … Gwen+Edurne, … Gwen+Edurne+Wapun**}. There is debate as to whether the denotation of *women* is just that, or whether the atoms are removed to leave just the pluralities. In either case, plural count nouns are *cumulative*: if *women* holds of **Gwen+Edurne** and **Edurne+Wapun**, it holds of their sum, **Gwen+Edurne+Wapun**, while *woman* holds of **Gwen** and **Edurne** but not their sume **Gwen+Edurne**. * tells us how to get from the denotation of a singular count noun to that of a plural one, but it does not mean that * or the cumulative structure it yields chracterise the meaning of the morphosyntactic feature [plural], though that would be nice. English and French abound in so-called *lexical plurals* that are the plurals of no singular or not related to their singular by cumulativity, so it would seem, nor will they prove to pass tests for it: *dregs, clothes, groceries, remains, news, trousers, barrens, heavens, manners, thanks, measels, Pyrenees...* Something more needs saying (see e.g. Ojeda 2005, Acquaviva 2008).

We also need to say something about how VPs apply to arguments denoted by DPs with singular and plural count nouns. Let us take *Gwen and Edurne yawned*, and assume that the subject denotes the plurality **Gwen+Edurne**, and the VP the property **λx . x slept** that can only hold of atoms. One way to get this atom-denoting VP to combine with the subject plurality is to apply * to the denotation of the lexical item *yawn*: if **sleep** holds of **Gwen** and of **Edurne**, then ***sleep** will hold of **Gwen+Edurne**; call it *lexical cumulativit*. We get the same results by applying * to the VP, but this latter move is needed to get the right meaning in more complex cases. An alternative to *-ing the VP is the silent distributive operator ^{D} below, which combines with the VP, the subject, takes each atom in the subject, and feeds it to the VP. For

7. Thus sum is associative; it is also commutative, *a+b=b+a*, and idempotent, *a+a=a*.

our purposes, the difference between it and *-ing the VP will not matter, but the distributive operator lends itself better to our discussion.

(10) $^{D} = \lambda X_{e} \lambda p_{et} . «x[x \leq X \;\&\; x \text{ is an atom} \rightarrow p(x)]$
(x is an atom := $\varnothing \exists y[y \leq x \;\&\; y\,{}^{1}x]$)

Among atoms, some are distinguished because they are intuitively constituted of other individuals, but not as sums thereof. An example is the atom denoted by *the*$_{s}$ *group of Gwen, Edurne and Wapun* in a particular situation *s*, call it **g**. We call such *group atoms* simply *groups*, and reserve the term *atom* for other or *pure atoms*. Assume that there is the *member-of* function *f* that is defined over groups and yields for each in a situation the individual (usually a plurality) that constitutes the group in a situation, *f(g)* = **Gwen+Edurne+Wapun**. Because groups are atoms independent of their members, different properties can hold of the two: in the following sentences, *the Pohjola club* and *it* cannot be exchanged with their members, *Gwen, Edurne and Wapun* or *the members of the Pohjola Club*. All this goes for inanimate groups, *This deck of cards has a card missing* but not *#These fifty two cards have a card missing*.

(11) In 2014, Gwen, Edurne and Wapun formed <u>the Pohjola Club</u>; <u>it</u> had three members
In 2015, <u>the Pohjola Club</u> went to Pohjola without Gwen, because she was sick.
By 2016, the members of <u>the Pohjola Club</u> were becoming too different from each other, and <u>it</u> dissolved.

Group nouns like *group, group of Gwen, Edurne and Wapun* and *Pohjola club* are just like count nouns, singular and plural, but happen to hold of groups, that is of atoms in the domain of *f*. Because they hold of groups, that is group atoms, Because group nouns hold of groups, they are not cumulative, just like singular count nouns: if *club* holds *the Pohjola club* and of *the Kalevala club*, it need not follow that there is a sum of the two that is also a *club*. Among group nouns, there may be important distinctions that we advert to later (see recently Henderson 2014, Pearson 2011). In some but not other varieties of English, and not at all in French, some singular group nouns can control plural agreement and then behave as pluralities: *The committee is (*each) old* gives the age of the committee, and more marginally that of its members, whilst *The committee are old* gives only the age of the members. Yet this very phenomenon reveals another gap in our understanding of the relationship between morpho-syntactic plurality and the theory of pluralities, and we return to it.

More or less complementary to count nouns are *mass nouns*, a term we use to a first approximation to cover those that, in English, are quantified by *much/little* rather than *many/few*, and including:

(12) (i) substances of varying granularities: *time, space, ether, water*, *silver*, *fruit, cake, sand, gravel, corn, hair*...
(ii) object mass nouns (aggregates) that seem to come in clear smallest pieces: *furniture, mail, luggage, silverware, ammunition, infantry*...
(iii) abstracts: *courage, knowledge, thinking, beauty, syntax*...

Mass nouns do not make distinctions of number; in English and French most are singular, and plural candidates like ***brains, oats, ashes*** either have no singular or do not seem to relate to it «regularly» by *-cumulation. There is a large number of closely similar mass-count pairs that lets us compare their properties: (we append * to those that are both mass and count): ***change - coin; mail - letter; carpet - carpeting; furniture -furnishings*** (lexical plural)***; fruit* - vegetable; corn - pea; foliage - leaf; baklava - croissant; success* - failure; infantry - footsoldier***. There are also conversions of nouns between mass and count, some lexicalised, ***fruit, cake, hair, success, belief, success***, but not say ***vegetable, fur, failure***, others by more or marked application of the «universal grinder» and «packager».

We sketch two approaches to mass nouns, based on contrasting guiding intuitions about their nature; they and others are reviewed in e.g. Krifka (2007), Rothstein (2010), Lasersohn (2011), Doetjes (2011), Gillon (2012) with external perspectives in e.g. Barner and Snedeker (2005), Papafragou (2005), Nicolas (2012), Steen (2012). On one view, call it ***monist***, mass nouns are close to plural count nouns, and they do indeed share striking properties against singular count nouns. Both support cumulativity: if something is ***baklava*** (mass) or ***croissants*** (count), and something else is too, then their sum will also be ***baklava*** or ***croissants***. Both can appear bare in English and then are used as existential, ***Baklava/Croissants will be available***, generic ***Brownies/Baklava need(s) butter***, and kind ***Croissants evolved from baklava***. Both can use the same «measuring» constructions, ***two kilos of***, ***two pieces of***... However, we also want to capture the differences -- after all, mass and not plural count nouns are singular, combine with ***much*** quantifiers, do not combine with cardinals, and so on. One influential proposal, that of Chierchia (1998ab), is at heart as follows: whilst a singular noun like ***chair*** holds lexically only of atoms, and must be pluralised by * to ***chairs*** to hold of the sums of those atoms plus have the atoms removed, ***furniture*** holds lexically of both atoms and their sums. Many similarities and differences get an elegant explanation. Among similarities, cumulativity is immediately guaranteed. Among differences, applying * cumulatoin would be vacuous, and so the singular-plural distinction is otious in the measure it reflects the atom-plurality distinction. More subtly, counting masses is expected to be impossible if counting relies on there being a predicate that identifies the atoms to be counted: with count nouns there is, namely the singular ***chair*** of ***chairs***, but with mass nouns the atoms and the pluralities all belong to a single predicate, ***furniture***. It is worthwhile to mention one more technical aspect of the proposal, because it illustrates a relationship between different categories of numerosity: as a singular definite, we might want ***the furniture*** to hold of atoms rather than pluralities, and can let it do so by making available a conversion that takes a plurality, in this case the plurality that includes all individuals that count as ***furniture*** in a situation, to the group (group atom) to which it relates by ***f***. The differences among mass nouns are not part of the ontology; ***water*** differs from ***furniture*** only because it is less clear what count as an atom of it: if we accept ***water is wet***, there are bits that are ***wet*** and no parts of them are, but we have trouble identifying them.

The other view of mass nouns, call it ***dualism***, holds that mass nouns hold of a separate domain of individuals than count nouns; we will sketch a proposal based on Link (1983). Let us suppose that our domain of individuals consists of just two atoms, of both of which count noun ***fruit*** holds, ***a*** and ***b***, so that ***fruits*** holds of ***a+b***. Suppose now that for every such «count» individual of which a count noun holds, there is a distinct individual to which the former is relatable by a function ***m***, the «stuff» of which it is made: $m(a) = x$, $m(b)=y$, $m(a+b)=z$. The mass noun ***fruit*** holds of these «mass» individuals. These mass individuals are not related to

their count counterparts by + (and thus by ≤): *z*, the stuff of *a+b*, is not the + sum of *a, b*, nor is *a+b* the + sum of *x, y*. But the mass individuals are themselves organised by an analogue of + (inducing ≤), call it $+_m$ (inducing $\leq_m$), with one key difference. The domain of count individuals is atomic with respect to ≤: any individual is related by ≤ to the atoms of which it is the closure under +. The domain of mass is not atomic: there may be individuals that are closures under $+_m$ of atoms with respect to $\leq_m$ but there may be others that are not. Thus in our example, $z = x+_m y$, and so $x \leq_m z$, but whereas *a*, to which *x* corresponds under *m*, is an atom, *x* need not be, but may be rather the $+_m$ sum of two smaller individuals, call them *x'* and *x"*, and these too may be sums, and so on, with no atoms «at the bottom». The mass noun *fruit* holds of *z* and all that relates to it by $\leq_m$: *x*, but also *x'* and *x"*, and so on. The individuals of which *furniture* holds plausibly do have atoms with respect to $\leq_m$, those of *ether* perhaps not. Non-atomicity allows for total homogeneity: if *x* is *a part of water* then *x* is *water*; but non-atomicity is not required of masses and so need not hold of *furniture*. Like monism, dualism is quite successful at dealing with many basic properties of the count-mass distinction. Again cumulativity is guaranteed, pluralisation can be thought of as otious, and counting is out if it relies on identifying atoms by proper sums through ≤.

The theory of numerosity now gives us the following categories of nouns against which to pit collectives, each with richly documented properties to compare:

(13)	Count singulars and their plurals:	*chair, chairs*.
	Group singulars and their plurals:	*team, teams*.
	Mass *singularia tantum*:	*space(*s),furniture(*s),courage(*s)*.

The theory also has gaps in coverage, such as *pluralia tantum* of the *scissors* type, a plural that holds of atoms in a way *knives* does not. They illustrate an apparent mismatch between numerosity and number. Two such mismatches, both difficult at present, are of particular interest to us because of their resemblance to collectives.

One are lexical plurals that are so to speak on the border with mass nouns: on the one hand by their meaning, on the other by marginal availability of quantification with *much* when they are in non-agreeing contexts, and by resistance to quantification by *many* and counting by cardinals in general. Examples are *ashes, snows, oats, dregs, fumes* ; *groceries, goods, belongings, leftovers* ; *brains, guts, wits, smarts, looks* ; *news, minutes, letters* ; *profits, dues* ; *vacations, nuptials* ; *barrens, deeps, narrows, heavens, (territorial) waters* ; and the irregular plurals *cattle, police* ; but not say **broads, *stupids, *shoppings*. Some are plurals of stems that otherwise occur only as adjectives or verbs (or not at all), others are plurals of count nouns with a different meaning, others of mass nouns that they somehow intensify or otherwise modify, and all are lexicalised so that there is no **broads* beside *narrows*, **stupids* beside *smarts*, **shoppings* beside *belongings* (see Acquaviva 2008 with further literature).

The other are plural-agreeing groups, like *The committee are old*. With plural agreement, there are some striking behaviours that make it seem as if *committee* denoted *members of the committee*, a regular count plural (Barker 1992). Yet it fails to bear plural morphology; it fails to combine with quantifiers for plural nouns like *most*, keeping rather to ones for singular nouns like *every*; and to some extent, it can bind both singular and plural pronouns (Elbourne 1999). This somewhat mysterious pluralisation seems to extend to a noun of which we make extensive use, *infantry*, because it is as a singular an object mass noun rather than a group

noun to go by known diagnostics:

(14) (Too much / ∅ / The) infantry is old. (cf. *Too much / *∅ / The army is old.)
*This infantry of rangers is old. (cf. This army of rangers is old)
%The infantry are old.

3. Testing numerosity in Breton

3.1. Introduction

Breton collectives are not themselves the morphological plurals of anything, yet take plural agreement and antecede plural pronouns:[8]

(15) Ar { fubu, plant, stered } n' {**int** / ***eo** } ket glas.
the midges plants stars neg are / is neg blue
The midges/plants/stars are not blue. M3]

Plural agreement on the verb might be a matter of morphosyntax with no interpretive correlates, but that of pronouns is a different matter. On any theory of pronouns, it reflects number visible to interpretation: either the number interpreted on their antecedent, or number on pronouns as individual variables, or number on a definite with a silent NP that pronouns reflect. Collectives are then interpretively [plural], and our question is how that relates to their numerosity. At one end of the range of possibilities, [plural] on collectives and count plurals have the same meaing, perhaps cumulativity, perhaps something quite different. At the other, there is still a single [plural] feature, but the interpretation is as unlike as it seems to be for [feminine] on ***fille*** 'girl' and ***chaise*** 'chair' in French, for for that matter [plural] on 2nd person plural and 2nd person singular polite ***vous***. Any conclusion across this spectrum is of great interest for understanding the nature of the relationship between numerosity and number.

English lexical plurals and plural-agreeing groups illustrate how to go about probing the numerosity of collectives and how difficult it might be to interpret the results. Like collectives, lexical plurals are plural in agreement and for anaphora, but are not plurals of any singular, though they do not have singulatives. Like collectives, they give the impression of being less, well, transparent for what makes them up than plain count plurals. The impression can be probed: even the most «articulated» ones like ***clothes, groceries, oats*** resist cardinals and less so ***many*** quantifiers, and some are hopeless with them, yet for reciprocals for instance the internal structure is more visible than that of any mass or group noun:

(16) ∅ / *Five / ?Many / *Much / ∅ clothes in this pile are clean, aren't they?
∅ / *Five / *Many / *Much wits are surely not needed, are they?

8 See the introduction of agreement with pronouns in various position; our example here also turns out to involve a pronoun rather than agreement, as in Breton agreement by a preverbal subject across negation needs *pro* (Jouitteau and Rezac 2006).

(17) ? Clothes made out of velcro would stick to each other.
* Clothing made out of velcro would stick to each other.

Our tests all revolve around «looking inside» collectives, and that can apparently occur in a variety of ways: cardinals cannot look inside ***clothes*** to count individual items of clothing, but reciprocals to some extent can. Better-studied categories of numerosity design a multitude of such contrasts: ***be round*** can look at the pieces inside the mass noun of ***This furniture is square***, but not inside the group noun ***This collection of furniture is square***, neither can be counted by ***five*** or ***many*** like ***Five/many pieces of furniture are square***, but only the group noun is opaque to ***Count the (*collection of) furniture***. We have here a way of finding out what might lie behind staple of traditional descriptions of collectives as nouns that ***qu'on ne pet pas penser à énumérer*** «that one cannot think of ennumerating» (Trépos 1957: 221): can one really not ***count*** the collective ***arc'hant*** 'money', or can one simply not count it by cardinals?

We shall run through the tests we have found useful in the order that facilitates explaning them, and start with the ones we understand better and can say more about. The results of our pilot study are summarized in a table in the Appendix, but the aim of our discussion is to bring out the potential of the tests in future work.[9]

3.2. Floating quantifiers

Floating quantifiers are a prototypical test relying on gettig at the atoms of sums by the part-of ≤ relation. Indeed, we shall simplify with much of the literature by taking the floating quantifier ***each*** to simply spell out the distributive operator ^{D}, though it probably imposes additional restrictions on event structure (cf. Junker 1995, Tunstall 1998). Unlike ***each***, ***all*** can be distributive or collective, as in ***The girls are all building a raft***, but there are meanings for it where it relies on ^{D} like ***each*** (Brisson 2003). These floating quantifiers are readily compatible with pluralities. They are incompatible with groups, as expected on the atomic analysis of groups where they relate to their members by *f* but and not ≤. Tellingly, floating quantifiers are also strictly incompatible with mass nouns of any sort, even object mass nouns, so these too do not seem to have atoms reachable by ≤.

(18) The members of the jury are each/all helping Gwen.
The jury is (*each/*all) helping Gwen.
The pieces of the furniture have each/all come from Ikea.
The furniture has (*each/*all) come from Ikea.

Floating quantifiers are curiously finnicky about their antecedent. One well known restriction is that they essentially need definite antecedents (Hoecksema 1997). Less widely studied is their resistance to arbitrary ***they*** (Kayne 2010). Perhaps relatable to the latter is their resistance to certain lexical plurals, ***cattle, police***, though not others, ***people***. There is an intui-

9. We make a pass at present at a couple of tests we have tried: bare nouns and equatives with plural DPs.

tion that ***cattle*** makes its constituents less salient than ***cows***, and under cardinals we discuss how that might be while still keep them predicates of sums of atoms. The badness with object-mass nouns might be related. The reciprocal diagnostic to follow shortly controls for whatever is going on here.

(19) John went to the post office. They$_{arb}$ (#each) told him to come back later. (Kayne 2010)

(20) Our cows/?cattle/??police have each been vaccinated against rabies.

When trying to test floating quantifiers in a new language, there is a number of confounds. The syntax of floating quantifiers remains under live debate (Fitzpatrick 2006, Cirillo 2009, Kayne 2010). One issue the syntactic relationship needed to their antecedent. Another is whether they might not apply to their antecedent through a silent pronoun. This last possibility is particularly relevant to us, because mediation of a clear pronoun, overt or PRO, does let floating quantifiers to apply to groups, (x-b,c), simply because a pronoun can accommodate reference to the members of an antecedent group (x-a). It seems that bare floating quantifiers in English do not have this option, but that needs establishing for Breton.

(21) **The pack** stopped when **they** were hungry.
?**The jury** was none of **them** too happy with the verdict.
The team is (*each) hoping **PRO** to be (?each) able to hit a/**their** target.

A second confound is concord. In French, ***chacun*** is singular, but ***tous*** plural, and accordingly only ***chacun*** can combine with antecedents that denote pluralities but are not plural (Rezac and Jouitteau 2015 on the impersonal pronoun ***on***). The third confound is related: in English and French both, there is a middle-field adverb ***all/tout***, singular in French, with quite different meaning in principle but not always in practic from the floating quantifier, and its availability might ameliorate the floating quantifier with groups (Kayne 2010).

Turning then to Breton, we have tested ***holl*** 'all', which seems to be a middle-field floating quantifier like ***all/tous*** and with similar relationships to adnominal ***all/tous*** (Jouitteau 2009-2015:'holl'). Floating ***holl*** is fine with plurals, including the irregular plural ***tud***, but not groups, whether simplex or derived by the suffix ***-ad***. Unexpectedly, it is good with the sole object mass noun with have tested, ***arrebeuri*** 'furniture': it is a mass noun by its singular for agreement and pronouns and by a couple of other hints we shall see, but it will also prove to behave strictly as a count plural for access to atoms. When we turn to collectives, ***holl*** is good with the plurals of singulatives derived from collectives, but also fundamentally with collectives themselves. It is a first, yet strong, hint of a behavior comparable to plural count nouns on the part of collectives.

(22) Ar { √ fubu, √ fubuennoù, ? plant, √ plantennoù} a zo **holl** bihan-tout.
the midges plants R is all small-very
The midges/plants are all very small. [M3]

(23) {An dud, Ar razhed, * Ar vandennad, * Ar familh } a zo holl bihan-tout.
the people the rats the group the family R is all small-very [M1]

Candidates for floating ***each***, ***pep*** 'each', ***pep a hini*** 'each of one', have the same profile:

(24) Ar { √ fubu(ennoù), √ plant(ennoù)} a zo **pep** ur c'hwezh ispisial dezho.
the midges plants R is each a smell special of.them
The midges/plants each have a special smell. [M3]

(25) { an dud, ar razhed, an arrebeuri, * ar vandennad logod, *ar familh }
the people the rats the furniture the group mice the family
... a zo **pep a hini** ur c'hwezh ispisial ganto.
R is each of one a smell special with.them [M1]

3.3. Diving quantifiers

Floating quantifiers need to be strictly distinguished from look-alikes in lower position like binominal ***each***; of these there is a variety, and we shall simply call them diving quantifiers. An illustration of their distinctiveness is the possibility and phi-features of dependent pronouns:

(26) Les filles avaient ($_1$ chacune$_i$) amené ($_2$ chacune$_m$) leur$_{i/m/n}$ propre / sa$_{*i/m/*n}$ propre / une$_{i/m/n}$ tente ($_3$ chacune$_n$).
The girls had ($_1$ each$_i$) brought ($_2$ each) {their$_{i/m/n}$ own, her$_{*i/m/*n}$ own, a$_{i/m/n}$ tent} ($_3$ each$_n$).

Diving quantifiers have the potential to combine with group antecedents, putting each atomic members of a group in correspondence with (say) a tent, so they must be able to access the atoms somehow, say semantically by the membership function ***f***. Yet they do not seem to be able to combine with object mass nouns, either because there are no atoms reachable by ≤ or ***f***, or for some other reason.

(27) La troupe des filles avait ($_1$ *chacune) amené ($_2$ chacune) une tente ($_3$ chacune).
The troop of.the girls had ($_1$ *each) brought ($_2$ each) a tent ($_3$ each).

(28) Le courier a (*chacun) un/son/leur timbre (*chacun).
The mail has (*each) a/its/their stamp (*each).

In Breton, the quantifier ***pep a*** + DP, lit. 'each of' + DP, is an adnominal quantifier that must combine with the DP, possibly an indefinite, to which it distributes its antecedent. It seems comparable to English binominal ***each*** (q.v. Stowell 2013) or better to French ***chacun*** that can combine with the DP within the PP ***Elles sont venues avec chacun un/son/leur sac*** 'They came with each a/her/their sac' (cf. Grevisse 2008: §748). Breton ***pep a*** is fine with regular and irregular plurals, with plurals of singulatives based on collectives, and with collectives themselves. For groups, we have mixed results. Like floating quantifiers, ***pep a*** is good with 'furniture'.

(29) Ar { √ fubu(ennoù), √ plant(ennoù)} zo bet lonket gant **pep a** labous.
the midges plants is been swallowed by each of bird
The midges/plants were swallowed by a bird each. [M3]

(30) Ar fubu(ennoù) neus kanet **pep a** damm barzhoneg.
the midges has sang each of piece poem
The midges sang each a little poem. [M3]

(31) {ar razhed, al logod, *ar vandennad logod} neus drebet **pep a** damm keuz.
the rats the mice the group mice has eaten each of piece cheese

(32) {an dud, ar familh } neus lennet **pep a** damm barzhoneg. [M1]
the people the family has read each of piece poem
Each one/member of the family read each a poem. [M1]

(33) An arrebeuri neus bet **pep a** lufr koar.
the furniture has had each of polish wax
Each piece of furniture has been waxed. [M1]

3.4. Adjunct quantifiers

Quite different from floating and diving quantifiers in both position and restrictions on antecedents is *one by one* and counterparts with other cardinals. Unlike *each*, it can relate to arguments below it, be left- or righ-peripheral to the minimal clause containing the argument, and operate on the plurality over which a singular quantifier ranges. These generalisations are discussed and analysed in Brasoveanu and Henderson (2009), who contrast it with floating *each* in being able to apply to groups; probably, it is good with object mass nouns as well.

(34) (One by one) she called the players/police/cattle in (one by one)
(One by one) she called the players/police/cattle in (one by one)
(One by one) she called each player in (?one by one)
(One by one) she called the team in (one by one)
(One by one) she opened the morning's mail (one by one).

Brasoveanu and Henderson, very roughly, analyse *one by one* as an adjunct that cumlates the individuals that satisfy a theta-role in the event that satisfies the predicate's clause, makes sure there is a separate subevent for each atom in the resulting sum, and orders the events linearly. It is the cumulation step that renders the members of groups visible, and without spelling out how in the present theory of numerosity, we will see below that entailments about theta-role satisfiers access the members of a group.

For Breton, there are different possibilities for adjunct quantifiers, including *unan hag unan* 'one and one', *a hini-enn-ou* 'of one-SINGULATIVE-PL'. Tentatively, they are good with all manner of pluralities, with collectives, with groups though *family* resisted, and with object

mass nouns.[10]

(35) Ar { fubu(ennoù), plant(ennoù)} zo aet kuit **unan a unan**.
the midges plants is gone away one of one
The midges/plants went away one by one. [M3]

(36) {an dud, ar razhed, al logod, ar vandennad logod, *ar familh}
the people the rats the mice the group mice the family
...zo aet kuit **unan a unan**.
is gone away one of one [M1]

(37) An arrebeuri neus steuziet **unan a unan**.
the furniture has disappeared one of one
The pieces of furniture disappeared one by one [M1]

(38) Ar beorien a oa aet kuit { **a hiniennou / unan a unan** }.
the poors R was gone away of one.SG.PL / one of one
The poors left the one after the others. [M1]

3.5. Phrasal reciprocals

Phrasal reciprocals may now be treated very briefly, because empirically they give results very close to floating quantifiers, and theoretically may be assimilated to how these distribute into their antecedents: indeed, one way to think of *The guests were talking to each other* is as close to *The guests were each talking to other guests* (Heim, Lasnik and May 1991, Magri 2012). However, phrasal reciprocals are easy-going about antecedents:

(39) John came to the police station and claims that {the/most/some police officers, they$_{arb}$, the police} were shooting at each other.

Thus it is more revealing that phrasal reciprocals in English and French are largely incompatible groups and object masses. Minimal contrasts can often be constructed with lexically reciprocal predicates like *fight, kiss*, and in French their clitic counterparts discussed below:[11]

(40) *The jury/furniture {ressembles, is leaning against} each other.
Whenever infantry/this team fights ?(*each other), the hospital is full.

10. But see Acquaviva (2008: 262) reporting an irregular plural incompatible with a hiniennou, a result we could not reproduce.
11. English each other does vary quite a bit with groups, even singular-agreeing ones, in different sources in the literature; in French the results are far more categorial, so it is likely something about English groups.

In Breton, the phrasal reciprocal varies somewhat across dialects, typical being ***an eil … an egile/eben*** 'the second … the second', ***an eil … ar re all*** 'the second … the others'. Regular and irregular plurals are fine as antecedents, as are plurals of singulatives from collectives. Collectives themselves are good too. The underived and derived groups we have tested are not good. However, the 'furniture' object mass noun is again good.

(41) Ar { fubu(ennoù), plant(ennoù)} a zo o tont **an eil war-lerc'h ar re all**.
the midges plants R is at come the second on-follow the ones other
The midges/plants are coming the one after the other. [M3]

*(42) {an dud, ar razhed, al logod, *ar vandennad, * ar familh}*
the people the rats the mice the group the family

(43) ... a zeu **an eil war-lerc'h** { **eben / egile** }. [M1]
R comes the second after other.F/other.M

(44) Arrebeuri IKEA a dorr { **an eil war-lerc'h egile/ar re all**}.
furniture IKEA R breaks the second after other.M/the ones other
Furniture IKEA breaks one piece after the other. [M1]

3.6. Essentially distributive predicates

We can give a very short shift to predicates like ***be similar, be neighbours***, because they behave like phrasal reciprocals when plugged into the foregoing examples, and have been reduced to them, being close to ***be similar to each other, be each other's neighbours*** (Hackl 2002). In Breton too, ***heñvel*** 'similar' shows the same pattern as phrasal reciprocals. A caveat in testing is to first establish what an essentially distributive predicate is: in English, ***The jury is (too) similar*** cannot compare the members, but ***The jury looks alike*** or ***behaves similarly*** can and is merely a collective predicate, discussed below.

(45) Ar fubu(ennoù) amañ a zo **heñvel**.
the midges here R is similar
The midges here are similar (to each other). [M3]

(46) { an dud, ar razhed, al logod, * ar familh } (amañ) a zo **heñvel-tout**.

(47) the people the rats the mice the family here R is similar-all [M1]

(48) * Ar vandennad a zo (holl) **heñvel**. the group R is all similar [M1]

(49) Er skol, evit ar vugale, an arrebeuri a zo **heñvel-tout**.
at school for the children the furniture R is silimar-all
At school the children have the same furniture. [M1]

3.7. Clitic reciprocity

We can contrast phrasal reciprocity with clitic reciprocity. French has both phrasal

reciprocals corresponding to English ***each other***, and reciprocals formed with the reflexive-reciprocal clitic ***se***. The conditions on clitic reciprocity are known to be weaker than those on phrasal reciprocity: ***Les soldats se sont frappés (les uns les autres)*** 'The soldiers SE have struck (each other)' would omit the phrasal reciprocal in a «general mêlée» where only some soldiers participated or in a mixed reflexive-reciprocal scenario (cf. Cable 2013). Beyond pluralities, there is little known to us and we are hesistant. Certainly, some groups (perhaps especially animate ones) are fine with some clitic reciprocals, but quite difficult with others regardless of contexts (according to reflective grammaticality judgments; usage might well be a different matter). Object-mass nouns are similarly unclear. English translations with corresponding lexical reciprocals like ***fight, kiss, touch*** seem to be good and bad when French, but perhaps better on the (*) examples. Theoretically, we have little to say here, but still send the reader to whatever we say about distributive predicates and about ***count***.

(50) Les gymnastes {se battent, se poussent, s'embrassent, se frappent, se touchent}
(*)Le groupe/famille/équipe se suit dans le noir.
L'équipe des gymnastes {s'embrasse, (*)se bat, *se pousse} encore.
L'infanterie (*des…) {s'embrasse, (*)se bat, *se pousse} encore.[12]
(*)La famille d'à côte est en train de se battre.
Quand je suis rentré à la maison, notre nouveau mobilier robotique se battait!
{*Le bouquet, *La collection, L'équipe des gymnastes} des fleurs se touche.[13]
Il faut que {la vaisselle, le courier, l'argent} ne se touche pas.
!Il y a {de la vaisselle, de l'infanterie} qui se touche.[14]

In Breton, we have only tested Breton ***en em heuliañ***, French ***se suivre***, 'follow each other'. It is good with all pluralities, with collectives, and with groups.

(51) **En em heuliañ** a ra ar { fubu(ennoù), plant(ennoù)}.
reflexive follow R does the midges plants
The midges/plants follow each other. [M3]

(52) **En em heuliañ** a ra {an dud, ar razhed, ar vandennad logod, ar familh}.
reflexive follow R does the people the rats the group mice the family [M1]

3.8. Collective, distributive, and stubbornly distributive predicates

Collective predicates need a complex argument of some sort, but let it be pluralities, groups, and all sorts of mass nouns: ***gathered around the hillock*** may hold of ***members of the***

12. French infanterie seems to be mass, given de l'infanterie and the unavailability of the group-partitive
13. Here se toucher is fine as reflexive, not reciprocal; see under distributive predicates.
14. Here unlike in the negative de seems to force a strictly substance use, odd with vaisselle and pejorative with infantry.

jury, the jury, infantry, mail, water, gravel, pile of wood, perhaps having all their denotations in its domain. *Distributive* predicates like *yawn, be born in Tsetserleg, be underweight* feel like they need to hold of a person individually, and at any rate give rise to entailments where they do so, and we uppose their use with arguments other than (pure) atoms requires a way of looking inside. This is possible if often marked with pluralities, and to some extent with groups and object masses: *The jury/infantry yawned* ; *My family was born in Tsetserleg*. *Mixed* predicates apply both to atoms and certain complex individuals. In *These players/boxes is too heavy*, the predicate can hold of all the boxes together, for the weigt limits of an elevator, or individually, to be transported by our donkeys. With groups and object mass nouns like *this pile/furniture* instead of the subject, use for the whole is good, but use for the constituents can be found, though is harder and subject to considerable variation. Champollion (to appear) reviews distributivity and collectivity.

One way to think about all these predicates is that they are all indiscriminate about what is in their denotation, but do not make sense with particular individuals: *gather* makes no sense with atoms (i.e. pure atoms), something that seems essential, and *be underweight* happens not to make sense with anything except atoms, though that seems conventional. This view naturally leads to subtleties: *assemble* differs from *gather* on substances, *The water assembled*, presumably by implications about the structure of its argument; *old* is like *heavy* in on groups, so that *The team is old* can measure the lifetime of the team or its members, but unlike *heavy*, it holds only of the atoms of a plurality and not the whole, *The players are old*, presumaby because there is no such thing as the lifetime of a plurality. If this «looking inside» is needed by lexical semantics, the appropriate relations are available in $\leq_c$, $\leq_m$, and *f*, but the boundary between lexical entailments and pragmatic inference is unclear to us. We are left with a number of mysteries for this view, e.g. *The committee got to its feet #and scratched its head(s)*. (See e.g. Dowty 1986, Barker 1992).

Of particular importance recently have been *stubbornly distributive predicates* like *be round, small, tall* (Schwarzschild 2011). They hold of atoms like *the box*, and of the atoms of a plurality like *the boxes*, but no of the whole: *The boxes are small* cannot be true if each box is large but they are few and so together take up little space, unlike *The pile of boxes is small*. Their interest dervies from how they treat mass nouns: for object masses that intuitively have clear minimal pieces, like *furniture, ammunition, infantry*, they hold of those pieces only, even when that leads to little sense, *#Infantry is round*, while with other object masses they are simply out, *#Snow is small*.[15] Schwarzschild raises the possibility that they are predictes that have only atoms in their denotation, and so like *be underweight* of our discussion, but for reasons intuitively less clear; if object passes are pluralities, their behavior would follow. We are not sure what to say about behavior with groups, *This group of boxes is small*, for they seem to be able to hold of the group only (which is fine), and not of its members (and we do not see why,

15. Apparently one can package it: «Snow is smaller than I thought» looking at one's first snowflakes (U. K. Le Guin, Planet of Exile).

given ***be old, underweight***, which perhaps resist but not at all like ***be small***).[16]

In Breton, we have seen clitic reciprocals already, which generally seem to be have like collective predicates. Otherwise, the stubbornly distributive predicate ***bihan*** 'small' behaves as expected: with all pluralities it must hold of the atoms, and likewise with the object mass noun 'furniture', but only of the whole with groups. Collectives behave like the former and not the latter.

(53) **Bihan** eo { ar fubu(ennoù) /* an dour}.
small is the midges(SG.PL) / the water
The midges are small, *# There are few midges*.[17] [M3]

(54) **Bihan(-tout)** eo { an dud, ar razhed, al logod, an arrebeuri }.
small-very is the people the rats the mice the furniture [M1]

(55) { **Bihan-tout/ * lart /* tev** } eo { ar familh / ar vandennad }
small-very fat fat is the family the group
The { family / the group } is small.
**The members of the { family /group} are small*. [M1]

3.9. Cardinality, adnominal

Adnominal cardinals (***five, fifty***) and vaguer cardinality expressions (***many, few***) combine only with count nouns, and cannot look inside groups: ***five/many *jury/ juries/*furniture/*furnitures***. Cardinals and vaguer cardinality expresions part ways with lexical plurals close to the mass border, like ***police, cattle***. Cardinals are bad, though less so for large rounded-off ones, while ***many/few*** are better. The noun must be treated as a plural by agreement and not singular as it sometimes can be otherwise.[18]

(56) This spring, ?five/two hundred/many cattle have been innoculated against rabies.
This spring, ?five/two hundred/many cattle have been innoculated against rabies.
*Five/?(?)Many clothes are still dirty.
There are still *five/?(?)many groceries left in the trunk.
You play this game with oats? And?*five/??how many oats are needed?

16 Schwarzschild argues for a different account that the option considered because the one in the text leaves unclear what to do about masses like snow, and on a particular view of groups, their behavior here makes more sense. Very roughly indeed, singular count nous hold of one pure atom per event, pluralised of multiple, object mass nouns of either, substance mass nouns of multiple, and stubbornly distributive predicates of one only; groups would then hold of one group atom in an event, but whenever they have multiple members, of several members.

17. The speaker reports familiarity with the meaning 'There isn't a lot of midges' for the collective Bihan eo ar fubu, but does not have it herself.

18 There is a great deal of speaker variation in this domain; for example judgments see McCawley (1975), Allan (1980), Acquaviva (2008).

There are *five/??too many news under each heading.
*Five/%Many waters will cover Tyre.

Harking back to our discussion of floating quantifiers, ***cattle*** seems to differ from ***cows*** in the «salience» of the individual cows in it, and the precisely-counting cardinals seem to that salience more than than the vaguer ***many/few***. How to get to this is another matter. Thinking of Chierchia (1998ab), sketched earlier, cardinals would rely on there being a predicate that holds only of the atoms of what is to be counted, and while for ***cows*** there is ***cow***, for ***cattle*** (with bulls and all) there is none. This would have to be finessed to explain why counting ***cattle*** is easier than counting ***police***, why counting ***people*** is perfect, and counting ***furniture*** is impossible.[19] Otherwise, see Brisson (2003), Chierchia (2010) on the role of context in defining atoms; Krifka (2007), Rothstein (2010) on how particular nouns might supply ways of counting; and Lasersohn (2011), Winter an Scha (2014) on the semantics of cardinality expressions.

There is a great deal of variation in the construction in which count nouns combine with cardinals and counting quantifiers. In Breton, cardinals with count nouns take the singular always. With other categories, we have telling but mysterious behavior. Collectives cannot be counted, but neither can singulatives formed from them that look like count singulars, nor the plurals of these. The members of a group cannot be counted with a group noun, which is expected, but our derived group noun in *-ad* fails to combine with a cardinal entirely. Quite unexpectedly, the pieces of the object-mass noun 'furniture' can be counted just fine, though they can also be counted by means of a classifier in the type *piece of furniture*, which attests to its really being a mass noun (cf. *pieces of (the) chairs* ≠ ***chairs***).

(57) **Pemp** { * fubu(ennoù), * plant(ennoù) } a oa aze.
five midges plants R is here [M3]

(58) **Pemp** {razh, logodenn, * razhed, * bandennad} a oa aze.
five rat mouse rats group R was here [M1]

(59) **Pemp** (penn/pezh) arrebeuri a oa aze.
five head/piece furniture R was here [M1]

The vaguer cardinality expression ***pet*** is like ***how many*** in combining with count and not mass nouns; like cardinals it combines with the singular of a count noun. The results with collectives are most interesting: as expected, ***pet*** can combine with the singular of a singulative drived from a collective but not with the plural thereof, but remarkably it can combine with

19 This does not seem to us a hopeless task; with *people*, usage is intricate, but it seems possible that *people* is an allomorphic plural of *person* on some meanings, while *persons* is the plural on others (e.g. with legal or philosophical comitments); *cattle* is closer to *cow* than *furniture* is to … to any predicate that describes its pieces, *chair, table,* ….

a collective to count its constituents. Like cardinals, it cannot combine with a singular group to count its members. Again, goodness with 'furniture' is unexpected, or rather expected after the behavior of cardinals.

(60) **Pet** { √ fubu, * fubuennoù, √ plant, * plantennoù} t'eus gwelet?
how.many midges /plants you'have seen
How many midges/plants have you seen? [M3]

(61) **Pet** {razh, logodenn, * razhed, * bandennad} t'eus gwelet?
how.many rat mouse rats group you.have seen [M1]

(62) **Pet** arrebeuri t'eus roet da Emmaüs, a-benn ar fin?
how.many furniture you.have given to Emmaüs at the end
How many pieces of furniture did you give to Emmaus at the end? [M1]

Other expressions quantify the amounts of both count and mass nouns, such as ***lots of***. In Breton, we have looked at the post-nominal element ***e-leizh*** 'lots of'. It measures whatever is inside a plurality, a singular group, a mass noun of any sort, a collective and the plural of its singulative, excluding only singular count nouns where there is nothing to measure inside.[20]

(63) {tud /*den } **e-leizh**, dour **e-leizh**
people/person a-lot water a-lot
a lot of people, a lot of water *Standard*

(64) Ar stered zo **leizh** anezhe.
the stars is a-lot of.them
There is a lot of stars. [A-M 1]

(65) Bez' zo { √ fubu, √ fubuennoù, ?/√ plant, √ plantennoù} **e-leizh**.
expl is midges / plants a-lot
There is a lot of midges/plants. [M3]

(66) Bez' zo {tud, familh} **e-leizh**.
expl is people family a-lot [M1]
There is a lot of people/family members.

3.10. Counting

In contrast to other counting words, the predicate ***count*** is very liberal: one can count plural count nouns like ***fruits***, ***coins, soldiers***, members of groups like ***jury, family*** but not others like ***collection, pile*** with perhaps animacy effects in counting ***the group of ?%girls/*chairs***, the

20. Hesitation on plant is due to a competing count singular meaning 'a plant', as in French.

constituents of an object mass ***argent/money***, ***change***, ***furniture***, ***silverware***, ***?clothing, ammunition, vaisselle***, ***?infanterie,*** and to some extent granular substances like ***corn*** if units like kernels or (much better) cobs are salient enough, as well as some nouns at frontier between lexical plurals and mass nouns, ***police, betail, cattle, clothes, groceries, %oats, %embers, %furnishings, *dregs***. We have no theory of other than what we have said about predicates looking inside groups and object passes earlier.

In Breton, ***count*** can count inside all manner of plurals and not count singulars, and the object mass ***furniture***, but not the groups we have tested. With collectives, we have some good results, some bad ones.

(67) Start eo kontañ ar { √ fubu(ennoù), * plant, √ plantennoù}.
hard is count the midges plants
It is hard to count the midges/plant. [M3]

(68) Start eo kontañ {* ar razh, ?/* ar vandennad logod / * ar familh }.
hard is count the rat the group mice the family
It is hard to count the rat/group of mice/family. [M1]

(69) Start eo kontañ { an dud, ar razhed, an arrebeuri }
hard is count the people the rats the furniture
It is hard to count the people/rats/pieces of furniture. [M1]

3.11. Cardinality, Predicate

Cardinality expressions also occur as predicates, ***be twenty/many.*** They impose a referentiality restriction on their subject similar to that of floating quantifiers (Solt 2009, Lasersohn 2011). Otherwise, they present essentially the same patterns as their adnominal counterparts, combining with count plurals, less so lexical plurals, and not counting inside a group or an object mass. The predicate ***be numerous*** and its French counterpart seem similar in limitation to referential antecedents, but a great deal more sharp-eyed:

(70) {The, *All, *Most, *Some} protesters are {few but determined, twenty in number, too numerous to dismiss}.
The cattle/?police were {few but determined, ?seven in number, too numerous to stop} when they broke in.
The team/infantry is {?*few but determined, *twenty in number, ?%too numerous}.
The mail is {*too many to keep track of, *twenty in number}.
The mail is {*too many to keep track of, ?%too numerous for one person to handle}.
The furniture is numerous and varied. (Cowper and Hall 2012)
(*)La vaisselle / (*)Le courier est trop nombreux.

In Breton, we have only looked at ***niverus*** 'numerous'. It can apply to plural and not singular count nouns; there is variation on group nouns; and it is good with the object mass ***furniture***.[21]

(71) **Niverus** eo ar { √ fubu, * fubuennoù, * plant, √ plantennoù} amañ.
numerous is the midges plants here
The midges/plants are numerous here. [M3]

(72) **Niverus** eo {* ar razh, *ar vandennad logod}.
numerous is the rat the group mice [M1]

(73) **Niverus** eo { an dud, ar razhed, al logod, ar familh, an arrebeurri} amañ.
numerous is the people the rats the mice the family the furniture here [M1]

3.12. Partitives

The members of a group may be specified by the ***group-partitive of*** + a bare, cardinal, or definite plurality, ***this committee of {the, three, *most, Æ girls}, this book of matches***. Barker (1992) gives ***of*** the semantics in (x), which requires that any atom that ***committee*** holds of be mapped by ***f*** to the denotation of the complement of ***of***.[22] *Of* cannot function in this manner with object mass nouns, *the infantry of the dwarves* being only partitive, or nof pluralities, *the footsoldiers of the dwarves*, treating them the same, as they are also on the other side of *of*, *this group of our infantry/footsoldiers*.

(74) $||of|| = \lambda y_e.\lambda p_{et}.\lambda x_e\ .\ Q(x)\ \&\ f(x) \leq y$

Similarly, we could look at measuring out a mass, ***a piece of fruit(*s)***, partitive restrictions of quantifiers, ***three of the group of girls/*chairs***, and so on (cf. Pearson 2011).

In Breton, there are different constructions translating ***of*** phrases: the construct state like ***(*ar) c'harrad ar mein-se*** '(*the) cartful of stones-this', adjectival apposition ***ar c'harrad mein*** 'the cartful of stones', and prepositions, ***an dud a vor*** 'the folk of sea' (Kervella 1947: §§358ff., Favereau 1997:§100ff.). We have looked only at adjectival apposition, and that most preliminarily. The constituency of a group noun can be specified by both plural singulative and its collective basis. A ***piece*** type classifier cannot combine with either a plural singulative or its collective base. A ***kilo*** type measure phrase differentiates the collective, with which it is fine, from its plural singulative. A ***half*** type partitive cannot combine with either. We must defer interpretation of these results until we can compare them with other expressions.

21. In the dialect of this particular speaker, postverbal plural subject permit plural agreement to some extent; it is of interest that an arrebeuri 'the furniture' refuses it, showing it is not simply a plurality.

22. On the assumption that (the traces of) three/∅ girls denote individuals.

(75) Bihan-tout eo **ar vandennad** { √ fubu, ? fubuennoù}.
small-very is the group midges
The group of midges is very small. [M3]

(76) ur **strollad** { ? fubu, fubuennoù, √ plant(ennoù) }
a group midges plants [M3]

(77) ul **lodenn** {* fubu(ennoù), * plant(ennoù) }
a piece.SG midges plants [M3]

(78) ur **c'hilo** { √ fubu, * fubuennoù, √ plant, * plantennoù}
a kilo midges plants [M3]

(79) un **hanterenn** * plant(ennoù).
a half plants [M3]

Conclusion

This pilot study of course is only a first step toward studying numerosity and number in Breton. The sole speaker with who we were able to test the tripartite collective - singulative - singulative plural distinction is a prototypical young native speaker of the twenty-first century. M was raised in a bilingually family and environment, by fluent but non-native parents, with native-speaker siblings with whom she exchanged almost entirely in Breton prior to school, schooled in a monolingual Breton environment, and continuing with Breton uninterrumptedly throghout her personal and professional life despite sicialisation including French monolingual areas. Contrary to the idea that the sociolinguistic extremely minorized position of the language makes it unable to be tested on young speakers anymore, we found that her results were robust: (i) judgments consistent across sessions; (ii) sharp judgments on semantically borderline novel sentence types; (iii) lack of hypercorrection where her judgments diverged from standard Breton, and (iv) uncertainty in domains that correspond to those where there is uncertainty in English and French. It will be very interesting to see if further testing of older generations will provide a contrast or not, and its character.

Taking stock of the results on our diagnostics for M, we have the following picture. The behavior of count singulars and count plurals is roughly as in English and French, and morphologically irregular plurals behave like regular ones, as does ***tud*** 'people', either a wholly irregular plural of ***den*** 'person' that lacks its own plural, or a ***plurale tantum***. Group nouns likewise are comparable to group nouns in English and French, setting aside the plural-agreeing group nouns in English. We have found some variation, which needs study in light of known differences in English between ***family, class, grove, collection…***

Of collectives and the plurals of their singulatives, focusing on ***fubu*** 'midges', we find that they are both essentially like count plurals, differing only on behavior with ***pet*** 'how many' (grey box in the Appendix), where the collective is like a count plural and the singulative is not. Yet lest one be tempted to suppose that M's linguistic background has eroded distinctions present for older speakers, M too reports the perception that the plural of a singulative is different from both a collective and a regular count plural: ***perennoù*** 'pears', plural singulative,

is more appropriate than ***per*** 'pears' for what goes into baking a single pear tart, and that in ***perennoù*** the individual pears are somehow more salient than in ***per***. Putative erosion must be carefully substantiated. Breton like English distinguishes ***pet*** 'how many' and ***pegement*** 'how much', and French does not; M's grammar has been unaffected on this point. French's influence is visible specifically in borrowings: originally collective ***plant*** 'plants' has had its behaviour troubled by borrowing of count ***plant*** 'plant'.[23]

So a prudent conclusion at this point seems to us to be that our tests are not fine enough or applied finely enough to discern the nature of the perceived distinctions between count plurals, collectives, and their singulative plurals, save to the extent that ***pet*** hints at possibilities. On a first try, this is unsurprising: the formal differences on our tests between ***people, cattle, police, oats*** are few, subtle, and subject to much variation, and theoretically hard to interpret, while access to the intuition that ***cattle*** is somehow more vague in the salience of indiviual beasts is readily available. The same goes for lexical plurals: there are differences and similarities on our tests in the range from ***groceries*** to ***oats*** to ***wits*** to ***barrens***, both clear and subtle, and correlated with introspectively accessible intuitions about their relationship to their parts, but hard to work out theoretically with the tools we have. There are likely to be differences outside the domain of our tests, say on homogeneity of form versus function or spatiotemporal contiguity (Acquaviva 2008, Henderson 2014; Lammert 2015, Lauwers 2014). However, these do not a priori tell us why ***groceries*** can be more reciprocal than ***oats***. It is likely enough that the elementary theory of numerosity is inadequate, telling us nothing for instance in how individuals relate to events or minimal situations in which they satisfy their predicate (Schwarzschild 2011).

Beside collectives, sole object-mass noun we have looked at, ***arrebeuri*** 'furniture', turned out to be very suprising indeed. On the semantic test, it behaves consistentaly as a count plural. Yet it is not a count plural. It controls singular agreement, antecedes singular pronouns, and unlike count plurals participates in constructions like ***a piece of furniture*** (cf. ****a piece of chairs***). M's grammar offers another insight into the syntax and semantics of this item. In M's grammar, there has been an innovation whereby postverbal plural subjects allow though not require agreement. This is unusual across Breton varieties (Jouitteau and Rezac 2006, 2008, Jouitteau 2009-2015:'agreement'). This innovation is not an «erosion» of M's agreement system, as pre-negation subjects behave strictly as in standard Breton, requiring plural agreement when plural. The interesting point is that for M, both preverbal and postverbal ***arrebeuri*** is strictly singular, as it is for anaphoric pronouns, like the singulars of both (pure) atom and group (atom) nouns.

(80) N' {**eo / int**} ket chalet al logod gant {***e, √ o**} fourmaj laezh!
neg is/are not tormented the mice with his/their cheese milk
The mice are happy with their cheese. (litt: ***The mice is ... with their***...') [M3]

23. Cf. Favereau (1997) on borrowings of articho 'artichoke(s)', banan 'banana(s)' as both collectives and their singulatives.

(81) Niverus **int** { ar razhed, an dud, *ar familh, * an arrebeurri}.
numerous are the rats the people the family the furniture [M1]

Methodologically, and taking stock of our first difficulties to identify collective triplets or any object-mass noun with older speakers, further investigation should proceed in two steps: a first session identifying lexical items pairing the tripartite opposition with robust plural anaphora; distinct session(s) applying semantic tests, coupled to detailed plausible contexts maximally fixing intended interpretations.

Appendix

M.		*tud*	*razhed*	*fubu*	*fubuennoù*	*plant*	*plantennoù*
Verbal agreement		PL	PL	PL	PL	PL	PL
Pronominal reference		PL	PL	PL	PL	PL	PL
Floating quantifiers *holl*		√	√	√	√	?	√
Floating quantifiers *pep a*		√	√	√	√	√	√
Diving quantifiers		√	√	√	√	√	√
Adjuncti quantifiers *unan a unan*		√	√	√	√	√	√
Phrasal reciprocals		√	√	√	√	√	√
Essentially distributive predicates *heñvel*		√	√	√	√		
Clitic reciprocity		√	√	√	√	√	√
Stubbornly Distributive predicates		√	√	√	√		
Cardinality, adnominal	*5*		*	*	*	*	*
	pet		√	*	√	*	*
	e-leizh	√	√	√	?/√	√	
Counting		√	√	√	√	*	√
Cardinality, predicate *niverus*		√	√	√	*	*	√
Partitives	*bandennad*		√	?			
	strollad		?	√	√	√	
	lodenn		*	*	*	*	
	kilo		√	*	√	*	
	hanterenn				*	*	

M.		*logod*	*bandennad*	*familh*	*arrebeurri*	*razh*	*dour*
Verbal agreement		PL	SG	SG	SG	SG	SG
Pronominal reference		PL				SG	SG
Floating quantifiers *holl*			*	*			
Floating quantifiers *pep a*			*	*	√		
Diving quantifiers		√	*	√	√		
Adjunct quantifiers *unan a unan*		√	√	*	√		
Phrasal reciprocals		√	*	*	√		
Essentially distributive predicates *heñvel*		√	*	*	√		
Clitic reciprocity			√	√			
Stubbornly distributive predicates		√	*	*	√		*
Cardinality, adnominal	*5*		*		√	√	
	pet		*		√	√	
	e-leizh			√			√
Counting			?/*	*	√	*	
Cardinality, predicate *niverus*		√	*	√	√	*	

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