Ad hoc categorization in linguistic interaction

# Ad hoc categorization in linguistic interaction

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**Abstract**

The aim of this paper is to describe and explain the role that linguistic interaction plays in category construction and communication, by looking at naturally occurring data of spoken language. First, it will be argued that there is a way of building categories that is inherently interactional and indexical, namely ad hoc categorization. Ad hoc categorization will be defined as a bottom-up exemplar driven process, that is dependent on context for both its construction and its interpretation, and crucially relies on non-exhaustivity and exemplification. After a brief overview of the linguistic strategies that may encode ad hoc categorization, we will concentrate on linguistic interaction, taking the perspective of so-called languaging. It will be shown that categorization is frequently instrumental to intersubjective aims, such mutual agreement, negotiation, and the general management of the speakers' positioning. In turn, it is collaboration between the interlocutors that allows to fine-tune categorization and achieve mutual understanding. Finally, we will focus on the incrementality of ad hoc categorization in interaction along

two dimensions, namely, the identification of the category borders and the progressive anchoring of the category to the interlocutors' experience.

**Keywords**: ad hoc categorization; exemplification; non-exhaustive connectives; general extenders; languaging; indexicality; linguistic interaction

## 1. Introduction[1]

The aim of this paper is to discuss the role that linguistic interaction plays in category construction and how category construction is achieved in linguistic interaction, by looking at naturally occurring data. In most linguistic approaches, categorization is seen as a primarily cognitive phenomenon, and as a consequence, linguistic structures are regarded as reflecting more or less transparently this pre-linguistic organization of experience. However, when we speak, we actively construct categories and we typically do in a cooperative and incremental way with our interlocutors. Therefore, once we take the perspective of speakers, categorization also becomes a crucially linguistic and interactional phenomenon.

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We will start by describing the indexicality and context dependence that is inherent to the communication of categories, addressing the procedural nature of a particular type of categorization, that is, ad hoc categorization (Section 2.1). After a brief overview of the linguistic strategies usually employed to convey ad hoc categorization, in Section 3 we will focus on the interactional dimension underlying category construction in discourse, arguing that categories are construed by interlocutors through cooperation and negotiation, with interaction itself being at the same time a path and a goal of categorization. It will be shown indeed that the achievement of mutual agreement is in certain cases the objective to which cooperative category construction is aimed to.

The interactional dimension of ad hoc categorization will become even more evident in Section 4, where it will be argued that the identification of the category borders (Sections 4.1 and 4.2) and the anchoring of the category to the interlocutors' experience (Section 4.3) are achieved incrementally in discourse. Some concluding remarks will then follow in Section 5.

## 2. The indexicality of categorization

### *2.1 Ad hoc categorization and the role of context*

In the light of psychological evidence provided since Eleanor Rosch's studies on prototypes (1973, 1975), it is nowadays well established that

categorization heavily relies on context. Barsalou (1983, 1991, 2003, 2010) identifies a specific category type that is not only dependent on context for its interpretation, but also for its very conception and construction, namely what he labels *ad hoc* category. Ad hoc categories are indeed goal-driven abstractions, which respond to the need to categorize the world under particular contextual circumstances. They are typically expressed by complex linguistic structures such as "cloths you can buy in a supermarket", and are created on the fly for specific communicative purposes, to be dismissed once they are no longer useful.

Lakoff's theory of categorization (Lakoff 1987), and typological research, such as the study on colors by Berlin & Kay (1969) or the study on spatial relations by Levinson (2003), provide further evidence for a theory of categorization that assigns great importance to contextual, cultural and linguistic variation. Croft & Cruse (2004) propose to consider every category as construed *on-line,* in a context-dependent way, according to the speakers needs and expectations, leading to a theory in which all categories are to be analyzed as construed ad hoc.

Much of the psychological and cognitive debate on categorization, however, is aimed at understanding how a specific category is interpreted, rather than observing how the process of category construction is achieved and conveyed in linguistic communication. Nonetheless, linguistic data offer an empirical ground where we can observe the choices that speakers take and the strategies they employ to verbalize the process of category construction,

monitoring the degree to which they rely on context and shared knowledge. Speakers may indeed decide to label a category through lexical or syntactic means (top-down), they can express the process itself of category construction, through exemplification and listing (bottom-up), or, as is frequently the case, they may opt for both options in alternation.

According to Mauri & Sansò (2018), category construction through reference to individual exemplars allows speakers to refer to abstract concepts by keeping their communication at the level of concrete individuals, employed as triggers of exemplar-driven categorization. They propose to call *ad hoc categorization* the verbalization of a bottom-up, goal-driven, context-dependent categorization process, characterized by the use of one or more examples to refer to a higher-level category. Evidence for both the universality and cross-linguistic variation in the verbalization of bottom-up categorization can be found in typological studies and corpus-based research on specific languages (cf. Ariel & Mauri 2018; Mauri & Sansò 2018, 2020; Barotto & Mauri 2018; Mauri, Goria & Fiorentini 2019; Arcodia & Mauri 2020; Fiorentini & Miola 2020; Barotto 2021, among others).

The semantic core that characterizes linguistic strategies employed to convey ad hoc categorization comprises:

(1) a. one or more *explicit exemplars* of the category

b. some additional *implicit members*, associated with the explicit exemplars by virtue of a common property or frame that is relevant to the context,

c. a *superordinate category*, which includes both explicit exemplars and implicit further category members (cf. Mauri 2017).

The exemplars are processed as arrows pointing towards the higher-level class (i.e. (1c)), which is larger than the set of mentioned exemplars (i.e. (1a)) and includes further potential additions (i.e. (1b)). The crucial step towards the identification of the intended category is the abstraction of the relevant property or frame, which depends on context and on the knowledge shared by the interlocutors, making ad hoc categorization inherently cooperative. Let us consider example (2):

(2) A: […] *German prisoners of war used to make toys. And although they weren't allowed to sell them for money,* [*people could give them objects, could give them* [*things like coffee*]$_b$ *and things like that*]$_a$

B: % *Yes*

A: % *in exchange*

(BNC Corpus, D8Y)[2]

[2] Data cited herein has been extracted from the British National Corpus Online service, managed by Oxford University Computing Services on behalf of the BNC Consortium. All rights in the texts cited are reserved. The symbol % is here employed to indicate an overlap between different turns.

Example (2) shows two speakers interacting. Speaker A is explaining that German prisoners of war used to build toys and they could not truly sell them, because they could not receive money, but they could receive other goods in exchange. In order to communicate what they could receive, Speaker A starts a process of ad hoc categorization, by exemplifying what people could give them, namely *objects, things like coffee* and *things like that.* By using the expression *and things like that* s/he indicates that the set is non-exhaustive and further potential additions are to be made, thus inviting Speaker B to actively enrich the list and join speaker A in building the relevant category, for which no lexical entry can be easily found. Speaker B promptly accepts the invitation and interrupts the interlocutor, giving the positive feedback *Yes*, to let Speaker A know that ad hoc categorization was successful: the relevant frame was accessed and the category [goods that could be given in exchange in war period]$_a$ was achieved. Interestingly, along the process of category construction, we observe a nested ad hoc categorization process, built through *things like coffee*, once again by introducing a representative exemplar of a larger set. In this case, the relevant property shared by *coffee* and the additional implicit set members is more specific and can be abstracted by opposition with *objects* above, yielding the category [drinks or food that prisoners would like to receive in war period]$_b$.

In both ad hoc categorization processes, it is the expressions conveying non-exhaustivity (i.e. the exemplifying strategy *things like* and the general extender *and things like that*) that trigger the interpretation of the

mentioned items (*objects, coffee*) as exemplars of a larger, higher-level category (cf. Mauri, Goria & Fiorentini 2019 on non-exhaustive listing). The hearer then abstracts the category from context and from the mentioned exemplars, by identifying the property P that is relevant in the specific frame (war period), e.g. 'something difficult to find for prisoners, useful and available in war period'. The identification of the context-specific property P is what allows to discriminate between plausible and implausible category members: for instance, clothes could be easily identified as likely members of [goods that could be given in exchange in war period]$_a$ but a computer is not, despite being an object; tea is a likely member of [drinks or food that german prisoners would like to receive in a war period]$_b$ but Japanese sake is not, despite being a drink.

Access to a shared context is thus what allows to abstract the relevant category being built, and it is also what makes the process of category construction a product of the ongoing interaction, as witnessed by the feedback that Speaker B provides to Speaker A in (2): it is thanks to some shared background that the interlocutors are able to interpret the non-exhaustivity conveyed by *things like* and *things like that*, thus safely drawing on extra-linguistic knowledge to communicate categories. Mauri (2017) and Barotto & Mauri (2018) propose to analyze ad hoc categorization as an indexical phenomenon, whereby the identification of the context-specific value of the property P (shared by the mentioned exemplar(s) and the additional implicit ones) is a process of saturation (cf. Recanati 2004), namely

a process whereby a given variable receives one or more values depending on context. Saturation is typically described for classical deictic markers, such as *this*, where reference is made to some entity whose identity can only be retrieved by access to context (cf. Anderson and Keenan 1985). In this case, the saturation of P is necessary to abstract the relevant category: if the identification of the value of P within the relevant frame fails, it is impossible to interpret ad hoc categorization (cf. Mauri & Sansò 2018 for a detailed discussion).

Non-exhaustive reference is thus necessary to trigger ad hoc categorization, because it introduces further potential additions that have to be inferable from the explicitly mentioned items, in such a way that their identification is only possible once the larger category including both explicit and implicit set members is correctly abstracted. However, the exact identity of the additional members may (and is actually likely to) remain unspecified even for the speaker who intentionally employs a non-exhaustive linguistic expression: Speaker A in (2) does not necessarily have in mind further items beyond objects and coffee, although s/he is aware that the set is not restricted to objects and coffee. What is indeed necessary for the higher-level category to be processed is that the additional category members be identifi*able*. Their identifiability is in turn subordinated to the *identification* of the specific value of P: once the value of the context-relevant Property P has been identified, the hearer is in the condition to discriminate between possible and impossible additional members of the higher-level category (cf. Mauri & Sansò 2018).

### *2.2 The linguistic expression of ad hoc categorization*

Based on what has been argued in the previous section, the linguistic strategies employed for ad hoc categorization can be analyzed as inherently indexical, referring to one or more exemplars and to some further unspecified items characterized by a Property P, which needs to be saturated by accessing context and a shared frame.

The various prosodic, morphological, or syntactic resources, that encode reference to additional elements, work as categorization triggers. That is, by signaling non-exhaustivity, they invite to infer the property P defining the whole category.

In addition to a categorization trigger, these strategies are also characterized by the presence of some overt category member(s), processed as the starting point for abstraction, i.e. as exemplar(s). Indeed, we may say that ad hoc categorization employs exemplification as a road to category abstraction (cf. Section 4). Although we observe some structural and functional variation across languages, all the linguistic constructions encoding ad hoc categorization can be thus characterized as being composed by one or more exemplar(s) and some non-exhaustivity marker, working as categorization trigger. According to Mauri & Sansò (2018), the more morphological the strategy, the more the exemplar is likely to be unique and to play a pivotal role in the category construction; the more syntactic the

strategy, the more the *online* process of set construction is mirrored in the speaker's listing of exemplars, along what looks like a search for the correct category delimitation.

Syntactic strategies are highly analytical, in some cases even compositional, and may typically be used with phrases and clauses, allowing for as many exemplars as the speaker needs. They include lists and exemplifying constructions. In lists, non-exhaustivity can be expressed by purely prosodic patterns or by explicit elements: if the non-exhaustive element is located at the end of a list, it will be called *general extender* (Overstreet 1999, Cheshire 2007; cf. *or something like that* in (3)); if it is employed to link the list items, it behaves as a *non-exhaustive connective* (Barotto & Mauri, forthcoming; Fiorentini & Miola 2020; cf. *-a* in (4)). As pointed out by Kuperschmidt (2018) and Ariel & Mauri (2018), also disjunctive connectives are frequently employed to link exemplars of some higher-level categories.

(3) [...] *her mum always cooks a meal in the evening so I, I do something like toasted cheese sandwiches or beans on toast* ***or something like that*** *at lunch time* […] (BNC Corpus)

(4) Mandarin (Sino-Tibetan, Chinese; Zhang 2008: 137; PF = perfect)

a. *Shu-**a**, baozhi-**a**, bai-man-le zhengge shujia.*

book-and newspaper-and put-full-PF whole bookshelf

'Books and newspapers, **among other things**, occupied the whole bookshelf.'

b. *Tamen tiao-**a** chang-**a,** huanqing shengli.*

they dance-and sing-and celebrate victory

'They sang, danced, **among other activities,** to celebrate the victory.'

c. *Yin-(*a) yang-(*a) duili.*

yin-and yang-and opposite

'Yin and yang are opposites.'

Exemplification, defined as the process whereby one or more elements are to be interpreted as representative of a broader class (cf. Lo Baido 2018; Barotto 2021), lies at the core of ad hoc categorization itself, as widely argued in Section 2.1. In this respect, every linguistic strategy encoding ad hoc categorization makes use of exemplification as a bottom-up way towards category construction. However, it is possible to identify a more restricted set of linguistic strategies, such as *for example*, *let's say*, *such as* (cf. (5)), etc., for which exemplification is the core meaning, that is, constructions that directly encode the fact that the linguist elements falling under their scope have to be interpreted as exemplars of a larger set. We will restrict the term 'exemplifying construction' to these cases.

(5) *You know, yes, skin tone does often play a role in **things such as** entertainment, politics and business* […]
(COCA Corpus, SPOK: NPR_NewsNotes, Davies 2008)

A very common strategy attested in the world's languages to encode ad hoc categorization is echo-reduplication (Inkelas 2014: 169-171; Stolz 2008: 115ff.), as shown in **Errore. L'origine riferimento non è stata trovata.** from Kannada, where a lexical base is reduplicated by replacing the first consonant and vowel of the noun with the sequence *gi-* or *gi:-*:

(6) Kannada (Dravidian, Southern Dravidian; Lidz 2000: 148-149; 1SG = 1st person singular, ACC = accusative, NOM = nominative, PROH = prohibitive, PST = past, RED = reduplication)

a. *pustaka* → *pustaka-gistaka*
book book-RED
'book' 'books and related stuff'

b. *ooda* → *ooda-giida beeDa*
run run-RED PROH
'run' 'Don't run or do related activities.'

c. *nannu baagil-annu much-id-e giigilannun muchide anta*
I-NOM door-ACC close-PST-1SG RED that

*heeLa-beeDa*

say-PROH

‘Don’t say that I closed the door or did related activities.’

Ad hoc categorization may also be expressed by means of morphological strategies, such as similative plurals (Daniel & Moravcsik 2013; Mauri & Sansò, forthcoming), derivational strategies (collectives, aggregates, Magni 2018) and even compounds (co-compounds, Wälchli 2005: 141ff.). Similative plurals have been described by Mauri & Sansò (forthcoming) as a type of heterogeneous plural, denoting a category of objects sharing similar features with a given exemplar, as in (7) from Manambu:

(7) Manambu (Sepik, Middle Sepik; Aikhenvald 2008: 509; SIM.PL = similative plural)

*bal* *məwi*

pig SIM.PL

‘pigs and things like that’

While similative plurals are employed in the same contexts where we find general extenders, that is in open listing, derived collectives and compounds are typically more conventionalized ways to denote ad hoc categories, showing a lower degree of context-dependency. Arcodia & Mauri (2020)

analyze what they propose to label *exemplar-based* compounds, i.e. juxtapositions of two exemplars used as strategies to encode the superordinate category encompassing the two exemplars plus other entities connected to them, as in (8):

(8) Mandarin (Sino-Tibetan, Chinese; Arcodia & Mauri 2020)

a. *dāo-qiāng*
   sword-spear
   'weapons'
b. *qín-shòu*
   bird-quadruped
   'birds and beasts'
c. *gān-gē*
   shield-dagger/axe
   'weapons, war'

All in all, despite the great variation attested, we can safely argue that every language shows indexical strategies to communicate ad hoc categorization, i.e. bottom-up, exemplar-driven, context-dependent category construction. In the next Section, we will focus on the use of such strategies in discourse, based on data of Spoken Italian, aiming to analyze how speakers, involved in a dialogic interaction, cooperate to build and identify categories in discourse.

## 3. The languag*ing* perspective: category construction in interaction

Linguistic interaction has received increasing attention in the last decades, as the place where grammar emerges out of repeated, collaborative use. A term that has had some success in the literature is *languaging,* in opposition to the term *language*, to emphasize the online dimension of the communication process rather than the static dimension of the communication product or tool (cf. Becker 1988, Steffensen 2009, 2015, Thibault 2017, Raimondi 2019, among others). Becker (1991) suggests that there is no such thing as language, but the only thing we can observe is the continuous activity of human communication, which coincides with what he calls 'languaging'. Swain and Watanabe (2013) describe languaging as the "process of making meaning and shaping knowledge and experience through language" (Swain 2006: 98), and argue that the use of the progressive verb *languaging*, instead of the noun *language*, forces a conception of language as a process rather than a reified entity.

Languaging thus refers to the activity performed in speech, which is an ongoing process constantly evolving and developing, thanks to the evolving relation between interacting speakers. The crucial role of human collaboration in languaging is underlined by Raimondi (2019: 19-20), who argues that "the notion of languaging activity is inherently dialogical and

radically relational". Building on the biological theory of Maturana (1983) and on the theories of Cowley (2007) and Thibault (2011), which insist on the embodied nature of the languaging activity, Raimondi focuses on dialogicity as being a central aspect of linguistic communication and, in general, of collaborative human activities. According to Raimondi (2019: 24, cf. also Linell 2009), communicating human beings are inherently cooperative and interdependent, therefore each event of individual speech occurs within a discursive framework of dialogue, making dialogicity a core feature not only of human languaging, but also, more in general, of human cooperative interaction

Research developed within conversation analysis and grammaticalization theories reached similar conclusions (cf. Bybee and Hopper 2001, Traugott 2003, Bybee 2015, Traugott and Trousdale 2010). In particular, the role played by dialogicity and use in shaping language has received great attention in studies on so-called constructionalization (Traugott and Trousdale 2013), which focus on the emergence of grammar from recurrent discourse patterns. Other recent approaches have highlighted the online aspects of grammar by taking the consequences of the linearity of speaking in time for syntactic organization into serious consideration (Auer 2009; Auer & Pfänder 2011), by focusing on the specificities of dialogic syntax (Linell 2009; Du Bois 2014), or by identifying the linguistic correlates of spoken modality at all levels of grammar (Voghera 2017).

It is against the background of an approach to linguistic data based on the observation of languaging, that we now aim to analyze ad hoc categorization, considering data of spoken Italian from the VoLIP Corpus and the KIParla Corpus.[3] Linguistic interaction, or *languaging*, is indeed at the same time container and content of categorization processes, with speakers engaging in cooperation and negotiation aimed at the ongoing and everchanging process of reciprocal fine-tuning. A great part of this mutual tuning is determined by reaching a common category construction, exploiting all the tools that discourse provides to manage this online process: if two speakers agree on how a category is to be construed, they agree on the reference, or set of referents, corresponding to the category, and this basically means that they agree on what they are talking about.

Let us consider example (9) from the KIParla corpus of spoken Italian:

(9)

1 A: *io ho paura che questa vada a cercare parecchio il pelo nell'uovo*

I'm afraid that this (professor) will split hairs a lot

2 B: *dici?*

You think so?

3 A: *eh questo mi fa paura*

[3] The KIParla corpus is publicly available at www.kiparla.it. It includes spoken data collected in Turin and Bologna in the years 2016-2019 (see Mauri et al. 2019). The VoLIP Corpus is publicly available at http://www.parlaritaliano.it/index.php/it/volip and includes data collected in Naples, Rome, Milan, Florence in the early '90s (see Voghera et al. 2014).

Eh this is what I fear

4 *cioè sai quelle precise che vogliono sapere tutto cioè i il boccaccio anche (.)*

I mean you know those nit-picking who want to know everything I mean Boccaccio even,

5 *anche il colore delle mutande voglio di-*

even the underwear color I mean

6 B: *ah ho capito*

oh I see

(KIParla Corpus BOA3001)

In example (9) two students are interacting, A is trying to guide B to identify the type of professor she is talking about, who causes A's feeling of fear. To do this, A starts by naming the aspect that she is afraid of (*the professor will split hairs,* line 1), and to reply to B's doubt (*you think so?*, line 2) she tries to build and communicate the category of professors to which the one at issue belongs.

The process of category construction starts with a reformulation (introduced by *cioè* 'I mean', line 4) and with the search for the interlocutor's feedback (*sai* 'you know', line 4). It then proceeds by labeling the category through the complex relative clause *quelle precise che vogliono sapere tutto* 'those nit-picking (professors) who want to know everything', (line 4). Yet, Speaker A feels that the label is not informative enough, probably because

the universal quantifier *everything* is too inclusive and generic, and therefore provides another reformulation (introduced again by *cioè* 'I mean', line 4). This time two highly specific exemplars of what the professor could ask are listed, namely *il boccaccio*[4] and *il colore delle mutande* 'the color of (Boccaccio's) underwear', whereby the second example is a specification of the first one. The choice of these two examples is highly meaningful for B, to the point that he ultimately provides the sought feedback *ho capito* 'I see' (line 6), which confirms mutual understanding. Usually, examples are chosen by virtue of their being prototypical and representative of the category, but here it is clear that A's intention is different: the color of Boccaccio's underwear is an extremely uncommon exemplar, aimed at pushing the borders of the category 'everything' so far as to include the least predictable case, namely non-relevant details that are impossible for a student to learn.

What we observe in (9) is thus a wave pattern, whereby the speaker first labels the category, which is then reformulated and exemplified in order to make it more accessible for the interlocutor, until he is able to abstract and construe it in the right way. The ad hoc categorization process in (9) is not only highly dependent on context but is also rooted into and led by the dialogical and cooperative interaction of languaging. The interlocutor's feedback is indeed the goal that drives the categorization process, which was triggered by the manifestation of some doubt (*dici?* 'You think so?', line 2), that is, by the risk

[4] Giovanni Boccaccio (1313-1375) is one of the most important Italian writers of the 14th century, author of the collection of novellas known as the Decameron.

of potential misunderstanding. Beyond the cognitive dimension of abstraction towards the identification of the category, the languaging perspective indeed highlights the cooperative dimension of conversation, in which ad hoc categorization is instrumental to building shared knowledge and mutual agreement.

Intersubjective moves like the search for agreement and the need for a feedback play a crucial role in categorization processes (cf. Barotto & Lo Baido, this volume): the cognitive dimension of category construction cannot indeed be separated from the pragmatic dimension of category verbalization, which is guided by illocutionary aims and discourse needs relating to the speakers' reciprocal positioning.

The interactional dimension of ad hoc categorization clearly emerges from the frequent co-occurrence of ad hoc categorization strategies with expressions that rely on the speakers' relation, such as interactional discourse markers (e.g. *sai* 'you know' and *dici* 'you say?' in (9)), feedback (e.g. *yes* in (1) *ho capito* 'I see' in (9)), or explicit appeals to mutual understanding (e.g. *mhmm* in (16)). When a category is built through a cooperative exchange by means of an incremental online process, once its construction is felt to be felicitous, i.e. when speakers think that a shared category has been reached, this is typically overtly acknowledged. Let us consider (10):

(10)

1 A: *eh* [*è vicinissima al centro però i prezzi delle cose tipo supermercati*

*cibo eccetera*, eh [it's very close to the center but the prices of things like food supermarkets etc.,

2 *non è esagerato*

is not exaggerated

3 *è allegra son tutti giovani,*

it's cheerful everybody is young

4 *comodissima coi mezzi*]$_a$

it's very comfortable with transports]$_a$

5 *meravigliosa*

wonderful]$_a$

6 B: [*ti piace il fatto che sia una zona viva dove c'è movimento*]$_b$

[you like the fact that it's a lively area where there's movement]$_b$

7 A: *sì io adoro Torino per questo motivo […]*

yes I love Turin for this reason [...]

(KIParla Corpus TOD2003)

Example (10) shows a conversation in which speaker A enumerates the reasons why a specific area of Turin is wonderful, by means of an exemplification list (list (a), lines 1-4): it's very close to the center, it's cheerful, everybody is young, it's very comfortable with transports. Then, exemplification leaves room to the speaker's evaluation, by means of the superlative *meravigliosa* 'wonderful'. Speaker B abstracts over the examples provided by A, proposing a general formulation that catches why A loves that

area, namely ‘the fact that it’s a lively area where there’s movement’ ((b), line 6): we observe here the cooperative attitude of B, who aims to categorize over the examples, implicitly asking for a feedback on the abstraction just made. The positive feedback is provided on line 7, where Speaker A confirms the categorization (‘yes, I love Turin for this reason’).

Barotto & Lo Baido (this volume) argue that exemplification itself can be employed in conversation as a positive feedback, to prove mutual understanding after a process of ad hoc categorization, as in (11). In this case, instead of simply using a backchannel, Speaker B acknowledges that the category has been felicitously construed by proposing a further example as a proof (‘optics for the eyes’ on line 4).

(11)

1 A: *dove ci sono gli ambulatori*

where there are clinics

2 B: *sì*

yes

3 A: *per fare le visite*

to do medical examinations

4 B: *sì sì ho capito* ***per esempio*** *come l'ottica per gli occhi*

yes yes I understand for example like optics for the eyes

5 A: *sì […]*

yes

[LIP Corpus, RC8]

Exemplification is here employed to fulfil an interactional need, namely, to communicate the respective alignment and agreement, as becomes evident from the repetition of *sì* 'yes'. Speaker B indeed explicitly says 'I understand' just before providing the example as evidence for this statement.

The cooperative process can easily turn into a negotiation, if the online process of ad hoc categorization takes different directions for the speakers involved in a conversational exchange. Example (12) provides another case in point:

(12)

1 A*: in cucina ricotta va bene* [***tipo*** *negli agnolotti, nelle torte salate*]$_a$

ricotta is fine in cooking, [like in agnolotti, in savory pies]$_a$

2 *però rigorosamente cotta*

but strictly cooked

3 *ri=cotta*

Re-cooked[5]

4 B: *la ricotta è ricotta tu dici […]*

ricotta is re-cooked, you mean

5 B*: e* **[*tipo*** *nei cannoli siciliani***]**$_b$?

[5] In Italian *ricotta* literally means re-cooked.

and [like in Sicilian cannoli]$_b$?

6 A*: io non li mangio*

I don't eat them

[KIParla Corpus TOA3004]

In example (12) Speaker A previously said that she does not like cheese, except for mozzarella and ricotta cheese. Ricotta cheese, however, is argued to be ok only *in cucina* 'in cooking (lit. 'in kitchen', line 1): this category is felt to require further specification to be understood, so Speaker A provides two examples, representative of what the ad hoc category 'ricotta cheese in cooking' refers to ((a) line 1: *negli agnolotti* 'in agnolotti'*, nelle torte salate* 'in savory pies'). In line 2, the crucial concept is focused and reformulated: the cheese has to be cooked. At this point, Speaker B feels that he got the point, but the category boundaries may be negotiated, therefore he starts to actively contribute to the categorization process, by proposing an additional element to the exemplification chain that could constitute an exception ((b): *nei cannoli siciliani* 'in Sicilian cannoli', line 5). Sicilian cannoli have indeed raw cheese, but are very popular, so Speaker B employs them here to challenge the actual category borders, i.e. to verify to what extent the category is built around the property of having cooked ricotta. Yet, this example leads to a set that is different from the one that Speaker A had in mind, so an immediate contrastive reaction is provided in line 6, where A says 'I don't like them'. In other words, an intent of negotiation in the identification of the

actual category delimitation fails and triggers a reaction that clearly anchors the category borders to Speaker's A tastes, that is, his subjective and individual experience (*I don't eat them,* cf. discussion in Barotto and Lo Baido, this volume).[6]

As argued by Clark & Wilkes-Gibbs (1986), within a conversation speaker and addressee explicitly signal their mutual understanding and alignment, especially concerning the identification of reference and categories. Ad hoc categorization in discourse can thus be triggered not only by the cognitive need to build an abstract concept, but also by the interactional need to cooperate, or negotiate, in the speech event, increasing social cohesion and common ground.

## 4. Incremental ad hoc categorization: zooming in and outside categories in discourse

As examples (9)-(12) have shown, category construction is the result of a cooperative process in which the speakers involved share a common goal, namely mutual understanding. To reach this goal they pursue category co-construction through successive attempts of (re)formulation (cf. (10)) and exemplification (cf. (11)-(12)), until they reach some agreement. In the process of ad hoc categorization, interlocutors are thus able to anchor general

[6] I would like to thank Alessandra Barotto for the hintful discussion on this example.

statements and abstract concepts to their own experience (cf. Barotto 2021), and this occurs incrementally through the ongoing conversational exchange. In this Section, three phenomena will be discussed that are revealing of how ad hoc categorization is construed incrementally along two dimensions, namely, the identification of the category borders (Sections 4.1 and 4.2) and the progressive anchoring of the category to the interlocutors' experience (Section 4.3). As will become clear from the discussion, the incremental and gradual focusing of the category members and of the category boundaries occurs both on the speaker's side and on hearer's side, because they are mutually and contemporarily involved in ad hoc categorization.

### *4.1 Identifying the category core and pushing the category borders*

When two speakers involved in languaging are cooperating to construe the same category, the choice of the examples is crucial to trigger the right inferential path (cf. Mauri & Sansò 2018). It is indeed the example(s) mentioned in discourse that activates the search for a specific contextually relevant property that ultimately characterizes the frame or category to be abstracted (cf. Section 2.1). Let us consider example (13), where a category is conveyed in line 6:

(13)

1 A: *ma infatti scusate, maretta quando torna?*

sorry, but when will maretta (NAME) come back?

2 B: *eh mi sa a inizio mese*

eh, I guess at the beginning of next month

3 A: *ah proprio?*

oh so (late)?

4 B: *eh perché lei il ritorno non l'aveva preso [xxx]*

eh, because she hadn't booked the return trip

5 C: *lei aveva detto che si faceva due settimane tipo*

she said she would stay home two weeks or something

6 B: *so che* [*la mamma, operazioni varie, cose*] *ci sta figurati*

I know that her mum, various surgeries, stuff, it's ok of course

(KIParla Corpus BOA3004)

Speaker A wants to know when a friend will come back, Speakers B and C cooperatively answer that she will remain at their parents' house for two weeks (lines 1-5), then B provides a list of examples that are meant to convey the reasons underlying the friend's choice (line 6). The reason is however never mentioned, but only abstracted from the open list 'her mum, various surgeries, stuff', which leads to the ad hoc categorization [complicated situations connected with her family's health]. Speaker B, at the end of the list, provides a subjective evaluation ('it's ok of course', line 6)) about the category just construed.

What are the factors triggering the right abstraction from ‘mum’ and ‘various surgeries’, without a general category formulation? First of all we have context: in the ongoing languaging process, context is a continuous source for relevant frames to be activated, which provide the background information necessary to mutual understanding. In (13), the background information is that the girl in question will stay at her parents’ house for a longer period than expected, and it is this frame (progressively construed in lines 1-5) that allows for a consistent interpretation of the two examples in line 6. The first element of the list ‘mum’ drives the interlocutors’ focus of attention towards the close family set and issues regarding the mother, while ‘various surgeries’ triggers the category delimitation around a plurality of medical events, pushing the category borders further enough to include other potential problems associated to surgeries and family. In other words, the two examples refer to mutually relevant elements (medical problems and close family) that provide the borders within which the category has to be construed.

The incremental choice of the category members explicitly mentioned is crucial also in example (14), where Speaker A is talking about her study experience abroad, arguing that she had to learn how to say small things in a different language and this is something that she had not learnt in class:

(14)

1 A: *essendo sempre stata abituata comunque a parlare con eh nella mia*

*lingua*

having always been used to speak anyway with eh in my language

2 *dover eh mh chiedere anche* [*per le minime cose*]$_{a1}$ ***ad esempio*** *eh mh* [*a che ora*

when you have to mh ask even the smallest things like for instance eh mh at what time

3 *si mangia a cena perché poi dobbiamo uscire*]$_{b}$ *o* ***non lo so*** *eh*

we have dinner because then we have to go out or I don't know eh

4 [*la carta igienica in bagno*] ***ad esempio****,* [*proprio piccole cose*]$_{a2}$

toilet paper in the bathroom for instance, truly small things

5 B: *mhmh sì*

mhmh yes

6 A: *sono comunque e doverle dire in una lingua che non è la tua*

they're anyway and when you have to say them in a language that is not yours

7 *sono comunque* [*cose molto particolari*]$_{a3}$

they are anyway [very particular things]$_{a3}$

(KIParla Corpus TOD2011)

The category she is interested in is explicitly named through the label 'the smallest things' ((a1) line 2), which is in itself highly generic and calls for more specific descriptions, to construe it in an ad hoc way for the discourse aims. Speaker A therefore undertakes an ad hoc categorization

process, mirroring her search for the most relevant examples: the first example she provides is ‘at what time we have dinner’ ((b), lines 2-3), and the second one is ‘toilet paper in the bathroom’ ((c), line 4): in what sense can these situations be considered ‘smallest things’? They denote situations belonging to the everyday-life frame, the former being more acceptable in a public situation, the latter being more intimate and linked to a familiar context. While example (b) could occur in a textbook and could easily be learnt in a foreign language class, thus constituting a rather prototypical case, example (c) is intentionally chosen among the things that are less likely to be mentioned in class, when studying a foreign language. Example (c) is thus identified with a specific aim, namely, to build the category borders in an unexpected way, so as to include ‘truly small things’ ((a2, line 4), whereby *proprio* ‘truly’ focalizes the fact that the example just mentioned is an exceptionally small thing and can *still* be included in the category. The speaker’s incremental ad hoc categorization is evident by the two reformulations that conclude the process, namely ‘truly small things’ ((a2), line 4) and ‘very particular things’ ((a3), line 7), encapsulating the process of category construction, achieved by means of precise exemplification choices. In line 5 Speaker B acknowledges that the category communication has been felicitous.

### *4.2 Beyond the borders: ad hoc categorization of the outside*

The languaging perspective allows to widen the observation scope to the entire interactional sequence, and this reveals strategies that involve ad hoc categorization not only within the category being communicated, but also outside its borders. In order to cooperatively build a category, speakers indeed frequently choose to exemplify what is *not* part of it, either by explicit negation or by contrast. This is revealing of the online process through which speakers try to achieve mutual understanding, which is not predetermined from the beginning, but rather evolves through resonance during the interaction (Du Bois 2012) and mirrors the speakers' attempts towards the most effective and accessible way of reaching the hearer's attention and agreement. Let us consider example (15):

(15)

1 A: *fra gli scrittori americani è proprio* [*uno di quelli che sopporto di meno*]$_a$

among the American writers he is one of those that I can't stand the most

2 *cioè tu piglia* [*un miller, henry miller*]$_b$

I mean, take a Miller, Henry Miller

3 *piglia* [*un un roth* ***per esempio***]$_c$

take a Roth for example

4 [*Palahniuk*]$_d$ *qualsiasi cosa*

Palahniuk, anything

5 B: *no, non mi piace*

no, I don't like him

6 *a me piace* [*paul auster*]$_e$

I like Paul Auster

7 A: *paul auster non lo conosco*

Paul Auster, I don't know him

(KIParla Corpus BOA3006)

Speaker A is talking about Hemingway and is arguing that he is 'one the [American authors] that he can't stand the most' ((a), line 1), thus introducing the wider category of authors that he does not like. Yet, instead of directly building this category, the speaker provides a list of authors that he *does* like, thus exemplifying what could *not* be included in the category: Miller ((b), line 2), Roth ((c), line 3), Palahniuk ((d), line 4). In line 5, Speaker B takes the turn and starts negotiating the category being constructed, by first expressing disagreement on example (d) Palahniuk, who would actually fit the 'bad authors' category according to him (because he 'doesn't like him', line 5), then suggesting to replace it by Paul Auster ((e), line 6), which he likes instead. This contribution is however infelicitous, because the new example is not part of the shared background and Speaker A does not know him. It is interesting to note the strategy that Speaker A employs to turn a proper name, inherently specific and identifiable, into an example representative of some larger category: he says *a* Miller ((b), line 2) and *a*

Roth ((c), line 3), thus introducing the proper name through an indefinite article (cf. Mauri & Sansò 2019 on ad hoc categorization of proper names). Example (16) provides another case in point:

(16)

1 A: *la mattina a casa loro si mangiava*

in the morning they used to eat

2 ***non*** [*biscotti o mh cose diciamo più dolci*]$_{a}$

not biscuits or mh let's say sweet stuff

3 ***ma*** [*cose più salate*]$_{b}$ *quindi* ***ad esempio*** [*toast uova eh*]$_{c}$ *mh*

but more salted stuff so for instance toast, eggs eh mh

4 *insomma* [*la classica colazione più all'americana*]$_{d}$

in short the classic American-style breakfast

5 B: *mhmh*

mhmh

(KIParla Corpus TOD2011)

Speaker A aims to communicate what she used to eat for breakfast during her stay by an Irish family. She starts by construing the category of things that she did *not* eat by means of exemplification ((a) line 2, 'biscuits or sweet stuff'), thus incrementally focusing what is outside the borders. She then turns to the inside and undertakes an ad hoc categorization process to communicate what she *did* eat (line 3), exploiting the opposition with the

‘outside’ category just built (a): the formulation she provides (‘more salted things’ (b)) is indeed rather general and is symmetric to ‘sweet stuff’( a). The actual category members are then exemplified by ‘toast, eggs’ ((c), line 3), through a zooming in movement, which leads to the final reformulation ‘the classic American-style breakfast’ ((d), line 4).

Once again, Speaker B provides a backchannel, allowing Speaker A to continue, knowing that the interaction is working as expected.

### *4.3 Progressive zoom into the interlocutors’ experience*

Ad hoc categorization frequently follows a cline that goes from general and abstract statements to highly specific situations intimately involving the interlocutors. The gradual co-construction of a shared category may indeed go hand in hand with a progressive zoom into the specific interlocutors’ experience, who incrementally focus on the individual entities or events that match the category being built.

In looking at example (17), in line 1 the speaker, talking about her experience abroad in Finland, argues that ‘it is a completely different situation because people are much more closed-minded’ ((a), line 1), thus providing a general frame. Then, to make the point clear, she exemplifies the frame further in lines 4-5 providing a first list of examples representative of how the situation is different (a): ‘they are locked in the house’, ‘they speak little’, ‘they also have few places where they can meet’. What we observe is thus a

movement going from a general categorization in terms of situation, to a narrower category of [people's behavior], communicated by means of an exemplar-driven process.

(17)

1 *e' proprio una situazione diversa perché la gente è molto più chiusa*

it is a completely different situation because people are much more closed-minded

2 *magari anche*

maybe also

3 *è anche una conseguenza del clima così rigido che hanno*

it is also a consequence of the harsh climate they have

4 *comunque* [*la gente è molto chiusa, sta tanto chiusa in casa, parlano poco*

anyway [people are very closed, they are so locked in the house, they speak little]

5 ***ad esempio*** *hanno anche pochi luoghi in cui eh mh in cui incontrarsi*]$_a$

for example [they also have few places where they can meet]$_a$

6 *per es* ***per esempio tipo*** [*i giovani*]$_b$

for example like [young people]$_b$

7 ***tipo*** [*noi*]$_c$

like [us]$_c$

8 [*la sera*]$_{d}$ *dato che*

[in the evening] given that

9 ***tipo*** [*il venerdi' sera*]$_{e}$

like [on Friday evening]$_{e}$

10 *dato che la maggior parte dei locali comunque chiudono alle otto di sera i bar*

since most of the places still close at eight in the evening, the bars

11 *prima di andare* ***tipo*** *in discoteca si radunano* ***tipo*** [*negli androni dei eh dei eh*

before going like in the disco they gather like [in the halls of the eh of the eh

12 *centri commerciali aperti 24 su 24 oppure nei eh all' ingresso dei delle*

shopping centers open around the clock or in eh at the entrance of the

13 *banche dove ci sono i bancomat*]$_{f}$

banks where there are ATMs]$_{f}$

14 *cioe' quindi puoi capire*

I mean so you can understand (KIParla Corpus TOD2005)

The last example in line 5 (‘they also have few places where they can meet’) is in focus, as underlined by the use of the additive focus-sensitive adverb *anche* ‘also’, and allows the speaker to open an exemplification chain, which is embedded in the ad hoc categorization in (a) and begins a progressive zoom into the speaker’s particular experience. The exemplification starts at line 6

and shows three parallel zooming-in tracks. First, 'people' is narrowed down to 'young people' ((b) line 6) and then to 'us' ((c) line 7), strongly anchoring categorization to the speech participants. Second, the general statement is narrowed down to 'evenings' ((d) line 8) and then to 'Friday evenings' ((e) line 9), thus zooming in to access a highly specific and representative example. Finally, the list of examples in lines 11-13 (f) is aimed at elaborating the 'few places where they can meet' (line 5). In line 14 we observe an explicit appeal to the interlocutor's understanding ('I mean so you can understand'), which appears to be the speaker's ultimate aim.

The discourse pattern observed in (17) is summarized in Figure (1):

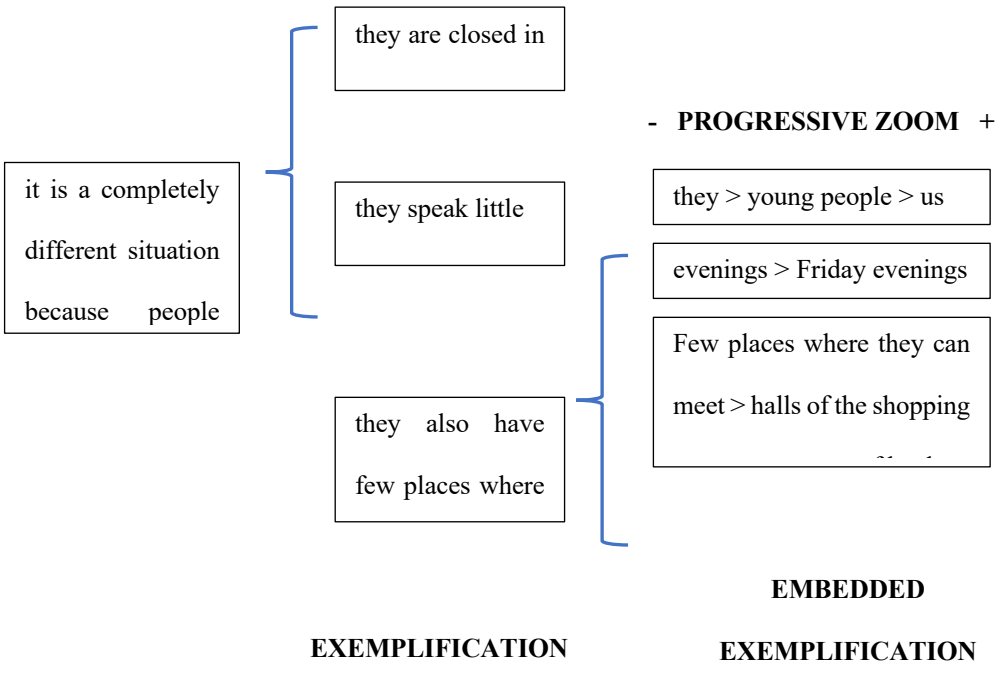


**Figure 1.** Progressive zoom in ad hoc categorization.

An incremental zoom into the speaker's specific experience can be observed also in the ad hoc categorization being construed in example (18), where the abstract concept of 'living the city in a different way' is progressively focused and communicated.

(18)

1 *e adesso dopo invece appunto due anni sto molto di più in casa* [*vivo la città in modo diverso*]$_{a1}$

and now, however, after just two years I am much more at home, [I live the city in a different way]$_{a1}$

2 ***per esempio*** [*giro molto di meno*

for example [I walk around much less

3 *sto sempre nei soliti posti*]$_{b}$

I'm always in in the usual places]$_{b}$

4 ***per esempio*** [*qua a santa cristina*]$_{c}$ *perchè vengo a studiare*

for example [here in Santa Cristina]$_{c}$ because I come (here) to study

5 *vengo a lezione qua c'è i m i miei corsi sono qui*

I come (here) to class, here is m my courses are here

6 *e quindi eh vi eh come dire* [*vivo i posti in modo più intimo beh*]$_{a2}$

and so eh there eh how can I say [I live the places in a more intimate way well]$_{a2}$

(KIParla Corpus BOA3015)

The speaker formulates the abstract frame ‘I live the city in a different way’ (line 1 ($a_1$)), which requires some shared categorization to allow mutual understanding. Ad hoc categorization is achieved by stepping down from the abstract formulation to the experience level, choosing examples that are representative of what the speaker means by ‘different way’ (cf. (b), lines 2 and 3): ‘I walk around much less’ and ‘I’m always in the usual places’.

As we observed for (17), also in this case exemplification incrementally proceeds by zooming into the actual life experience of the speaker: in the last example ‘I’m always in the usual places’ the speaker embeds a further exemplification level, by naming the specific place she has in mind, namely ‘here in Santa Cristina’ ((c), line 4). We notice again the use a deictic expression (*qua* ‘here’ in line 4, cf. ‘us’ in example (17)), which strongly anchors the end of the zooming exemplification to the here-and-now of the speech act. Line 6 closes the ad hoc categorization process by providing a reformulation for the category introduced in (a1) (line 1), replacing the term ‘city’ by ‘places’ and the term ‘different’ by ‘intimate’ (($a_2$), line 6), in the light of the progressive focus that guided not only the hearer, but the speaker herself towards the best category label. The reformulation ($a_2$) is introduced by two discourse markers, *quindi* ‘so’ and *come dire* ‘how can I say’, clearly revealing of the speaker’s online search for the right phrasing.

The discourse pattern observed in (14) is summarized in Figure (2):

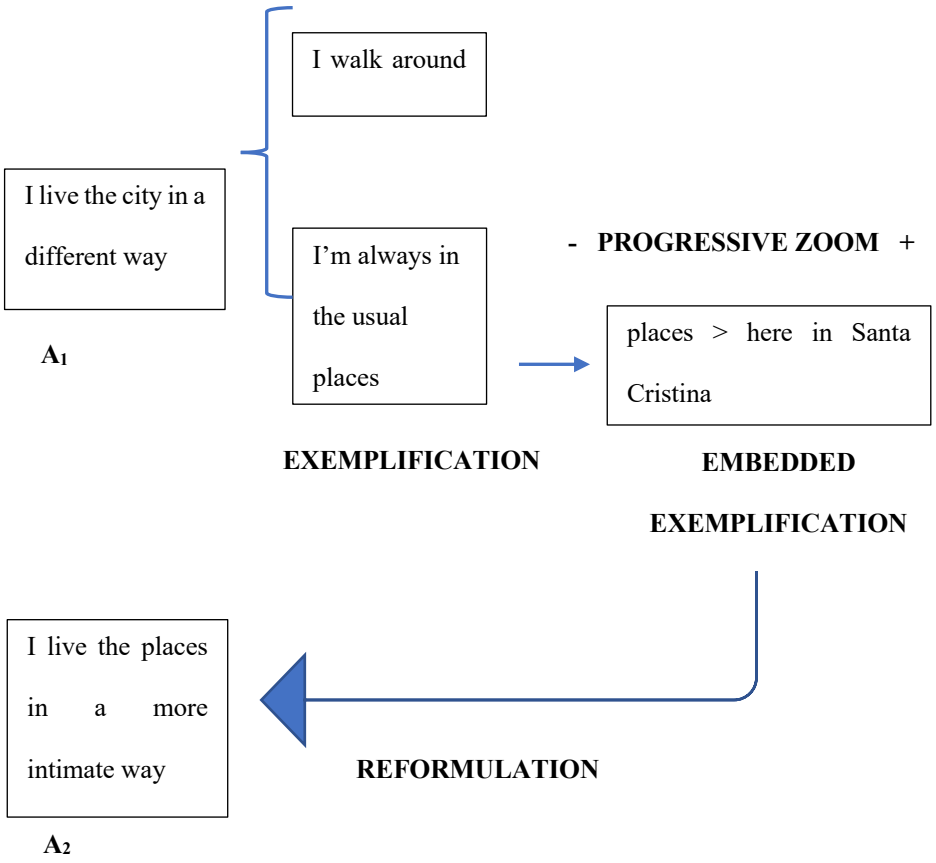


**Figure 2.** Progressive zoom and reformulation.

## 5. Conclusions

The aim of this paper was to describe the role that linguistic interaction plays in category construction and in its communication, by looking at data of spoken language. We started by identifying a particular way of building categories that is inherently interactional and indexical, namely ad hoc categorization, as opposed to category labeling. We argued that ad hoc

categorization can be analyzed as a bottom-up, goal-driven, context-dependent categorization process, characterized by the use of one or more examples to refer to a higher-level category. Ad hoc categorization is dependent on context for both its construction and its interpretation, and crucially relies on non-exhaustivity and exemplification (Section 2).

After a brief overview of the linguistic strategies that may encode ad hoc categorization, we adopted the perspective of languaging (Section 3), that is, the activity performed in speech, which is an ongoing process constantly evolving and developing, thanks to the evolving relation between interacting speakers. By looking at how ad hoc categorization is performed in linguistic interaction, it becomes clear that interaction is not only the place where categorization is communicated, but it is frequently also the goal itself, triggering category co-construction, negotiation and sharing. In other words, categorization appears to be often instrumental to intersubjective aims, such as mutual agreement and the general management of the speakers' reciprocal positioning. In turn, it is collaboration between the interlocutors, who actively collaborate in finding examples for the relevant category and who explicitly acknowledge the process going on, that allows to achieve mutual understanding.

In Section 4 we observed the incremental dimension of category construction and delimitation. In this process, speaker and hearer are mutually and contemporarily involved in the identification of the category members and the category boundaries, recurring to exemplification along a progressive

zooming in and out movement. In particular, ad hoc categorization frequently shows a gradual cline from general category formulations towards the highly specific experience of the speaker, who follows the online flow of reference construction.

All in all, linguistic interaction stands out as playing a crucial role in exemplar-driven category construction, because it sets the common ground against which ad hoc categorization occurs, it influences the interlocutors' choices regarding the linguistic strategies to be employed, and it may even act as the real trigger pushing speakers to undertake ad hoc categorization. Last but not least, interaction is also frequently what allows categorization itself to be successful, thanks to processes of cooperation and negotiation that the interlocutors are constantly engaged in.

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