The place of ad hoc categories within the typology of plural expressions

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A R T I C L E   I N F O

A B S T R A C T

In this paper, ad hoc categories are assigned a place among plurals. It is shown that they fall into the same subtypes that other plural expressions do: they may be based on similarity or contiguity and, like other plurals, at least some of their forms tend to involve humans. Ad hoc categories differ from other plurals in that they involve partial rather than complete lists and thus they fill a systematic gap in the typology of plurals.

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1. Introduction

The interpretation of any linguistic expression and of the categories they include is context-dependent at least to an extent (Smith and Samuelson, 1997; Lasersohn, 1999; Croft and Cruse, 2004: 92-106; Mauri, 2014, 2016; Mauri and Sansò, 2018). For example, in the sentence *Here is the paper*, the word *paper* may refer to an essay, to a newspaper, or to a ream of paper depending on context. Or in the sentence *It is cold*, the temperature referred to is understood differently on a summer day and in January. Daniel Casasanto and Gary Lupyan have argued that there are in fact no stable categories at all that would be entrenched ready-made in people's minds: all categories emerge from current situations as people create them on the fly (Casasanto and Lupyan, 2015).

While the context-dependence of categories is likely to hold across all languages, many languages also provide dedicated expressions for those cases where the membership of a category is crucially dependent on context. Lawrence Barsalou has defined these ad hoc categories as "a novel category constructed spontaneously to achieve a goal relevant in the current situation"(Barsalou, 2010: 86). Emphasis on situation-dependency differentiates ad hoc categories from other expressions where vagueness is inherent rather than context-dependent, such as approximate numerals (e.g. *The phone call came **around 4:00 o'clock**.*). The crosslinguistically-manifested range of the expressions of ad hoc categories has been surveyed by Caterina Mauri (2014, 2016) and by her and is further documented by the papers in this volume.

Beyond recognizing the existence of ad hoc categories and describing the ways in which their dedicated expressions are formed in various languages, there is a further task to address. In introducing the workshop on ad hoc categories held in Naples in 2016, organizers Caterina Mauri and Andrea Sansò stated: "The workshop aims to provide a unified approach to these constructions [i.e. ad hoc categories] and to their common abstracting function…" That is, we need to relate ad hoc

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categories to other grammatical constructions and find a principled place for these expressions in the overall context of construction types.

This paper addresses this goal. Of several possible approaches, the one that is embarked on here is locating ad hoc categories within the domain of plural expressions. This is not a new idea: the title of Mauri's, 2014 article – "What do connectives and plurals have in common? The linguistic expression of ad hoc categories" – implies a relationship between ad hoc categories and plurals (see also Mauri, 2016: 320-321). My intended contribution is to expand on this idea by pinpointing the exact location of ad hoc categories within a comprehensive survey of plural constructions.

Section 2 provides an overview of ad hoc categories, Section 3 is a synopsis of plural expressions in general, and Section 4 assigns a place to ad hoc categories within this framework. Section 5 is a summary.

2. Types of ad hoc categories

Ad hoc categories imply a listing where one or more exemplars of a category are identified and the listener is invited to fill in the other members of the list from the discursive and situational context. Based on a sample of 30 languages (2014) and subsequently on an extended sample of 60 languages (2016), Mauri surveyed the various syntactic, morphological, and lexical ways in which ad hoc categories are expressed[1]. Syntactic expressions employ general extenders and connectives; morphological devices range over inflectional/derivational affixing including reduplication; and plurals of personal pronouns constitute lexicalizations (i.e., lexical expressions) of ad hoc categories. Here are some examples.

(1) General extenders
    *This drawer stores rings, bracelets, necklaces **and the like***.

(2) Connectives
    Japanese (Japonic; Haspelmath, 2007: 25)
    *John **yara** Mary **(yara)** ga   yattekita.*
    John **REP** Mary **REP**   NOM   came
    'John and Mary (among others) came.'

(3) Affixing
    (a) Similative plurals
        Telugu (Dravidian; Moravcsik, 2017: 446)
        *puli-**gili***
        tiger-**REDUPL**
        'tigers and such'

    (b) Associative plurals
        Central Alaskan Yup'ik (Eskimo-Aleut; Corbett, 2000:110; glossing reduced)
        *Kiimek   Franky-**nkuk**   ayallruuk.*
        alone   Franky-**ASS.DUAL**   had.gone
        'Franky and his companions had gone up there by themselves.'

(4) Lexicalization
    we

3. Types of plural expressions

Expressions of plurality differ within and across languages both semantically and formally. Here are four parameters for systematizing their differences[2].

- Listing or lumping
- Ranking or no ranking
- Cohesion by similarity or by grouphood
- Choice of pluralizable nominals

(A) LISTING OR LUMPING

Members of the plural set may be individually listed or they may be subsumed under a covering category. In these cases, the membership of the list is fully specified either because all the members are listed or because the general category under which they are lumped together delimits the membership.

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[1] A similar survey is provided in (Moravcsik, 2017: 445-451).
[2] These parameters have been proposed in (Moravcsik, 2017).

Examples:

(5) (a) Listing
    the table, the chair, and the bed
  (b) Lumping
    the furniture

(B) RANKING OR NO RANKING

If the members are listed rather than lumped, they may be given as equals or they may be ranked with some members distinguished over the others, such as in comitative constructions.

(6) (a) Unranked list
    ohn, Jill, and Mary
  (b) Ranked list
    John with Jill and Mary

(C) COHESION BY SIMILARITY OR BY GROUPHOOD

Any plural expression, such as *apples* or *ideas*, is based on the members of the set having something in common: they form a category. Different apples do not share all of their characteristics nor are all ideas the same but they are all connected by some property. The common denominator among the items may be similarity or grouphood. The difference is exemplified by the two plurals of the noun *Wort* 'word' in German: *Wörter* is a set of unconnected words as in a dictionary while *Worte* is an assemblage of words forming a discourse. The same difference holds between Hungarian *szó-k* referring to a list of words and *szav-ak* referring to words in connected speech. Both forms are regular plurals derived from two alternative stems of the word *szó* 'word'. Here are other examples.

(7) (a) Plurality based on similarity
    bread, cake, and muffins
  (b) Plurality based on grouphood
    bread, butter, and cheese

These two relations – taxonomy and partonomy (meronomy) – are fundamental to human thinking. When pondering how people connect ideas with each other, the 18th-century Scottish philosopher David Hume searched for some bond of union that underlies their association. He concludes: "The qualities from which this association arises, and by which the mind is[,] after this manner[,] convey'd from one idea to another, are three, viz. RESEMBLANCE, CONTIGUITY in time and place, and CAUSE AND EFFECT." (Hume 1739 (1978) 10-11). Resemblance is similarity; contiguity is closely akin to partonomy since contiguous items tend to be parts of a whole; and cause–effect relations may perhaps be regarded as a subtype of contiguity[3].

(D) CHOICE OF PLURALIZABLE NOMINALS

The basic condition for the pluralizability of a nominal is that it has to be countable. Languages can differ in what nouns are taken to be count nouns and which are mass nouns. As is well known, in languages like Japanese and Korean, no noun can be directly pluralized: all nouns behave as the mass nouns of European languages in that they require unitization for their plurals by means of classifiers. But even among languages with a clear division between countable and mass, the pluralizability of a given noun may be decided differently. For example, the words for 'information' and 'advice' are pluralizable in German (*Informationen, Ratschläge*) but not in English (**informations, *advices*).

As pointed out by a reviewer, countability as a precondition of pluralization appears to be contradicted by plurals like English *wines* or Italian *birre* 'beers'. Although in these cases, there are indeed no countable units of a substance, there is something that is countable: kinds of a substance.

Furthermore, among count nouns, there are crosslinguistic preferences for the pluralizability of some nouns over others, with animate and especially human nouns more prone to have plurals than inanimate ones. A systematic account of these preferences is captured by the Animacy Hierarchy (Corbett, 2000: 56; 89–132)[4], the noun-related portion of which is given in (8).

(8) Animacy Hierarchy (for nouns)
    kin > (other) human > (other) animate > inanimate

The basic claim is that pluralization preferentially affects the top (left) segment of the hierarchy: number marking at any point of the scale is crosslinguistically more common than at all points to the right. That plural marking on human nominals is

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[3] For a three-way distinction among collective nouns (e.g. *team*), aggregate nouns (e.g. *furniture*), and superordinates (e.g. *vehicle*) based on partonomic and taxonomic relations, see (Joosten, 2010). On the historical and developmental priority of partonomy and the general relationship between partonomy and taxonomy, see (Moravcsik, 2003: 477-478) and (2017: 462-464).

[4] On the Animacy Hierarchy, see also (Daniel, this volume). For counterexamples to the hierarchy, see (Filimonova, 2005).

more widespread among languages than on other animates is documented in Haspelmath's crosslinguistic survey of 290 languages (Haspelmath, 2005). He found no languages where the plural occurred only on inanimate nouns but not on animate ones, or where the plural would be present in all nouns other than human ones. Preference for plural expressions involving humans is further shown by the fact that comitatives are generally, or perhaps exclusively, formed on humans (for examples, see (Stolz et al., 2005)). Among human nominals, the crosslinguistically most widespread types that have plurals are first and second person pronouns. In a sample of 260 languages charting independent 1st and 2nd person subject pronouns, Daniel found that the great majority (250 languages) had plurals for these pronouns (2005a).

In addition to constraining the pluralizability of different nominals, the Animacy Hierarchy has a second function: it also captures the systematic distribution of subtypes of plurals based on similarity or on grouphood. Corbett shows that humans are not only more commonly pluralizable than inanimates but they tend to form group-plurals rather than type-plurals. For example in Slave, the suffix –*ke* is used as a plural and also as a group plural (Corbett, 2000: 57).

(9) Slave (Athabascan)
    *t'eere-**ke***
    girl-**PL**
    'girls', 'groups of girls'

According to one account (Iljic, 1994), the Mandarin Chinese plural suffix -*men*, used optionally and only on human nouns and pronouns, always designates groups.

Thus, the Animacy Hierarchy represents two general patterns:

(i) "The singular-plural distinction in a given language must affect a top segment of the Animacy Hierarchy." (Corbett, 2000: 56)

and, as also suggested by Corbett (2000: 86),

(ii) The expression of group-based plurals in a given language must affect the top segment of the Animacy Hierarchy.

An explanation for both tendencies is offered by Frans Plank (1987: 180-181). First, humans are more commonly pluralized than nonhumans because we primarily interact with each other and thus the distinctness of human individuals is more conspicuous that the distinctness of inanimate objects. Second, since humans do not exist as isolated individuals but tend to do things together, group-based plurals can be expected to be prominent.

This argument is not meant to be a historical explanation: it does not intend to address the question of how and why the hierarchy has come to be what it is. As aptly noted by Sonia Cristofaro (Cristofaro, 2013: 88), the Animacy Hierarchy is "a descriptive schema": it shows what language learners and language users are faced with and how the facts may make sense to them. By generalizing over the patterns found in languages, the hierarchy explains – i.e. renders derivable – individual instances and, given Plank's functional arguments, it may also suggest a reason explain why these patterns are widespread and resist historical change.

When it comes to the historical evolution of these patterns, Cristofaro demonstrates that they have resulted from several independent diachronic processes.

The difference between the reasons why a cultural object came to be what it is and, how its properties - however they arose - function for the users can be illustrated outside language as well. For example, if the cross started out historically as a device used in executions, it had to be tailored to correspond to the shape of the human body. Today's widespread use of the cross as a religious symbol and as the plus sign may in turn be motivated by its simple form with the original reason for its shape forgotten. Similarly, kosher diet may have first been designed for health reasons but for many of today's users, these considerations may have faded out and have been overridden by its religious significance. The analogous phenomenon of exaptation is known from biology, such as that feathers that birds use in flying may have originally evolved for temperature regulation. In all of these cases, both historical explanations about how things have come about and synchronic explanations about how they function regardless of their origins contribute to our understanding of the world.

4. Ad hoc categories as a type of plurals

Given that ad hoc categories, as all other categories of countables, encompass a multitude of items, the question is how exactly they resemble and differ from other plurals. Based on the crosslinguistic survey of plurals seen above, let us consider whether the meanings and forms of ad hoc categories can be systematically identified as particular subtypes of plural expressions.

Let us start with parameter (A) *Listing or lumping.* In explaining this general parameter of plural expressions (Section 3), examples were given where the membership of a category is fully specified either through an actual list (*the table*, *the chair, and the bed*) or through a general category label (*the furniture*). However, in addition to fully-specified lists, the concept of a list has another logically available subtype: a partial (non-exhaustive, or open-ended) list. This is where ad hoc categories fit in (cf. Moravcsik, 2017: 446–451). As mentioned above, ad hoc categories, by definition, semantically involve a partial – that is, non-exhaustive, or open-ended - listing. This fact is variably reflected in their actual form. The expressions of some ad hoc

categories are indeed formally explicit partial lists. This is clearest in general extender constructions: one or more exemplars of the category – termed "the focal members" – are spelled out with an explicit reference to the missing ("non-focal") members (e.g. (10)). In other cases – such as in representative (i.e., similative and associative) constructions – the focal member is spelled out but there is no overt hint at the rest of the list (e.g. (11) and (12)). These constructions are termed representative because in each case, one or more members of a category stand for, or represent, the rest.

(10) General extender constructions (see also (1))
      *They served cakes, muffins, cookies **and other such things**.*

(11) Similative plurals (see also (3a))
      Turkish (Turkic; Moravcsik, 2003: 475)
      havlú-**mavlú**
      towel- REDUPL
      'towels and the like'

(12) Associative plurals (see also (3b))
      Hungarian (Finno-Ugric)
      *Péter-**ék**   megjöttek.*
      Peter-**ASS**   have.arrived
      'Peter and his group have arrived.'

There are also expressions of ad hoc categories where even the focal exemplar is only implicit because the category is lexicalized. First and second person plural pronouns are examples. In such forms, the focal member – 'I', 'you(SG)' - may be spelled out (as in (13a)) but this is rarely the case (cf. (13b)). Daniel (2005a) has found that in 114 out of 260 languages, person and number are expressed as a portmanteau morpheme.

(13) First and second person personal pronouns
      (a) Focal member spelled out
           Mandarin Chinese (Sino-Tibetan; Li and Thompson, 1981: 41)
           wǒ-*men* 'we'
           I-PLU
           nǐ-*men* 'you(PL)'
           you(SG)-PLU

      (b) Focal member not spelled out
           German (Indo-European)
           wir 'we'   (cf. *ich* 'I')
           ihr 'you(PL)' (cf. *du* 'you(SG)')

Given the near-universality of the occurrence of first and second person plural pronouns (cf. Siewierska, 2004: 79–81), Corbett has placed them to the very top of the Animacy Hierarchy. They also fit the pattern of the left-most categories of the hierarchy tending to be group-based, rather than similarity-based. Michael Cysouw terms them as "group plurals" in most of their uses (Cysow, 2003, chapter 3).

Here is the full version of the hierarchy (cf. (8) above):

(14)   Animacy Hierarchy for both nouns and pronouns
Speaker > addressee > 3rd person (pronoun) > kin > (other) human > (other) animate > inanimate

We have seen so far that ad hoc categories represent partial lists. Turning to parameter (B) *Ranking or no ranking*: as noted above, partial lists are, by definition, ranked in that some members of the set are distinguished by identification while others are implied. The identified members are ranked over the implied ones by the very fact that they are known. Thus, in (10), the higher-ranked, focal members – those necessarily included in the list - are 'cakes, muffins, cookies'; in (11), it is 'towel' and in (12), it is 'Peter'. Similarly, first person plural pronouns are defined around the speaker as the focal member of the set and second person plural pronouns have the listener as the exemplar although, as noted above, this is generally not reflected in the actual form of the pronouns.[5] Thus, ad hoc categories are partial lists and, by definition, they are ranked.

Third, just as other plural expressions as noted above, ad hoc categories may be based either on similarity or on grouphood (parameter (C)) (cf. Mauri, 2016: 302). This means that the members of the category may be either of the same kind in that they share some properties or they are parts of the same group.

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[5] Inclusive pronouns have two focal exemplars: speaker and hearer. In the dual, rather than plural, they are not partial lists but full ones. For an example, see Lavukaleve (Austronesian; Terrill, 2003: 170): where *mel* 'I and you(SG)' (=inclusive dual), and *me* 'I and you(SG) and others' (=inclusive plural). Also, as a reviewer pointed out, full listing in plural pronouns may be achieved by the implied members identified by deixis.

[6] On similatives, see also Auwera & Sahoo, this volume.

(15) Similatives (also (3a) and (11))[6]
      Turkish (Turkic)
      oda-lar   ***m-oda-lar*** 'rooms etc.'
      room-PL ***m*-room-PL**

(16) Associatives (also (3b) and (12))
      Amharic (Afro-Asiatic)
      ***ənnä*-**   'Abel and his partners'
      Abel
      ASS   Abel

Finally ((D)), ad hoc categories, just as other plural expressions, show preferences along the lines of the Animacy Hierarchy. Whether all ad hoc categories (including general extender constructions or special coordinations) tend to have human or animate members has not been studied systematically. It is not known, for example, whether similatives favor inanimate members although examples strongly suggest this pattern: expressions such as 'tables and chair' seem more frequently cited in the literature than 'men and women'. However, there are two kinds of ad hoc categories whose expressions almost always involve humans. These are associative plurals[7] and first and second person plural pronouns.

While associative plurals are almost always humans, not all humans are equally prone to occur in associative plurals: there are preferences among human nominals to figure in this construction (Moravcsik, 2003: 472).

(17) The choice of focal referents in associative plurals[8]
      ("title" refers for nouns like 'teacher' or 'judge')
      proper name > definite kin > definite title > other definite human

The generalization is that if in a language there are associative plurals for nouns at any point on the scale, there are also associative plurals for nouns to the left.

This scale is akin to the middle part of the Animacy Hierarchy as given in (8). Thus, ad hoc categories fit the Animacy Hierarchy in that at least one of their subtypes – associative plurals – is both predominantly human and in all cases, group-based.

5. Conclusions

The purpose of this paper was to propose a systematic place for ad hoc categories in the general context of plural expressions. What we knew to begin with is that ad hoc categories, like all other categories of countables, express plurality. Thus, the more specific question raised was about the exact place of ad hoc categories among plural expressions. This means that we had to see if the subtypes of ad hoc constructions were analogous to the subtypes of other plural expressions. We examined this question in reference to four parameters charting the similarities and differences among plural expressions. Here is the overview.

5.1. Re (A) Listing or lumping

Plural expressions in general may be lists or lumps. Ad hoc categories are, by definition, semantic lists of the partial kind; they may be formally expressed as such but, as in first and second person plural pronouns, they may also be lexicalized. They therefore fill a logically available subtype of lists: those that are partial rather than exhaustive.

5.2. Re (B) Ranking or no ranking

Plurals may be ranked or unranked. Since, by definition, partial lists are ranked and, also by definition, ad hoc categories refer to partial lists, they are always ranked.

5.3. Re (C) Cohesion by similarity or by grouphood

Just as general plurals, ad hoc categories exemplify both options. Similatives are based on similarity and associatives and first and second person pronouns on grouphood.

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[7] For more detail on associative plurals, see (Corbett, 2000: 101-110), (Moravcsik, 2003), (Daniel, 2005b), and (Daniel and Moravcsik, 2005).

[8] There are a few exceptions (Moravcsik, 2003: 497), (Daniel and Moravcsik, 2005: 150) such as associative plurals on animals in Tatar (Turkic) on tools in Sanskrit (Indo-European) and Nganasan (Uralic), and on proper names and some common nouns but not on kin terms in Balkar (Turkic). See also the anti-associative of Eskimo languages (Corbett, 2000: 241-242).

5.4. Re (D) Choice of pluralizable nouns

As general plurals, ad hoc categories may be formed both for humans or for inanimates and, just as for general plurals, those involving humans tend to be group-based rather than similarity-based.

In sum: a unified framework has been presented for ad hoc categories by identifying a slot for them among plurals. The occurrence of ad hoc categories fills a systematic gap in the general typology of plurals in that ad hoc categories are partial lists versus the fully-specified lists of other plurals and they fall into subtypes analogous to the subtypes of plural expressions. All in all, the single semantic difference between ad hoc categories and other plurals is that ad hoc categories involve partial and thus ranked lists, while other plurals are full lists that may or may not be ranked.

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