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Alessandra Barotto

EXEMPLIFICATION AND CATEGORIZATION: THE CASE OF JAPANESE

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The Case of Japanese

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To Ida

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List of Abbreviations

ACC	accusative
ACOP	adjectival copula
ADV	adverbial form
AGT	agentive case particle
ASP	aspect
ATT	attributive form
AUX	auxiliary
CAUS	causative
CLF	classifier
CMPL	completive
COM	comitative
CONCL	conclusive
COND	conditional
CONN	connective element
COP	copula
DAT	dative
DES	desiderative form
DET	determiner
DV	defective verb
EVID	evidential
EX	exemplary conjunction
FIN	final verbal form
FOC	focus marker
FP	final particle
GEN	genitive
GER	gerund
HON	(respect) honorific
IMP	imperative form
INF	infinitive form
INS	instrumental
LK	linker
LOC	locative
MOD	modal expression
NEC	necessitive
NEG	negative
NF	non-finite/non-final
NML	nominalizer
NOM	nominative
NPS	non-past tense
OBJ	object
PASS	passive
PAST	past
PERF	perfective
PL	plural
POL	polite suffix
POT	potential suffix
PP	pragmatic particle
PURP	purpositive
PR	particle of lack of specification
PROG	progressive
PRS	present
PRT	particle
Q	question marker
QT	quotative marker
RES	resultative
RLS	realis
SG	singular
STA	stative
TE	*te* (conjunctive) form
TENT	tentative
TOP	topic
VOL	volitional suffix

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1 Theoretical foundations: the notion of exemplification

The domestic life of a concept is a series of examples.
(Birk 2007: 5)

1.1 Introduction and aims

1.1.1 Why exemplification?

This research aims to investigate the relationship between exemplification and categorization, using evidence from linguistic data to better understand how people create and communicate conceptual categories in real-life situations (cf. the notion of *ad hoc categories* in Barsalou 1983). More specifically, using data from present-day Japanese and a corpus-based methodology, the distributional properties and the discursive functions of four Japanese exemplifying constructions will be examined in order to understand *i*) how examples are used and encoded by speakers to make reference to conceptual categories, *ii*) what types of categories speakers can create and communicate by means of exemplification, *iii*) how the relationship between exemplification and categorization can be exploited by speakers to achieve specific discourse effects, such as vagueness and politeness.

Traditionally, exemplification has been addressed in different research fields, such as rhetoric and logic, but often dismissed as an inferior form of reasoning shaped in a too obvious a form (cf. Aristotle 1984; Lyons 1989). To better describe this fact, Lyons (1989) notes that example can be seen as "metaphor's forgotten sibling" (1989: 4). Metaphor and example are both rhetorical figures with a long theoretical tradition. However, they have had different fates. While metaphors have been recognized for their cognitive role in the conceptualization of complex ideas (cf. Lakoff and Johnson 1980), the cognitive import of exemplification has not been addressed thoroughly. This is despite the fact that metaphor and example share important similarities: both are used to understand abstract concepts starting from more concrete and straightforward material. In the last decades, studies on epistemology (cf. the role of *exemplars* in the disciplinary matrix in Kuhn 1970) and psychology (cf. the role of *exemplars* in Rosch 1973; Medin and Schaffer 1978) have revised the traditional view on exemplification, showing that abstract concepts and categories are formed and

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shaped by the specific exemplars that have been experienced. It follows that we cannot understand the former while ignoring the latter.

Despite this progress, exemplification has struggled to find its own place in linguistic studies, where it has been usually discussed as a type of reformulation or elaboration device (Longacre 1983; Hobbs 1985; Mann and Thompson 1988). This means that, once again, examples are considered subordinate to the generalization or to the abstract concept they illustrate. This is due to the fact that often, in linguistics, exemplification – as a process – has been examined focusing on a very specific group of exemplifying markers that overtly signal the status of example, such as *for example* or *for instance* in English. Therefore, the properties and functions associated with these analytic markers tend to be extended to the whole domain of exemplification as well.

In this work, however, exemplification will be investigated first and foremost as a type of (cognitive and linguistic) process, that is, the act of providing one or more examples of a larger set, which can be achieved by speakers in different ways, even using non-dedicated strategies (cf. the usage of the epistemic marker *magari* 'maybe' in Mazotti 1998 or the usage of the so-called *general extenders* in Overstreet 1999). This type of approach has shown some interesting results in recent studies on vagueness and general extenders (e.g. Channell 1994; Overstreet 1999; Ghezzi 2013), where linguistic strategies used by speakers to provide examples have been briefly addressed as means to achieve vague categorization or ad hoc categorization in discourse. While these studies mention the role of exemplification in creating and communicating conceptual categories, they do not address the phenomenon of exemplification in a systematic way, aiming at different purposes than those pursued here.

This study aims to move a step forward and fill such a theoretical gap, in the belief that, just like metaphors, examples are instruments of cognition with a pivotal role in the construction and communication of conceptual categories, and therefore they should be the object of systematic linguistic analysis. In this regard, the present study constitutes the first attempt to provide a comprehensive linguistic study on exemplification and its relationship with categorization starting from empirical data, in the hope of improving the view on example from forgotten sibling to a restored (to value) sibling.

1.1.2 Why Japanese?

To achieve the goals described in the previous section, a case study on Japanese exemplifying constructions will be performed. The case-study methodology has

been chosen because it allows to investigate exemplifying constructions in their linguistic context, using both qualitative and quantitative approaches. In this regard, the specific language is not the scope of the observation, but only a tool to examine the process of exemplification. Therefore, the final aim of this research is not to provide an exhaustive account of how exemplification is linguistically encoded in Japanese, but to investigate a universal mechanism, starting from a sample of its many linguistic interfaces, in order to identify cognitively motivated tendencies in its linguistic coding.

Japanese is not a random choice but is motivated by several reasons. First of all, most linguistic studies on exemplification and exemplifying constructions have been done based on data from European languages, such as English (Halliday and Hasan 1976; Hobbs 1985; Eggs and McElholm 2013; Rodríguez Abruñeiras 2015), Italian (Manzotti 1998; Lo Baido 2018), French (Rossari and Jayez 1999) and other Romance languages (Mihatsch 2010). Moreover, much attention has been paid to exemplifying constructions that overtly signal the status of example through analytical expressions, such as *for example*, *ad esempio*, *par example*. Since this study aims at offering a different perspective on exemplification, we have chosen a language without any connection to those mentioned above. Not only Japanese is completely unrelated to European languages, but it also shows substantially different structural patterns (e.g. words order, cf. Iwasaki 2013). Moreover, Japanese is a well-documented language. This ultimately allows to pursue the type of in-depth investigation on exemplifying constructions described at the beginning of this section.

Finally, another reason for choosing Japanese concerns the peculiar status of many Japanese exemplifying constructions. Contrary to what happens in most European languages where exemplification is usually encoded by means of analytical lexical expressions (e.g. *for example*), in Japanese, there are several exemplifying markers that belong to the grammar and follow precise morphosyntactic rules (e.g. syntactic restrictions). For instance, Japanese has a quite wide range of dedicated "exemplifying" connectives, that can only be used when the entities they join together "are taken as examples from a larger group of items" (Chino 2001: 41). The fact that these markers are part of the grammar and follow (often strict) morphosyntactic rules makes them noteworthy. For example, some markers can only be used with NP examples, while others can only be used with VP examples; some markers can only be used with at least two (or more) examples, others can be used with a single example. This means that, when speakers make reference to categories through exemplification, they need to consider different linguistic parameters that can have an impact on the cognitive elaboration of entire categorization processes. Because of these pecu-

liarities, Japanese seems to be an interesting point to start the analysis of exemplification and its relationship with categorization.

1.1.3 Overview

The work is organized as follows. Section 1.2 outlines a state-of-the-art survey on the subject of exemplification considering different fields such as rhetoric, communication studies and linguistics. In Section 1.3, the relationship between exemplification and categorization is discussed, starting from the role of exemplars in organizing the knowledge and in structuring conceptual categories, and concluding with the use of exemplification to make reference to categories in discourse. In Section 1.4 the notion of exemplification is defined in functional terms and in Section 1.5 the four Japanese exemplifying markers under examination (*ya, nado, tari, toka*) are described. Chapter 2 focuses on the methodology used in the study of Japanese exemplifying constructions, describing the corpus data and the parameters of analysis.

Chapter 3 and 4 focus on the cognitive functions of exemplification, providing data on the linguistic coding of lexicalized and non-lexicalized categories respectively. Each chapter starts with a definition of the type of construction examined, describing it on the basis of the presence or absence of a category label. Then, the analysis of the data will highlight tendencies and recurring patterns in the linguistic coding of these constructions. Finally, we will discuss the division of labor between category labels and examples and the role of the context in directing the underlying inferential processes.

Chapter 5 focuses on the pragmatic functions of exemplification. Specifically, we will investigate the use of exemplifying constructions to perform semantic and pragmatic hedging and to intensify the negative polarity of the utterance. In the end, we will argue that these functions are closely related to the ability of exemplifying constructions to profile a wider set of similar elements.

In chapter 6, a unitary account of exemplification is provided, by examining together the tendencies and the patterns that have emerged in the previous chapters. In this regard, the functional domain of exemplification will be examined while discussing the role of categorization and introducing the notions of actual and potential non-exhaustivity. Finally, we will take a diachronic glance on the developments of the exemplifying markers examined, showing an interesting relation between the notion of *irreality* and that of exemplification. Chapter 7 summarizes the major results of this research and suggests possible further

developments that may deepen our understanding of the exemplification phenomenon.

1.2 Exemplification in language

For a long time, exemplification has been a minor object of study in rhetoric and logic, considered as an inferior form of reasoning shaped in too obvious a form. As noted in the introduction, Lyons (1989: 4) calls the example "metaphor's forgotten sibling", comparing the different fates of the two rhetoric figures. He points out that even though they both can trace their status in rhetorical theory at least back to Aristotle's Rhetoric, metaphor has received a far greater amount of attention. Even recently, while the value of metaphor has been recognized not only as a rhetorical figure, but also as cognitive tool (cf. Lakoff and Johnson 1980; Lakoff 1987; Gibbs 2008, among many others), exemplification has been left in the background, still considered "an addition to what has already been said and proven independently" (Birk 2007: 3).

Despite not drawing much attention, exemplification does exhibit an interesting depth, and this is evident right from the meaning of the term *exemplum* in medieval Latin: "a clearing in the woods". Lyons elaborates the concept noting that:

> Only the clearing gives form or boundary to the woods. Only the woods permit the existence of a clearing. Likewise, example depends on the larger mass of history and experience, yet without the "clearings" provided by example that mass would be formless and difficult to integrate into any controlling systematic discourse.
>
> (Lyons 1989: 3)

The main point of the clearing (the example) is its discernible structure, which contrasts with the unclear surrounding wood. Moreover, the clearing suggests a precise duality between the "inside" and the "outside", consequently shaping the boundaries of the wood. At the same time, it gestures toward the "outside", that is "some commonly recognized basis in a reality shared by speaker and listener, reader and writer" (Lyons 1989: 4).

Although its real impact remains understudied, it is indisputable that exemplification is a widespread device (Lischinsky 2008: 243), used by speakers whenever they need to build and communicate a new form of thought. Examples can clarify it, illustrate it, justify it, discover new areas of application, propose or suggest something new (Manzotti 1998: 107). In fact, exemplification is so pervasive in everyday interactions that its role tends to go unnoticed. However, as noted by Lischinsky (2008: 244), an example is first of all a chosen rep-

resentation of a concept. People tend to choose that particular example that frames the general concept in a specific way or that highlights certain concrete features. In this regard, examples have a strategic value that should be addressed.

In this section, the role that exemplification plays in language is discussed through a survey of the state-of-the-art addressing different fields. This survey aims to be neither exhaustive nor complete, but our goal is to provide a concrete explanation as to why exemplification may prove to be an important communicative strategy.

1.2.1 Exemplification in rhetoric

The first acknowledgement of exemplification as a rhetoric figure can be traced back to Aristotle. In the Rhetoric, he examines the forms of rhetorical argument distinguishing between those that are part of the inductive method and those that are part of the deductive one. Following this model, he identifies two means of argumentation: the enthymeme, as part of the deductive reasoning, and the example (*paradeigma*) as part of the inductive reasoning.

Even if enthymeme and example seem to complement each other in the demonstration process, it is evident that, according to Aristotle, the former is preferable to the latter, both from the point of view of the success of the speech, but also of the accuracy of the argumentative method. Therefore, while Aristotle recognizes the role of examples as argumentative devices, he also believes that they are not appropriate for what he considers to be serious thought (Aristotle 1984: 4628): they only serve to make up for the lack of stronger evidence, mainly because in many cases induction reasoning cannot be considered as a suitable demonstrative argument.

More recently, Perelman and Olbrechts-Tyteca (1969) have addressed exemplification in their taxonomy on argumentative techniques. An entire section is devoted to the description of argumentation by examples, which are described as relations "establishing the structure of reality" (1969: 350). Following a distinction already highlighted by Aristotle, they distinguish between *i*) argument by examples proper, that is, the usage of particular instances to establish a rule, and *ii*) illustration, whereby examples provide support for an already established regularity. Perelman and Olbrechts-Tyteca admit that this distinction can be quite subtle (1969: 358), nevertheless it enables us to see that sometimes rules and examples are used with different purposes than those traditionally ascribed to them (cf. 1969: 359).

Perelman and Olbrechts-Tyteca seem to follow a very dynamic approach to exemplification, both at the discourse level and at the cognitive level. For instance, the number of instances and the degree of similarity among them are important features in order to consider a particular case as an example and not as mere information (cf. 1969: 351). In to establish a rule, it takes more than one particular case to activate the inference of generalization in the hearer's mind.

They also observe that examples interact with each other, playing an active role in making a more accurate reference to an abstract generalization: "the mention of a further example modifies the meaning of the examples previously given, making it possible to define accurately the point of view from which the facts given earlier should be regarded" (1969: 354). Let us imagine a list of three examples. Once the speaker mentions the second example, the hearer will spontaneously compare it with the previous one in order to identify potential similarities. The same happens after the third example, which in turn will be compared to the second and the first ones. Only through comparison it does become clear what kind of features the hearer should consider in order to understand the underlying generalization.

As for illustration, Perelman and Olbrechts-Tyteca note that its role is quite different from that of analogy, since it does not replace the abstract with the concrete, but it just represents a particular case that validates a given rule (1969: 360). Furthermore, often the purpose of illustration is to help the comprehension of the rule, by providing an instance of its application. Nevertheless, Perelman and Olbrechts-Tyteca recognize that different examples might exhibit different discursive purposes. Therefore, the passage from example proper to illustration might even occur in the same utterance. Just through the comparison between the first-mentioned examples, the rule may be established to the point of becoming well-attested, so that the following examples relate directly with the rule, functioning effectively as illustrations.

Finally, they argue that illustration runs less the risk of being misinterpreted, since people are guided by the well-known rule (1969: 358). If follows that there is a mutual relationship between examples and abstract rules: while the example supports the rule, the rule helps to understand the example, indicating in a more direct way the features that are useful for the generalization.

1.2.2 Exemplification in communication studies

While Perelman and Olbrechts-Tyteca focus on the inferential value of examples, their persuasive power in discourse has been explored by current research

on communication. The so-called *exemplification theory* (cf. Zillmann 1999; Brosius 2003) explores how concrete examples can shape and influence people's opinions about the likelihood of facts. Zillmann (2002: 20) notes that with the emergence of linguistic competencies and communication skills, relevant experiences have become communicable: people can thus rely on communicated information in addition to those learned from first-hand experience. While the ability to communicate events and information is obviously crucial, at the same time, the experiences related by others can prove to be unreliable. This is particularly true since the dawn of mass media, due to the fact that "the capacity to reach large audiences carries with it the risk of misleading the public in case the disseminated information proves to be distorted and inaccurate or simply in error" (Zillmann 2002: 21).

The core foundation of the exemplification theory is built upon the idea that information sources can be categorized as base-rate or exemplar (Gibson and Zillmann 1994). Base-rate information includes numbers, facts, and figures, while exemplars are episodic illustrations that describe "causes, importance, and consequences of the problem under consideration form the unique perspective of an individual" (Brosius and Bathelt 1994: 48). Base-rates are considered more veridical and less partial. On the other hand, exemplars are generally perceived as more concrete, emotionally interesting and – being episodic narrative – more entraining. Usually, in news reports, exemplars are used in combination with base-rates in order to provide not only a description, but also a demonstration of the event being discussed.

Different studies have questioned the relationship between these two sources of information by conducting experiments to measure their influence on the human mind. Specifically, investigations in social psychology (e.g. Baesler and Burgoon 1994; Bar-Hillel 1980) show that people tend to overlook explicit statistical evidence. On the contrary, anecdotal evidence proves to be more persuasive and seems to capture the attention of the hearer since it deals with the abstract in a more direct and intense way. Furthermore, research on communication (e.g. Gibson and Zillmann 1994; Brosius and Bathelt 1994) demonstrates that the distribution of exemplars affects the way people perceive the event population: the estimated frequency of a certain event is usually linked to how often that specific event is illustrated by means of examples. In these investigations, the persuasive role of exemplars proves to be so intense that even when the distribution inferred through exemplars is at odds with what explicitly stated, people still form their judgments based on the exemplars, ignoring base-rates information (cf. Brosius and Bathelt 1994; Zillmann 2002: 31). Thus, once the representation of events is biased, people's opinion can be deceived.

The fact that exemplars overweight base-rate information is usually explained by the theory of heuristics (Kahneman and Tversky 1973; Tversky and Kahneman 1973). In psychology, heuristics are mental shortcuts that allow people to solve problems quickly and efficiently, focusing on one aspect of a complex problem without using every potentially available piece of information (cf. Tversky and Kahneman 1974; Gigerenzer 1991; Gigerenzer and Gaissmaier 2011). Exemplification theory argues that media messages are processed through two cognitive heuristic mechanisms: representativeness and availability heuristics. The representativeness heuristic indicates that judgments on event populations are based on the examination of representative exemplars without any consideration on the size of the sample or sampling methods. The phenomenon called "base-rate fallacy" (Bar-Hillel 1980) is related to this heuristic and it illustrates the devaluation of abstract information in favor of concrete events. The availability heuristic refers to the fact that judgments about event population depend on exemplars available for cognitive manifestation at the time judgments are made. This retrieval mechanism is considered a "function of the ease" (Zillmann 2002: 27) with which exemplars in memory are retrieved and thus exercise a disproportionate influence on the evaluation of the event population and on the formation of mental judgments. The mechanism of the availability heuristic is often expressed in terms of vividness and salience of information (cf. Taylor and Thompson 1982). Examples are perceived as more concrete and emotionally interesting, that is, they contribute to make the story more intense, increasing the emotional involvement of the hearer (Brosius 2003). Furthermore, exemplars prove to be meaningful not only as persuasive devices, but also as tools helping the comprehension. Hendriks Vettehen and van Snippenburg (2004) demonstrate that exemplification stimulates complexity of thought about (the various aspects of) an issue, helping to process the information. This is due to the fact that exemplars have the intrinsic quality of making the abstract more understandable.

1.2.3 Exemplification in linguistics

The elaborative value of exemplification has been examined also by studies on textual coherence in discourse (cf. Halliday and Hasan 1976; Hobbs 1979). The assumption behind these studies is that there is a certain number of discourse relations (e.g. cause, evidence, justification, exemplification, etc.) that have a central role in the coherence of discourses since they "bind contiguous segments of text into a global structure for the text as a whole" (Hobbs 1985: 1).

Most of these studies tend to provide a taxonomy of coherence relations, starting from the assumption that correctly identifying the type of relation is a pivotal step in order to understand the entire text.

In these taxonomies, exemplification is generally recognized as a subtype of elaboration relation, that is, relations in which a secondary part of the text or *satellite* (cf. Mann and Thompson 1988) contributes to the important point of the text or *nucleus* by elaborating the material provided through the nucleus. For instance, Longacre (1983: 83-84) describes exemplification as a type of illustration that allows to elaborate an abstract formulation by means of some concrete instances. Similar classifications are also provided by Mann and Thompson (1988) and Hovy and Maier (1994).

Some studies go beyond the simple act of categorizing coherence relations and actually provide some analysis of how the exemplifying relation works, pointing out some interesting features. For instance, Carston (1992, 1998) defines exemplification as a way of providing evidence for a claim, which means that exemplification ultimately implies the production of two utterances "each of which carries the presumption of relevance individually" (Carston 1998: 219). This definition is further developed by Blakemore (1997, 2001) who focuses on two important features of exemplification: its typicality and the implication of other similar exemplars. She notes that the recognition of a state of affair as an example triggers the expectation that it is typical in some respect (2001: 109). Therefore, exemplification implies the existence of a larger set of instances that have the same property and could have been chosen by the speaker. According to Blakemore (1997: 13), this inference is what makes exemplification such a powerful tool to provide evidence for a claim.

Strictly related to the notion of elaboration, exemplification has also been examined with regards to another important discursive phenomenon, namely reformulation. For instance, despite recognizing the two processes as two different discourse functions, Hyland (2007: 268) notes that exemplification and reformulation share the same basic function of clarifying the writer/speaker's communicative purpose and negotiating the meaning in different contexts. In particular, he describes exemplification as a clarification process "through which meaning is clarified or supported by a second unit which illustrates the first by citing an example" (2007: 270). The relationship between these two phenomena has been further investigated by studies on discourse markers (Bazzanella 1994; Ciabarri 2013: 120), where exemplification markers like *per esempio* 'for example' in Italian have been categorized as a specific type of reformulation markers (the others being paraphrase markers and correction markers, e.g. *cioè* 'that is' in Italian), as shown in (1).

(1) *Sono questi i meccanismi che gli mancano **per esempio** l'abilità di tradurre*
'These are the skills that he lacks, **for example** the ability to translate.'
(LIP – FA3)

The occurrence above represents what the literature considers a prototypical instance of exemplifying construction (see Rodríguez Abruñeiras 2015: 55): a general element or statement with a broad referent (i.e. *meccanismi che gli mancano* 'skills that he lacks') which is reformulated or re-elaborated by means of an exemplifying element which is more specific and whose referent is included within the referent of the general element (i.e. *l'abilità di tradurre* 'the ability to translate').

Finally, exemplification has also been examined as a hedging strategy. The term 'hedging' refers to a specific type of discourse strategy "that reduces the force or truth of an utterance and thus reduces the risk a speaker runs when uttering a strong or firm assertion or other speech act" (Kaltenböck et al. 2010: 1; see also Lakoff 1973; Fraser 1975; Prince et al. 1982; Hübler 1983; Caffi 2007). The functional overlapping between exemplification and hedging is usually explained through the ability of exemplification to open up "a paradigm and thereby show that other neighboring expressions would be equally possible" (Mihatsch, 2010: 108, see also Manzotti 1998; Ghezzi 2013). Therefore, in specific circumstances, marking a linguistic element as an example can allow speakers *i*) to convey approximation (that is, "a discrepancy between the conventional meaning of a linguistic expression and its meaning in a concrete utterance" Mihatsch, 2010: 107) as shown in (2), or *ii*) to reduce the force of an utterance by downgrading strong assertions or other speech acts to proposals that the hearer can accept or refuse, as shown in (3).

(2) *Você precisa de uma cultura literária geral, que não deve ser feita duma vez só, mas dentro de um programa que pode durar **ponhamos** seis anos.*
'You need a general literary culture that must not be done just once, but within a program that may go on for **let's put** six years.'
(Mihatsch, 2010: 108)

(3) *ma **tipo** prova a cliccare sul suo nome e riportalo per spam.*
'but **like** try and click on his/her name and put it in the spam.'
(Voghera, 2013: 302)

In (2), the Portuguese exemplifying marker *ponhamos* 'let's put, for instance' is used as an approximating strategy to add "fuzziness within the propositional content proper" (Prince et al. 1982: 85), whereas in (3), the speaker uses the Italian exemplifying marker *tipo* 'type/like' to weaken the illocutionary force of her suggestion by downgrading it to an option (among others) that the hearer can disregard.

The usage of exemplifying constructions as hedging strategies has been attested by several studies. For instance, Mihatsch (2010) briefly examines the usage of exemplifying constructions in Romance languages (e.g. *ponhamos* 'let's put' in Portuguese and *disons* 'say' in French) when they are employed as approximators (cf. terminology in Prince et al. 1982). Ghezzi (2013: 164) notes that the Italian analytic marker *per esempio* 'for example' can be employed to hedge strong assertions. Similar hedging functions are also attested for some Italian epistemic markers such as *magari* 'maybe', that are frequently used to exemplify (Manzotti 1998; cf. also Masini and Pietrandrea 2010). Voghera (2013: 304) focuses on the functional extension of the Italian taxonomic noun *tipo* 'type', which is frequently used to exemplify, but can also function as a hedge, "attenuating either the full meaning of an expression or the pragmatic force of an utterance" (2013: 302). Similarly, in English, the exemplifying marker *like* perform a wide range of pragmatic functions by signaling "a slight discrepancy between the following linguistically encoded concept and that which the hearer is expected to pragmatically infer" (Andersen 2000: 24-25).

1.3 Exemplification and categorization

Although exemplification is often perceived as a discourse phenomenon, studies on knowledge acquisition and categorization have shown that examples are also essential elements in cognitive processes, even before the mediation of language. In these studies, examples, or *exemplars*, are considered particularly important because of their twofold nature. Not only can they be used to illustrate an average tendency, but they can also represent an ideal prototype or model (cf. Lischinsky 2008: 245). In the following sections, it will be shown how this twofold nature enables the cognitive guidance of exemplars, and the relationship between exemplification and categorization will be discussed.

1.3.1 Exemplification and the organization of knowledge

In his discussion on the role of examples in directing human behavior and judgments (cf. Section 1.2.2), Zillmann (2002: 19–20) includes an excursus on how exemplification can work at the cognitive level in extrapolating information to gain knowledge about the world. Since the human brain is constantly surrounded by a continual flow of information, it needs to find ways to extract experiential chunks that can provide some knowledge about the environment. The extrapolation is not made randomly, but with a precise focus on those events that are deemed vital for the welfare of individuals and could not be overlooked without losing important information. However, the simple extrapolation of events is not enough: if these events are processed individually and in isolation, they may provide only a small amount of knowledge, since, as postulated by Heraclitus, there are no two events that are ever exactly the same. Therefore, to maximize the positive cognitive effect, the brain processes them through a systematic comparison with those previously collected, automatically applying relations of similarity to organize them into manageable chunks (Bruner et al. 1956: 12). In other words, whenever two or more events are deemed alike for sharing of a number of defining features "to a degree that makes them classifiable as members of the same population of events" (Zillmann 2002: 23; see also Burns 1992; Mervis and Rosch 1981), they are grouped together in one category.

This is a crucial step because performing an act of categorization means that important events stop being representative only of themselves and start being representative of other (potential) future events. They become *exemplars*. Consequently, the brain is able to deduce information about other events included in the same category and to potentially predict information about all other similar events (Zillmann 2002: 20). Thus, through a spontaneous inductive inference, this small collection of experiences serves as a basis for acquiring knowledge about past occurrences and for guiding future behavior. Furthermore, this act of categorization makes faster and easier the identification of new events simply by storing them in already established classes.

The crucial role of categorization through exemplars is thus evident in the acquisition of new knowledge. In his book *The Structure of Scientific Revolutions* (1970), Kuhn argues that the success of scientists depends on the knowledge acquired through the collection and the analysis of particular cases. In particular, he highlights the importance of laboratory examples, which he calls *exemplars*. According to Kuhn, exemplars are the fourth element in the disciplinary matrix (along with symbolic generalizations, metaphysical presumptions, and

values), and by *exemplars* he means "the concrete problem-solutions that students encounter from the start of their scientific education, [...]. All physicists, for example, begin by learning the same exemplars: problems such as the inclined plane, the conical pendulum, and Keplerian orbits" (1970: 187). Exemplars are crucial in the formation and evolution of scientific developments, because "in the absence of such exemplars, the laws and theories he has previously learned would have little empirical content." (1970: 187–188). For this very reason, texts typically present not only abstract rules and theories, but also instances of scientific research, that is, the applications of those theories in the solution of important problems, along with the new experimental techniques employed in those applications. These exemplars are regarded and used as models of exemplary science and consequently fulfill some important functions: they suggest new puzzles and new solutions to solve those puzzles. From this perspective, science proceeds on the basis of perceived similarity to exemplars: this is the principle that guides scientists through scientific research and what enables them to grasp new puzzle-situations and hence new potential solutions.

1.3.2 Exemplification and the structure of categories

Categorization has always been a crucial topic in psychology because of people's natural tendency to see something as an instance of something else, rather than simply seeing it (Goldstone and Kersten 2003: 599; cf. also Wittgenstein 1953): a way of interpreting the world which is fundamentally an act of categorization. Until the later part of the twentieth century, rule-based accounts of category representation have prevailed in categorization theory (cf. Givón 1986). According to these accounts, categories are well-defined, pre-stored in memory and independent from the context. Category membership is determined by a series of rules (that is, criteria properties) that underlie the representation of the category itself and that allow to determine whether an entity belongs within the given category or not.

In the last decades, growing dissatisfaction with the assumptions of rule-based models has brought major changes in categorization theories. For instance, Wittgenstein (1953) notes that it is not always possible to find a property (or even a set of properties) shared by all members by virtue of which they should be grouped together. He addresses the question using *Spiel* 'game' as an example of a category in which the members do not seem to share a common set of defining properties. According to him, categories are structured by "a complicated network of similarities overlapping and crisscrossing: sometimes over-

all similarities, sometimes similarities of detail" (Wittgenstein 1953: 32). In other words, some members of the category share a set of attributes and other members share another set. Therefore, in some cases, there exist members that do not share any common attribute.

The discussion on the nature of categories and category learning has been further expanded due to empirical evidence collected by cognitive psychologists. In particular, the work of Rosch (1973, 1975) on natural categories has deeply influenced the contemporary view on categories, changing the focus from abstract representations to concrete instances. Through a series of empirical experiments, Rosch confirms that categorization does not simply involve a specific set of shared features. She investigates the structure of natural categories observing that some concrete instances can act as cognitive reference points. In other words, people consider them to be more representative of a given category than the other members. To explain this relationship between categorization processes and the concrete instances people come across in their day-to-day life, two new types of theories were elaborated: the *prototype* model and the *exemplar* model (see Murphy 2002: ch.3). According to the prototype model (cf. Rosch 1973, 1975), conceptual categories show an internal graded structure. At the center of the category there is the prototype which exhibits the highest concentration of defining attributes, while towards the boundaries of the category there are those members that have fewer characteristic features. Following this approach, members are judged as a good exemplar of the category by virtue of their similarity to the prototype. While the graded structure might suggest that the prototype has a prominent role within the category, it is noteworthy that prototypes are constantly and dynamically elaborated on the basis of concrete experience. Therefore, the instances met in real-life situations can construe and re-shape categories.

The role of the exemplar is even more crucial in the exemplar model, which is an alternative theory on categorization proposed by Medin and Schaffer (1978). According to the exemplar model, the conceptual representation of a category involves only the actual instances that have been experienced. Thus, while the prototype representation of the category *dog* consists of a collection of the most common features across all dogs, in exemplar models, the category *dog* is actually "the set of dogs that the person remembers" (Murphy 2002: 49; see also Goldstone and Kersten 2003: 606–608). In other words, a conceptual category is represented by all the exemplars that are part of it and there is no abstract summary representation that stands for all individual instances. In a practical sense, it means that any new stimulus is identified on the basis of personal experiences with that concept, and then compared to multiple well-

known exemplars in order to grasp similarity relationships and decide for its categorization.

Although prototype and exemplar models have often been presented in contrast to each other, they both rely heavily on the notion of similarity: only by resembling to a prototype or to a stock of exemplars stored in memory, a new stimulus can be properly placed into a category. In more recent discussions on category learning, the centrality of similarity has been reconsidered, indicating that categorization is more like an act of problem solving that attribute matching (see for instance Murphy and Medin 1985). This idea has triggered the (at least partial) superseding of prototype-based and exemplar-based theories. Nevertheless, there is no question that these theories have helped to recognise the centrality of concrete instances in cognitive sciences, showing their crucial role in the formation and organization of knowledge.

1.3.3 Exemplification and the reference to categories

In recent years, exemplification has attracted a new wave of interest among linguistic studies (cf. Mauri 2014, 2017; Mauri and Sansò 2018) that examine the construal of reference to conceptual categories, that is, the ways in which speakers communicate categories in real-life interactions. In Sections 1.3.1 and 1.3.2, we have seen how exemplars have an important role in shaping and construing categories at the cognitive level. Nevertheless, categories should not be considered only as abstract instruments of cognition. To understand them, we also need to consider their strong connection with language, which allows them to transcend personal experience and to be communicated. This connection can be seen as a bidirectional relationship, in the sense that "one's repertoire of concepts may influence the types of word meanings that one learns, whereas the language that one speaks may influence the types of concepts that one forms." (Goldstone and Kersten 2003: 613). In this regard, Edwards (1991: 517) argues that "[c]ategorization is *something we do*, in talk, in order to accomplish social actions (persuasion, blamings, denials, regulations, accusations, etc.)". This means that categorization processes are always encountered as a part of discourse and, therefore, they should be investigated according to discursive function they serve in a specific context of interaction.

Nevertheless, in order to talk about categories, speakers need linguistic devices to make reference to them in real-life conversation. For many centuries, categorization theories have differed in many aspects (cf. Section 1.3.2) but one: they all have assumed the existence of some sort of stable mental representation

for each conceptual category. The existence of these representations is crucial at the linguistic level because it allows to establish fixed links between categories and specific words (e.g. *fruit*, *birds*, *dogs*) or linguistic expressions (e.g. *vegan food*, *musical instruments*). Following this approach, when speakers want to make reference to a conceptual category, they only have to name them, using the specific word or small expression that works as a category label (Rosch 1975: 193).

This model was assumed valid until the actual existence of stable mental representations was questioned by later development in categorization studies. These studies argue that categories cannot have stable representations because they reflect our knowledge about the highly variable world (cf. Barsalou 1987; Smith and Samuelson 1997). In this regard, Barsalou (1983, 1991, 2003, 2010) theorizes the existence of what he calls *ad hoc categories*, i.e. categories that are spontaneously constructed to achieve goals that are relevant in a given situation (e.g. THINGS TO DO IN BEIJING while planning a vacation). These categories are not stable: they do not reside in long-term memory and are not based on a previously represented concept. Furthermore, they are context-dependent since they are built according to a specific situational context.

For these very reasons, the reference to ad hoc categories represents a new challenge for linguists. Ad hoc categories cannot hold stable associations with dedicated words or expressions, and their reference needs to be built any time they are used in a specific interaction. This issue becomes even more pivotal when we consider that some scholars (cf. Smith and Samuelson 1997: 167) have proposed that all categories are indeed *ad hoc*, completely refusing the notion of stable categories with underlying stable representation. This idea seems to be supported by psychological experiments, which demonstrated that ad hoc categories are pervasive in everyday cognition (cf. Ross and Murphy 1999, Medin et al. 2006; Chrysikou 2006) and used rapidly and without troubles by different types of subjects in different types of situations (cf. children acquisition of goal-derived categories in Lucariello and Nelson 1985). Croft and Cruse (2004: 75) call this new approach to categorization "dynamic construal approach", referring to the fact that "all aspects of conceptual categories are subject to construal". Barsalou himself recognizes the crucial role of the language ("Both conceptual and linguistic mechanisms appear central to forming ad hoc categories. [...] Linguistically, people combine words in novel ways to index these concepts.", 2010: 86), calling for further study ("Much further study is needed to understand their structure and role in cognition. Important issues include the following: How do productive conceptual and linguistic mechanisms produce ad hoc categories?", 2010: 87).

In linguistics, the idea of stable categories with fixed labels has not been questioned until recently. Nevertheless, we should note that there exist studies in semantics that highlight some issues with this model. For instance, Cruse (1986: 148) notes that in everyday life people can deal with categories lacking a specific label but having conceptual reality (cf. the notion of "covert categories", e.g. the category of furniture people can sit on, such as chairs and sofas). While category labels can be used to make reference to specific context-dependent categories because of pragmatic inferences (Wilson and Carston 2007), we should wonder whether other linguistic strategies can be used by speakers to achieve the same goal.

In this regard, some scholars suggest that examples can play an important role. For instance, Wittgenstein (1953) addresses the role of examples in the communication of concepts without a precise set of attributes shared by all members. In order to facilitate the comprehension, he proposes that the speaker should list some exemplars of the category: "How should we explain to someone what a game is? I imagine that we should describe *games* to him, and we might add: 'This *and similar things* are called 'games'" (Wittgenstein 1953: 33).

More recently, some studies have tried to identify linguistic strategies that can be used by speakers to specifically make reference to ad hoc categories (cf. Channell 1994 and Overstreet 1999 for their discussion on *general extenders*; Mauri and Sansò 2018 for their typological analysis of the linguistic strategies that can encode ad hoc categorization). Interestingly, all these studies identify strategies that rely on providing some exemplars of the category as a starting point of an inferential process. This process is well described by Mauri (2017: 301), who argues that "the construction of ad hoc categories starts from the context and requires an abstraction over concrete exemplars, rather than going from an abstract category and looking for its actualization in the context.". This can be achieved by means of three inferential processes: 1) saturation, 2) associative reasoning, 3) abstraction. First, the speaker signals the status of example(s) of the mentioned item(s) by means of some overt, dedicated strategies to guide the hearer to recognize the existence of additional members besides the mentioned ones. These strategies have a precise referential function, that is, they "mentally open an empty folder, where such further items can be 'saved'" (Mauri 2017: 303). This step is vital because it ensures that the hearer does not process the mentioned elements solely on the basis of their referential meanings, but as representative of a larger set that should be inferred. The saturation process is fulfilled through associative reasoning (cf. Récanati 2004), in the sense that the additional members must be associated, or associable, to the mentioned exemplars by virtue of a defining shared property. In order to identi-

fy this property, the hearer compares the mentioned examples looking for their minimum common denominator that is relevant in the specific context. Finally, on the basis of the recognized property, the hearer is able to determine the inclusion or exclusion of other potential members. This ultimately leads to the construction of the superordinate category which includes explicit exemplars and implicit members. Let us examine in detail the linguistic interface of these processes considering an example from English:

(4) *I grudgingly admit that it's a handy thing to have where I can check email, Twitter, and etcetera. In fact, these are the apps I'm using that are very essential to my daily life!*
(enTenTen13)

In (4), we can recognize two exemplars of the category (*email* and *Twitter*) and a general extender (*etcetera*). Through this construction, the speaker is suggesting the existence of other additional items that share with the exemplars the property 'accessible via an app', identifiable by drawing on the context. In the end, the actual reference activated by *email, Twitter, and etcetera* in this specific context is the superordinate category [ONLINE SERVICES AND WEBSITES ACCESSIBLE VIA APPS], which includes explicit exemplars and implicit members.

To sum up, the discussion on the role of category representation in memory and on the existence of *ad hoc* categorization has led some linguists to investigate further how categories can be construed in discourse. On the one hand, studies on lexical pragmatics have shown that the interpretation of category labels can be enriched by means of pragmatic inferences, allowing the contextualization needed to make reference to ad hoc categories. On the other, several studies have pointed to the usage of exemplar-driven processes as an alternative linguistic strategy to category labels, paving the way for the recognition of the cognitive contribution of exemplification in linguistics.

1.4 Towards a functional definition of exemplification

As noted in our theoretical survey, in linguistics, exemplification has been mainly examined as a communication process used by speakers to elaborate, clarify, or support a general formulation by pointing out some concrete instance (see Manzotti 1998; Hyland 2007). The main issue with this definition is that it is too anchored around the idea that exemplification is subordinate to a general formulation, which is expressed in the text (cf. Rodríguez Abruñeiras 2015: 55). On the contrary, studies on linguistic strategies used to make reference to ad

hoc categories (e.g. Overstreet 1999; Mauri 2017) show that exemplification can have a leading role in triggering inferences towards an otherwise unexpressed conceptual category. It follows that a different definition of exemplification is needed.

For the purpose of our analysis, we propose a functional definition of exemplification. Specifically, with the term 'exemplification' we mean the basic process of giving one or more examples. At the linguistic level, to perform exemplification, the speaker must indicate in some way that the mentioned entity should be considered as representative of something else. Different linguistic strategies can be used to perform this basic function. For instance, speakers can explicitly mark the entity as an example by means of dedicated exemplifying markers, i.e. linguistic constructions whose main function is indeed to signal an act of exemplification, like *for example* and *for instance* in English, *per esempio* and *ad esempio* in Italian, etcetera.

Nevertheless, there is another way to mark something as an example. Since examples are by definition representative of a larger set of similar elements (see Manzotti 1998: 108), linguistic constructions that directly encode the existence of these other related elements, can be used to perform exemplification. In their cross-linguistic investigation, Mauri and Sansò (2018) recognize a wide range of linguistic strategies that can be used to give concrete examples of a category across the languages of the world. These strategies range from discourse-level constructions such as general extenders in English, to less transparent means such as non-exhaustive connectives (i.e. connectives that can only be used in open-ended lists), heterogeneous plurals (i.e. associative and similative plurals) and a specific type of reduplication called *echo-word formation* or *echo-reduplication*. Despite the attested morphosyntactic variation, all these strategies encode the existence of further similar elements beyond those explicitly mentioned. In other words, they all encode non-exhaustivity (cf. Mauri et al. 2019) and through non-exhaustivity they indicate that the marked entities should be conceived as examples. Let us briefly address some of these strategies.

Similative plurals and associative plurals (see Corbett 2000: 101-111; Daniel and Moravcsik 2013; Mauri and Sansò 2019, 2021) are special types of plurals that codify the existence of a heterogeneous set of elements (instead of homogenous sets of identical items like additive plurals), all related to the explicit example by virtue of some relation of similarity or associability. In Tshangla, the similative plural suffix *-te* functions as a non-exhaustive tag indicating the existence of other items similar to *choto* 'butter', which should only be considered as examples of a larger set:

(5) Tshangla (Sino-Tibetan)
bra *songo-ba-ki-bu* *choto-**te*** *laga-ga* *chom-nyi* *pha-nyi*
other person-PL-AGT-FOC butter-**PRT** leaf-LOC wrap-NF bring-NF
u-n *cho-wa* *dang*
come-SE stay-NOM PRT
'Other people had brought **butter and such**, wrapped in a leaf.'
(Andvik 2010: 426)

Another strategy to encode exemplification is a special type of reduplication called *echo-word formation* (cf. Keane 2005; Enfield 2007) or *echo-reduplication*, which involves the "reduplication of a word, with replacement of the onset or, sometimes, vocalism or internal material in one copy" (Inkelas 2014: 170). For instance, in Assamese, echo-reduplication is used to modify the reference encoded by a specific word in order to include similar entities as well, as shown in (6).

(6) Assamese (Indo-European)
mad 'wine' → *mad-**sad*** 'wine and the like'
māṣ 'fish' → *māṣ-**sāṣ*** 'fish and the like'
(Goswami 1970: 192)

Some languages exhibit dedicated connectives to encode lists of examples (see Barotto and Mauri forthcoming). Haspelmath (2007: 24) mentions this type of connectives using the label 'representative conjunction' noting that "in this construction, the conjuncts are taken as representative examples of a potentially larger class". Mauri (2014, 2017) calls them 'non-exhaustive connectives', using an expression that is well-established in the literature of East Asian Languages (see Chino 2001; Zhang 2008). The peculiarity of this type of connective is the restriction to occur only in open-ended lists. For instance, in Koasati, the connective *-ó:t* encodes open-ended lists of items, suggesting that other instances should be considered beyond those mentioned:

(7) Koasati (Muskogean)
akkámmi-t *ow-i:sá-hci* *hahci-f-**ó:t*** *oktaspi-f-**ó:t*** *kámmi-fa*
be.so-CONN LOC-dwell.PL-PROG river-in-**EX** swamp-in-**EX** be.so-in
'So they live in rivers and in swamps **and in suchlike places**.'
(Haspelmath 2007: 24)

Finally, the so-called *general extenders* can also be used to perform exemplification. The label 'general extender' was proposed by Overstreet (1999: 3), due to the fact that these strategies can be seen as "'general' because they are nonspecific, and 'extenders' because they extend otherwise grammatically complete utterances". General extenders are linguistic markers commonly used at the end of a list of items to indicate additional members (see Overstreet 1999: 11, Mauri and Sansò 2018: 12–13). For instance, in (8), *and stuff like that* indicates that the hearer should consider other examples beyond *swings* and *does somersaults*.

(8) English (Indo-European)
she's sort of a child who swings and does somersaults ***and stuff like that***
(Dines 1980: 28)

General extenders range from compositional expressions showing a basic syntactic structure [CONJUNCTION + NONSPECIFIC NOUN PHRASE] (e.g. *and such*, *or something* in English) to more synthetic constructions like *etcetera* in English (> Latin *et cetera*) which went through a process of univerbation (cf. Lehmann 1995). Moreover, Mauri and Sansò (2018: 13) show that synthetic general extenders can also derive from indefinite pronouns. For instance, in Galo, the marker *jòo* 'what' first develops the meaning 'whatever' and then the meaning "'etcetera; and all that sort of thing; and so on'" (Post 2007: 344–346), as shown in (9).

(9) Galo (Sino-Tibetan)

hottúm-horə́	*ri-kú-nam*	*ri-nam=əəm*
bear-boar	do-CMPL-NML:RLS	do-NML:OBJ=ACC
dó-pàk-là(a)	***jòo-là(a)***	
eat-RES-NF	**and.so.on-NF**	

'All that we in the end produced was eaten up **and all** by wild animals.'
(Post 2007: 345)

This brief cross-linguistic survey shows that once we apply a function-to-form approach, the linguistic constructions used by speakers to exemplify in discourse represent a heterogeneous group, where exemplifying constructions proper (e.g. *for example*) are just one available strategy among many others.

1.5 Object of analysis: Japanese exemplifying constructions

Using the definition proposed in the previous section, we selected four Japanese linguistic markers that perform exemplification: the non-exhaustive connec-

tives *ya*, *tari* and *toka* and the general extender *nado*.[1] Before moving to the description of these markers, some remarks about the reasons behind this selection should be made.[2]

First, the decision not to consider the exemplifying marker *tatoeba* 'for example' might seem controversial. Nevertheless, we decided to exclude this marker for different reasons. At the distributional level, *tatoeba* tends to show fairly homogeneous patterns of usage since it is frequently used to mark reformulation (cf. *paraphrase* in Kaiser et al. 2001: 80) through exemplification. Therefore, *tatoeba* usually occurs after an abstract generalization (often at the initial position of a new utterance or turn) to mark the following element as example. Since our aim is to monitor distributional and structural parameters that may provide insights on categorization processes (e.g. the presence or the absence of a category label), the quite regular behavior of *tatoeba* may create biases. Furthermore, we would like to monitor strategies that do not require a conscious effort from the speaker to link abstract generalizations to concrete instances. In this regard, *tatoeba* suffers from being "too obvious".[3]

Another reason concerns the peculiarities of the selected markers. As already noted in Section 1.1.2, Japanese exhibits exemplifying markers that are cross-linguistically less frequent or even rare (e.g. non-exhaustive connectives), showing more heterogeneous patterns of use (e.g. they do not require an explicit general formulation or category label). Furthermore, we decided to investigate a small set of widespread constructions, rather than taking into consideration a larger group, in order to have comparable amounts of data while avoiding constructions that are too similar (thus creating potential biases in our quantitative analysis). Therefore, we excluded constructions that are attested in descriptive grammars but show low frequency in the corpus.[4] In addition, we also excluded register and style variants. For example, *nanka* and *nante* are often considered

1 Since the main function of these markers is to provide examples (cf. Chino 2001), we will refer to them as 'exemplifying markers'. The term 'exemplifying construction' will be used to make reference to the linguistic construction that comprises the example(s) and the exemplifying marker(s) (e.g. *ringo ya banana nado* 'apples, bananas, and so on').

2 The system of romanization used in this book is the modified Hepburn system (cf. Hasegawa 2015: ch. 4). Long vowels are indicated by macrons (ā, ī, ū, ē, ō).

3 The kanji in *tatoeba* (例えば) is that of *rei* 'example' (例).

4 Information about frequency were gathered through a preliminary corpus-based investigation using the Japanese corpus of the Leipzig Corpora Collection and available quantitative studies on these constructions (cf. Taylor 2010).

colloquial variants of *nado* (cf. Martin 1975: 160).[5] To avoid any potential bias, we decided to investigate only *nado* since our corpus is mainly based on written texts (see Section 2.1).

Taking all these issues into account, we selected four strategies that are widespread, but different from each other at various levels of analysis, that is: 1) type of construction (i.e. non-exhaustive connective, general extender, connective that can also be used as a general extender), 2) type of examples with which they can occur (i.e. noun phrases vs. verbal phrases/clauses), 3) register (i.e. formal register vs. colloquial register), 4) channel of communication (i.e. written language vs. spoken language). Table 1 summarizes the major features of the markers under consideration (C =connective; GE = general extender).

Tab. 1: Japanese exemplifying constructions

	ya	**nado**	**tari**	**toka**
Type of construction	C	GE	C/GE	C/GE
Syntactic level	NP	NP/VP	VP	NP/VP
Register	formal	formal	formal/informal	informal
Channel of communication	written	written	written/spoken	spoken

1.5.1 ya

The Japanese connective *ya* links nouns and noun phrases to specifically encode non-exhaustive listing. In other words, it "implies that the items stated are taken as examples from a larger group of items" (Chino 2001: 41). For instance:

(10) *Watashi no heya ni wa, konpyūtā **ya** sutereo ga*
I GEN room LOC TOP computer YA stereo NOM
oite-arimasu.
place:TE-ASP:POL:NPS
'In my room there is a computer, a stereo, **and such**.'
(Chino 2001: 41)[6]

5 While some studies address the exemplifying function of *nante* (cf. Kinjo 1996), it appears that nowadays it is rarely used for enumeration of examples (Suzuki 1998a: 269).

The connective *ya* is attested only at the nominal level and cannot be used to join verbal phrases or clauses. Being a connective, it cannot be used with only one item, but there must be at least two items. Typically, *ya* does not follow the last element of the list (i.e. X *ya* Y *ya*), but it occurs only between two items (i.e. X *ya* Y, cf. (10)).[7] *Ya* is often used together with the general extender *nado* (see below), in order to reinforce the non-exhaustive meaning.

1.5.2 nado

Nado is a free morpheme that functions as a general extender (cf. Overstreet 1999) to encode non-exhaustivity. Specifically, *nado* occurs immediately after the last example to indicate that "the item(s) mentioned is/are representative samples" (Kaiser et al. 2001: 258), as shown in (11).

(11) *Keiyakusha ni wa udedokei* ***nado*** *o okuru.*
contractor DAT TOP wristwatch NADO ACC give:NPS
'They give wristwatches **and whatnot** to the contracting parties.'
(Kaiser et al. 2001: 258)

Nado cannot be used as a connective to join items, thus it is not repeated after each item of the list. To provide a list of two or more items, *nado* must be used in combination with a non-exhaustive connective, such as *ya*. Otherwise, it can be used alone at the end of a list of juxtaposed items. Contrary to *ya*, *nado* does not have any syntactic restriction and can be used with noun phrases, verbal phrases, and clauses.

1.5.3 tari

The verbal suffix *-tari* is used to join verbal phrases or clauses in order to "mention activities or events just as exemplars, thus leaving room for other things which are left unsaid" (Banno et al. 1999: 215), as shown in (12). Typically, it

6 All the examples taken from Chino (2001), Kaiser et al. (2001) and Shirane (2005) are glossed by the author, since they were not provided by the original source.

7 The occurrence of *ya* after the final element of the list (i.e., A *ya* B *ya*) does not seem ungrammatical, but rather extremely rare. As Martin (1975: 156) noted, "written Japanese also overwhelmingly prefers A *ya* B over A *ya* B *ya*, which is largely limited to set phrases".

indicates a range of actions performed by the same agent, but in some cases, it can also be used with different participants (Alpatov 1997).

(12) *Osaka de kaimono o shi**tari** kankoku-ryoori o*
Osaka LOC shopping ACC do:TARI Korean-meal ACC
*tabe**tari** shimasu.*
eat:TARI do:POL:NPS
'In Osaka, I will do **such things as** shopping and eating Korean food.'
(Banno et al. 1999: 215)

The suffix *tari* is usually treated as a converb (see Haspelmath 1995) since it cannot serve as the root of independent clauses and is not inflected for tense. Nevertheless, it is important to note that *tari* still allows inflection for other verbal categories such as aspect, voice and, in some cases, even mood expressed by bound morphology (e.g. potential mood). Information about tense and the degree of politeness are provided through the dummy verb *suru* 'to do' that tends to follow the last *tari* (Martin 1975). The occurrence of *suru* tends to be less frequent in informal spoken language.

Contrary to *ya*, *tari* can also be used with only one item, functioning as a general extender. More specifically, Ohori (2004: 54) notes that in colloquial speech *tari* can be attached to a single clause, functioning as an utterance-final marker indicating that the event described by the verb is representative of several other events. For instance:

(13) *Tenki no warui hi ni wa, ie de ongaku*
weather GEN bad day DAT TOP home LOC music
*o ki**tari** shimasu.*
ACC listen:TARI do:POL:NPS
'On days when the weather is bad I listen to music **and do other such things** at home.'
(Chino 2001: 108)

Beyond enumeration of examples, the verbal suffix *-tari* can also be used to indicate the discontinuous repetition of two or more (usually opposite) actions during one period of time:

(14) *Nisando* *wakamono* *no* *mae* *o* *it**tari***
two.three.times young.man GEN front ACC go:TARI
*ki**tari*** *shita.*
come:TARI do:PAST
'Two or three times he **came and went** in front of the young man.'
(Alpatov 1997: 393)

Although in Contemporary Japanese *-tari* is not an aspectual marker (Narrog 2012: 147), in some cases its usage as a verbal connective gives rise to aspectual nuances such as iteratively and distributivity (see Alpatov 1997). Since these uses of *-tari* are not linked to the notion of exemplification and are often treated as separate functions, occurrences like (14) will not be considered in our analysis on exemplifying constructions.

1.5.4 toka

The independent morpheme *toka* can be used as a connective to join two or more items (cf. (15)), but also attached to just one item functioning as a general extender (cf. (16)).

(15) *Koohii* ***toka*** *koocha* ***toka*** *iroirona* *mono* *ga*
coffee **TOKA** tea **TOKA** various thing NOM
arimashita.
exist:POL:PAST
'There were various things **such as** coffee and tea.'
(Maynard 1990:106)

(16) *Nihon* *no* *shinbun* ***toka*** *yomu* *no.*
Japanese GEN newspaper **TOKA** read:NPS Q
'Do you read Japanese newspapers **and the like**?'
(Kaiser et al. 2001: 539)

Toka does not exhibit any syntactic restriction and it can be used to join noun phrases, verbal phrases, and clauses. Moreover, it can follow each item of the list (X *toka* Y *toka*), it can be used only between two items (X *toka* Y) and it can also be used only at the end of a list of juxtaposed elements (X Y *toka*).

Toka is widely used in colloquial speech (especially by young people, see Yamamoto 2004). On the contrary, it is hardly used in written language (with

the important exception of the language of the Internet), and even more rare in formal (written) language.

As noted by Taylor (2015: 143), it is likely that the contemporary marker *toka* is derived from two distinct markers (exemplifying *toka* and quotative *toka*) which exhibit different diachronic pathways. Exemplifying *toka* is usually interpreted as the combination of the comitative and conjunctive marker *to* (that is, 'with' but also 'and') and the indefinite/interrogative marker *ka*. Both elements contribute to the overall meaning of the suffix: "since *ka* generally conveys uncertainty and hence the possibility of choice, the composite morpheme *toka* means more than 'and'." (Ohori 2004: 51). On the contrary, quotative *toka* is derived from the quotative marker *to* (as in *to iu* 'to say that'), and it normally functions as a hedge to indicate that the speech may not be verbatim (Ohori 2004: 53; see also Chapter 5). In Contemporary Japanese, the distinction between exemplifying *toka* and quotative *toka* does not seem to be that clear, to the point that some studies (cf. Ohori 2004; Suzuki 1998a) discuss them as different functions of the same maker *toka*. Since the connection between exemplifying constructions and hedging strategies is well attested and worthy of being further investigated, *toka* will be analyzed as a unique maker (at least, at the synchronic level) exhibiting different functions.

2 Data collection and parameters of analysis

In Chapter 1, we adopted a so-called 'top-down approach' (cf. de Haan 2010). We started our analysis by outlining the domain that we wish to examine, namely exemplification (cf. Section 1.2), with a focus on its relationship with categorization processes (cf. Section 1.3). Then, using a functional definition of the phenomenon, we identified a set of constructions in a specific language that can be used by speakers to give examples in discourse (cf. Section 1.5).

Nevertheless, in order to investigate the phenomenon of exemplification without imposing pre-determined notions (e.g. the role of examples as reformulation strategies), we need to reverse our perspective and adopt a bottom-up approach.[8] The analysis will be thus performed by *i*) collecting data on the four Japanese exemplifying construction selected (*ya*, *nado*, *tari* and *toka*), *ii*) examining potential tendencies in the way they are used to make reference to conceptual categories, and *iii*) investigating other emerging functions that appear to have some connection with the notions of exemplification and categorization. In this regard, our ultimate goal is to determine the functional range of these markers, working our way up to the domain level in order to better understand how speakers use exemplification in 'real-life' discourse.

To sum up, the object of our research is twofold. First, we aim to better understand the modalities in which examples can be used to make reference to conceptual categories, using an intra-linguistic and more focused approach than in previous studies on the topic.[9] Secondly, we also aim at sketching the functional space of exemplification, in order to better understand *i*) what types of discursive functions can be achieved when speakers present specific elements as (salient) examples of a larger set of alternatives, *ii*) potential links between exemplification and other linguistic domains. In this regard, the bottom-up approach will lead us to build and piece together several single functional spaces to give rise to a larger one, that represents the domain under examination.

8 De Haan (2010: 103) highlights the differences between these approaches by pointing out that while a top-down approach leads to questions such as "to what category [domain] does linguistic element X belong?", the bottom-up approach leads to questions like "what is semantic range of the linguistic element X?".

9 As noted in Section 1.2 and 1.3, previous studies on exemplification and its relationship with categorization processes have been performed considering a wide range of linguistic strategies beyond exemplification (Mihatsch 2010; Ghezzi 2013) or adopting a cross-linguistic approach (Mauri 2017; Mauri and Sansò 2018).

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2.1 Data selection: The Leipzig Corpora Collection

To investigate the usage and functions of Japanese exemplifying constructions, it is crucial to examine them in large bodies of authentic discourse data. Moreover, since our analysis has a special focus on the construction of reference to contextually relevant categories in discourse, it is also important to have access to the broader context in which these linguistic constructions are used. To address these methodological issues, we decided to adopt a corpus-driven approach using the Japanese corpus of the Leipzig Corpora Collection (LCC).[10] The Leipzig Corpora Collection is a collection of corpora of comparable sources and equivalent processing for more than 250 languages (Goldhahn et al. 2012). It was started during the 1990s at the University of Leipzig, using the World Wide Web as the key source. In our analysis, we used the Japanese corpus labelled "jpn_news_2005-2008", which consists mainly of newspaper texts and some randomly collected web pages from 2005 to 2008. The corpus contains 58.407.729 tokens. In the end, we analyzed 250 occurrences for each Japanese exemplifying construction under analysis (for a total of 1000 occurrences) taken from random samples.

This corpus has been selected for several reasons. First, for each sentence, it provides a clear and easy link to the main source. This allows us to monitor not only the immediate co-text of the exemplifying construction, but also the entire context of the utterance. Secondly, the main sources of the corpus are online newspapers and magazines. As shown in Section 1.2.2, studies on communication have addressed the cognitive value of exemplification in informative discourse (cf. Zillmann and Brosius 2000). Examples have been recognized as essential instruments whenever people need to explain, describe, and inform. For this reason, a corpus based on newspaper articles can be a good starting point for our research. Third, while the corpus mainly consists of newspaper articles, it still exhibits a significant amount of heterogeneity both in style and register. The variety of the texts it contains ranges from more traditional articles written in a formal style (e.g. articles taken from newspapers such as *The Asahi*

10 Corpus linguistics can be defined as "the study of language based on examples of 'real-life' language use" (McEnery and Wilson 1996: 1). The analysis is thus based on contextualized, actual data, rather than on "made-up" data (Meyer 2002: xiii). More specifically, our analysis of Japanese exemplifying markers is performed using a bottom-up, corpus-driven methodology (cf. Tognini-Bonelli 2001). This type of methodology allows us to observe and investigate functions emerging from corpora (Sinclair 2004: 191), without imposing pre-empirical intuitions to the data.

Shimbun), to blog posts written in casual informal style showing characteristics and patterns typical of the speech discourse, to even transcripts of interviews which can be considered as naïve transcriptions of spoken language. This large variety in style and register allows us to investigate exemplifying constructions in different communicative situations.

On the other hand, the variety of topics discussed in the corpus is not as large. While it is possible to find articles discussing all sorts of issues (from banking experts advising on mortgages, to schoolgirls describing their dating history), most texts focus on computer science and technological devices. Although this can constitute a bias in the internal variation of the corpus, we believe that it is (at least partially) minimized by the variation in styles and registers. For instance, in our corpus, there are several reviews of technological devices. While some of them can be considered as standard newspaper article written in a formal register, others are much more informal, showing speech patterns as if the author is having a conversation with the reader. In this regard, it is noteworthy that register and style can be considered as the major factors in determining different patterns of usage and functions. This fact is backed up for instance by the quantitative study of Taylor (2010) on some Japanese exemplifying constructions (i.e., *nado, toka* and *tari*), in which she notes that the higher variation in usage and functions is triggered by different styles and registers (e.g., spoken language vs. written language, formal language vs. informal language, private conversations vs. public conversations), rather than by topic variation.

Finally, we selected this corpus also for future research purposes. We believe that this study on Japanese exemplifying constructions is just a first step towards a more comprehensive study on exemplification. In particular, further investigation on the functional space of exemplification should be carried out also on other languages. Therefore, the usage of a corpus which is part of a collection of comparable corpora may provide a good starting point for future (comparable) research.

2.2 Parameter of analysis

Each occurrence of the corpus data is examined on the basis of several parameters comprising morphosyntactic, distributional, and textual features of the exemplifying construction and its broader co-text. Some parameters are selected in order to examine different important aspects of the reference to conceptual categories through exemplification (e.g. the presence of a category label, the syntactic properties of labels and example). Other parameters are selected in

order to identify different functions that may be performed by exemplifying constructions, such as the modality of the utterance (i.e. *realis* vs. *irrealis*) and the topic continuity of categories and examples. In the following sections, the parameters of analysis are illustrated and explained in detail. For clarity purposes, the parameters will be described using mainly invented examples from English. However, when parameters are related to language-specific issues, examples form Japanese will be used.

2.2.1 Category label

Generally speaking, a category label (or category name) is a word or a linguistic expression through which people make specific reference to a conceptual category. Unfortunately, much of the existing literature is quite vague in providing a concrete working definition of category label, merely describing it as a word or short expression associated with a stable cognitive representation, that is, the category (cf. for instance Rosch 1975; Channell 1994; Taylor 1995; Overstreet 1999). This characterization is not enough to distinguish instances of category labels from instances that should not be considered as such. Therefore, it is crucial to establish a much more precise working definition.

In our analysis, a given linguistic expression will be considered as a category label if 1) it designates a set to which the explicit exemplars can be traced back,[11] and 2) it provides some semantic clue towards identification of the defining property of the category. This definition excludes placeholders such as *things* because they do not provide any semantic specification regarding the property shared by the category members. Consider the following examples.

(17) a. *My house is full of **things** like trousers, shirts, skirts and so on.*
b. *I like to collect **fancy clothes**. My house is full of trousers, shirts, skirts and so on.*
c. *I like **shopping**. My house is full of trousers, shirts, skirts and so on.*

11 The designation of a set is sometimes tricky to define. Since in Japanese, typically common nouns are not marked by number, we rely on the context (e.g. words such as *various*, *all*, *many*, etc.) and the presence itself of the example(s) to infer the reference to a set. We also decided to consider as category labels specific situations in which the examples can be clearly considered as (sub-)types of the referent denoted by the category label (especially when this relationship is overtly expressed by words such as *like*, *including*, *such as*, etc.), thus relying on the relationship of inclusion typical of hyponyms and hypernyms.

In (17a), the word *things* indicates a set of elements, but it is overly general to provide any useful semantic clue about the defining feature of the category. Therefore, according to our definition of the term, words like *things* are not proper labels, but just placeholders.[12] Consequently, Japanese words *koto* 'things' and *mono* 'stuff, things' are not considered as category labels.[13] On the other hand, in (17b) not only does the expression *fancy clothes* imply the presence of a set, but it also encodes the defining property shared by all category members (including the mentioned examples). Finally, in (17c), the word *shopping* does provide some semantic clue about the category, however it does not codify the existence of a set and the examples cannot be considered sub-types of it. For this reason, we do not consider this type of words or expressions as category labels.[14]

In the analysis of category labels, we also exclude lexical items that can be used to indicate sets of events but are too general to really provide actual semantic information. For instance, in Japanese, words like *toki* 'times', *kēsu* 'cases', *baai* 'situations' are often used in the place of category labels.[15] However, for the purpose of our analysis, they are not considered category labels because 1) they are too general, and 2) they usually signal that the category members should be considered as *cases* or *situations*, that is, alternatives that may happen in different situations, without specifying the kind of times/cases they are.

Placeholders can be considered proper labels as long as they are further specified by means of one or more linguistic adjuncts.

(18) a. *Things like hiking and climbing*.
b. *Things to do during a trip on the mountain, like hiking and climbing*.

12 It is noteworthy that in some languages, unspecific terms like *things* crystallized into analytical general extenders (e.g. *and things like that* in English, *e cose così* in Italian) expressing non-exhaustivity.

13 Although *mono* 'stuff, things' is frequently used to designate concrete things (contrary to *koto*, whose referent is much broader), it is still too underspecified to be considered a 'proper' category label.

14 Even though words like *shopping* cannot be considered as category labels according to our definition, it is indisputable that they do provide semantic information about the category. For this reason, they have been monitored as well. This type of elements will be discussed in depth in Section 4.5.

15 It should be noted that sometimes these elements can be used to introduce temporal subordinate clauses (i.e. they can be translated in English as *when*).

In (18a), the word *things* is not a label, but a placeholder. However, in (18b) *things to do during a trip on the mountain* can be considered as a proper category label.

2.2.1.1 Presence of the category label

This parameter distinguishes between *lexicalized* and *non-lexicalized* categories. The former is characterized by the presence of an explicit category label in addition to the examples as shown in (19a). The latter is characterized by its absence as shown in (19b).

(19) a. *Small animals such as dogs, rabbits and so on.*
b. *Dogs, rabbits, and so on.*

In the case of non-lexicalized categories, the defining property of the category needs to be inferred from the situational context and from the semantic properties of the mentioned examples. On the contrary, when a category label is provided, the property is lexicalized (at partially) through the label itself.[16]

(20) *Relaxing drinks such as water, herbal teas, smoothies and such.*

In (20), the label indicates that the speaker is making reference to drinks that help people to relax. Therefore, the hearer can exclude other types of drinks, such as coffee or soft drinks with caffeine.

Moreover, as noted in the previous section, we consider as non-lexicalized categories those occurrences in which the label consists only of a placeholder (cf. (21a)), and as lexicalized categories those occurrences in which the label consists of a placeholder attached to other linguistic adjuncts (cf. (21b)).

(21) a. *Things like hiking and climbing.* [non-lexicalized category]
b. *Things to do during a trip on the mountain, like hiking and climbing.* [lexicalized category]

16 As will be made clear in Section 3.2.1, the presence of a category label does not exclude the necessity of inferential enrichment, because, in some cases, the property may be only partially lexicalized. Therefore, while the category label represents an important clue to correctly identify the property shared by category members, the key role of the context cannot be excluded completely.

2.2.1.2 Syntactic properties of labels

Category labels are examined on the basis of their syntactic properties. As already noted, category labels are usually described as short conventional linguistic means, such as general simple nouns (e.g., *fruit*, *furniture*) or short phrases (e.g., *alcoholic drinks*), without a specific analysis of their syntactic properties. Nevertheless, the conceptualization of ad hoc categories brings along the possibility of using complex expressions as labels to designate contextually relevant categories. In fact, despite being often studied as instances of non-lexicalized categories (cf. Channell 1994; Overstreet 1999), ad hoc categories can still be designated by means of linguistic expressions, which usually consist of nonspecific superordinate nouns (e.g. *things*) and infinite purpose clauses (*to do X*), such as in *things to take on a camping trip* (cf. Overstreet 1999: 42).

Starting from the definition formulated in the previous sections (which is deliberately unspecified with regard to the syntactic parameter), any instance of category label is examined on the basis of its syntactic structure. First, we will distinguish between category labels encoded by a single noun (22a) and category labels encoded by a noun phrase. The latter is further subdivided into several types depending on the type of adjunct(s) added to the simple noun, for instance: 1) noun phrases containing adjectives (cf. (22b)); 2) compounds (cf. (22c)); 3) noun phrases containing genitive clauses (cf. (22d)); 4) noun phrases containing relative clauses (cf. (22e)); 5) noun phrases encompassing two or more adjuncts (cf. (22f)).

(22) a. ***Animals**, such as rabbits.*
b. ***Small animals**, such as rabbits.*
c. ***Farm animals**, such as rabbits.*
d. ***Animals of the Chinese zodiac**, such as the rabbit.*
e. ***Animals that live in countryside**, such as rabbits.*
f. ***Small animals that live in countryside**, such as rabbits.*

2.2.1.3 Semantic properties of the label

Category labels are examined also on the basis of their semantic properties. Specifically, we will try to determine whether their reference is general or specific with respects to the members of the category. This parameter will help us understand whether speakers tend to use very specific label to designate their target category or rather general labels that need to be interpreted through the context.

This parameter relies on the semantic notion of hyponymy (cf. Lyons 1968; Cruse 1986). In semantics, hyponymy is a relation of inclusion where X is defined as a kind or type of Y. For example, "the meaning of *tulip* is said to be 'included' in the meaning of *flower*" (Lyons 1968: 453). This semantic relation can also be interpreted from the point of view of categorization, by saying that a word such as *flower(s)* can be seen as a label (or name) for a category that encompasses members such as *tulip*, *roses* and so on.

This semantic relation has been organized and examined by means of semantic taxonomy hierarchies (cf. Cruse 1986). In order to understand what we mean with 'general label' and 'specific label', let us consider one of the hierarchies provided by Cruse (1986: 136). If a speaker wants to designate the category whose members are 'Spaniel' and 'Alsatian', the more specific label (i.e. the more characterizing) would be *dogs*, while the label *animals* would be considered general, and *creatures* even more general. Therefore, we argue that the more specific label is the one on the (hypothetical) immediately higher level (e.g. *dogs*, or *flowers* in the previous example). On the contrary, moving higher up the hierarchy, labels become more general and inclusive (i.e. *animals* is more general than *dogs* but still more specific than *creatures*), encompassing more heterogeneous groups of items. This specificity of the daughter-nodes with respect to mother-nodes is given by the relation of inclusion: "we may say that the meaning (sense) of *apple* is richer than that of *fruit* and includes, or contains within it, the meaning of *fruit*" (Cruse 2000:150–151).

Ideally, speakers should use specific labels that make precise reference to the target category, therefore, the label positioned in the immediately higher level than the category members. However, this immediately higher level is not always available since a specific superordinate noun may do not exist in a particular language. For instance, in English, there is no superordinate noun that functions as a label for the category of pieces of furniture on which people can sit, like *seat*, *armchair* and so on. Therefore, to cover this gap, the speaker can decide to 1) create a syntactically complex label, starting from a more general label and then adding one or more linguistic adjuncts (e.g. *furniture on which people can sit)* or 2) use the "nearest" label available and then specify it through one or more examples. In the first case, the label is specific and syntactically complex, while, in the second case, the label is general but syntactically "simple".

It is noteworthy that the general-specific relation is relative and not absolute, because it is determined by the members of the category. Consider the following examples:

(23) a. ***Animals*** *such as alsatians and spaniels.*
b. ***Animals*** *such as dogs and elephants.*

The noun *animals* should be considered as a general label when it is used to designate a category encompassing members such as *spaniels* and *alsatians*. Yet, it should be considered as a specific label when it refers to a category covering *dogs* and *elephants*. Therefore, unlike the syntactic parameter, the analysis of the semantic properties of category labels is always performed taking into consideration the mentioned examples.

The investigation of the syntactic and semantic properties of category labels would allow us 1) to better understand how speakers lexicalize (i.e. create and use category labels) categories in discourse, and 2) to identify possible tendencies in the use of category labels with regard to the type of categories (i.e. categories of things or categories of states of affairs, cf. Section 2.2.2.1).

2.2.1.4 Position of the category label

Category labels are examined on the basis of their position inside the utterance, with respect to the examples. Specifically, the label can be part of the exemplifying construction, that is, directly linked to the example(s) by means of some linguistic connectors (e.g. *toitta*, cf. the label *shōdōbutsu* 'small animals' in (24)) or it can occur before or after the examples without being directly connected to them (cf. the label *kyōyu-bu* 'common areas' in (25)).

(24) *tanuki* *ya* *itachi* *toitta* ***shōdōbutsu***
racoon YA weasel such.as **small.animal**
'**small animals** such as racoon and weasel'

(25) *Kono* *tatemono* *wa* ***kyōyū-bu*** *ga* *nai* *deshō.*
this building TOP **share-area** NOM NEG COP:MOD
Tatoeba *kyōyō* *no* *entoransuhōru* *toka*
for.example common DET entrance.hall TOKA
'This building has no **common areas**. For example, a common entrance hall'

It is important to note that, in our analysis, this parameter is strictly related to the presence of a linguistic connector joining together the label and the example(s). For this reason, we consider instances like (26) separately:

(26) *Blockbuster ya eBay **nado,** iroirona kyōryoku saito*
Blockbuster YA eBay **NADO,** various collaboration website
'various partner websites, such as Blockbuster and eBay'

Although sometimes *nado* can be used as a connector (cf. Section 3.4), in (26) there is a pause, that is, a comma between *nado* and the label. Because of the comma, we cannot automatically assume that the label and the examples are part of the same construction and that *nado* functions as the linguistic connector. Therefore, we decide to monitor this type of construction by annotating the use of the comma.

2.2.1.5 Linguistic links between label and example(s)

Whenever a category label is directly linked to the example(s), there must be some sort of linguistic marker that encodes the relationship between the two components of the construction. In our analysis, we will monitor and investigate linguistic constructions that express the semantic relation 'X is an example of Y', or more generally, 'X is included in Y'. For instance, let us consider the following example from Japanese:

(27) *saru ya kitsune ya inu toitta dōbutsu*
monkey YA fox YA dog such.as animals
'animals such as monkeys, foxes, dogs, and so on.'

In (27), *toitta* 'such as' is used to connect the category label *dōbutsu* '*animals*' to the examples (i.e. *saru* 'monkeys', *kitsune* 'foxes', *inu* 'dogs').

Linguistic constructions expressing hyponymy have been thoughtfully studied by semanticists. For instance, Cruse (1986: 137) notes that "[a] useful diagnostic frame for taxonymy is: An X is a kind/type of Y". Thus, X is a hyponym of Y, like in *a rose is a type of flower*. From the perspective of categorization, X is an exemplar of Y, and Y is the label of the category that encompasses exemplar like X. The same linguistic structure has been studied by Lyons (1977: 292–293). Furthermore, language-specific studies have investigated the range of formulations that can be used by speakers to indicate hyponymy (see Hearst 1992; Pearson 1996; Borillo 1996).

In our analysis, we will follow a bottom-up corpus-driven approach: we will investigate those linguistic constructions that are attested in our corpus, discussing potential patterns of functional extension. Our aim is to sketch a preliminary typological survey of these linguistic constructions while analyzing the intra-linguistic variation as it is attested in our corpus data.

2.2.2 Examples

2.2.2.1 Syntactic and semantic properties of the examples

Being interpreted as category members, examples are important clues to understand the type of category the speaker wants to designate. Theoretically speaking, individuals can categorize any sort of entities: objects (cf. (28a)), properties (cf. (28b)), activities (cf. (28c)), etcetera.

(28) a. *I always bring with me a [book or magazine or something].*
b. *He is very [shy and modest and the likes].*
c. *You can [read a book, watch a movie or something].*

Despite this, for many decades, in cognitive psychology the primary focus has been the representation of (concrete) objects (see for instance Rosch 1973; Rosch et al. 1976; Murphy 2002). Comparatively less attention has been given to the categorization of events (cf. Majid et al. 2008) or properties. In order to monitor potential tendencies in the types of conceptual categories speakers construe through exemplification, the linguistic properties of the examples will be investigated.

First, the syntactic properties of the examples are considered, distinguishes between instances of examples encoded by 1) noun phases, 2) verbal phrases and clauses,[17] 3) adjectives.[18] We will also monitor possible cases where the examples occurring in the same exemplifying construction are encoded differently.[19] Syntactic properties are a first clue to investigate the type of category the

17 In the analysis, verbal phrases and clauses are considered together because they both encode the predication of a state of affair (e.g. action, event, state, etcetera).

18 Japanese has two types of adjectives: verbal adjectives and nominal adjectives (see Iwasaki 2013: 61-63; Hasegawa 2014: 65-67) Verbal adjectives (or *i*-adjectives) conjugate like verbs and can be identified by the final *-i* in their dictionary form (e.g. *omoshiro-i* 'interesting'). Nominal adjectives (or *na*-adjectives) are morphologically like nouns. They require the suffix *-na* (derived from the copula) to be inserted before the noun (e.g. *kirei-na hana* 'lovely flower'). Moreover, being like nouns, they cannot be inflected and need the copula to become a predicate. For the purpose of the analysis, verbal adjectives and nominal adjectives are analyzed as adjectives whenever they are used attributively and predicatively. However, if the example comprises both a subject and a predicative adjective (e.g. *hon ga omoshiro-i* 'the book is interesting'), the example is considered a clause.

19 In the analysis, the entire exemplifying construction (which may encompass one or more examples) is considered. Therefore, for instance, an exemplifying construction that includes three NP examples is counted as one instance of examples encoded by noun phrases and not as

speaker wants to designate, because 'prototypical' nouns tend to encode the reference to an object or thing, 'prototypical' verbs tend to encode the predication of a state of affairs, and 'prototypical' adjectives tend to encode the modification by a property (cf. Croft 1991; Givón 2001).[20]

Beyond syntactic properties, in order to further investigate the nature of conceptual categories, the semantic-pragmatic properties of the examples will be considered as well. We use the expression 'semantic-pragmatic properties' because in our analysis we do not examine the inherent semantic properties of the words used as examples in isolation, but the reading (cf. Ariel and Mauri 2018) that examples have in a specific exemplifying construction and in a specific context. By their own nature, examples do not have an independent and discourse relevant reference (Mauri 2017), since their only purpose is to represent the larger set to which they belong in a given situation. For this reason, their actual meaning cannot be examined without considering co-textual and contextual information. In this regard, our analysis assigns a great role to context in shaping meaning (cf. Sperber and Wilson 1986; Levinson 2000; Récanati 2004; Wilson and Carston 2007), to the extent that "the meaning of words is adjusted or 'modulated' so as to fit what is being talked about" (Récanati 2004: 131). For instance, in a sentence like

(29) *Dean and Jen used to have a drink on Saturday night.*

the word 'drink' undergoes a process known as *lexical narrowing*, which "involves the use of a word to convey a more specific sense than the encoded one, with a more restricted denotation" (Wilson and Carston 2007: 6). In other words, the hearer tends to consider the linguistically encoded word meaning as no more than a clue to the speaker's actual meaning (Wilson 2003: 283).

A similar approach to meaning can also be found in cognitive linguistics. Croft and Cruse (2004: 97–98) refer to this as 'dynamic construal of meaning', stating that:

three separate instances. The reason for this is to avoid potential biases created by long list of examples, which may give the impression that a specific syntactic pattern is much more frequent than it actually is.

20 The term 'state of affairs' is here used as a hypernym for the words 'process', 'action', 'event' and 'situation' (see Dik 1997: 105; Van Valin 2006: 82-89).

> meanings are something that we construe, using the properties of linguistic elements as partial clues, alongside non-linguistic knowledge, information available from context, knowledge and conjectures regarding the state of mind of hearers and so on.
>
> (Croft and Cruse 2004: 98)

We argue that when linguistic elements are used as examples, they are subject to construal, in the sense that their actual meaning is construed on the basis of the other examples and the broader context. Consider the following exemplifying constructions in the context of 'killing time':

(30) a. *for example books, magazines or something like that*
b. *for example books, playing videogames or something like that*

The lexical meaning of the second item ('magazines' in the first case and 'playing videogames' in the second) determines the interpretation assigned to 'books'. In the first case, the word 'books' makes reference to a concrete object. However, in second case, the word 'books' functions as a sort of meronym of the act of reading books, since 'books' is to be construed as a salient part of a larger process (cf. Croft and Cruse 2004: 159). It follows that, while in (30a) the exemplifying construction refers to a broader category of objects that are commonly used to kill time, in (30b), it refers to a category of possible ways (in the sense of actions) to kill time.

Considering the above, we will examine each instance of exemplifying construction in its entirety, assigning a specific value on the basis of the overall nature of category members. Since the analysis does not focus on the inherent semantic properties of the single words taken as examples, we will not use the classification of lexical semantics. Instead, we will use different cognitive-motivated distinctions. First, we distinguish between 1) things, 2) states of affairs and 3) properties (cf. Croft 1991). On the basis of the parameters of concreteness and animacy, we further distinguish between 1) abstract things, 2) concrete inanimate things, 3) concrete animate things. Therefore, for instance, occurrences like (30a) would be analyzed as 'concrete inanimate things', but occurrences like (30b) would be analyzed as 'states of affairs', regardless of the syntactic properties of each example included in the exemplifying construction.

The distinction between abstract and concrete things is made considering features that can be useful for categorizing elements, namely 1) temporality and spatiality (cf. Givón 2001: 56) and 2) the ability to be perceived using one of the five senses. Abstract things (e.g. 'peace', 'dream', 'courage') exist neither in time nor in space and cannot be perceived using one of the five senses. Concrete things (e.g. 'bottle', 'tree', 'woman') exist in both space and time and can be

identified through one of the five senses. We are well aware that the distinction between abstract and concrete is a difficult one to apply, when we consider not only prototypical entities, but also borderline cases. Nevertheless, we also believe that this is the only realistic parameter that can be used to understand the variety of categories created by speakers.

Considering the type of category and the syntactic encoding of the category separately allows also to identify potential tendencies in the way speakers linguistically construe exemplifying constructions. As already noted, prototypically, nouns encode the reference to an entity, verbs encode the predication of a state of affairs, and adjectives encode the modification by a property. Nevertheless, other combinations are possible as well, for instance speakers can use nouns to encode the reference to a state of affairs (i.e. verbal nouns). As pointed out by different scholars (cf. Croft 1991; Langacker 1987a, 1987b, 1991b; Givón 2001), the choice of encoding concepts in a marked way influences how language users process those concepts. This can be explained using a typological universal that Croft (1991) calls *behavior potential*. The universal states that the range of grammatical behavior of unmarked combinations is at least as wide as (if not wider than) that of marked combinations. The consequence is that the behavior of marked combinations is often impoverished compared to that of unmarked combinations. For instance, when properties or states of affairs are encoded by nouns rather than by adjectives and verbs, they lose their reference to their gradable nature (in the case of properties) or to the distribution through time (e.g. aspect and tense, in case of states of affairs). This intrinsically affects the way people elaborate these words (cf. Langacker 1991b). Since speakers can decide to encode exemplifying constructions in different ways, we monitor instances of unmarked (cf. (31a)) and marked (cf. (31b)) encoding which may be related to the process itself of construing and communicating conceptual categories.

(31) a. Categories of states of affairs encoded by verbs
If you need to relax, you can [sleep, drink a tea or something similar].
b. Categories of states of affairs encoded by nouns
[Smoking, drinking and so on] are bad habits.

2.2.2.2 Number of examples

In the analysis, the number of examples mentioned by the speaker is also considered. Specifically, we monitor whether the speaker provides one single example (cf. (32a)) or a list of two, three or more examples (cf. (32b)).

(32) a. One example
I need to buy [milk and stuff].
b. List of examples (two or more)
I need to buy [milk, flower, eggs and stuff].

Although there are no structural constrains[21] on the number of examples a speaker can provide in discourse, there are several reasons for monitoring this parameter. Examples need to be compared to each other in order to infer their common property (cf. associative reasoning in Section 1.3.3) and thus the category they represent. Therefore, the number of examples provided has some consequences in the way the categorization process is performed. For instance, if the speaker provides only one example, the hearer is forced to infer the property by comparing the example to the multi-dimensional context in order to understand why it is relevant in the given situation. This process may require a greater cognitive effort showing consequences also on the encoding of the examples. Moreover, since comparison is a dynamic process (cf. Perelman and Olbrechts-Tyteca 1969: 354), whenever new examples are provided, not only should they be interpreted in the light of those previously mentioned, but they also adjust the reference generated by the other examples. It follows that the inference of the common property is a complex process which can be influenced by the number of examples provided by the speaker.

Finally, while there are no actual structural constrains on the number of examples, it is also true that communication is ordered by a principle of linguistic economy, which can be described as a tendency towards the minimum amount of effort that is necessary to reach the maximum result. Therefore, we may wonder whether there exists a number of examples beyond which the further mention of category members is considered as a "cognitive waste".

2.2.3 Utterance

2.2.3.1 Mood and modality

Modal verb forms and modality elements are monitored, since they can be clues to instances of exemplification used as hedging devices. In particular, we focus

21 As noted in Section 1.5.1, *ya* is the only strategy under examination that exhibits a structural constrain on the number of items, which should be at least two. Nevertheless, this is not a universal constrain of exemplification: all other strategies can be used also with only one example, and therefore does not invalidate our statement.

on the *reality value* of a given utterance. Following Elliot (2000: 66), a proposition is said to be realis when it asserts that a state of affairs is an "actualized or certain fact of reality". On the contrary, a proposition is said to be irrealis when it "implies an event belongs to the realm of the imagined or hypothetical, and as such it constitutes a potential or possible event, but it is not an observable fact of reality" (Elliot 2000: 67).

In our analysis, we will mainly focus on the irrealis value, which is linked to "the domains of imagination, possibility, wish, interrogation, necessity, obligation and so on" (Mauri 2008: 171). The irrealis value can thus be used not only to describe a certain event as not having taken place, but also when the speaker is not sure about its actual occurrence. For this very reason (cf. Fraser 1975, 2010), epistemic contexts frequently co-occur with pragmatic functions such as hedging, since the speaker is likely compelled to reduce her commitment, as shown in (33).

(33) *I guess I can chop them up or something.*

Similarly, in deontic contexts, the speaker might be compelled to attenuate the illocutionary force of her utterance to sound less direct. Therefore, we monitor the use of overt irrealis markers (e.g. verbal forms) encoding possibility, future, uncertainty, question, or similar domains.

It should be noted that irrealis contexts do not always imply pragmatic functions. This is just a probable correlation that should be confirmed by means of other parameters (e.g. topic continuity, cf. Section 2.2.3.2). Exemplifying constructions can be used in irrealis contexts also to create categories of possible alternatives. The correlation between irrealis and disjunction relates to the fact that alternatives are conceptualized as equivalent, mutually replaceable possibilities. As noted by Mauri (2008: 180), "[u]ntil a choice is made or the speaker gets to know which hypothesis is realized at that given time, either [alternative] could be the non-occurring one and is therefore conceptualized as irrealis".[22]

2.2.3.2 Topic continuity in discourse: categories and examples

As already noted in Section 2.2.2.1, when examples are used to make reference to conceptual categories, they do not have an independent and discourse-

22 Unsurprisingly, in some languages, irrealis markers are used to codify alternative relations. For instance, in Japanese, the marker encoding exhaustive disjunction *ka* is also the interrogative marker (cf. Chino 2001: 45).

relevant reference. Therefore, it is likely that they are not the main topic of the discourse (whereas the category can be). In contrast, when examples are presented as particularly salient to achieve other functions (e.g. hedging), they do have independent reference and they can be the main topic of the discourse.

At the discourse level, we rely on the notion of *reference-tracking* (Foley and Van Valin 1984; Comrie 1989), which relates to the speaker's ability to track entities from one clause to the following clauses in an on-going discourse. In the analysis, we consider the topic continuity (Givón 1983) of categories and examples, distinguishing between cases in which the category is or becomes the topic of discourse and stays active through the subsequent text, and cases in which specific examples are selected as topic. To achieve this, we also monitor the use of words that semantically correspond to the main semantic field of the co-text in which the exemplifying constructions occur. For instance:

(34) *She got pregnant, so she had to start eating for the baby. She ate very healthy, except on weekends she would sometimes indulge a little on* ***cookies or pizza or something****. Now that she's had the baby, she is a lot bigger than she wants to be and hardly eats again.*
(enTenTen13)

In (34), the speaker mentions two examples: 1) cookies, 2) pizza. Examining the co-text, it appears that they do not have independent reference, but they are used only to make reference to the category NON-HEALTHY FOODS THAT SHE STILL EATS FROM TIME TO TIME. For instance, we can identify many occurrences of the lexeme 'eat' (i.e. *eating for the baby, ate very healthy, hardly eats again*), which is the actual main thematic field of the text, since the speaker is comparing the eating habits of the woman before and after her pregnancy. Moreover, he makes explicit reference to the opposite notion to the one expressed by the category (*she ate very healthy* vs. *she would sometimes indulge a little on cookies or pizza or something*). In this case, the speaker wants to focus only on the category, and he manifests further his intention by coming back to the domain of 'eating' the at the end of the utterance (e.g. *and hardly eats again*). Therefore, this occurrence can be classified as an instance of exemplifying construction used to make reference to a conceptual category.

In other cases, topic continuity suggests a different picture:

(35) Elise: *Oh, the usual. Um, so, do you want to go to* ***dinner or something*** *sometime?*
Tom: *Um... sure.*
Elise: *Great! Where do you want to go?*
Tom: *I don't know. Where do you like to eat?*
(enTenTen13)

Elise provides one example, namely *dinner* (*or something*). Despite being presented as an example of a larger set, *dinner* is the actual topic of the subsequent text, in which the two speakers discuss where to eat. Therefore, even if Elise uses exemplification, her actual purpose is to perform some other communicative functions (e.g. making her suggestion less direct). This type of occurrences will be investigated further in Chapter 5.

2.2.3.3 Position of the exemplifying construction

The position of the exemplifying construction in the utterance is monitored in order to investigate the discourse function performed by exemplification. This parameter is mainly language-specific, although other studies on exemplification have pointed out that different positions in the utterance may correlate with different discursive functions (see Ghezzi 2013). Specifically, regarding Japanese, Taylor (2010, 2015) notes that whenever the scope of Japanese exemplifying constructions is not limited to noun phrases or verbal phrases, but it is extended to the entire utterance, their function is likely hedging. This conclusion is backed up by the fact that many Japanese markers (e.g. *kedo* 'but', *kara* 'because') can produce pragmatic effects when they are used in utterance-final position, mitigating the speaker's assertion, especially in spoken language (Maynard 1989, Iwasaki 1993, Iguchi 1998). For instance, consider the following utterance:

(36) *kaichuu-dentoo toka ne? Ato rajio toka mottari toka.*
flashlight TOKA PP and radio TOKA hold:TARI TOKA
'also taking something like flashing or radio TOKA'
(Taylor 2010: 136)

Taylor (2010) notes that while the first two *toka* are used to mark 'flashlight' and 'radio' as examples and thus to communicate a category of similar objects, the third token of *toka* is used to hedge the assertiveness of the entire utterance.

Since we are adopting an approach that avoids imposing pre-existent theoretical definitions, we will monitor this parameter without assuming *a priori* a

strong connection between the position and the function of the exemplifying construction.

2.2.3.4 Types of speech acts

Generally speaking, a speech act is an utterance that has a performative function (cf. Austin 1962) in communication. In *How to Do Things With Words*, Austin outlines the theory of speech-acts and the concept of performative language, according to which "to say something is to do something" (1962: 94). Speech acts can be analyzed at different levels, but in our analysis, we mainly focus on illocutionary acts, "such as informing, ordering, warning, undertaking, etc., i.e. utterances which have a certain (conventional) force" (1962: 109).[23] Searle and Vanderveken (1985: 109) note that an illocutionary act is characterized by a propositional content and particular illocutionary force, that is, the speaker's intention in producing that utterance (e.g. asserting, promising, inquiring, ordering, etc.). For example, if we compare the two utterances *You will leave the room* and *Leave the room!*, they have the same propositional content, but the former has the illocutionary force of a prediction and the latter has the illocutionary force of an order.

The notion of illocutionary force has often been linked to that of hedging, in the sense that, in certain situations, speakers might feel the need to attenuate their illocution in order to avoid face-threatening situations (Brown and Levinson 1987; Fraser 2010). This connection will be further discussed in Chapter 5, but for now we should consider two factors: 1) some linguistic markers can assume pragmatic functions whenever are used in face-threatening situations, such as directive acts (Fraser 1975; Brown and Levinson 1987); and 2) as suggested by Erman (2001: 1341), strategies that imply a vague categorization (such as exemplifying constructions) can have a face-saving function. For instance, consider again the example (35), repeated here as (37):

23 Beyond illocutionary acts, other levels are 1) locutionary act, which is "roughly equivalent to uttering a certain sentence with a certain sense and reference" (Austin 1962: 109), and, in certain cases, 2) a perlocutionary act, that is, "what we bring about or achieve *by* saying something, such as convincing, persuading, deterring, and even, say, surprising or misleading" (Austin 1962: 108).

(37) Elise: *Oh, the usual. Um, so, do you want to go to* ***dinner or something*** *sometime?*
Tom: *Um... sure.*
Elise: *Great! Where do you want to go?*
Tom: *I don't know. Where do you like to eat?*
(enTenTen13)

Examining the topic continuity, we have already established that the topic of discourse is not a conceptual category, but the mentioned example *dinner*. Now, we should also note that Elise is performing a specific type of illocutionary act, namely a request. Thus, she likely feels compelled to attenuate the illocutionary force of her utterance (cf. also the use of a question). Thus, we classify this occurrence as an instance of exemplifying construction used as hedging strategy (cf. Chapter 5).

It is noteworthy that, similarly to irrealis contexts, specific speech acts do not always imply pragmatic functions. For instance:

(38) *The fridge is empty. Buy a* ***pizza or something****.*

In (38), although the speaker performs a directive act, the exemplifying construction is used to designate the conceptual category TAKE AWAY FOOD (as confirmed by the topic continuity, i.e. *The fridge is empty*), and not to hedge the illocutionary force of the order.

2.2.4 Context

The final parameter is the context of the exemplifying construction. Since one of the main goals of the study is to examine how speakers create the reference to conceptual categories in discourse, the analysis of the context inevitably plays an important part. As noted in Section 1.3, the access to the situational context is pivotal to correctly construe the category. In this regard, we need to investigate how the context can influence and direct the categorization process. Some studies on the topic have already been conducted, both at the pure cognitive level (e.g. Barsalou 1983, 2010) and at the linguistic level (cf. Croft and Cruse 2004; Wilson and Carston 2007; Carston 2010). Nevertheless, we believe that a more focused investigation on the role of context in exemplification may add further insights regarding the relation between cognition and language.

To achieve this, a working definition of *context* is needed. First of all, the context should not be considered as an inert setting for cognitive and linguistic processes, but as a multi-dimensional element consisting of different components, such as shared knowledge and interpersonal relations. Following the taxonomy proposed by Croft and Cruse (2004: 102-103), we can distinguish four types of context: 1) *linguistic context*, which includes previous discourse, immediate linguistic environment, and the type of speech; 2) *physical context*, which includes those elements that participants can see, hear and so on, in their immediate surroundings; 3) *social context*, which includes the (social) relations between the participants; and 4) *stored knowledge*, which regards that "background of a vast store of remembered experiences and knowledge, which is capable of affecting the likelihood of particular construals" (Croft and Cruse 2004: 103), and therefore it includes information related to the participants and their background. All these dimensions of the notion *context* can effectively influence the elaboration of the examples and thus the inferential processes. Given the nature of our analysis, we will focus on the first type of context, namely the linguistic context. In the end, the aim is to understand whether there are clues in the linguistic context that may influence the way categories are created in discourse.

3 Exemplification of lexicalized categories

3.1 The notion of lexicalized category

Traditional theories of categorization conceptualized a constant mental representation underlying each category in order to explain the stability of cognition, that is the ability to perform "the same cognitive act over and over despite varying local circumstances" (Smith and Samuelson 1997: 161). This notion of stability seems to have an impact also on the modality in which these categories are linguistically codified: stable categories can be encoded by short conventional lexical items (e.g. 'birds', 'fruit'), which are known as the labels or names of the categories. To describe this linguistic feature of common stable categories, Overstreet (1999: 42) introduces the notion of *lexicalized category*, in opposition to *nonlexicalized category* which in turn refers to those categories that do not come with ready-made linguistic labels (e.g. ad hoc and goal-derived categories). The assumption behind this distinction is that there is no need to use other linguistic strategies, such as exemplification strategies, to make reference to a stable lexicalized category, because the speaker can easily and more precisely refer to it by its name. However, this model exhibits some shortcomings addressing the existence of categories lacking a specific label but having a stable conceptual reality. This case encompasses some grey areas between the notion of *common categories* and other types of *non-stable non-lexicalized* categories.

In chapter 1, we introduced the concept of *covert categories* (Cruse 1986: 151). While analyzing the vertical dimension of categories, Cruse notes that some slots have no names. For instance, English has the superordinate category name *furniture* and the basic-level category name *chair*, however it has no single-word name for the category in between, that is 'pieces of furniture that you can sit in'. The latter is intuitively recognized as a conceptual category and people can easily mention some examples of it. Still, it has no label. The existence of these "lexical gaps" (Cruse 1986) is problematic, because there is no real difference between the nature of the category FURNITURE and the nature of the category PIECES OF FURNITURE THAT YOU CAN SIT IN. The only substantial difference seems to be the way they are linguistically encoded.

Channell (1994: 123) addresses the issue by recognizing the existence of common categories that have a name and common categories that do not have a name as two separate phenomena. Nevertheless, this distinction is highly problematic when we assume an interlinguistic perspective, since different languages can lexicalize different categories. For instance, Glucksberg (2001: 39) notes that, unlike English, American Sign Language (ASL) has no single-word

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name for the superordinate category FURNITURE. In this regard, the process of lexicalization can be seen as highly arbitrary and cultural dependent.

Another problematic point is the nature itself of conceptual categories, beyond the linguistic labels that speakers decide to apply to them. As already noted in Chapter 1, recent empirical evidence (e.g. Barsalou 1983; Rips 1989; Smith and Sloman 1994) suggests that the context seems to play an important part in categorization processes and that "acts of categorization are not simply repeated; they vary. Different tasks and contexts seem to create different categories" (Smith and Samuelson 1997: 167). These findings ultimately indicate that the notion of stable categories with constant representations is unrealistic, and that categories are inherently variable and contextually dependent. This notion exhibits consequences also on the usage of category names or labels.

The concept of *ad hoc categories* has recently been employed in research on lexical pragmatics, within the Relevance Theory approach (Wilson and Carston 2007; Carston 2010). These studies propose a contextual approach in order to explain why "the meanings of words are frequently pragmatically adjusted and fine-tuned in context, so that their contribution to the proposition expressed is different from their lexically encoded sense" (Wilson and Carston 2007, abstract). According to this inferential approach, the meanings of words systematically undergo a pragmatic process of lexical adjustment involving either lexical narrowing or broadening. In addition, "narrowing and broadening are flexible, highly context-dependent processes" (Wilson and Carston 2007: 234).

Wilson and Carston (2007) recognize the effects of this approach on categorization processes. Based on the insights provided by Glucksberg (2001: 38–52), they theorize a phenomenon called "category extension", which is a type of broadening (see Wilson 2004; Wilson and Carston 2007). This phenomenon concerns, for instance, the use of salient brand names (e.g. Kleenex) to denote a broader category (DISPOSABLE TISSUE) which also includes items from less salient brands. Common names can also undergo the same process. For instance, in *brown is the new black*, *black* is not just a color, but it evokes the category of staple colors in a fashion wardrobe (Wilson 2004: 345).

The identification of ad hoc concepts and categories has changed many assumptions about the way categories are built and communicated. On the one hand, there are several cognitive psychology studies that show how categories are indeed inherently dynamic, context-dependent and elaborated in a specific situation. On the other hand, research in cognitive linguistics and lexical pragmatics shows that also the meanings of individual words or phrases strongly depend on the context. In such an account, it seems anachronistic to still rely on the notion of stable associations between categories and linguistic expres-

sion. On the contrary, it seems more sensible to assume that every category conveyed by lexicon is "necessarily translated into a more concrete category, anchored in the situational context" (Mauri 2014: 3).

What said so far provides some theoretical background regarding the linguistic encoding of conceptual categories. However, since our analysis focuses on exemplifying constructions, we need to go a step further and try to understand what types of categories can be encoded by means of exemplification. Traditionally, exemplifying constructions have been considered as a means to encode ad hoc non-lexicalized categories (see Ghezzi 2013: 163). However, Overstreet (1999: 44) attests also a few instances of exemplification (in the sense of providing examples of the category) used to make reference to what she recognizes as common lexicalizable categories. Consider (39):

(39) *Most of 'em are evergreens around there I guess. Pine trees an' stuff.*
(Overstreet 1999: 45)

In addition to providing a category label (*evergreens*), the speaker also mentions a concrete example (*pine trees*), to better illustrate the type of items that are encompassed by the previous label. Overstreet (1999: 45) ascribes this phenomenon mainly to pragmatics, arguing that the speaker likely suspects that the hearer may be unfamiliar with the category EVERGREENS. This is a very likely interpretation, yet it may not be the only one. For instance, we should also consider the possibility that the speaker's category is a more specific subset, such as TYPE OF EVERGREEN THAT GROWS AROUND THE PLACE I LIVE IN. In fact, the category EVERGREEN encompasses a wide variety of trees, from pines to olives. It seems unlikely that in a specific context, the speaker really wants to address the (taxonomical) category in its entirety. Following this approach, the label *evergreens* may sound too general with respect to the actual target category. Thus, by adding *pine trees an' stuff*, the speaker is trying to specify the reference, that is, she is talking about pines and other similar evergreen trees. Consider (40):

(40) *I'm going to get some milk, and stuff.*
(Overstreet 1999: 45)

According to Overstreet, the entire construction can be summed up by the label *groceries*, but by choosing to say *milk and stuff*, the speaker "highlights one member of the category while also referring to the category" (1999: 45). Nevertheless, it should be noted that, depending on the context of the utterance, the underlying category may change. For instance, the father of a newborn baby

may say something similar before leaving for the supermarket. In such a context, the label *groceries* would not be suitable. The reason behind these different interpretations is that there is no stable association between expressions such as *milk, and stuff* and specific categories: each utterance should be analyzed and interpreted as a part of a larger context.

Taking these issues into account, it might be tempting to give up the notion of "lexicalized category", since the distinction between lexicalized and non-lexicalized categories seems to be difficult to apply. Nevertheless, we propose that this notion is still a valuable linguistic parameter, once it is conceptualized according to a dynamic approach to categorization. To do this, we should consider only the structure of the linguistic expression that codifies the category. There is a significant difference between (39) and (40). In (39) the creation of the category consists of two separate elements: a category label and a concrete member taken as an example. On the contrary, in (40), there is no label, but just an instance of exemplification. Instead of looking at these strategies as criteria to distinguish between types of conceptual categories, we propose that lexicalization and exemplification should be studied only as communicative strategies adopted by speakers according to the speech situation. Thus, we can distinguish between two main patterns: in the first one (cf. (39)), the speaker communicates the category through a label and one or more examples, while in the second (cf. (40)), the speaker only uses one or more examples to build and communicate the category. Thus, we consider the presence or absence of a category label as a distributional parameter to distinguish between linguistic patterns. Specifically, we define *i*) as lexicalized categories those categories that are expressed by means of a category label and a list of examples (cf. (41))[24] and *ii*) as non-lexicalized categories those categories that are encoded solely through exemplification (cf. (42)):

(41) *1-fairu-atari* *yōryō* *wa* *50MB* *ni* *seigen-sarete-iru*
1-file-per capacity TOP 50MB DAT limit-do:PASS:TE-ASP:NPS
ga, *dokyumento* *ya* *seishiga* *toitta* *fairu* *deareba*
but document YA still.image such.as file COP.COND
jūbun *darō.*
enough MOD

24 Lexicalized categories are categories designated by means of a category label. This means that examples are not necessary. Nevertheless, since our analysis concerns exemplification strategies, we will not consider instances of category designated solely by category labels.

'The capacity per file is limited to 50MB, but if they are files such as documents or still-images, it should be enough.'

(42) *Fuyōna kami ya chirigami nado ni yoku nakami*
unnecessary paper YA tissue NADO DAT often content
o shiboridashite, [...]
ACC squeeze:TE
'I often squeeze the content out on unnecessary paper, tissues or something like that [...]'

In (41), the speaker wants to make reference to the category SMALL FILES. To do so, she uses a construction consisting of a category label ('files') linked to a short list of examples ('documents and still images'). The dedicated non-exhaustive connective *ya* signals the existence of other potential members of the category and thus, that still-images and documents are only representative items of a larger set. In (42), the speaker gives advice on the disposal of old medicines. Regarding ointments and creams, she suggests squeezing all the contents out before throwing away the package, and indicates a category of paper tools that can be useful to perform such a task. To make reference to this category, she does not provide a category label, but only a list of concrete examples of the category, that is, *fuyōna kami* 'unnecessary paper' and *chirigami* 'tissues', while signaling their status of example though the markers *ya* and *nado*. Therefore, according to a similarity reasoning, the hearer can infer other potential instances, leading to the construction of the category.

These two examples can also help us to corroborate our proposal to consider the lexicalization of a conceptual category not as an inherent feature of conceptual categories, but merely as a communicative strategy. As an evidence, we can rewrite these occurrences according to the opposite pattern. In the case of example (41), we remove the label and use solely the examples:

(43) *1-fairu-atari yōryō wa 50MB ni seigen-sarete-iru*
1-file-per capacity TOP 50MB DAT limit-do:PASS:TE-ASP:NPS
ga, dokyumento ya seishiga deareba jūbun darō.
but document YA still.image COP.COND enough MOD
'The capacity per file is limited to 50MB, but if they are documents, still-images, and such, it should be enough.' (Invented from (3.3))

In the case of example (42), we add a category label (i.e. *kami-rui*, 'paper (material)') that could well encompass the mentioned members:

(44) *Fuyōna* *kami* *ya* *chirigami* *nado* *toitta* *kami-rui*
unnecessary paper YA tissue NADO such.as paper
ni *yoku* *nakami* *o* *shiboridashite, [...]*
DAT often content ACC squeeze:TE
'I often squeeze the content out on papers like unnecessary paper, tissues or something like that [...]' (Invented from (3.4))

In both cases, there are no differences in the final interpretation of the conceptual category.

3.2 Linguistic coding of category labels

The first result that emerges from our data concerns the relationship between lexicalization and exemplification. Although labels and examples are often perceived as alternative strategies, our data suggest a different picture. In Table 2, we examine the overall frequency of distribution of lexicalized categories, that is, categories encoded by a label and one or more examples[25].

Tab. 2: Distribution of lexicalized categories

	Total Categorization Function	Lexicalized categories
ya	250	87 (35%)
nado	248	135 (54%)
tari	237	59 (25%)
toka	219	84 (38%)
Total	954	365 (38%)

Based on the presence of a label, it is possible to identify 365 occurrences of lexicalized categories, which means that the usage of a category label is a well-attested strategy (38% of the total number of occurrences). This first result shows that labels and examples are not competing strategies, but instead they frequently occur together. Nevertheless, this is just partial information. Let us

25 The total number has been calculated excluding instances of exemplifying constructions used for other purposes than making reference to conceptual categories (e.g. hedging, see Section 5.2).

also consider the position of the label with regards to the example(s), as shown in Table 3.

Tab. 3: Positions of the category label

	Linked label	Label inside the list	Linked label (comma)	Free label
ya	64	1	9	13
nado	94	0	27	14
tari	29	0	11	19
toka	27	7	25	25
Total (%)	214 (59%)	8 (2%)	72 (20%)	71 (19%)

Data from the corpus show that not only labels and examples frequent co-occur, but also that, in most cases, they are directly linked to each other, forming a single complex linguistic construction. More specifically, in 214 occurrences (59%), the label is directly linked to the example(s) by means of a linguistic connector, that is, a linguistic marker that explicitly codifies the relationship 'X is an example of Y' (e.g. *toitta* 'such as', cf. (45)). Furthermore, in 8 occurrences (2%), the label occurs within the list of examples. In such case, the referents of the examples are included within the referent of the last element of the list, as shown in (46).

(45) *ryokucha* *toka* *seicha* *toitta* ***cha*** ***no*** ***shurui***
green.tea TOKA blue.tea such.as **tea** **GEN** **variety**
'**varieties of tea** such as green tea and blue tea'

(46) *USB* *toka* *doraiba* *toka* ***sōyū*** ***bubun***
USB TOKA driver TOKA **such** **part**
'USB, drivers and **such parts**'

In 72 occurrences (20%), the label is still linked to the example(s), but without an overt connector. In such cases, a comma is used to signal where the list of examples ends:[26]

(47) *Blockbuster ya eBay nado,* ***iroirona kyōryoku saito***
Blockbuster YA eBay NADO **various collaboration website**
'**various partner websites**, such as Blockbuster and eBay'

Finally, in 71 occurrences (19%), the label is not directly linked to examples.[27] In some cases, it can occur in the previous or following sentence with respect to the examples:

(48) ***jibun de chokin-shiteta o-kane*** *no naka kara*
self by save-do:ASP:PAST HON-money GEN inside from
haratte-masu. Otoshidama toka tametate-kita kara.
pay:TE-ASP:POL:NPS new.year.gift TOKA save:TE-come:PAST because
'I am paying out of the **money I saved by myself**. Because I saved new year's gift and such.'

The high frequency of labels directly linked to the example(s) suggests that not only labels and examples can coexist, but that they can function together as a single unified construction, where both elements provide important and complementary information regarding the conceptual category. For this reason, it is important to understand their respective contribution to the inferential process.

At first glance, there seem to be no particular differences between the pattern that involves the use of a language connector and the one that involves a comma between label and examples. Both strategies seem to indicate the necessity of making clear the different status of examples and label. Therefore, without any linguistic connector that encodes the relation 'X is an example of Y', it is necessary at least to use a comma, thus indicating the change of status through a pause. It is possible that the occurrence of one pattern instead of the other is linked to readability issues, depending on the syntactic complexity of the label

26 In 3 occurrences, examples are placed in brackets immediately after the category label. Given the scarcity of this specific pattern and the usage of punctuation, we decided to count these cases within the 'linked label (comma)' pattern.

27 In some of these cases, the marker *tatoeba* 'for example' is used at the beginning of the utterance including the examples to indicate the relationship between the two utterances. Nevertheless, despite the presence of a connector, when examples and category label do not occur in the same utterance, we have decided to consider them as separated.

or of the examples. In other words, if the label or the example(s) are syntactically complex, the creation of a single connected construction may be considered problematic. In these cases, the use of a comma may be the best strategy, especially in a written text. This issue will be investigated further in Sections 3.2.1 and 3.2.2, while considering different types of labels.

3.2.1 Simple labels vs. complex labels

As already noted at the beginning of this chapter, the assumption that conceptual categories are too dynamic to create stable representations has important consequences in the way speakers make reference to them. Without stable representations, categories cannot be tightly linked to specific linguistic expressions. It follows that, in spontaneous language, the process of lexicalization can be very arbitrary, and speakers can create and use labels that are functional in a specific speech situation. This is evidenced by the fact that, in our corpus, category labels are not syntactically uniform and various degrees of complexity are attested. Specifically, six structural patterns are attested: 1) single noun (cf. 49a); 2) compounds (cf. 49b); 3) noun phrases containing adjectives (cf. 49c)[28]; 4) noun phrases containing genitive clauses (cf. 49d); 5) noun phrases containing relative clauses (cf. 49e); 6) noun phrases consisting of two or more modifiers (cf. 49f).

(49) a. *sanma* *ya* *sake* *toitta* ***gyorui***
pike YA salmon such.as **fish**
'**fishes** such as pike and salmon'

b. *Toyota* *nado* ***jidōsha*** ***sangyō***
Toyota NADO **car** **industry**
'**Automotive industry** for instance Toyota'

c. *denisshu* *nado* ***oishī*** ***pan***
danish NADO **delicious** **pastries**
'**delicious pastries** such as Danish pastry'

28 With the term 'adjectives', we consider both verbal adjectives (e.g. *oishī pan* 'delicious pastries') and nominal adjectives (e.g. *kireina hana* 'beautiful flowers') when used as modifiers (see Iwasaki 2013).

d. *okottari* *sunetari* *nado,* ***negatibuna*** ***kokoro*** ***no***
get.angry:TARI sulk:TARI NADO **negative** **mind** **GEN**
ugoki
movement
'**the movements of negative mind**, such as getting angry and sulking'

e. *oiwai* *messēji* *ya* *chikoku* *no* *renraku* *nado*
celebration message YA lateness GEN message NADO
fudanno ***seikatsu*** ***ni*** ***awaseta*** ***sozai***
everyday **life** **DAT** **match:PAST** **material**
'**materials tailored to everyday life** such as messages for being late and congratulation messages'

f. *Weebly,* *Synthasite,* *oyobi* *Google* *Pages* *nado,* ***kazuōkuno***
Weebly Synthasite and Google Pages NADO **many**
burauza ***ue*** ***no*** ***de*** ***dōsa-suru*** ***webusaito*** ***seisaku*** ***tsūru***
browser **up** **GEN** **LOC** **run-do:NPS** **web.site** **creation** **tool**
'**Website creation tools that run on many browsers**, like Weebly, Synthasite, and Google Pages'

Table 4 illustrates data on frequency of the attested patterns.

Tab. 4: Distribution of syntactic types of category labels

	N	Compound	Adj N	Gen N	Rel N	2 or more modifiers
ya	30	28	7	5	5	12
nado	56	44	6	8	12	9
tari	25	7	8	4	11	4
toka	29	10	17	7	16	5
Total (%)	140 (38%)	89 (24%)	38 (11%)	24 (7%)	44 (12%)	30 (8%)

Even though different structural patterns are attested, data reveal that speakers tend to use labels encoded by a single noun more frequently than any other syntactic structure. The second most frequent strategy is compounding but, interestingly, most compounds attested in the corpus are what Kageyama (2001, 2009) calls 'word plus compounds' (79 occurrences out of 89). Word plus are phrasal-like compounds that frequently consists of juxtaposition of two or more

nouns (e.g. *sagi kōgeki* 'fraud attack', *supamu haishin gijutsu* 'spam delivery techniques').

Keeping in mind that this is not a discrete distinction but more a matter of degrees of complexity, we may still identify two main lexicalizing tendencies or strategies. In the first case, the label is a single noun as shown in (50). We call this strategy 'simple label'.

(50) *meiwaku-mēru* *taisaku* *no* *kyōka* *ya* *kakin*
spam-email countermeasure GEN strengthening YA billing
taikei *no* *henkō* *toitta* ***shisaku*** *o*
system GEN modification such.as **measure** ACC
happyō-shita.
announcement-do:PAST
'[Softbank mobile] announced **measures** such as the reinforcing of countermeasures against email spam and the modification of the billing system.'

Shisaku 'measures' can be interpreted as a label which encompasses different types of policies taken to achieve or alternatively to avoid something. However, while the category denoted by the label is wide, the actual range of items included in the target category is constrained by contextual factors: the speaker describes the implementing measures introduced by Softbank Mobile in order to improve its email service.

In the second case, speakers build syntactically complex labels by adding one or more modifying clauses to a noun. For example:

(51) *Pages* *09* *ni* *wa* *mata,* *nyūzuretā,* *posutā,* *shōjō,*
pages 09 LOC TOP also newsletter poster certificate
soshite *kōdinēto-sareta* *binsen* *nado,* ***appuru***
and coordinate-do:PASS:PAST stationery NADO **apple**
ga ***dezain-shita*** ***40*** ***no*** ***atarashī*** ***tenpurēto*** *ga*
NOM **design-do:PAST** **40** **GEN** **new** **template** NOM
fukumarete-imasu.
be.included:TE-ASP:POL:NPS
'Pages 09 also includes **40 new templates designed by Apple**, such as newsletters, posters, certificates and coordinated stationery'

In (51), the label used by the speaker is a complex expression consisting of a simple noun (i.e. *tenpurēto*, 'template'), an adjective (i.e. *atarashī*, 'new'), a

numeral modifier (i.e. *40*) and a relative clause (i.e. *appuru ga dezain-shita*, 'designed by apple'). Unlike in (50), in this case, the speaker tries to contextualize the category through the label itself. By adding further linguistic material to the simple noun *tenpurēto*, the speaker can specify what types of 'templates' are actually relevant in the context.

These two linguistic patterns do not distinguish between different types of categories but correspond to two communicative strategies to refer to contextually relevant categories in discourse. On the one side of the spectrum, a simple label directly designates a broader but less specific category than the one the speaker wants to communicate. Being more general, it requires a lower cognitive effort to retrieve possible members of the category. Nevertheless, at the same time, because its reference is often too broad, it requires some cognitive effort in tailoring the category to the specific context, and thus understanding what types of category members are relevant to the specific context (cf. the notion of *narrowing* in Wilson and Carston 2007). Consider (52).

(52) *Tokoroga, sono SSRI nimo, kōgekisei o mashitari*
However the SSRI also aggression ACC increase:TARI
suru yōna fukusayō ga deru kanōsei ga
do:NPS like side.effect NOM go.out:NPS possibility NOM
aru koto ga wakatta.
exist:NPS thing NOM understand:PAST
'However, it was found that SSRI may also have side effects like increasing aggression.'

In (52) the speaker describes antidepressant drugs (SSRI) which, in some cases, may cause violent behavior. For example, it is reported the case of a man who beat his wife with a metal object while under the effects of this type of drugs. Therefore, while *fukusayō* 'side effects' makes reference to a well-known broad category, the entire exemplifying construction designates a context-dependent sub-category of side effects, namely 'side effects similar to aggressiveness'. Therefore, the speaker does not refer to common side effects of medications like, for example, nausea or headache, but to a specific type of side effects, that is, instances of aggressive and violent behavior. It is possible to come to this conclusion because both the examples and the context direct the interpretation towards the construction of the correct category. In fact, despite being part of the broader category SIDE EFFECTS, instances of aggressive and violent behavior are not the best choice to represent it, that is, they are not prototypical examples of it (see Taylor 1995: 40). The fact that the author deliberately chooses an ex-

ample that is not prototypical of the broader category designated by the label shifts the attention of the readers to a particular subset of members, around which the new category is thus created. Moreover, also the context provides some other clues to infer the defining property of the category (i.e. the description of the type of drugs, the episodic case of the man attacking his wife), and consequently the fact that the author is referring to a more specific category than the one designated by the explicit simple label.

Crucially, since the complexity of the category label is a matter of degrees through a continuum, the reference to a broader category that should be tailored according to the context is not only a prerogative of single nouns. As noted regarding natural categories, short expressions that are conventionally associated with a specific and well-known category, can function in the same way:

(53) *Chiketto, pasupōto o hajime, ryotei-hyō, mairēji-kādo*
ticket passport ACC start:INF itinerary mileage-card
nado tabi no hitsuju-hin o sumāto-ni
NADO travel GEN essentials ACC smart-ADV
shūnō-dekiru toraberu-kēsu
storage-do:POT:NPS travel-case
'A travel case that can be used to smartly store travel essentials such as tickets, passports, itineraries and mileage cards.'

In the sentence above, the label *tabi no hitsuju-hin* 'travel essentials' is not a single noun, but a short expression consisting of one modifying clause. Nevertheless, it still refers to a well-known category that is much broader than the one the speaker wants to communicate. Examples and context help to identify the relevant travel essentials. Toiletries and items of clothes are not part of the category, which includes only important documents such as 'tickets' and 'passports'.

The analysis of the context is always crucial when category labels referring to broad categories are used in order to grasp correctly the reference. Nevertheless, it is especially important in those cases where the examples do not seem enough to correctly direct the interpretation. Consider (54).

(54) *Messēji o jushin-suru to, namae,*
Message ACC receive-do:NPS when name
denshi-mēru-adoresu, jūsho nado no kojinjōhō
email-address address NADO NML personal.information

o *kinyū-suru* *web-fōmu* *ga* *hyōji-sare [...]*
ACC fill.in-do:NPS web-form NOM display-do:PASS:INF
'Upon receiving a message, a web-form is displayed to be filled in with personal information, such as name, email address, address and so on, [...]'

If we consider only the exemplifying construction (i.e. the label and the members taken as examples of the category), we may be tempted to interpret it as referring to the broad category PERSONAL INFORMATION. However, when we consider the entire context, the result is quite different. The article in (54) describes different phishing systems, that is, fraudulent websites that steal sensitive information. Specifically, a fraudulent web form asking for personal information is described. Then, the following utterance explains that there is also a form asking specifically for credit card details, thus providing further details on the kind of sensitive information the article is actually describing:

(55) *[...] sarani* *kurejittokādo* *no* *bangō,* *kigen,*
further credit.card GEN number expiration.date
sekyuritikōdo *o* *kinyū-suru* *fōmu* *ga* *hyōji-sareru.*
security.code ACC fill.in-do:NPS form NOM display-do:PASS:NPS
'[...] and further, a form for entering the credit card number, expiration date, and the security code is displayed.'

Hence, taking into consideration the broader context, the reader is actually able to tailor the category 'personal information' focusing only on those personal data that are relevant to that specific context: PERSONAL INFORMATION THAT COULD BE USEFUL TO HIJACK CREDIT CARD DETAILS ONLINE.

On the other side of the spectrum, more detailed labels (or complex labels) are the result of the speaker's deliberate effort to create a label which can directly make reference to the target category. Speakers can choose from a wide range of linguistic constructions in order to designate the specific category she has in mind. In some cases, the complex label designates exactly the target category. In other cases, the label is still broader than the target category (but still more precise than a simple label). Let us consider (56).

(56) *imēji-gata* *supamu* *no* *hassei* *nado* *supamu*
image-model spam GEN occurrence NADO spam
haishin *gijutsu* *ga* *kōmyōka-shite-ori [...]*
distribution technique NOM sophistication-do:TE-ASP:INF

'spam delivery techniques, such as the occurrences of image-type spam have become sophisticated [...]'

The simple label *gijutsu* 'techniques' with the addition of a concrete example (*imēji-gata supamu no hassei* 'occurrences of image-type spam') could have been sufficient to designate the category, especially since the entire article describes spam issues. However, the speaker chooses to be more specific, creating an equally specific *ad hoc* label to designate the category by means of a compound: *supamu haishin gijutsu* 'spam delivery techniques'.

(57) *Sorekara, pāsonaruna naiyō desu ne.*
then personal content COP:POL PP
Kenkō, biyō, kekkon toka mo.
health beauty marriage TOKA also
'[The first type of search concerns contents related to the mobile phone.] Then there are personal contents. For instance, health, beauty, marriage.'

In the sentence above, the label *pāsonaruna naiyō* 'personal contents' makes reference to a more specific sub-category than the simple label *naiyō* 'contents'. Nevertheless, its referent is still broader than the target category. In the interview, the speaker describes what are the contents that people usually search for online using their mobile phone. The target category is thus PERSONAL CONTENTS THAT PEOPLE SEARCH FOR ONLINE. In the end, the mention of concrete examples facilitates the process of exclusion of irrelevant members.

Generally speaking, a complex label designates a specific set of items that is very similar (or may even coincide) to the target category. Since the referent is more precise, the contextualization of the category requires a minor effort. Having more precise instruction, it is easier for the hearer to exclude irrelevant items and focus only on relevant exemplars. Nevertheless, the identification of a category thus designated may be difficult depending on how detailed the label is. In fact, highly detailed labels may turn out to be too complex or opaque to be easily comprehensible:

(58) *Shashin, bideo, ofisu bunsho nado, izen wa*
picture video office document NADO before TOP
subete rōkarukonpyūta-jō ni atta dēta ga,
all local.computer-on LOC exist:PAST data NOM

shidaini *onrain-jō* *ni* *hokan-sare,* *kyōyū-sareru*
gradually on-line-on LOC storage-do:INF share-do:PASS:NPS
yōninatte-kita.
reach.the.point:TE-come:PAST
'Data that previously were on the local computer, such as photos, videos, and office documents, are increasingly being stored and shared online.'

While 'data that previously were on the local computer' well specifies the category, without the help of the concrete examples, it may be difficult to understand what it actually stands for, that is, what members should be considered in the first place (even before understanding what it is relevant and what is not).

To sum up, we can identify two competing strategies that act on the continuum, as illustrated in Figure 1.

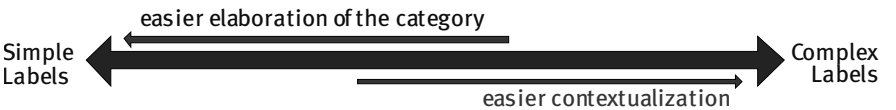

Fig. 1: Continuum between simple and complex labels

On the one hand, the simpler the label used by the speaker, the easier it is to identify and elaborate the category designated by the label, but also the harder it is to contextualize it. On the other hand, the more complex the label used by the speaker, the easier it is to contextualize it, but the harder it is to identify and elaborate the category designed by the label.[29] These differences seem to have consequences also at the linguistic level, specifically in the position of the labels with regards to the examples. Consider Figure 2.

29 This relation between simple and complex labels (and their inference) exhibits some correlation with the notion of "hidden complexity". Bisang (2009, 2013) refers to the notion of "hidden complexity" to describe extremely simple surface structures that need more inferential effort from the perspective of the hearer. This type of complexity is motivated by economy, while the other opposite strategy (i.e., using overt grammatical markers) is motivated by the need of explicitness.

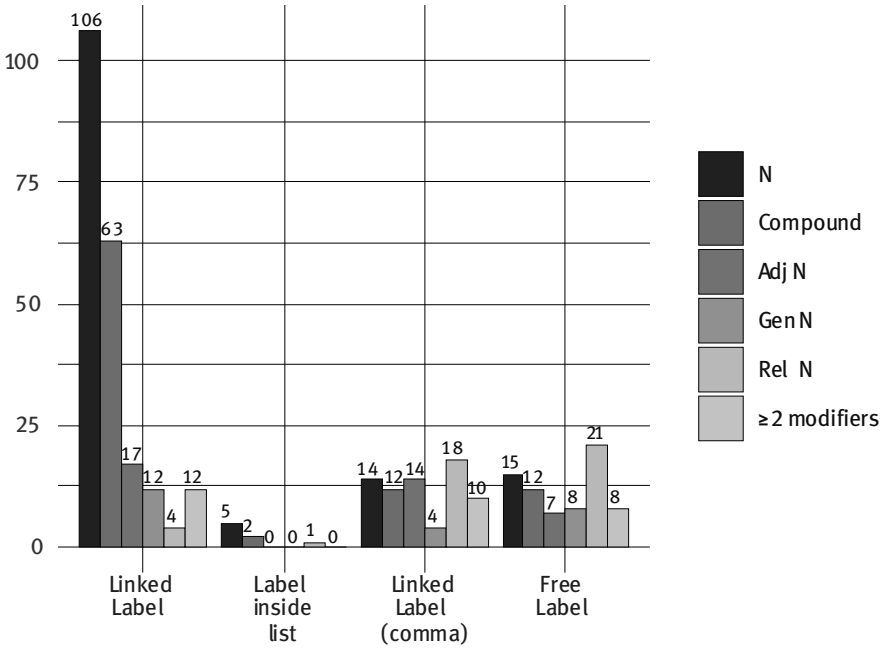

Fig. 2: Frequency of category labels with respect to position and syntactic type

Data on the correlations between the position of the labels and their syntactic structure show a rather interesting picture. Nearly all simple labels expressed by single nouns are directly linked to the example(s) (106 occurrences out of 140, 76%). This tendency becomes less strong with increasing syntactic complexity. For instance, all three patterns are well attested with labels encoded by noun phrases containing two or more modifying clauses. Labels encoded by noun phrases containing relative clauses tend to frequently occur following the 'free label' pattern, that is, without being directly connected to the example.

To explain this tendency, we should take into consideration the processes underlying these types of labels. Simple labels refer directly to broader categories which should be reinterpreted and tailored according to the context (and, in case they are provided, to the examples). For this reason, we can argue that there is a discrepancy between the category encoded by the label and the one the speaker wants to communicate. Simple labels alone can successfully make reference to the target category only if the context is clear enough to ease the interpretation (cf. Wilson and Carston 2007). Otherwise, the reference might be ambiguous. Therefore, simple labels are less independent, and examples are a crucial factor in their interpretation. Accordingly, connecting directly the label

to the examples points out more clearly that the target category is not represented by the label alone, but it should be inferred by the entire construction and that the interpretation should be mediated by the examples. On the contrary, data show that complex labels can function also in isolation without being directly linked to the example(s).

At this point a question may arise. If it is possible to create specific *ad hoc* labels to designate contextually relevant categories, why would a speaker also provide examples? Again, we argue that the reason lies in the fact that context-dependent categories do not reside as knowledge structures in long-term memory. Without fixed representations, there cannot be specific words or linguistic expressions that unequivocally and specifically designate those categories. These labels are created on the spot according to the speaker's ability to summarize the defining feature of the category. Therefore, although simple labels might be too general to describe specific context-dependent categories, at the same time, *ad hoc* labels might be not sufficiently clear to designate them without any risk of misunderstanding.

Nevertheless, the identification of *ad hoc* labels is a further demonstration of the need to revise the notion of lexicalized category, because it shows that even without a stable association between categories and lexicon, speakers can create and use labels to make reference to functional categories built on the spot. Generally speaking, the existence of ad hoc complex labels is proof of the possibility of lexicalizing any kind of category, in the sense that every category can be described by a specific label. Of course, since these are categories are built on the spot, their lexicalization suffers from the same instability: the speaker will try to identify the best label to represent the category depending on the specific context and her discursive goal, however this does not mean that she will be always successful in her communication.

3.2.2 General labels vs. specific labels

The distinction between simple labels and complex labels cannot be considered solely in terms of syntactic structures, but it should also be analyzed in terms of semantic properties, specifically general-specific semantic relations (cf. Section 2.2.1.3). However, while the syntactic structure of labels can be assessed regardless of the examples (and thus of the category), the distinction between general and specific labels strongly relies on the nature of the target category and its members.

As we are dealing with context-dependent categories, it is unlikely that a specific single superordinate noun (that is, the one on the immediately higher level in the taxonomic hierarchy) is always available. More frequently, there are semantic gaps that need to be filled with other linguistic strategies, such as syntactically complex expressions or, moving higher up the hierarchy, broader general labels. Therefore, as stated in the previous sections, intuitively, we may argue that simple labels expressed by single nouns tend to be more general as they refer to a broader category. On the contrary, more complex labels expressed as (different types of) noun phrases tend to be more specific, in the sense that they refer to specific sub-categories. For instance, *karā* 'colors' is more general (and thus less specific) than *bibiddo karā* 'bright colors', *gijutsu* 'techniques' is more general (and thus less specific) than *supamu haishin gijutsu* 'spam delivery techniques', and so on. While this general observation is rather uncontroversial, some specific points emerging from the data should be addressed as well.

First of all, as already noted, the general-specific semantic relation is a relative and not an absolute concept. In our case, it depends strongly on the category the speaker wants to communicate. For this reason, we cannot implicitly assume an exact correspondence between the syntactic complexity of the label and the general-specific parameter. Consider the following examples.

(59) *Femininna pinku wa, orenji ya ierō nado no*
Feminine pink TOP orange YA yellow NADO NML
bibiddo karā ni wa [...] matchi-suru bannō karā.
bright color DAT TOP match-do:NPS all.purpose color
'Feminine pink is an all-purpose color that matches [...] with bright colors such as orange and yellow.'

(60) *Kakei o sekkyokuteki-ni minao-shitari, yokin*
household.budget ACC active-ADV review-do:TARI deposit
o fuyasu iyoku ga waku, nado omowanu
ACC increase:NPS desire NOM grow:NPS NADO unexpected
kōka ga umarete-iru yō desu.
effect NOM be.born:TE-ASP:NPS EVID COP:POL:NPS
'It seems that unexpected effects are generated, such as actively revising the household budget and wanting to increase the bank deposit.'

In (59), the word *bibiddo* 'bright' is an adjective, even though it is used without the attributive form of the copula *na* (*bibiddo-na karā*). The label *bibiddo karā* is likely the word-by-word transliteration of English expression *bright colors*. In (60), the word *omowanu 'unexpected'* falls into the category of nouns and verbs acting prenominally (i.e. *rentaikei*). In other words, these words can directly modify the nouns they are attached to. The suffix *–u* in *omowanu* indicates the attributive form. Hence, from the syntactic point of view, the label in (59) and the one in (60) are comparable and we may expect the same degree of specificity. However, when they are examined taking into consideration the examples (that is, the members of the target category and thus the category itself), they are different. In (59), the label is specific, since it designates a category that coincides with the one the speaker wants to communicate. On the contrary, in (60), the label is broad and does not specify the target category. Crucially, the label only suggests how the mentioned examples should be conceived (that is, as unexpected effects prompted by having money issues) in the specific context, rather than specifying the defining property. It follows that the general-specific semantic relations should always be considered in relation to the specific target category. Secondly, it is important to also consider the discursive goal of the speaker. Consider (61).

(61) *Tōshin de wa, tetsugaku ya shinri, keizai,*
report in TOP philosophy YA psychology economics
hōgaku nado no hiroi bunya de, ningen no kokoro
law NADO NML wide field in human NML mind
no ugoki o umidasu nō no fukai
GEN movement ACC produce:NPS brain GEN deep
chishiki ga motomerarete-iru to shiteki
knowledge NOM demand:PASS:TE-ASP:NPS QT point.out
'In the report, it was pointed out that in a wide variety of fields such as law, economics, psychology, philosophy, a deep knowledge of the brain that produces the movements of the human mind has been demanded.'

Looking at the heterogeneity of the examples provided, it can be argued that the speaker wants to make reference to a broad category. Therefore, the label was

chosen accordingly. In other words, while the label *bunya* 'fields' can be considered a simple general label[30], it still designates exactly the target category.

Finally, similarly to the syntactic parameter, the general-specific parameter is a matter of degrees and not a discrete distinction. This is especially true for context-dependent categories, since semantic taxonomic hierarchies are full of semantic gaps, forcing the speaker to create alternative expressions which are not always easy to compare in terms of general/specific semantics.

For all these reasons, this parameter can only be used in relation to the examples. Generally speaking, a label is considered general or unspecific if, in a hypothetical taxonomic hierarchy, it is possible to place the same label in one of the highest nodes (or in the highest mother-node, cf. Section 2.2.1.3). Labels that can be placed in daughter-nodes close to the examples will be considered specific.

3.3 Linguistic properties of the example(s)

In this section, we will provide an overview of the linguistic coding of the examples whenever they are used in combination with an explicit category label. More specifically, we will consider the linguistic properties of the examples both in isolation and in relation to the properties of the label. This will allow us not only to provide information regarding how examples are usually encoded by speakers, but also about potential tendencies in the way speakers choose to combine labels and examples.

3.3.1 Syntactic properties of the example(s)

Table 5 illustrate data regarding the syntactic properties of the examples.

30 According to the definition of category label provided in Section 2.2.1, adjectives that do not qualify the category but only focus on the number of elements are not considered as part of the label. They will be discussed further in Section 3.5.2.

Tab. 5: Syntactic properties of the examples (lexicalized categories).

	NP	VP/Clause	ADJ	Mix
ya	87	0	0	0
nado	124	10	0	1
tari	0	59	0	0
toka	57	25	0	2
Total (%)	268 (73%)	94 (26%)	0	3 (1%)

The label *mix* is used to indicate occurrences in which the exemplifying construction encompasses examples with different syntactic properties:

(62) *Izurenishitemo hayameni ha no shinkei o nuitari,*
anyway early tooth GEN nerve ACC extract:TARI
ha no ne no naibu no chiryō nado, honkakutekina
tooth GEN root GEN inside GEN treatment NADO proper
chiryō ga hitsuyōna koto mo arimasu
medical.treatment NOM necessary NML also AUX:POL:NPS
'In any case, a proper treatment may be necessary, such as removing the nerve of the tooth early or treating the inside of the tooth root.'

In (62), the first example (marked by *tari*) is a verbal phrase (*hayameni ha no shinkei o nuitari* 'removing the nerve of the tooth early') while the second is a noun phrase (*ha no ne no naibu no chiryō* 'treatment of the inside of the tooth root').

Data illustrated in Table 5 suggest that examples tend to be encoded more frequently by noun phrases (73%), rather than verbal phrases or clauses. This figure should be interpreted with caution. As noted in Section 1.5, two strategies exhibit structural constraints: *ya* is used only with nouns, while *tari* can be used solely to connect verbs or clauses.[31] While it is important to address these issues, we think that the overall trend is still worthy of attention, especially considering that the total occurrences of *ya* and those of *tari* tend to offset each other, avoiding any strong bias towards one strategy rather than the other.

31 Theoretically speaking, it would be possible to use *tari* with NP examples by using the copula *da* between the example and *tari* (e.g. *tori dattari usagi dattari* 'for example birds, rabbits, etc.', see Taylor 2010: 139). Nevertheless, this type of construction is not attested in the corpus data.

Data also suggest that the 'mix' pattern is very infrequent. In our corpus, only three exemplifying constructions include examples with different syntactic properties. In two cases the first example is a verbal phrase while the second is a verbal noun, as shown in (62). In one case, the exemplifying construction encompasses two clauses and one predicative adjective:

(63) *asa* *okite* *kibun* *ga* *yokunakattari,* *hiruma*
morning wake.up:TE mood NOM good:NEG:TARI daytime
nemui *toka* *shūchū-ryoku* *ga* *nai* *toitta* *utsubyō*
sleepy TOKA concentration NOM AUX:NEG such.as depression
sokkuri *no* *shōjō*
like GEN symptom
'[...] symptoms similar to depression, such as waking up in the morning and feeling unwell, being sleepy during the day, or lacking concentration'

In (63), the examples are: 1) *kibun ga yokunakattari* 'feeling unwell (waking up in the morning)', 2) *hiruma nemui toka* '(being) sleepy during daytime' and 3) *shūchū-ryoku ga nai* 'there is no concentration'. While the first and third examples are clauses, the second one is a predicative adjective. Interestingly, this means that, despite having different syntactic properties, examples show similar semantic properties since they all encode states of affairs. The rarity of this pattern and the semantic homogeneity of the attested constructions are not particularly surprising: by their very nature, examples must be similar to each other in some way in order to be included in the same category. This implies a certain degree of homogeneity among exemplars.

Finally, in our corpus, there are no instances of exemplifying constructions comprising only adjective examples. As previously noted, the only instances of examples encoded by (predicative) adjectives have been found together with VP/Clause examples. Moreover, there are no occurrences of exemplifying constructions encompassing attributive adjectives.

Data on syntactic properties of examples provides interesting information also regarding the underlying categorization process, because different syntactic types of examples represent different types of categories (i.e. typically nouns designate entities or things, while verbs and clauses designate states of affairs) and, more importantly, different modalities through which speakers encode conceptual categories. Consider the combination of data regarding syntactic properties of examples and syntactic properties of labels in Figure 3.

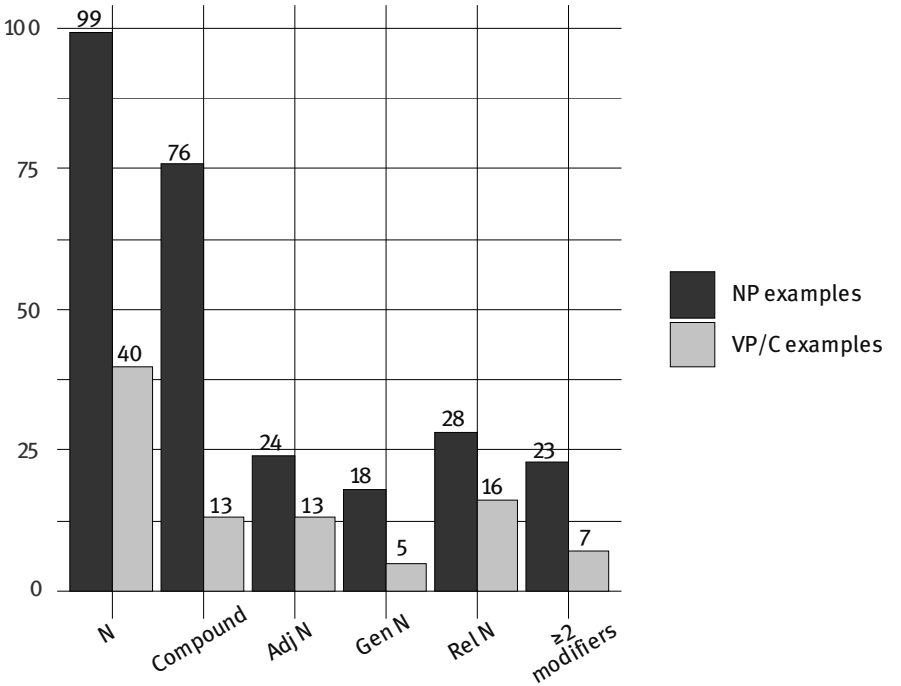

Fig. 3: Correlation between syntactic types of examples and syntactic types of category labels

Data suggest that categories encompassing verbal phrase/clause examples are more likely to be lexicalized by means of a single noun (43%). Interestingly, out of the 40 occurrences of examples encoded by verbal phrases and lexicalized through a simple label, in 32 occurrences the category label is (highly) unspecific (e.g. *nīzu* 'needs', *kufū* 'schemes', *toraburu* 'troubles', *mokuteki* 'purposes', *chansu* 'chances', *soryūshon* 'solutions', *kōka* 'effects', *mondai* 'problems', *tekunikku* 'techniques', cf. Section 2.2.1.3), compared to the actual category designated by the examples:

(64) *Saisho wa bijinesuyūsu ga chūshin desu ga,*
at.first TOP business NOM center COP:POL:NPS but
sonogo, kojin de mo dōga o mitari, netto
after.that individual INS also video ACC see:TARI net
o tsukattari toitta ***nīzu*** *ga dete-kuru no*
ACC use:TARI such.as **need** NOM appear:TE-come:NPS NML

da to omoimasu.
COP QT think:POL:NPS
'At first, business was the core, but, after that, I think that some **needs** have emerged, such as using the Internet or watching videos also privately.'

(65) *IP denwa ga tsunagaranaku-naru nado*
IP telephone NOM be.connected:NEG:INF-become:NPS NADO
no ***toraburu*** *ga atta monono, genzaide wa*
NML **trouble** NOM exist:PAST although now TOP
seijōni dōsa-shite-iru.
normally operation-do:TE-ASP:NPS
'there were **troubles**, for instance the IP phone got disconnected, but now it is operating normally.'

(66) *Shiriai ni ageru toka furima ni*
acquaintance DAT give TOKA flea.market LOC
shuppin-suru toka, sōitta ***chansu*** *mo nai nara*
diplay-do:NPS TOKA such **chance** TOP NEG if
suguni sutemasu.
immediately throw.away:POL:NPS
'Giving [the shoes] to an acquaintance, putting them to sale on a flea market, if there are no such **chances**, [the shoes] are to be thrown away immediately.'

This pattern does not seem to be a prerogative of single nouns. Even examining syntactically complex labels, we can note that frequently *i*) the noun at the head of the nominal group is broad and unspecific, *ii*) in some cases, not even the linguistic adjuncts add true qualitative specification. For instance:

(67) *eria o 48-jikan inaini taiō-shitari, denchi no*
area ACC 48-hours within respond-do:TARI battery GEN
muryō torikae o yattari toitta, ***jimichina doryoku***
free replacement ACC do:TARI such.as **steady** **effort**
ga sukoshizutsu okyakusama ni tsutawatte-iru
NOM little.by.little customer DAT be.introduced:TE-ASP:NPS
no dewanai deshō ka.
NML COP:NEG MOD Q

'[...] I think that **steady efforts** have been introduced little by little to customers, such as responding to the area within 48-hour and doing free replacement of batteries.'

(68) *Mochiron, B6 nōto o ryō-saido ni ireru toka,*
of.course B6 notes ACC both-side LOC put:NPS TOKA
Rodia o sashikonde, amatta supēsu ni komono-rui
Rhodia ACC insert:TE left:PAST space LOC small.thing-kind
o ireru, toitta ***tsukai-kata*** *mo OK desu.*
ACC put:NPS such.as **way.to.use** also OK COP:POL:NPS
'[describing a conference folder] Of course, **ways of use** such as putting the B6 notes on both sides or inserting the Rhodia notebook and putting small items in the extra space are also okay.'

We argue that this fact can be ascribed to two reasons. The first one is a mere terminology issue. Typically, verbal phrases designate events (cf. Givón 2001, Langacker 1987a, 1991b). While there are plenty of taxonomic lexical hierarchies regarding categories of entities (see Cruse 1986), languages tend to lack superordinate terms to designate categories of events. This fact does not prevent speakers from creating and using labels with this type of categories, but it might affect the modalities in which these categories are lexicalized.

The second reason is a cognitive issue. Givón (2001: 52) notes that, contrary to nouns, verbs often exhibit considerable complexity. This is because (prototypical) verbs involve several distinct participants (e.g. the agent, the patient), "all distributed over space and each an individuated, spatially compact, temporally durable entity in its own right" (Givón 2001: 52). Similar remarks have been made by Langacker (1987a, 1991b). This observation is even more interesting when we consider that in most cases (87 out of 94 occurrences), examples are not encoded by simple verbs, but by verbal phrases or even clauses. This means that the examples consist of a main verb and at least one modifier designating a participant to the event. Since the lexicalization of a category consists in identifying and labelling the property shared by category members, in case of events encoded by verbs, this process requires a greater cognitive effort because speakers need to consider different correlations profiled by processes. To solve this issue, speakers may create detailed complex labels:

(69) *Yubi de najimasetari, suponji o tsukattari,*
finger INS blend:TARI sponge ACC use:TARI
***fande o najimaseru hōhō** wa samazama*
foundation ACC blend:NPS way TOP various
'There are various **ways to blend the foundation**, such a blending it with your finger or using a sponge.'

(70) ***Go-hōbi o erabu toki** ga ichiban*
HON-reward ACC choose:NPS time NOM best
tanoshī! Tatoeba, shikaku shiken ni gōkaku-shitari,
enjoyable for.example qualification test DAT success-do:TARI
dai purojekuto o seikō-sasetari.
big project ACC success-do:CAUS:TARI
'**Times when I choose a reward** are the most enjoyable! For example, when I pass a qualification exam, when I make a big project succeed or other similar occasions.'

Otherwise, as already noted, another strategy that speakers frequently employ (32 occurrences out of 94) consists in using very broad unspecific labels which do not concretely delimit the category, but that *i*) act similarly to placeholders encoding the existence of other potential items (i.e. non-exhaustivity) as in (71), or *ii*) simply stress the way the examples should be conceived in that specific context, as in (72).

(71) *gakkyoku o sentaku-shitari, saisei o okonattari*
music ACC selection-do:TARI playback ACC perform:TARI
*toiu yōna **sōsa** wa, [...]*
NML like **operation** TOP
'**operations** such as selecting the song or performing playback [....]'

(72) *Gan wa, seijōno soshiki to hikaku-shite zōshoku*
cancer TOP normal tissue to comparison-do:TE increase
no supīdo ga hayakattari, soshiki no kyōkai o
GEN speed NOM be.fast:TARI tissue GEN boundaries ACC
*norikoete shinjun-shitari toitta samazamana **sōiten***
climb.over:TE infiltration-do:TARI such.as various **difference**
ga arimasu.
NOM exist:POL:NPS

'Cancer has various **differences**, for instance, it grows faster than normal tissues and it infiltrates across the boundaries of tissues.'

In (72), the speaker does not use a label to make explicit the property shared by the examples, but she tries to communicate how the examples should be conceived in this specific context, that is, they should be considered as *sōiten* 'differences' that exist between cancer cells and normal cells.

It is important to note that this fact is peculiar to examples encoded by verbal phrases or clauses, and not to simple labels in general. When examples encoded by nouns/noun phrases are lexicalized by simple labels, these labels tend to specify concretely the category (cf. Figure 4).

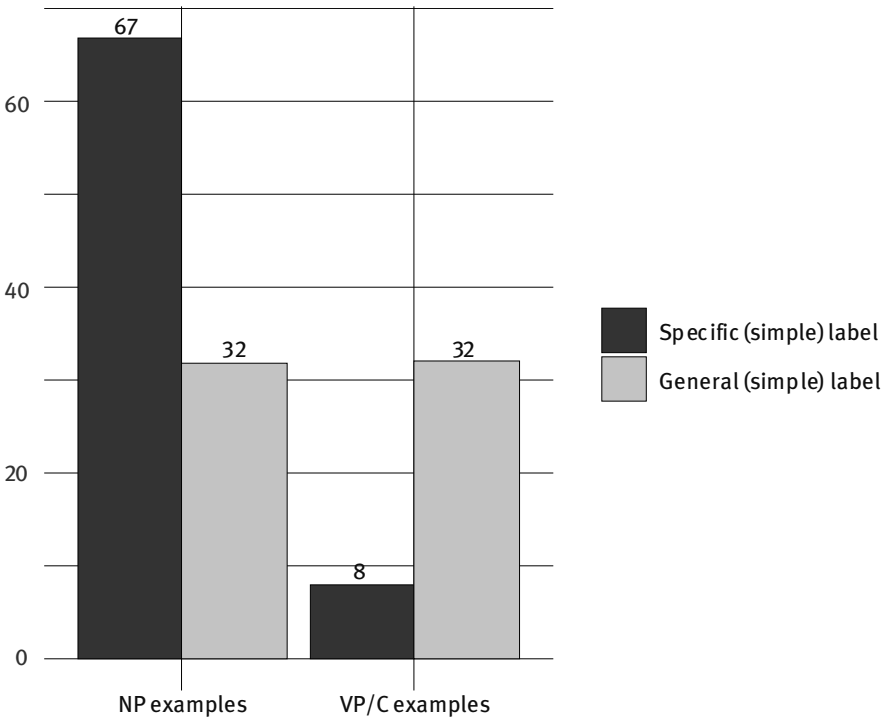

Fig. 4: Correlation between the degree specificity of simple labels and the syntactic properties of examples

Consider the following examples:

(73) *PC (Mac / Windows) ya keitaidenwa nado no* ***debaisu***
PC (Mac / Windows) YA mobile.phone NADO NML **device**
o Live Mesh no sābisu ni tōroku-shite-oku to [...]
ACC Live Mesh GEN service DAT registration-do:TE-ASP:NPS if
'If you register a **device** such as a PC (Mac / Windows) or a mobile phone to the Live Mesh service, [....]'

(74) *Gaga mūbī channeru wa, gyaga komyunikēshonzu ga*
Gaga movie channel TOP gaga communication NOM
haikyū-suru eiga-sakuhin no yokokuhen ya CM
distriburion-do:NPS movie-work GEN trailer YA commercial
nado no ***dōga*** *o haishin-suru kōnā*
NADO NML **video** ACC transmission-do:NPS corner
'Gaga Movie Channel is a corner that delivers **videos** such as commercials and movie trailers distributed by Gaga Communications.'

Although labels like *debaisu* 'device(s)' *dōga* 'videos' still need to be further contextualized, they are still more characterizing than the labels used in (71) or (72), since in taxonomic hierarchies they would occupy the immediately higher level than the category members (Cruse 1986: 136).

To sum up, the analysis reveals that whenever category members have high internal complexity (i.e. they designate states of affairs), labels show an equivalent complexity or tend to be highly unspecific.

3.3.2 Semantic properties of the example(s)

Table 6 illustrates data regarding the semantic properties of the examples.

Tab. 6: Semantic properties of the examples (lexicalized categories)

	Concrete things	Abstract things	SoA	Properties
ya	46	27	14	0
nado	83	31	21	0
tari	0	0	59	0
toka	35	17	32	0
Total (%)	164 (45%)	75 (21%)	126 (34%)	0

Semantic properties confirm what has already emerged from the analysis of the syntactic properties. They suggest that the lexicalization of categories is possible regardless of the nature of the members, but there is a slight tendency towards the usage of things as examples, especially concrete things (45%). This trend seems quite natural if we consider that concrete things are characterized by features that are easier to label. These encompass not only inherent features, such as color, shape, size and so on, but also more ad hoc features, such as the modality of use. For this reason, it is easier to create characterizing labels to denote categories of concrete things, as shown in (73) and in (74). In all these cases, despite being expressed by single nouns, labels precisely highlight the shared property of the examples.

(75) *Terebi* *ya* *shinbun,* *zasshi,* *intānetto* *nado*
tv YA newspaper magazine internet NADO
samazamana ***media*** *o* *tsukatte* *puromōshon* *o*
various **media** ACC use:TE promotion ACC
tenkai-suru *koto* *ga* *kanō* *na* *no* *desu*
expansion-do:NPS NML NOM possible COP NML COP:POL
'Using various **media** such as TV, newspapers, magazines, and the Internet, it is possible to expand the promotion.'

(76) *Bitamin D* *wa* *sanma* *ya* *sake* *toitta* ***gyorui*** *ya*
vitamin D TOP pike YA salmon such.as **fish** YA
kinoko-rui *ni* *ōi.*
mushroom-class DAT many
'Vitamin D is abundant in mushrooms and **fishes** such as pike and salmon.'

Moreover, the concreteness of the examples does not just ease the creation of category labels, but also facilitates their interpretation. Since examples act as bridges between the concreteness of the context and the abstractness of the labels, the usage of concrete things as examples may help the hearer to contextualize and actualize the target category. In this regard, it is not a wonder that cognitive theories on categorization have spent considerable time focusing on this type of categories (cf. Rosch et al. 1976, Rosch 1978) since they are the most basic stimuli in our experiential environment. For this reason, as will be shown in Section 3.5, they may facilitate the process of moving from the abstract (the category) to the concrete (the context), through the contextualization and actualization of abstract category labels.

The comparison between the syntactic properties and the semantic properties of examples provides further information about the lexicalization of categories of states of affairs. In our corpus, there are 29 occurrences of examples encoded by noun phrases designating states of affairs. As noted in the previous sections, examples encoded by verbal phrases and clauses tend to be lexicalized through complex labels or broad unspecific simple labels. This tendency slightly persists but appears less strong when we consider examples denoting states of affairs encoded by noun phrases, as illustrated in Figure 5.

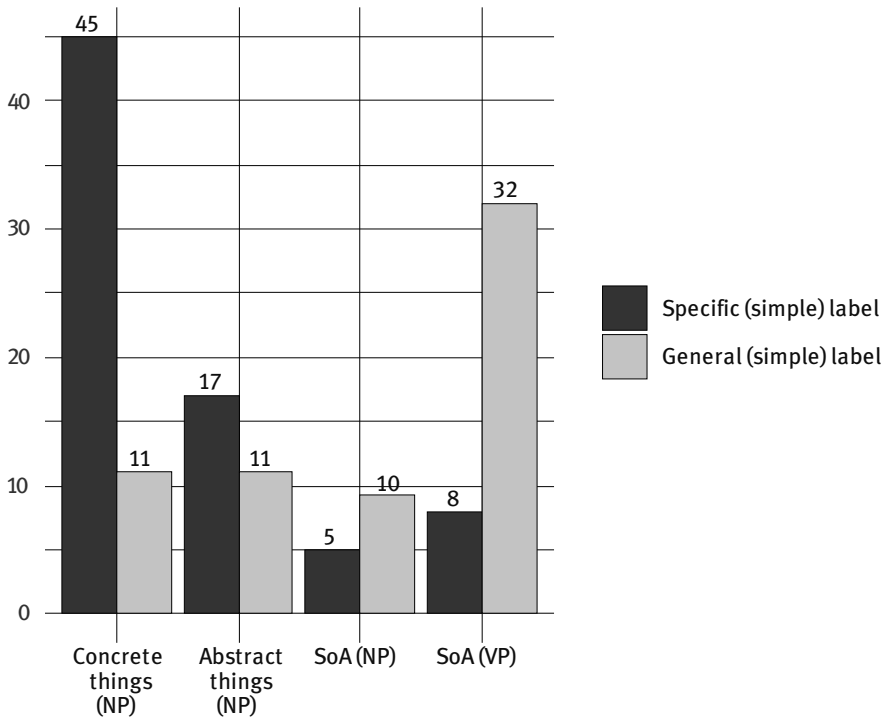

Fig. 5: Correlation between the degree of specificity of simple labels and the syntactic/semantic properties of the examples

The use of verbal nouns is peculiar (cf. the notion of *nominalization* in Langacker 1991b) because they include the event structure, but it is embedded in the holistic conceptualization characterizing nouns, which, for instances, does not encode the evolution through time: "*explode* and *explosion* are not considered semantically equivalent: nominalization involves a conceptual reification

whose character can be explicated with reference to the notional definition proposed for the noun and verb classes" (Langacker 1991b: 22). In this sense, the events thus profiled are more similar to abstract entities than to real events profiled by verbs: they are less complex to be processed. Therefore, we may argue that it is easier for the speaker to identify and select a characterizing label to designate the category. This ultimately suggests that the way examples are syntactically encoded may affect the process of lexicalization, even more than the nature of the exemplar itself. Therefore, the process of lexicalization may be schematized by means of a continuum, as shown in Figure 6 below.

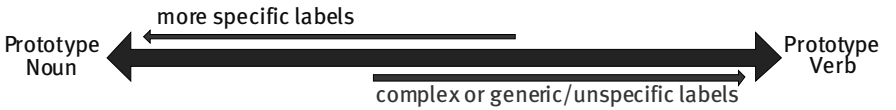

Fig. 6: Continuum regarding the lexicalization of conceptual categories

The notions of 'prototypical nouns' and 'prototypical verbs' are taken from Givón (2001). He states that prototypical nouns are "concrete, and made out of relatively-durable materials. Their bundled — co-experienced — properties, such as size, color, shape or consistency, thus change relatively slowly as individual features as well" (2001: 51). For this reason, they are also stable and durable through time. On the contrary, prototypical verbs are "most typically events that involve concrete participant nouns" and "code rapid changes in either the state, condition or spatial location of some noun-coded entity" (2001: 52).

Looking at our data, we propose that the more the exemplars resemble concrete (e.g. sensorily perceivable) things, 1) the more frequently the lexicalization process takes place, and 2) the easier is for the speaker to create specific labels to denote the category. On the contrary, the more the examples resemble abstract processes such as events, 1) the less frequently the lexicalization process takes place, and 2) the more lexicalization relies on complex labels or, alternatively, unspecific broad simple labels. In the middle of this continuum, less prototypical instances such as abstract entities and events construed as abstract entities (i.e. verbal nouns) seem to be less predictable, showing different lexicalization strategies.

3.3.3 Number of examples

In this section, we will provide some brief remarks on the number of examples in lexicalized categories. In this regard, we distinguish four patterns based on the number of examples provided by the speakers: one example (cf. (77)); two examples (cf. (78)); three examples (cf. (79)); and four or more examples (cf. (80)).

(77) *banana nado no kariumu o ōku fukumu*
banana NADO NML potassium ACC much contain:NPS
tabemono wa mukumi taisaku ni o-susume
food TOP swelling counter.measure DAT HON-suggestion
desu
COP:POL:NPS
'[...] foods that contain a lot of potassium like bananas are recommended for preventing swelling.'

(78) *Attōtekini, josei ga kau mono ga ōi.*
overwhelmingly women NOM buy:NPS thing NOM many
Keshōhin toka, kenkō-shokuhin toka.
cosmetics TOKA health-food TOKA
'Overwhelmingly, there are many things that women buy. Cosmetics, health food, and such.'

(79) *Taiyō o minai kansoku hōhō [...]*
sun ACC see:NEG:NPS observation method
Firumu no kirehashi o tsukattari, sangurasu o
Film GEN piece ACC use:TARI sunglasses ACC
tsukattari, susu o tsuketa garasu o tsukattari...
use:TARI, soot ACC attach:PAST glass ACC use:TARI
'Methods to observe [the eclipse] without looking at the sun [...] Using a piece of film, using sunglasses, using a glass with soot, etc....'

(80) *Tenpura, nimono, itame-mono, pasuta, guratan, sarada,*
tempura boiled stir-fry pasta gratin salad
pai, taruto, purin nado nado kabocha o tsukatta
pie tart pudding NADO NADO pumpkin ACC use:PAST
oishī ryōri wa sū-shirezu!
tasty dishes TOP innumerable

'There are innumerable delicious dishes using pumpkin such as tempura, boiled pumpkin, stir-fried pumpkin, gratin, salad, pie, tart, pudding and so on!'

Table 7 illustrates data on the frequency of these patterns.

Tab. 7: Number of examples in lexicalized categories

	1 example	2 examples	3 examples	4 or more examples
ya	1	61	14	11
nado	34	36	31	34
tari	1	45	13	0
toka	15	51	13	5
Total	51 (14%)	193 (53%)	71 (19%)	50 (14%)

Data suggest that speakers generally tend to provide two examples.[32] However, this tendency is not homogeneous across exemplifying markers. In particular, *nado* is equally attested with all the patterns described above.

The general tendency to provide two examples can be likely ascribed to associative reasoning. When the hearer is presented with at least two examples, she can compare them to each other in order to identify the shared property that is relevant in the given context, and thus to abstract the target category. While category labels do help this process, they are still abstract summaries of conceptual categories and therefore may be perceived as more complex or obscure than the example(s). This general consideration will be elaborated further regarding non-lexicalized categories (cf. Section 4.3.3), where the ease of elaboration and comparison might be crucial in the construction of reference to categories without category labels.

3.4 Linguistic linkage between labels and examples

Whenever a category label is directly linked to the example(s), a linguistic connector is used. More specifically, with the term *connector* we refer to those lin-

32 In one occurrence of the corpus, the non-exhaustive connective *ya* is used to join a single example and the category label (cf. the inside pattern in Table 3.2). Therefore, although *ya* is used to join two elements, there is only one example.

guistic strategies that encode the relation 'X is a hyponym of Y' and therefore can be used to connect labels and examples to make explicit their relationship.

Our survey based on Japanese shows great variation in the types of strategies that may be used as connectors, ranging from similative constructions (i.e. 'Y like X', where Y is the category label and X the concrete example) to synthetic means like the so-called 'noun complement markers' (cf. Horie 2000, 2003). This varied picture is likely peculiar to Japanese and strongly dependent on the different diachronic paths of the attested strategies. Despite this, we would like to analyze the intra-linguistic variation as it is attested in the corpus data, trying to sketch a preliminary survey of linguistic connectors. Our final aim is to make the first step towards a more comprehensive study on this set of strategies. The repertoire of strategies used as connectors in our corpus is listed in Table 8.

Tab. 8: Linguistic connectors

	ya	nado	tari	toka	Total
yō	1	0	3	1	5
mitai	0	0	0	2	2
(tari) to iu	0	0	7	0	7
(toka) to iu	0	0	0	4	4
(nado) no	30	58	3	4	95
(toka) no	0	0	0	2	2
toitta	23	2	15	10	50
nado	10	34	0	2	46
toka	0	0	0	2	2
combination	0	0	1	0	1

Among these strategies, we identify five types:

– Similative markers (e.g. *yō, mitai*).
– Noun complement markers (e.g. *no*, *to iu*) directly attached to a general extender. More specifically in our corpus the following combinations are attested: 1) *nado no* (the most widespread), *toka no*, *tari to iu*. Nevertheless, other combinations are still possible, as they are acknowledged in different grammars (e.g. *nado to iu*, cf. Kaiser et al. 2001). In our corpus, there are no occurrences of these markers directly attached to the example(s) without the mediation of a general extender.
– Fixed expressions that have been grammaticalized (e.g. *toitta*).

– General extenders (e.g., *nado, toka*).
– Combinations of two different strategies (e.g., *yōna to iu*).

In the following sections, we will examine each of these strategies in some details.

3.4.1 Similative markers

Similative markers (see Haspelmath and Buchholz 1998: 313–319, Treis and Vanhove 2017) are linguistic elements that encode a relationship of similarity. This basic function can be expanded to explain the relationship between a category and its members. Specifically, the mentioned example(s) represents the standard around which the category should be construed, following similarity-based reasoning. Consider (81).

(81) *Psychiatric illnesses like depression*.

The similative marker suggests that only those *psychiatric illnesses* that are similar to the standard established by the example (*depression*), should be considered. In our corpus, two similative markers used as connector are attested, namely *yō* (cf. (82)) and *mitai* (cf. (83)).

(82) *kōgekisei* *o* *mashitari* *suru* *yō-na* *fukusayō*
aggressiveness ACC increase:TARI do like-COP:ATT side.effect
'side effects like the increasing of aggressiveness'

(83) *kakaku-komu* *toka* *attokosume* *mitai-na* *kigyō*
kakaku-com TOKA at.cosme like-COP:ATT company
'companies like Kakaku.com and @Cosme'

Similative makers as connectors are not particularly widespread in our corpus (3,2%). More specifically, the similative marker *yō* is attested with *ya, toka* and *tari* (and it is particularly frequent with the latter). The similative suffix *mitai* occurs only twice and, in both occurrences, it is used in combination with the connective *toka*. This is not surprising since *mitai* can be considered the colloquial equivalent of *yō*.

3.4.2 Noun complement markers

In our corpus, only two noun-complement markers are attested, that is, *no* and *to iu*. Japanese is characterized by an extensive use of complementation by means of nominalization (Horie 2000: 14), and consequently by a widespread usage of noun complement markers such as *no* and *to iu*. Generally speaking, *no* can be used to modify a noun (N_2) by means of a preceding noun or clause (N_1 or C). In this sense, N_1/C can specify N_2 "giving further information as to its status, identity, etc." (Kaiser et al. 2001: 326):

(84) [N_1 *no* N_2]
otōto *no* *Masao-kun*
younger.brother NML Masao-HON
'Masao-kun, the younger brother.'
(Kaiser et al. 2001: 326)

By extension, this construction is used by speakers to describe a category (N_2) by means of one or more members (N_1/C). Interestingly, in our corpus, *no* is never directly attached to the example(s)[33] but always to a general extender. Therefore, the typical pattern of use can be schematized as follow: [Example *nado/toka no* Label]:

(85) *supekku* *nado* *no* *shōsai*
specification NADO NML detail
'details such as specifications'

(86) *tomato* *toka* *no* *akai* *yasai*
tomato TOKA NML red vegetable
'red vegetables like tomatoes'

The other noun complement marker attested in our corpus is *to iu*. Morphologically, *to iu* consists of the verb *iu* 'to say' and the quotative marker *to*. Beyond its basic function as a quotative construction, *to iu* has undergone a grammaticalization process and eventually became a generalized noun complement marker,

33 There is no clear answer regarding this fact. It is possible that without the general extender, the example(s) might be interpreted as genitive complement(s) of the label, since *no* is also the genitive marker. Therefore, the presence of a general extender helps to avoid potential misunderstanding.

frequently occurring between a modifying phrase and its head noun (cf. Terakura 1983; Horie 2003: 372):

(87) *Honsha o doko ni oku no ga ī ka*
Headquarter ACC where LOC put NML NOM good Q
to iu mondai mo aru.
QT IU problem also exist:NPS
'There is also the problem of where best to position the headquarter.'
(Kaiser et al. 2001: 535).

In this regard, similar to *no*, this construction can be used to indicate that the example occurring as a modifying phrase further specifies the content of the category label, that is, the head noun. Consider the following occurrence from our corpus.

(88) *gyōmu-chū ni bonyari shitari, hyōjō ya*
work-middle LOC absent.minded do:TARI facial.expression YA
kōdō ni genki ga nakunattari to iu henka
behavior DAT health NOM disappear:TARI TO IU change
'changes such as being absent minded during work or looking and behaving unhealthily'

The examples 'being absent-minded [during work]' and 'being no healthier in look and behavior' explain how to correctly interpret the general single noun 'changes' according to the actual context.

3.4.3 Fixed expressions

The fixed expression *toitta* is the second most widespread connector in our corpus (23,4%). Morphologically, it consists of the quotative marker *to* and the past tense of the verb *iu* 'to say', thus it can be translated as 'said' or 'called'. In Contemporary Japanese, it is also[34] used as a fixed expression comparable to the English connector *such as*.

A proof of this grammaticalization path is the fact that, when used as a connector, *toitta* is written using kana alone, that is, without the kanji of the verb

34 In many other contexts, *to itta* is used as the past tense of the verb *to iu*, that is, 'said'. Usually, when it is used to convey this meaning, it is written using the kanji of *iu*.

iu. It is a general rule in Japanese that lexical items are written in kanji, while grammatical items such as case morphemes and inflectional endings, are written in hiragana (see Iwasaki 2003: 20). When lexical items usually written in kanji become grammaticalized in certain contexts, they end up being written in hiragana instead[35]. The fact that *toitta* is written in hiragana whenever it is used to link category labels and examples, means that it is perceived more like a grammatical element than a lexical one.

(89) *keiei.rinen* *ya* *kigyō* *bijon* *toitta* *mono*
management.idea YA business vision such.as thing
'things such as management philosophy and corporate vision'

(90) *eria* *o* *48-jikan* *inaini* *taiō-shitari,* *denchi* *no*
area ACC 48-hours within respond-do:TARI battery GEN
muryō *torikae* *o* *yattari* *toitta,* *jimichina* *doryoku [...]*
free replacement ACC do:TARI such.as steady effort
'steady efforts such as responding to the area within 48-hour and doing free replacement of batteries [...]'

Interestingly, this strategy seems to occur less frequently in combination with *nado*. This figure is noteworthy because in our corpus *nado* is the exemplifying construction with the higher frequency of lexicalized categories and *toitta* is one of the most used connectors. Nevertheless, they occur together only twice.

Finally, *toitta* can be attached directly to the examples. This is likely due to the dedicated nature of the fixed expression *toitta* as a connector between category labels and examples.

3.4.4 General extenders (nado, toka)

Some general extenders can be directly attached to category labels, functioning as connectors. More specifically, in our corpus, both *nado* and *toka* perform this function:

35 For instance, whenever the verb *miru* conveys its lexical meaning 'to see', it is written using the kanji. On the contrary, whenever it is used as part of a periphrastic verb construction 'try to do', it is written in hiragana.

(91) *imēji-gata* *supamu* *no* *hassei* *nado* *supamu*
image-model spam GEN occurrence NADO spam
haishin *gijutsu*
distribution technique
'spam delivery technologies such as the occurrence of spam through images'

(92) *Yahoo* *toka* *yūmeina* *kaisha*
Yahoo TOKA famous company
'famous companies such as Yahoo'

This functional extension is likely due to the closeness of general extenders and category labels because of the word order in Japanese, according to which the label must be placed at the end of the exemplifying construction, hence (immediately) after the general extender. This may also explain why *tari* is the only general extender that is not used as a connector in our corpus. Since *tari* requires the addition of the auxiliary verb *suru* 'to do' at the end of the list of examples[36], there is no direct connection with the category label.

Diachronically, this functional extension may also be motivated by the omission of the noun complement marker *no* in some occurrences (e.g. EXAMPLE *nado no* LABEL > EXAMPLE *nado* LABEL). To better understand this fact, we believe similar investigations should be performed in languages with the same word order as Japanese. This may help us to understand if the functional extension from general extender to connector is a cross-linguistic pattern or merely a language-specific strategy.

3.4.5 Combinations of connectors

In one occurrence of our corpus, the similative marker *yō* is combined with the noun complement marker *to iu*:

36 It should be noticed that in some cases, the auxiliary verb *suru* is indeed elided, especially in speech. Nevertheless, the nature of *tari* as a non-finite verbal form may still represent a structural constraint that prevents (or at least restricts) its usage as a connector.

(93) *gakkyoku o sentaku-shitari, saisei o okonattari*
tune ACC selection-do:TARI reproduction ACC perform:TARI
to iu yōna sōsa
TO IU like operation
'operation like such as selecting songs and performing the reproduction'

The combination of connectors is neither particularly odd, nor peculiar of Japanese. For instance, regarding Italian, Barotto and Mauri (2018) note the high frequency of similative markers co-occurring with exemplifying markers (e.g. *luoghi più disparati, ad esempio come stazione di ricerca, location per eventi e molto altro ancora* 'a variety of locations, for example like research station, event venues and much more').

3.5 (Re)categorization: the division of labor between labels and examples

In this section, we will discuss how labels and examples play an active role in the process of communicating conceptual categories in discourse. In particular, it will be shown that, when labels and examples are used together, they functionally complement each other to better direct the reference to the target category and facilitate the inferential process performed by the hearer. In short, we will argue that there is a division of labor between labels and examples. This fact is backed up by the linguistic data provided in Section 3.2 which show that in most cases labels and examples are linked together or occur next to each other.

3.5.1 The role of the label in directing the inferential process

Generally speaking, the main purpose of labels is to make explicit the property shared by the members of the target category. In this sense, the very presence of a category label acts as a sort of guarantee that the hearer is asked to build a category exhibiting certain given features. It follows that the hearer does not need to infer the existence of the category and its defining property solely through the examples. Consider (94).

(94) *Saisho wa, "sutairu" no kinō o tsukatte shashin*
first TOP style GEN function ACC use:TE photo
no mawari o bokashitari, waku o tsuketari,
GEN *edge* ACC blur:TARI frame ACC add:TARI
katamuketari toitta kōka o settei-shite-mimashou.
incline:TARI such.as effect ACC setting-do:TE-try:POL:VOL
'First, let's try to set up effects such as blurring the edge of the picture, adding a frame or bending using the "style" function.'

The label *kōka* generally designates a category of 'effects', but here it is used while explaining how to retouch pictures using Photoshop. Although a certain degree of contextualization is still needed, when the label is properly interpreted, it provides useful insights on the type of category the hearer must infer and thus construe, that is, Photoshop effects to retouch images. Therefore, even without the mention of concrete examples, the hearer would be able to infer not only the presence of a category, but also to construe it at least partially.

In addition, the importance of category labels in directing the inferential process can be further understood if we consider that the same list of examples can be interpreted differently depending on the context. Consider another example:

(95) *Kō-gan zaichiryō de wa saketetōrenai fukusayō.*
anti-cancer drug.therapy during TOP unavoidable side.effect
Shokuyoku ga ochitari, hakkekkyū no kazu ga
appetite NOM fall.down:TARI leucocyte GEN number NOM
sukunaku-nattari, soshite kaminoke ga nuketari.
few:INF-become:TARI and hair NOM fall:TARI
'Sides effects that cannot be avoided during anti-cancer drug therapy. Losing appetite, the number of leukocytes decreases, and the hair falls down.'

In (95), the speaker refers to cancer and potential treatments to cure it. If we consider only the mentioned examples ('losing appetite, leucocytes become less, and hair falls down'), there is a risk of wrongly interpreting them as the (less strong) symptoms of the disease, instead of the side effects of the treatment. However, the label *kōganzaichiryō de wa saketetōrenai fukusayō* 'sides effects that cannot be avoided during an anti-cancer drug therapy' makes explicit the common property of the examples and directs the reader to interpret them correctly as side effects, thus avoiding any possible misunderstanding.

Compared to the label used in (94), the label in (95) provides a higher degree of specification by pointing out some additional details. As already noted in Section 3.2.1, by means of a complex label, the speaker can designate more accurately the target category (in this particular case, the side effects of anticancer therapy that cannot be avoided). It follows that, in some cases, the reference of the label is so precise that it actively helps the contextualization process along with the example(s).

On this final point, it is noteworthy that just as the choice between lexicalizing or not lexicalizing a category can be seen as an arbitrary communicative strategy, the same applies also to the choice of using a simple label instead of a complex label and vice versa. All categories can be designated by at least one simple label[37] and by one or more complex labels, depending on how the speaker decides to encode the specifications of the target category. It follows that, depending on the situational context, the target category, and the ultimate discursive goal, the speaker can choose the strategy considered more appropriate.

As noted in Section 3.2, different strategies entail different goals and limitations. In case the speaker chooses to use a complex label, she provides a higher degree of specification and a more precise reference to the target category even without the mediation of examples, helping to direct the inferential process. Nevertheless, without a stable association between the mental representation of the category and a fixed linguistic expression to designate that category, the usage of such hyper-specific labels may entail a great effort not only for the speaker (who needs to identify and lexicalize the common property), but also for the hearer (who needs to construe the category on the basis of the clues provided by the speaker). In case the speaker chooses to use a simple label, there is a minor cognitive effort both for the speaker and the hearer as the category is outlined in broad terms. Nevertheless, the contextualization of the label – which is necessary to identify the actual members of the target category – is less straightforward and requires further mediation.

3.5.2 The role of heterogeneity in designating superordinate categories

In Section 3.2.1, we have seen how adjectives can be added to simple labels to provide a higher degree of contextualization (e.g. *ryūkō-no suītsu* 'popular sweets'). Nevertheless, in our corpus, we can find a specific type of adjectives

37 As noted in Section 3.3, the speaker may decide to use the label just to highlight how the examples should be conceived in a specific context.

that does not seem to add any concrete semantic specification regarding the category and its defining property, but rather emphasizes the wide and heterogeneous nature of the category. Consider the following occurrences:

(96) *Jinken-mondai, kankyō-mondai, kosodate-shien*
human.rights-issue environmental-issue childcare-support
nado ***samazama-na*** *tēma de sekkyokutekini torikumu*
NADO **various-COP:ATT** theme LOC actively make.effort:NPS
kigyō wa, shakai nitotte jūyō deari [...]
company TOP society for important COP:INF
'Companies that actively engage in **various** themes such as human rights issues, environmental issues and childcare support, are important to society [...]'

(97) *Yūzā ga Blockbuster ya eBay nado,* ***iroiro-na***
user NOM Blockbuster YA eBay NADO **various-COP:ATT**
kyōryoku saito o burauzu-suru to, sono kōdō
collaboration website ACC browse-do:NPS when that action
kiroku ga Facebook ni okurikaesarete, yūjin ga
report NOM Facebook DAT send.back:PASS:TE friend NOM
kyōyū dekiru yōninaru.
share do:POT:NPS reach.the.point:NPS
'When the user browses **various** partner websites such as Blockbuster or eBay, the action report is sent back to Facebook and friends will be able to share it.'

In (96), the adjective *samazama*[38] does not give any specific contribution to the reference to the category, that is, in this particular case, it does not indicate what kind of issues are taken care by the company in question. Therefore, to construe the category, the hearer can rely only on the simple label *tēma* 'themes' and the examples which effectively specify the relevant topic. The purpose of *samazama* is to highlight that the covered issues are many even beyond those mentioned. It thus reinforces the non-exhaustive feature. In a similar way, in (97), the role of the adjective *iroiro* 'various' is not to further

38 Both *iroiro* and *samazama* are *na*-adjectives (*keiyō-dōshi*), that is, adjectival nouns. The label '*na*-adjective' is due to the fact that, when *na*-adjectives are used pre-nominally, they can only occur with *na*, which is a form of the copula, as in *iroiro-na kuni* 'various countries'.

specify what types of websites are considered partners, but rather to emphasize their high number.

Nevertheless, emphasizing the non-exhaustivity feature is not the only function performed by these adjectives. Semantically, adjectives like *iroiro* and *samazama* not only provide information about the number of the items (that is, they are not simply synonymous with 'many'), but they also highlight the high heterogeneity of the set. In (96), the issues are many, but also quite different from each other. Examples support this interpretation: the speaker chooses to mention issues concerning different fields such as *kankyōmondai* 'environmental issues' e *kosodate shien* 'childcare support', whose only common denominator is to be social issues that may be of interest to private companies in terms of charity. Similarly, in (97), the websites considered are many and different in nature: eBay and Blockbuster are two different services, even though they both fall within the scope of the category.

While *iroiro* and *samazama* are the most common adjectives of this type in our corpus, there are also other adjectives that can perform the same functions, such as *hiroi* 'wide (range of)' and *habahiroi* 'wide (range of)':

(98) *Tōshin de wa, tetsugaku ya shinri, keizai,*
report in TOP philosophy YA psychology economics
hōgaku nado no ***hiroi*** *bunya de, ningen no kokoro*
law NADO NML **wide** field in human NML mind
no ugoki o umidasu nō no fukai
GEN movement ACC produce:NPS brain GEN deep
chishiki ga motomerarete-iru to shiteki
knowledge NOM demand:PASS:TE-ASP:NPS QT point.out
'In the report, it was pointed out that in a **wide variety** of fields such as law, economics, psychology, philosophy, a deep knowledge of the brain that produces the movements of the human mind has been demanded.'

(99) *Posuto purodakushon sagyō ya karāgurēdingu sagyō,*
post production work YA color.grading work
sutajio niokeru satsuei eizō no monitaringu, hōsō
studio in photographing picture GEN monitoring broadcast
gyōkai niokeru non-rinia henshū toitta ***habahiroi***
industry in non-linear editing such.as **wide**
seisaku kōtei o kabā-shite-iru.
production process ACC cover-do:TE-ASP:NPS

> 'It covers a **wide range** of production processes, such as post-production work, color grading work, video monitoring in the studio, and non-linear editing in the broadcasting industry.'

The point regarding the heterogeneity of the category is of particular importance, especially giving the fact that in our corpus there are 28 occurrences of adjectives used to highlight the heterogeneity (and the non-exhaustivity) of the category.[39] To better understand this phenomenon, we should note that, by their very nature, categories are heterogeneous sets of elements grouped together only by virtue of sharing a given feature. This inherent heterogeneity of categories has been examined by different approaches to categorization. For instance, Rosch (2011: 100) notes that superordinate category members show "heterogeneous attributes, patterns of motor interaction, and appearances". Therefore, heterogeneity is not uniform across categories, but it varies along the vertical dimension of categorization. Members of superordinate categories (e.g. FURNITURE, MAMMAL) are much more heterogeneous than the members of categories below the basic level (e.g. CHAIR, DOG). This is due to the fact that members of superordinate categories have fewer common attributes than members of basic level categories (cf. Rosch et al. 1976). The heterogeneity feature appears to be even more crucial in ad hoc categories. Since they are constructed spontaneously to achieve a goal relevant in a given situation (Barsalou 1983, 2010), ad hoc categories tend to encompass items that otherwise may have little in common (e.g. 'money' 'asparagus' 'frog' 'emerald' can all be included in the category of THINGS THAT ARE GREEN).

Let us consider again (98), whose context is about research on the brain. This type of context might influence the hearer, leading her to think that the target category encompasses only scientific fields, such as medical science. The adjective *hiroi* 'wide' helps to broaden the reference. It indicates that a larger variety of fields should be taken into consideration. The list of examples supports and further emphasizes this interpretation, since very different fields (*tetsugaku* 'philosophy', *shinri* 'psychology', *keizai* 'economy', *hōgaku* 'law') are mentioned.

39 More specifically, there are 15 occurrences of *samazama* 'various', 5 occurrences of *iroiro* 'various', 3 occurrences of *ironna* 'various' (a colloquial variant of *iroiro*), 4 occurrences of *habahiroi* 'wide (range of)', 1 occurrence of *hiroi* 'wide (range of)'. On the contrary, there are only 5 occurrences of adjectives stressing numerosity but not heterogeneity ('many/a lost/numerous').

We argue that *hiroi* allows the speaker to make reference to a superordinate category lacking a specific name, rather than to a more specific sub-category that may be construed if one relies too much on the context. Therefore, in other words, adjectives like *hiroi* work on the vertical dimension of categories. By increasing the heterogeneity of the category, they allow to move upward in the vertical dimension, instructing the hearer to include elements that, at first glance, might be excluded due to the context. This means that speakers do not always need to create new different labels every time they make reference to categories. On the contrary, they can use semantic strategies that allow them to increase the perceived heterogeneity, leading to the construal of superordinate categories. The use of these adjectives confirms further Rosch's insights on the role of heterogeneity in the vertical dimension of categories and proves how the language can play an active role in cognitive mechanisms.

3.5.3 The role of examples in contextualizing and actualizing the category

Examples are representative members of a category. In this respect, their main function is to bridge the gap between the concreteness of the hyper-specific context and the abstract reference of labels. To do so, they contextualize and actualize the category by showing some actual members chosen according to the context. As noted in Section 3.3, examples are not chosen, nor encoded, randomly, but to better represent concrete experiences and situations (cf. the preference for concrete entities) and to be easily processed by the hearer (cf. the preference for examples encoded by noun phrases).

More specifically, examples perform two important functions: 1) contextualizing and 2) actualizing the category. These functions have different levels of importance depending on the type of label that occurs with them, in the sense that examples are used to complement the reference designated by the label. As already noted, on the one hand, simple labels may be too general and abstract, on the other, complex labels may be too specific or ambiguous. Let us examine these functions in detail.

The first function is to contextualize the category. This is particularly important with simple labels, since the examples must fill all the referential discrepancies that exist between what is designated by the label and the target category. In other words, in these cases, it is necessary to link the broad abstract notion provided by the label to the actual category relevant in a given context. Consider (100).

(100) *shisutemu kanri no hanzatsusa ya, sekyuriti*
system management GEN complexity YA security
no kyōka, kanrikosuto no sakugen nado
GEN strengthening administrative.cost GEN reduction NADO
no mondai o kaiketsu-suru soryūshon desu.
NML problem ACC solution-do:NPS solution COP:POL:NPS
'[It] is a solution to solve problems such as the reduction of administrative costs, the reinforcing of the security and the complexity of the management system.'

While it is not particularly difficult to understand what *mondai* 'problems' stands for (that is, to retrieve the members of the category designated by the label), identifying which types of problems are relevant in the specific context requires a certain amount of cognitive effort. This process is made easier by the list of examples. The mentioning of concrete exemplars facilitates the process of narrowing down the category denoted by the label, tailoring it to the context. The examples signal that we are not dealing with a general category *mondai* 'problems', but with a more context-specific category, that is ADMINISTRATIVE PROBLEMS THAT AFFECT BUSINESS COMPANIES. Therefore, on the one side, the label facilitates the inference in that it denotes a more stable and well-known category (cf. Barsalou 1983). On the other, the examples anchor the category to the context.

While this function is crucial when examples are combined with a simple label, it still may be useful even with more specific complex labels, as shown in the example below.

(101) *Kigyō wa seitōna riyū ga areba, naitei*
company TOP legitimate reason NOM exist:COND offer
o torikesu koto ga dekiru. Tatoeba, naitei-sha
ACC cancel NML NOM POT:NPS for.example offer-person
ga naitei-go ni hanzai o okashitari,
NOM offer-after DAT crime ACC commit:TARI
gakureki o sashō-shite-itari shita
academic.background ACC false.statement-do:TE-ASP:TARI do:PAST
baai da.
case COP:NPS
'If there are legitimate reasons, companies can cancel the job offer. For example, in case the nominee commits a crime after the nomination or in case he made a false statement about his academic background.'

In (101), the speaker wants to refer to situations in which people got fired before even starting the job. She explains that there are some legitimate reasons for firing someone after the job has been offered, and then provides a list of concrete examples. While the label *seitōna riyū* 'legitimate reasons' stresses only the presence of justified reasons to fire someone, the mentioned examples describe real circumstances in which employees are rightfully fired, thus contextualizing the reference towards the category relevant in that specific context.

The fact that this function is still important even with complex labels is again likely due to the fact that, without a stable association between linguistic labels and context-relevant categories, the speaker can choose to focus on some features of the category which she considers more important for her communicative goal, while excluding other features which may be more useful in the contextualization of the category.

The second function performed by examples is to actualize the reference, that is, to shift the focus from abstract configurations to concrete experience, in order to facilitate the processes of elaboration and comprehension of the category. As noted in Section 1.2, this is the main communicative function traditionally ascribed to exemplification, for instance in communication studies (cf. Zillmann 2002) or in research on discourse coherence (cf. Hobbs 1985).

This function is facilitated by the fact that speakers tend to choose examples that refer to concrete objects (cf. Section 3.3) and thus the interlocutor may have had (direct or indirect) experience with them in her everyday life. At the cognitive level, this is particularly valuable whenever a complex label is used. Again, since there is no permanent representation of the category, the connection between the category and the label chosen by the speaker is absolutely arbitrary, and therefore potentially opaque or unclear. In this regard, providing some concrete examples resolves any potential ambiguity. For instance:

(102) *imēji-gata* *supamu* *no* *hassei* *nado* *supamu*
image-model spam GEN occurrence NADO spam
haishin *gijutsu* *ga* *kōmyōka-shite-ori [...]*
distribution technique NOM sophistication-do:TE-ASP:INF
'spam delivery techniques, such as the occurrences of image-type spam have become sophisticated [...]'

Even if the reference to the category by means of the label *supamu haishin gijutsu* 'spam delivery techniques' can be considered quite satisfactory, it remains an abstract formulation requiring a certain degree of encyclopedic knowledge to be processed successfully. On the contrary, the mentioned example, i.e. *imējigata*

supamu no hassei 'occurrences of image-type spam' refers to concrete situations related to the everyday usage of a personal computer and the internet, that is, the possibility of coming across web images that serve no purpose other than spam. As a result, the fact that examples represent potential direct or indirect experiences ultimately makes the elaboration of the category easier.

(103) *mondai no gyōza o fukumu Chūgoku-sei*
question GEN dumpling ACC contain China-made
reitō-shokuhin o tabeta ato, geri ya hakike
frozen-food ACC eat:PAST after diarrhea YA nausea
nado no chūdoku shōjō ga atta to
NADO NML poisoning symptom NOM exist:PAST QT
hokenjo nado ni uttaeta hito ga, […]
health.care.center NADO LOC complain:PAST person NOM
'[…] people who complained to health centers and such that they had experienced poisoning symptoms such as diarrhea and nausea after eating frozen food made in China containing the dumpling at issue.'

Here too the examples help to actualize the set of issues encompassed within the label *chūdoku shōjō* 'poisoning symptoms'. In this sense, *geri* 'diarrhea' and *hakike* 'nausea' represent concrete situations. The hearer likely has had direct or indirect experience of them, and this accessibility facilitates the elaboration of the contextual concept of poisoning symptom.

In other cases, the speaker can decide to stress some features of the category that are deemed more appropriate for communicative purposes, with the result that the label may be perceived as potentially misunderstandable:

(104) *Doraggu&doroppu-suru dake de shashin o*
drag&drop-do:NPS only INS photo ACC
appurōdo-shitari, daburukurikku de zengamen no suraidoshō
upload-do:TARI double.click INS full.screen GEN slideshow
o saisei-suru nado, shoshinsha demo kaitekini
ACC play-do:NPS NADO beginner even simply
riyō-dekiru kantanna sōsa
use-do:POT:NPS simple operation
'simple operations that can be used comfortably even by beginners, such as playing full-screen slideshows with a double-click, uploading photos by simply dragging and dropping and so on'

The label 'simple operations that can be used comfortably even by beginners' is certainly functional to describe the ease of use of the software in question. However, it does not identify unequivocally a particular set of functions. On the contrary, the examples describe specific situations, that is, actions that can be easily elaborated at the cognitive level, because they are part of the everyday experience with photo software. The combination of these two elements allows not only to correctly designate the target category, but also to emphasize the fundamental property of being easy to use.

The actualizing function is possible even in those cases where the category designated by the label and the target category coincide perfectly.

(105) *Femininna pinku wa, orenji ya ierō nado no*
Feminine pink TOP orange YA yellow NADO NML
bibiddo karā ni wa [...] matchi-suru bannō karā.
bright color DAT TOP match-do:NPS all.purpose color
'Feminine pink is an all-purpose color that matches [...] with bright colors such as orange and yellow.'

In (105), despite the fact that the category denoted by the label *bibiddo karā* 'bright colors' coincides with the target category, the speaker still provides some concrete examples. Overstreet (1999: 44) argues that cases like (105) can be explained by means of pragmatic reasons, mainly referring to a possible misunderstanding between speaker and hearer about the reference designated by the label (e.g. the speaker thinks that the hearer does not know the label). While we agree with Overstreet's analysis, there may be other reasons that have to do with the relationship between label and examples. Specifically, these other reasons bring us back to the core function of exemplification as it was delineated in Chapter 1.

Regarding the vertical dimension of categories, Rosch (1978) identifies the *basic level* as the most culturally salient and, for this very reason, also the more accessible. Therefore, for example, while *colors* is a super-ordinate category, on the basic level we find basic color categories (see Rosch 1973) such as *blue*, *yellow*, *orange*, and so on. We may thus consider *bright colors* as an intermediate step: a super-ordinate category that encompasses only a subset of the broader category COLORS. It follows that, because of this position in the vertical dimension, *bright colors* is more abstract and less salient than *yellow* or *orange*. Moreover, although we are dealing with colors, we may still say that *yellow* and *orange* are more concrete than *bright colors*, in the sense that they are part of the sensorial experience, while *bright colors* requires further abstraction. This in-

herent accessibility of the basic level is what makes it a perfect source of examples. Examples picked from the basic level allow to make the abstract more concrete, thus shifting the comprehension of the category to a more accessible dimension.

Let us consider again example (105). The sentence is part of a fashion article that explains which colors and styles match bright pink. We argue that providing concrete examples of the category allows the speaker to make the reference more comprehensible. Specifically, the mention of actual colors can make the hearer think about specific clothing items of those colors that she owns, ultimately facilitating the elaboration of the category itself. In this case, rather than making the label more understandable, Examples allow to make the label more concrete and more easily linked to things the hearer has direct experience in her everyday life, shifting the comprehension of the category to a more accessible dimension.

4 Exemplification of non-lexicalized categories

4.1 The notion of non-lexicalized category

In Chapter 3, we have seen how category labels may represent an advantage for the hearer, since they facilitate the inferential process by suggesting the property shared by the category members. Nevertheless, labels are not necessary to designate conceptual categories and speakers can refer to a category even without an explicit category label. In this regard, the simple mention of one or more exemplars is enough to trigger the inferential process that leads to categorization. Consider (106).

(106) *POS shisutemu de no kādo kessai torihiki*
POS system INS GEN card payment transaction
nioite, jiki kādo dēta ya PIN, sekyuritikōdo nado
during magnetic card data YA PIN security.code NADO
o POS-jō ni nokosanai.
ACC POS-up LOC leave:NEG:NPS
'During the card payment transactions in the POS system, do not leave magnetic card data, PIN, security code and so on the POS.'

In (106), we observe an instance of non-lexicalized category, that is, a category encoded only by means of examples and thus without any explicit label. Here the speaker is talking about security of card payment transactions. To communicate the category of those elements in a card payment transaction that contain sensitive information, the speaker does not provide a label, but she lists some concrete members of the category marking them as representative exemplars. The status of example is linguistically encoded by means of the non-exhaustive connective *ya* and the general extender *nado*, which emphasize the existence of other potential members beyond those mentioned.

As noted in Section 3.1, the lexicalization of a category (in the sense of the deliberate act of creating a category label) cannot be used as a parameter to discriminate between types of categories but should be instead considered a communicative strategy to refer to categories in specific contexts. This holds the other way around: the act of not lexicalizing a conceptual category is a communicative strategy as well. While there exist good reasons for providing an explicit label (cf. Section 3.5), it should be noted that, in some contexts, the lexicalization process may require a greater cognitive effort for the speaker (e.g.

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categories of events, frame-based categories). First, the speaker needs to identify a suitable label. To do that, it is essential to identify the defining property of the category and then to encode this property by means of some lexical items. In other words, the creation of a label requires a certain degree of ability to synthetize the essential core of the category. In some cases, a single word may seem insufficient and the lexicalization process involves the creation of *ad hoc* labels, through the addition of further linguistic material (cf. Section 3.2.1). In this regard, the speaker may struggle between the urge of providing all the important details and the urge of being synthetic and effective (cf. linguistic economy). For such reasons, in some cases, avoiding completely the lexicalization process and only providing one or more examples can be seen as the more effective solution.

This however brings us to a further theoretical issue. Category labels function as guarantee for the reference to a category: when speakers use labels, we know that they are making reference to a conceptual category. The absence of a category label presents us with the necessity to demonstrate in some way that there still is an underlying categorization process. In other words, we should consider the possibility that categorization is not the ultimate speaker's discursive goal and that exemplifying strategies simply encode enumeration of items. For instance, consider the following invented sentence:

(107) *Tēburu* *no* *ue* *ni* *hon* *ya* *koppu* *ya* *pasokon*
table GEN up LOC book YA glass YA pc
nado *ga* *arimasu*.
NADO NOM exist:POL:NPS
'On the table there are books, glasses, a personal computer and so on.'

Sentences like (107) are typically presented in descriptive grammars to explain the non-exhaustive connective *ya*. In such cases, the discursive function of the non-exhaustive list may be a matter of dispute: is that an instance of categorization or merely an act of enumeration? At first sight, the second option seems more likely. The issue is not trivial for our analysis. Labelling each occurrence as an instance of categorization without further discussion would end up watering down the very notion of category, which, on the contrary, exhibits strong defining characteristics and constraints, such as an internal graded structure and a defining shared property. In order to solve this issue, we need to identify clear working definitions and parameters.

First, it is crucial to highlight an important terminological distinction between the notion of *list* and the notion of *enumeration*. In our analysis, a list is a linguistic construction (cf. Fillmore and Kay 1995) which can be defined as the

"junction of two or more elements occupying the same structural position in a dependency structure" (Voghera 2018: 181; see also Blanche-Benveniste et al. 1990; Gerdes and Kahane 2009; Selting 2007; Masini et al. 2018). In this regard, it can be argued that list constructions can perform different functions, for example categorization (cf. (106)) and enumeration (cf. (107)).

These two functions need to be clarified as well by means of working definitions, so that we can identify features that can help us to distinguish between instances of categorization and instances of enumeration. Generally speaking, we define enumeration as the ordered listing of items in a set. Therefore, at least theoretically, pure enumeration, unlike categorization, does not presuppose any kind of constraint on how the set should be organized and regarding the relationship among the members of the set. Compare (107) with (108).

(108) *Kutsushita* *ya* *hando-taoru* *nado* *o* *sentaku* *pinchi*
socks YA hand-towel NADO ACC washing pinch
nashide *hoseru* *komono* *horudā* *mo* *fuzoku.*
without dry:POT:NPS small.accessory holder also included
'It also includes a small accessory holder that allows you to dry socks and hand towels without using a wash pinch.'

In both occurrences, the non-exhaustive connective *ya* and the general extender *nado* are used to encode non-exhaustive lists. Yet, we can argue that the speakers' discursive goals are different. In (107), the speaker is listing the items placed on the table, leaving the list open to indicate that there are other - not explicitly expressed - items. The mentioned items do not share any specific property, beyond the tautological fact of being indeed part of the list. In other words, they are all items that are on that particular table in that particular moment. For this reason, it may be difficult for the hearer to identify with certainty other potential items. Of course, it is still possible to make a very rough selection, based on the encyclopedic knowledge that tells us that some items cannot be placed on a table (e.g. a fridge, a bookshelf, an elephant). However, beyond this basic information, there is almost no certainty about how to saturate the open variable configured by the non-exhaustive markers.

In (108), the speaker provides a list of concrete objects as well. However, contrary to (107), in this case it is possible to identify a property shared by the mentioned elements: they are clothes that are usually hung on a clotheshorse (the main topic of the article). For this very reason, the simple comparison between the mentioned elements in the specific context is enough to identify the

shared property. Thus, by means of this property, the hearer can saturate the open variable designated by *ya* and *nado*.

Another difference between an act of categorization and an act of enumeration can be found in the presence or absence of a graded internal structure (cf. Rosch and Mervis 1975). Since categories exhibit graded structures, it is possible to indicate good examples and bad examples on the basis of the defining property. In (108), it is possible to affirm that 'soap' is not a good example of the category, whereas 'underwear' can be a good example. On the other hand, in (107), there is no way to assert that 'bottle' is a better example than 'purse'.

The comparison between these two occurrences allows us to outline some distinctive features of categorization and enumeration, and, consequently, it allows us to draw some partial conclusions:

– In case of enumeration, what is shared by the items is the membership to the list itself or - at most - the potential membership (e.g. in the grocery list, not buyable items must be excluded). On the contrary, in a category, the items share a property which should be considered as a defining criterion to identify what types of elements are part of the category and what types of elements are not. This property can be identified simply by comparing each element of the category in a specific context.
– Category members are organized in a graded structure. On the contrary, in enumerations, the items share the same status: there is no element that represents the list better than others. In other words, they only share a tautological feature that does not allow different degrees of membership: elements are part of the list or they are not part of the list.

What is outlined above is a theoretical distinction, formulated in isolation, which needs to be applied to real-life situations. However, this is the great bias of sentences like (107): like all invented sentences, not only do they give a distorted idea of the actual use of a certain linguistic construction, but they also lack any form of context. Moreover, they do not represent the linguistic reality: in the corpus data of actual occurrences of *ya*, there is no evidence of sentences like (107), that is, existential clauses which describe the presence of certain items in a certain space in a certain moment. The same holds for all the other strategies under study. This does not mean that sentences like (107) are ungrammatical or are impossible to find when examining larger corpora. However, it does mean that they are not the prototypical non-exhaustive list that speakers create in real-life interactions. This fact is interesting because a list of elements related by pure contingency is likely the clearest and more prototypical instance of the enumeration function.

In our analysis, we argue that pure enumeration is extremely unlikely in real-life interaction, and that this is due to the nature itself of lists (and more generally of coordinating constructions) and the key role of context. First of all, in real-life interactions, speakers create lists in order to carry out particular discursive purposes. This means that there is always a reason behind the creation of a list, and that the elements that are part of it are not chosen randomly, but with a very specific motivation. In this respect, studies on the semantics of coordination (cf. Lang 1984; Mauri 2008) demonstrate that there is always a certain degree of underlying associability among elements in a coordination construction. Let us consider the following examples taken from Lang (1984: 36).

(109) *No entry for dogs and Chinese!*
(Sign board at a park entrance in a European settlement in pre-war Shanghai)

(110) *Défense de cracher ou de parler breton!*
'Spitting and speaking Breton prohibited'
(Sign board in schools and offices in 19th century Britanny)

These signs boards convey a strong derogatory connotation. In the first case, in addition to the negative effect produced by banning the access to a specific nationality, the issue is further amplified by the semantic nature of the other conjunct, that is *dogs*. In the second case, the request might not be intrinsically derogatory (i.e. the prohibition of speaking Breton), but it becomes so the moment it is associated with the other conjunct, *cracher* 'spitting'. If we assume that enumeration does not imply associability between conjuncts, then it is difficult to explain the derogatory effect amplified by coordination constructions.

This effect can only be explained by referring to the notion of "common integrator" (cf. Lang 1984: 263), i.e. the conceptual entity deduced from the combined conjuncts and which, at the same time, includes them, in the sense that the conjuncts are instantiations of this common integrator. In other words, the common integrator is what Lakoff (1971: 268) calls "common topic", that is "that [semantic] part of each conjunct of the sentence that is identical", or the ground on which the two conjuncts are pertinently combined. In this regard, Lakoff explains that the common topic is not overtly present and identifiable in the sentences, but it is a necessary (but non-sufficient) condition to the coordination of elements (1971: 118).

We can understand better the notion of common integrator when we consider a range of coordinating constructions in which the first conjunct remains unchanged. Let us consider the examples provided by Lang (1984: 26-27).

(111) a. I need a book or some newspapers or magazines
b. I need a book or a record
c. I need a book or a cigar-box

In these sentences, not only does the common integrator change according to the elements of the coordination, but it also results from narrowing down the interpretation of *book* accordingly to (111a) 'something to read', (111b) 'entertaining present', (111c) 'solid object having the thickness of a book' (see Lang 1984: 27). Hence, we can say that the lexical meaning of the second conjunct determines the interpretation assigned to the first.

These theoretical premises allow us to properly interpret the examples provided in (109) and (110), therefore explaining the underlying derogatory effect. Lang notes that "[t]he cognitive operation basically involved in the deduction of a Common Integrator [...] is that of pairing the conjunct meanings in such a way that they come to hold an equal rank within a conceptual hierarchy" (1984: 35). In this sense, whenever the conjunct meanings are not equal ranking instances of some common integrator, the achieved result is equating things that normally rank differently, creating an ironic (cf. Lang 1984: 35) or a derogatory effect, depending on the conjuncts and the context.

The very notion of common integrator suggests that, in real-life sentences, it is always possible to find some conceptual entity that encompasses all the elements of the list. This is especially true considering the essential role played by the broader context. As Lang himself notes "the deduction of the common integrator also involves various other factors obtainable only from either the situational context or the interactional setting of the given utterance or from extralinguistic systems of knowledge, belief-systems etc." (1984: 27).

The second reason against the enumerative function is indeed the context itself. As noted in Sections 1.3.2 and 1.3.3, context plays an important role in the identification of the property underlying categories. It follows that even those lists that may be seen as instances of enumeration, the moment they are inserted in a specific context, they tend to be interpreted as instances of categorization. Consider again (107) in the context of an alcoholic writer struggling to finish his latest novel. We can construe the same list as a category, identifying a defining property, good examples (e.g. balled up pieces of paper, bottles of wine) and bad examples (e.g. a calculator). Then, consider it again in the con-

text of a college student studying for finals and drinking too much coffee to stay awake. Again, we can construe the list as a category, with a different defining property. In this case, *bottles of wine* is no longer a good example, *calculator* and *coffee powder* may be good examples, and so on. Indeed, we can imagine as many different scenarios as we want, and every time the category will be different.

This little experiment allows us to argue that 1) the context plays an important part in the interpretation of a list construction and that 2) whenever a sentence is included in a broader context, a tendency prevails to interpret the list construction as an instance of categorization, rather than enumeration, because the context provides all the data around which to build the category. Consider (112).

(112) *Mochiron, kyoku-okuri ya onryō chōsei, dengen*
of.course song.feed, YA volume control power
jidō OFF kinō mo sonawatte-imasu.
automatic OFF function also be.furnished.with:TE-ASP:POL:NPS
'Of course, song feed, volume adjustment, automatic power OFF function and such are also provided.'

Here, we may be tempted to interpret the list construction ('song feed, volume adjustment, automatic power OFF function and such') as an instance of enumeration. However, since the broad context describes the functions of a compact stereo that can be used in the bathroom while taking a bath or a shower, the category interpretation seems again more likely. Specifically, the speaker wants to highlight that this product has all the classical function of a stereo (cf. *mochiron* 'of course' at the beginning of the sentence), in addition to the more peculiar functions related to its usage near water.

Even those lists that are not part of a larger textual context (i.e. co-text), are still part of a broader and always accessible extra linguistic context. Even a grocery list written down on a piece paper can be interpreted as a category when it is read in the context of a family with food allergies or certain dietary habits. In this case, the extra linguistic context defines the property shared by the elements of the list.

Therefore, we argue that, in real-life interactions, instances of pure enumeration are very much unlikely.[40] Whenever a list construction is considered with respect to the broader context, it always activates the presupposition that the list members share some common property (or common integrator) and that they should be considered exemplifications of the category thus defined.

In light of this, the aim of this chapter is to examine how exemplifying constructions may activate and guide the categorization process, even without a category label. As stated in Section 1.4, an exemplifying construction comprises 1) a non-exhaustive marker and 2) the mention of one or more examples of the category. In the following sections, we will show how these elements play essential roles in the cognitive and discursive process of referring to conceptual categories, examining 1) the non-exhaustivity feature as a crucial linguistic tool to trigger inferential processes (thus explaining why non-exhaustive markers are an essential part in exemplification), 2) the linguistic properties of the examples, and 3) the role of the context in directing inferential processes.

4.2 Non-exhaustivity

Up to this point, we have taken almost for granted the role of non-exhaustivity in exemplification and categorization processes. This assumption was built on empirical evidence (cf. Section 1.4). While examining the linguistic strategies identified by Mauri (2017) and Mauri and Sansò (2018) to communicate contextually relevant categories, we found that all of them encode non-exhaustivity, that is to say, the presupposition of other further elements beyond those explicitly mentioned. Furthermore, since we are examining linguistic strategies that explicitly encode it, non-exhaustivity has been a pivotal feature from the beginning of this book. Nevertheless, to understand the role played by non-exhaustivity, at this point, it is necessary to challenge it. Is non-exhaustivity really an essential feature in exemplification and categorization processes? Consider example (113a) and the same utterance with the exhaustive connective *to* 'and' in (113b).

40 This does not mean that enumeration itself is an impossible function, but just a very marked one, e.g. lists of numbers, lists of items in pure isolation without considering the extra linguistic context.

(113) a. *Baikin ya uirusu o shikkari jokyo.*
germ YA virus ACC firmly removal
'It removes germs, viruses and such.'

b. *Baikin to uirusu o shikkari jokyo.*
germ AND virus ACC firmly removal
'It removes germs and viruses.'

According to our theoretical proposal (cf. Section 1.4), the construction *baikin ya uirusu* 'germs, viruses and such' is used to make reference to the conceptual category PATHOGENS. This is due to the use of a non-exhaustive marker (i.e. the non-exhaustive connective *ya*) which triggers an inferential process, leading to the construction of the category. However, now that we are arguing against the role of non-exhaustivity, we should wonder if the same category can still be inferred through the exhaustive construction *baikin to uirusu* 'germs and viruses'. In other words, can we infer, build, and communicate categories in discourse even without using non-exhaustivity markers?

From our considerations, we must exclude all those constructions which comprise the explicit mention of a category label (i.e. lexicalized categories). In these cases, the presence of a non-exhaustive marker is less crucial, since the category is already explicit and, in most cases (cf. Chapter 3), directly linked to the examples. For instance, lexicalized categories can be expressed through similative constructions (X like Y), without any explicit non-exhaustive marker.[41]

Therefore, we are considering only those cases in which the category must be inferred from one or more explicit items, presented as an exhaustive list. More specifically, we are mainly concerned with two situations: 1) the speaker provides one item, 2) the speaker provides two or more items. The first situation is what Wilson and Carston (2007) call *category extension*, a specific type of broadening that mainly regards salient brand names, personal names or – more rarely – common names that can evoke a broader category of elements (cf. section 3.1). However, this is not a process that can be applied to any kind of exemplar, but just to those that are culturally salient to the point of being able to

41 Despite the absence of explicit non-exhaustive markers (e.g. non-exhaustive connectives, general extenders), we can argue that even similative constructions imply non-exhaustivity at the semantic level. In other words, the presupposition of constructions like 'Y like X' is that X is part of a larger set from which it was deliberately selected by the speaker (cf. Barotto and Mauri 2018).

represent an entire category. More generally, it is difficult, if not impossible, to make the hearer infer an entire category from just one example, without any linguistic element that trigger inferential processes.

The second situation involves the use of two or more examples in an exhaustive list. In his discussion about the notion of common integrator (cf. Section 4.1), Lang (1984) makes no distinction between exhaustive and non-exhaustive lists. Accordingly, his claim holds for any coordinate construction. It is always possible to infer a common integrator, that is, a defining property shared by all the members of the list. As a matter of fact, almost all examples provided by Lang are instances of exhaustive constructions (1984: 25-37), and yet, he demonstrates how it is always possible to deduce the common integrator, i.e. that entity that makes the conjuncts associable with each other. Therefore, for example, in *I need a book or some newspapers or magazines* the common integrator is 'something to read', while in *I need a book or a record* the common integrator is 'entertaining present' (Lang 1984: 27), and so on.

Going back to our original issue on the role of non-exhaustivity, the very notion of common integrator seems to argue against our assumption that only non-exhaustive constructions can encode conceptual categories. It is even arguable that there is always a conceptual category underlying the coordination construction. For instance, in *I need a book or some newspapers or magazines*, the underlying category is indeed THINGS TO READ. This is highly problematic in the light of what we assumed at the beginning of this section. If there is always categorization underlying the list construction, then what is the difference between an exhaustive construction and a non-exhaustive one? For example, we can argue that in (113a) and (113b) the common integrator is the same, namely 'microorganisms that are harmful to the human body'. Therefore, what is the real difference between (113a) and (113b) with regards to categorization processes?

Lang (1984: 26) seems to notice the substantial difference established by (non-)exhaustivity when he compares sentences (114a) and (114b).

(114) a. *I need a book or something.*
b. *I need a book or some newspapers or magazines.*

Specifically, he notes that sentences like (114a) are open to a wide range of possible specifications, whenever they are taken in isolation, or, to put it the other way around, there is a large class of possible contexts in which sentences like (114a) would fit into. This does not apply to sentences like (114b). In other words, Lang notes that the *or something* element is unspecified and that it as-

sumes a specific semantic referent only when it is inserted and interpreted within a specific context.

Following this intuition, Barotto and Mauri (2018) suggest that the difference between exhaustive and non-exhaustive constructions lies in the distinction between the presupposition (cf. Levinson 1983) and "what-is-said" part of the utterance meaning (cf. Grice 1989; Recanati 2004). While the former represents the inference associated with utterances that generally conveys backgrounded and uncontroversial information with respect to the context of the utterance, the latter refers to the conventional meaning of a sentence and the truth-evaluable representation made available to the speaker.

On the basis of this distinction, Barotto and Mauri (2018) propose that list constructions always activate the presupposition that list members share some common property P and should therefore be considered exemplars of the category defined by P. However, crucially, the property P is not always included in the "what is said" part of the utterance. In other words, it is not always part of the explicitly communicated content (cf. the notion of *explicatures* in the Relevance Theory). So, for example, in (114b), *I need a book or some newspapers or magazines* activates the presupposition that the book, the newspapers and the magazines share some common property P 'things to read'. However, this property is not included in the "what-is-said" part of the utterance: the speaker is not saying that she needs something to read, but that she needs one of the things she has mentioned. Therefore, the fact that it is always possible to activate the presupposition of a common property P does not imply that the underlying category is part of the speaker's communicated content. On the contrary, in (114a), *I need a book or something* activates the presupposition that the list members share the property P 'things to read', and this property is actually part of the explicitly communicated content. In other words, the "what-is-said" part of the utterance can be paraphrased as *I need something to read*.

Let us try to schematize what said above using as examples the following invented sentences.[42]

(115) a. Please go to the supermarket and [buy me some milk, flour and eggs.]
b. Please go to the supermarket and [buy me some milk, flour, eggs and so on]

In (115a), the difference between the presupposition and the "what-is-said" part of the utterance can be schematized as follows:

42 Examples are adapted from Barotto and Mauri (2018).

WHAT IS PRESUPPOSED: [$X_{(milk)}$, $X_{(flour)}$, $X_{(eggs)}$] share some common property P.
WHAT IS SAID: buy me the following things: [$X_{(milk)}$, $X_{(flour)}$, $X_{(eggs)}$].

In this case, in order to understand what is (effectively) said by the speaker, it is necessary to assign a referent to each list member but not to assign a specific value to the property P. This means that even if the hearer is not able to identify the common property, she can still go to the supermarket and buy milk, flour and eggs, ensuring felicitous communication.

Now let us consider the non-exhaustive version of the same utterance. In (115b), the difference between the presupposition and the "what-is-said" part of the utterance can be schematized as follows:

WHAT IS PRESUPPOSED: [$X_{(milk)}$, $X_{(flour)}$, $X_{(eggs)}$, $X_{(unspecified)}$] share some common property P.
WHAT IS SAID: buy me the following things: [$X_{(milk)}$, $X_{(flour)}$, $X_{(eggs)}$, $X_{(characterized\ by\ P)}$].

Here, in addition to the presupposition of a shared property P triggered by the list members, there is also the presupposition triggered by the non-exhaustive marker *and so on* regarding the existence of further unspecified Xs characterized by the shared property P. Therefore, it is now necessary to identify a specific value in order to saturate P, otherwise the utterance would be ambiguous. In other words, the hearer must be able to distinguish between possible Xs and impossible Xs. To achieve this, she must have access to the context. For example, if the context is about cooking pancakes, the shared property P will be 'ingredients for pancakes', and then X = 'sugar' but *X = 'coffee'. However, if the context refers to the weekly grocery shopping, property P will be 'things that are normally found in the kitchen', and then X = 'coffee' but probably *X = 'umbrella'. It follows that if the hearer has no access to the context and cannot saturate the value of P, she cannot understand the overall communicated content, leading to potential misunderstandings.

To sum up, the presupposition of a shared property P 'ingredients for pancakes' is activated by the list construction in both (115a) and (115b). However, in (115a), the property P is not necessary to understand the explicitly communicated content of the utterance (i.e. *milk, flour and eggs*). On the contrary, in (115b), the non-exhaustive marker activates the presupposition of further unspecified members that can be identified only by saturating the variable P. It follows that in (115b), the value of P is essential to correctly understand the "what-is-said" part of the utterance. As a result, in (115b), the category defined by P is part of the communicated content. We can schematize the difference as follows:

(116) a. Please go to the supermarket and [buy me some milk, flour and eggs.]
= buy some milk, flour and eggs
=/= buy the ingredients for pancakes

b. Please go to the supermarket and [buy me some milk, flour, eggs and so on.]
= buy the ingredients for pancakes
= buy some milk, flour, eggs and other ingredients that are needed for this specific receipt.

To further explain the role of non-exhaustivity, Barotto and Mauri (2018) suggest that non-exhaustivity markers function as indexical elements. Indexical elements adduce a lack of information while implying the existence of a variable. However, they do communicate comprehensible pieces of information because they are usually included in a broader context, which allows to saturate the variable. For instance, the indexical word *tomorrow* configures an open variable 'the calendar day that succeeds the time of speaking (X)', which can be saturated by looking at the specific (extra-linguistic) context of the utterance. In the same way, non-exhaustivity markers configure a variable, namely the property P, whose saturation is pivotal in order to correctly comprehend the communicated content.[43] Let us consider again (113a), repeated here as (117).

(117)	*Baikin*	*ya*	*uirusu*	*o*	*shikkari*	*jokyo*.
	germ	YA	virus	ACC	firmly	removal
	'It removes germs, viruses and such.'					

In (117), the list construction [*baikin ya uirusu*] activates the presupposition that the list members share a common property P, which can be identified by examining the list members in the specific linguistic and extra-linguistic context they occur. In this example, we identify P as 'microorganisms that are harmful to the human body'. Up to this point, the process would have been the same even with an exhaustive list construction, as in (113b). However, the presence of the non-exhaustive connective *ya* activates the presupposition of further unspecified Xs characterized by the common property P. Therefore, explicit list members *baikin*

43 Barotto and Mauri (2018: 105) argue that only P can be considered as a variable in its own right. The other unspecified Xs may remain unspecified, but they need to be identifiable. This is why the identification of P is such a crucial step to correctly understand non-exhaustive expressions.

'germs' and *uirusu* 'viruses', and implicit 'Xs that are harmful microorganisms' together constitute the superordinate category 'pathogens', which represents the actual communicated content of the utterance.

Let us consider another example.

(118) *Fuyōna kami ya chirigami nado ni yoku*
unnecessary paper YA tissue NADO DAT often
nakami o shiboridashite, marumete kanen-gomi
content ACC squeeze:TE round.off:TE combustible-waste
toshite sutemasu.
as throw.away:POL:NPS
'I often squeeze the content out on unnecessary paper, tissues or something like that, roll it up, and dispose it as combustible waste.'

Again, in (118), the hearer is compelled to infer other potential members and the superordinate category because of the presupposition activated by the non-exhaustive markers *ya* and *nado*. Therefore, we argue that whenever non-exhaustive markers are used, the following elements become part of the truth-evaluable representation which is available to the speakers (Recanati 2004; Mauri 2014: 4):

1. the reference to the explicit list members (i.e. unnecessary paper, tissues);
2. a broader (linguistic and extra-linguistic) context (i.e. a series of advice on how to dispose household waste);
3. the property shared by the list members, identified through associative reasoning and by comparison (i.e. paper-like surfaces);
4. the reference to a contextually relevant category which comprises the list members and further items sharing a specific property (i.e. paper-like surfaces that can be used to empty containers before throwing them away).

To sum up, in this section we have showed that only in non-exhaustive lists the common integrator (or property P) coincides with the "what-is-said" part of the utterance meaning. This is due to the fact that non-exhaustive markers effectively work as indexical elements. For this reason, following the suggestion of Barotto and Mauri (2018), we refer to this entire process as *indexical categorization*, that is, an exemplar-driven process implying a variable which is to be saturated through the context. On the contrary, in exhaustive lists, the common integrator (and thus the superordinate category defined by it) is just part of the presuppositions. We refer to this case as *presupposed categorization* (cf. Barotto and Mauri 2018: 115).

4.3 Linguistic properties of the example(s)

Without an explicit label, examples are the only clues directing the inferential reasoning towards the identification of the target category. In this case, the hearer is asked to infer the shared property by comparing the explicit examples. As Lang notes, examples are thus "mutually determined, weighed up against each other, or integrated with each other" (1984: 30). Ultimately, their interpretation is narrow down to some shared property that covers them all in a specific situational context.

Because of this, we can argue that speakers are equally compelled to choose carefully the examples, so that they can provide all the important pieces of information regarding the target category (cf. Taylor 1995: 40) and successfully guide the inferences of the hearer. It follows that, at the linguistic level, we need to understand if the way examples are linguistically encoded can have an active role in facilitating or even directing these cognitive processes. In the following sections, we aim to provide an answer to this issue, monitoring the syntactic and semantic properties of the example(s) and the number of examples selected by the speaker.

4.3.1 Syntactic properties of the example(s)

Table 9 illustrate data regarding the syntactic properties of the examples in non-lexicalized categories.

Tab. 9: Syntactic properties of the examples (non-lexicalized categories).

	NP	VP/Clause	ADJ	Mix
ya	163	0	0	0
nado	106	7	0	0
tari	0	178	0	0
toka	107	27	0	1
Total	376 (64%)	212 (36%)	0	1

The first point of interest in Table 9 concerns the frequency of non-lexicalized categories occurring with the exemplifying marker *tari*. A likely reason for this is syntactic. The converb *tari* is the preferred strategy whenever speakers use examples encoded by verbal phrases or clauses. As noted in Chapter 3, lexicaliza-

tion appears to be less frequent with examples encoded by verbal phrases and clauses. Nevertheless, it is noteworthy that a general tendency to encode examples by noun phrases (64%) instead of verbal phrases (36%) persists even when we consider only non-lexicalized categories. It follows that the preference for examples expressed by noun phrases seems to be an overall tendency of exemplification.

As noted in Chapter 3, nouns and verbs exhibit different degrees of complexity. Givón (2001) describes (prototypical) nouns as "multi-featured bundles of experience [...] Consequently, when either rapid change or deviance crop up in one feature, the relative stability of the rest insures that a deviant individual remains within a reasonable range (standard deviation) of the population's prototype (mean)" (2001: 51). Therefore, beyond having easily identifiable features such as size, shape, color, weight, sound, smell, etcetera, nouns exhibit temporal stability ("nouns change only little over repeated perceptual scans" Givón 2001: 51) and tend to be spatially compact. It follows that it is easier to process them since they are not scattered all over the perceptual space and through time. Moreover, it is also easier to elaborate them because they are formed by conceptually and sensorially salient features. On the contrary, (prototypical) verbs exhibit low temporal stability and are spatially more diffuse. Moreover, "while not quite as multi-featured as nouns, prototype verbs often exhibit considerable complexity" (Givón 2001: 52). This is due to the fact that prototypical verbs (i.e. actions or events) may involve different participants and each of them is an identifiable, spatially compact, temporally durable entity. In other words, verbs do not show sensorially salient features (which are easier to grasp for the human brain), and they are more complex than nouns, since they presuppose interconnections among the participants.

The differences between nouns and verbs have been also investigated by Langacker (1987a, 1991b). What Givón identifies as temporal stability, for Langacker it becomes cognitive stability. He notes that while nouns profile (i.e. designate) things, verbs profile processes. This has consequences on the way the human brain configures both, in the sense that "whereas a noun profiles a thing, a relational predication designates a set of interconnections. A verb, moreover, is an especially complex relation, in that it profiles a series of relational configurations, and further specifies their continuous distribution through time" (1991b: 21-22). In other words, while verbs "represent a higher level of conceptual organization" (1991b: 20) since they relate to interconnections and time, encoding the evolution of a particular event through time, this is not the case for nouns. Like Givón, Langacker places nouns and verbs at oppo-

site extremes on the category spectrum (1991b: 19), however he shifts the focus on the level of internal organizational complexity.

In Chapter 3, the different ways in which nouns and verbs are cognitively processed were used to explain the frequency patterns of lexicalized categories. Nevertheless, the identification of a common property is not only the basis of the lexicalization process, but also of the entire process of categorization *via* exemplification. Having access to the defining property is essential to successfully build contextually relevant categories: if the hearer is unable to track the property, she cannot infer the category. Therefore, ideally, examples should be simple to understand and interpret, so that the hearer can easily compare them finding out what they share in a specific context. Following the insights suggested by Givón and Langacker, we argue that it is easier to interpret and compare things (that is, 'prototypical nouns'), rather than interpreting and comparing processes (that is, 'prototypical verbs'). As already noted, usually things are stable and have sensorially salient features that are easy to identify (e.g. shape, color, way of usage, etc.). On the contrary, processes are complex interconnections of entities (i.e. the participants) and they tend to be scattered through space and time. Consider and compare the following occurrences.

(119) *Rizōtobaito to wa... kankō shīzun ni hoteru*
resort-part.time QT TOP sightseeing season DAT hotel
ya ryokan penshon nado ni sumikomi de
YA japanese.inn pension NADO LOC live-in INS
okonau arubaito.
do:NPS part.time.job
'A resort part-time job is a part-time job where the worker lives in hotels, inns, pensions and such during the sightseeing season.'

(120) *Sarani dōten de wa, byōki no petto*
furthermore same.store LOC TOP disease GEN pet
o kakaete-itari anrakushi nitsuite nayande-itari
ACC have:TE-ASP:TARI euthanasia about be.worried:TE-ASP:TARI
nado suru kainushi to sono kazoku ni kaunseringu
NADO do pet.owner COM their family DAT counselling
ya sapōto o okonau to shite-iru.
YA support ACC perform LK do:TE-ASP:NPS
'In the same shop, (they) provide counselling and support for pet owners and their families who are worried about euthanasia, have pets with diseases, etc.'

In (119), to have access to the shared property, the hearer only needs to recognize that the three examples (*hoteru* 'hotel', *ryokan* 'Japanese traditional inn' and *penshon* '(western style) pensions') are places that usually provide accommodation for travelers and tourists. On the contrary, in (120), the hearer must have access to the broader context (i.e. the article refers to a pet shop that performs also veterinary counselling) to understand correctly what 'having an ill pet' and 'being worried about euthanasia' have in common. Moreover, beyond the events (i.e. 'to own' and 'to be worried'), the hearer must also consider all the interconnections that are profiled, such as *petto* 'pets' and *anrakushi* 'euthanasia'. Finally, although *tari*-forms are not marked by tense (cf. Section 1.5.3), they still provide important information regarding how the process is temporally constituted (cf. grammatical aspect). For instance, in (120), *kakaetei(ru)-tari* and *nayan-dei(ru)-tari* take the aspectual marker *-teiru* which indicate that the events are ongoing but not evolving situations (i.e. continuous stative aspect). Therefore, the hearer must also consider how the state of affairs develop through time in order to ultimately understand the exemplifying construction.

Finally, data on syntactic properties of examples also confirm some tendencies already emerged in Chapter 3, namely the absence of exemplifying construction comprising only adjectives and the low frequency of exemplifying constructions comprising examples with different syntactic properties. In the corpus there is only one occurrence of the latter case:

(121) *Kaze o hiki-yasukattari hada no toraburu ga yoku*
cold ACC catch-easy:TARI skin GEN trouble NOM often
okoru yōna toki wa, karada no teikō-ryoku ga
occur:NPS like time TOP body GEN resistance-power NOM
yowamatte-iru kamoshiremasen
weaken:TE-ASP:NPS MOD:POL
'In times when [we are] prone to catching colds and skin troubles often happen, the resistance of the body may weaken.'

Similarly to the occurrences examined in Chapter 3, also in this case examples have different syntactic properties (the first is an adjective phrase and the second is a clause[44]), but they still both denote states of affairs. As already noted,

44 The construction *kaze o hiki-yasu[i]* (lit.) 'easy to catch a cold' is a so-called "tough" predicate (Inoue 1978). In this construction, a derivational adjectival suffix (e.g. *-yasui* 'easy to') is attached to a verbal phrase. Usually, these adjectival suffixes can induce a case-marking alter-

this figure is consistent with the fact that examples must be similar to each other to a certain degree in order to be included in the same category. Therefore, while individuals can create different types of categories, moving along the vertical and horizontal dimensions of categorization (cf. Rosch 1978), some basic cognitive constrains persist in the way categories are built and then linguistically encoded, in particular with regard to the notion of similarity.

4.3.2 Semantic properties of the example(s)

Table 10 illustrates data regarding the semantic properties of the examples in non-lexicalized categories.

Tab. 10: Semantic properties of the examples (non-lexicalized categories)

	Concrete things	Abstract things	SoA	Properties
ya	89	42	30	2
nado	65	26	22	0
tari	0	0	178	0
toka	66	31	38	0
Total (%)	220 (37%)	99 (17%)	268 (46%)	2

Looking at the figures in Table 10, two points are noteworthy: 1) the very low frequency of categories of properties and 2) the mismatch between syntactic data and semantic data, which highlights the use of nouns also to encode states of affairs and properties.

In the corpus, there are only two occurrences of examples denoting properties:

nation on the object of the base verb, from accusative to nominative. However, as noted by Sugioka and Ito (2016: 360), when "tough" predicates are used to indicate the likelihood of the event denoted by the verb, there is no case-marking alternation. The result is an adjective phrase constituting of a verbal phrase and an adjectival affix (e.g. *[kaze o hiki]*$_{VP}$*-yasui*$_{A}$). Following the analysis of Sugioka and Ito (2016), we decided to analyze the exemplifying construction as [AP-TARI C-(TARI)], thus categorizing it as 'mix'.

(122) *Yūkō-sei ya anzen-sei o kakunin dekireba, [...]*
effectiveness YA safety ACC confirmation POT:COND
'If the safety and effectiveness [of the vaccine] are confirmed, [...]'

(123) *Dēta no eizoku-sei ya fukugen-sei o sonae, [...]*
data GEN persistence YA resiliency ACC possess:INF
'With data persistence and resiliency, [...]'

Examples in (122) and (123) are properties encoded by nouns (cf. the noun-forming suffix *-sei* that indicates qualities or properties). This brings us to the second point of interest that emerges from comparing syntactic data and semantic data. The discrepancy between the frequency of examples encoded by verbs or clauses (36%) and the frequency of examples denoting states of affairs (46%) indicates a specific tendency to use nouns also to exemplify categories of states of affairs or, to a lesser extent, properties. Consider the following occurrences:

(124) *Kasai ya hason nado niyoru songai o kabā-suru.*
fire YA damage NADO due.to damage ACC cover-do:NPS
'It covers damages resulting from fire, breakage and so on.'

(125) *jinzai-saiyō toka kōkoku nanka no eigyō denwa*
recruitment TOKA advertisement etcetera GEN business call
ga fuemashita ne.
NOM increase:POL:PAST PP
'business calls for recruitment, advertisement, etcetera have increased.'

In the occurrences above, the speakers make reference to categories of states of affairs by using verbal nouns as examples: *kasai* 'fire, conflagration' and *hason* 'damage' in (124), *jinzai-saiyō* 'recruitment' and *kōkoku* 'advertisement' in (125).[45] In other cases, speakers use nouns that, when interpreted considering the broader context, make reference to states of affairs and not abstract or concrete things. For instance,

45 These verbal nouns are usually part of the *kango*, i.e. the portion of the Japanese vocabulary that has been created from elements borrowed from Chinese. Contrary to other types of verbal nouns, these nouns are not derived from verbs or verbal forms, but they consist of the bare lexical root without any derivational suffix. These nouns can be used as verbs by using the verb *suru* 'to do' (e.g. *kōkan* 'replacement', *kōkan suru* 'to replace, to change').

(126) *byōin no machiaishitsu toka basu ryokō no toki*
hospital GEN waiting.room TOKA bus trip GEN time
nado no himatsubushi niwa saikō.
NADO NML killing.time for the.most
'[the game] is great for killing time for instance in the hospital waiting room or during a bus trip.'

Here, the speaker does not want to make reference to a category of places (cf. *byōin no machiaishitsu* 'hospital waiting room'), but she likely wants to make reference to a category of states of affairs that share a common frame *waiting for something to happen* (a medical visit or the destination of a bus trip). Therefore, *byōin no machiaishitsu* 'hospital waiting room' does not really exemplify a concrete place, but a specific type of waiting.

Nouns denoting states of affairs represent the 9% of non-lexicalized categories (55 occurrences out of 589). More importantly, they represent the 21% of non-lexicalized categories of states of affairs (55 occurrences out of 268). These figures are interesting because Japanese has one dedicated strategy to exemplify categories of states of affairs by means of verbs (*tari*) and two strategies that optionally can perform the same function (*nado* and *toka*). For instance, in (125), the speaker could have added the light verb *suru* 'to do' after both *jinzai-saiyō* 'recruitment' and *kōkoku* 'advertisement' in order to use them as proper verbs (and thus use verbal suffixes to express tense, aspect, mood, and such). It follows that nouns denoting states of affairs can be seen as a linguistic strategy, rather than a resort for lack of better options. We argue that the linguistic choice of using nouns to represent categories of states of affairs may be due to the way entities need to be construed to function as examples. Specifically, the use of nouns denoting states of affairs "involves a conceptual 'reification' of the designated process" (Langacker 1991a: 20), by nullifying the temporal evolution, which is characteristic of verbs. In other words, when states of affairs are encoded as nouns, this changes the profiled process into a complex atemporal relation. So, while event-denoting nouns incorporate the conception of a process, they do not profile interconnections but rather an abstract region (Langacker 1991b: 37). From the point of view of categorization, it can be argued that the process of elaborating and comparing states of affairs that do not involve relational configurations and distribution through time requires a minor cognitive effort. All in all, it appears a general tendency to select concrete things as examples or to construe entities as examples by reifying or objectifying them as much as possible. Given the nature of the present study, it is hard to provide a clear explanation for this tendency. Whereas we may hypothesize that it might

be related to the way different entities of the world are elaborated in the human mind when they are categorized, we should call for further study by means of psycholinguistic experiments to shed more light on the phenomenon.

4.3.3 Number of examples

The final parameter we need to address is the number of the examples that are mentioned by the speaker. Data on the number of examples are particularly interesting in case of non-lexicalized categories, since examples are the only explicit clues to infer the conceptual category. We identify four patterns. In the first patter, the speaker provides only one example:

(127) *Kokkai-shingi* *nado* *de* *toriyame* *ni*
parliament.deliberation NADO INS cancellation DAT
natta *rei* *wa* *aru* *ga,* *kono* *hi* *wa*
become:PAST example TOP AUX:NPS but this day TOP
kokkai *wa* *kūten-shite-ori,* *yotei-jikoku* *ni* *raikyaku*
parliament TOP idling-do:TE-ASP:INF schedule-time LOC visitor
wa *nakatta.*
TOP AUX:NEG:PAST
'Although there were instances (of doorstep interviews) being cancelled due to Diet deliberations and such, this day the Diet has been idle and there was no visitor at the scheduled time.'

In (127), the speaker mentions one example, *kokkai shingi* 'Diet deliberations'. The reference is to a category of situations in which the prime minister cancels interviews. To correctly interpret the example, it is necessary to draw on the broader context. Specifically, in this context, *kokkai shingi* 'Diet deliberations' is relevant in the sense of being an important event the prime minister cannot miss. The implication is that events such as the Diet deliberations can justify the cancellation. Considering this, the hearer can build the category, including only important events that cannot be cancelled or postponed for an interview.

(128) *mēru* *toka* *o* *shi-hajimeta.*
email TOKA ACC do-begin:PAST
'I started doing emails and such.'

Again, in (128) the speaker provides one example, that is, *mēru* 'emails'. In this case it is even more pivotal to draw on the context and encyclopedic knowledge to correctly infer the category. The speaker is describing how she started using mobile phones. We can thus imagine that she is referring to the types of emails and electronic messages that were used with the first Japanese mobile phones. Furthermore, she is not referring to social networks or other online services, that came much later. If the hearer does not have access to the broader context, it might be quite difficult to figure out what aspect of *mēru* 'emails' is important to properly build the category.

In the second attested pattern, the speaker provides two examples:

(129) *CSS o chimachima ijittari, uijetto no*
CSS ACC little play.with:TARI widget GEN
narabi-jun o kaete-mitari.
line-order ACC change:TE-try:TARI
'[I started my own blog, it's funny!] Playing around with the CSS, trying to change the order of widgets, etc.'

In (129), the speaker provides two examples: *CSS o chimachima ijittari* 'playing around with the CSS' and *uijetto no narabi-jun o kaete mitari* 'trying to change the order of widgets'. In this case, the hearer does not have to rely solely on the broader context (i.e. the speaker is talking about his new blog), because she can compare the two examples in order to grasp what they have in common in the given situational context. Therefore, unlike the previous occurrences (127) and (128), here, the examples act as starting points for associative reasoning, helping the hearer to infer the common defining property. Let us consider another occurrence:

(130) *Kenka toka arashi mo ōi yo ne.*
fight TOKA troll also many PP PP
'There are also many fights and trolls and such things!'

In (130), the speaker mentions two examples: *kenka* 'fights' and *arashi* '(internet) trolls'. Even without knowing the broader context, the simple comparison of the mentioned examples allows to understand which aspect of the two items is crucial to build the target category. Specifically, the second example *arashi* '(internet) trolls' is much more specific than the first, *kenka* 'fights', thus it defines the relevant semantic field more precisely. Even without any reference to the context, we can still configure the category NEGATIVE AND ANNOYING EXPERIENC-

ES ON THE INTERNET. This is further confirmed by the broader context: the speaker is describing how toxic the Internet can be, while talking about her experience using cellphones and online services in general. While the context is always an important factor to consider, it is noteworthy that the simple presence of two (or more) examples triggers an associative inference towards the shared property and, ultimately, the relevant category.

In the third pattern, the speaker provides a list of three examples:

(131) *Shoseki ni fusen o hattari, sen o hiitari,*
book DAT label ACC stick:TARI line ACC draw:TARI
orikaeshi o tsukeru no wa yoku yarimasu.
flap ACC add:NPS NML TOP often do:POL:NPS
'I often underline, attach a label, fold the corner of the page and so on.'

Here we identify three examples: 1) *fusen o haru* 'to attach a label', 2) *sen o hiku* 'to underline', 3) *orikaeshi o tsukeru* 'to fold the corner of the page'. Through their mention, the speaker wants to refer to the category THINGS THAT PEOPLE USUALLY DO TO MEMORIZE A BOOK. Again, the comparison among the mentioned examples triggers an associative inference towards the shared property.

In the fourth and final patterns, the speaker provides four or more examples. For instance, in (132), the speaker provides a long list of important destinations in Japan:

(132) *Mata, kinkō dake dewanaku, Narita ya Haneda,*
also suburbs only COP:NEG:INF Narita YA Haneda
Aomori, Nagano, Toyama, Ōsaka nado e no basu
Aomori Nagano Toyama Ōsaka NADO to GEN bus
rosen mo ari, arayuru kōtsū-shudan no
route also exist:INF every transportation-means GEN
yōsho tonatte-imasu.
important.point become:TE-ASP:POL:NPS
'Also, there are bus routes not only to the suburbs, but also to Narita, Haneda, Aomori, Nagano, Toyama, Osaka, etc., making [Ikebukuro station] an important point for all means of transportation.'

Table 11 illustrates the distribution of these patterns.

Tab. 11: Numbers of examples in non-lexicalized categories.

	1 example	2 examples	3 examples	4 or more examples
ya	0	128	29	6
nado	38	41	20	14
tari	6	138	27	7
toka	32	88	12	3
Total	76 (13%)	395 (67%)	88 (15%)	30 (5%)

To better understand the data illustrated in Table 11, some remarks on structural constrains should be made. In particular, while considering the frequency of the first pattern, it should be noted that, being a connective, *ya* cannot occur with only one example. Despite this bias, since the other strategies can occur with one, two or more examples, data on frequency may still provide interesting insights.

Data suggest that overall speakers tend to provide two examples, although this tendency is not equally strong across strategies. We propose that this preference can be traced back to the fact that two examples are the minimum number to deduce the common property by associative reasoning. Without a second element working as a comparison, the hearer is forced to elaborate the only mentioned example according to the given situational context. Consider the following variations of (130).

(133) *Arashi* *toka* *mo* *ōi* *yo* *ne.*
troll TOKA also many PP PP
'There are also many trolls and such things!'

(134) *Kenka* *toka* *mo* *ōi* *yo* *ne.*
fight TOKA also many PP PP
'There are also many fights and such things!'

Both examples have been used by the speaker in (130). Thus, it is reasonable to think that they are both well qualified to represent the target category.

In (133), although *arashi* '(Internet) trolls' is quite specific, it can still be difficult for the hearer to understand which aspect of the example must be considered to build the category: people like trolls (e.g. haters, fake accounts) or situations such as dealing with trolls (e.g. flames, hateful comments)? Since the example is semantically specific, it is likely that in both cases the inferred cate-

gory is not too far from the target one, but this may change substantially if we consider a more generic term as an example. As for (134), *kenka* 'fights' is a generic term that encompasses having a heated argument with strangers but also the type of everyday quarrel between siblings or lovers. Without any context, it is practically impossible to identify the defining property of the category. Furthermore, even if the hearer considers the context (i.e. Internet), it may still be cognitively difficult since different types of categories can be thus inferred (e.g. quarrels with acquaintances that may have repercussions in real life, arguments with haters, and so on).

All these issues are minimized in (130) where the comparison between the two examples allows the hearer to grasp immediately the shared property. This fact is noted by Lang (1984) while investigating coordination. He suggests that the lexical meaning of the second item determines the interpretation assigned to the first, narrowing it down to some common property that covers them from a particular point of view (e.g. in *a book or a record*, *record* narrows down the interpretation of *book* to 'entertaining present', see Lang 1984: 27). In our occurrence, *arashi* 'internet trolls' suggests that we are dealing with Internet people that engage in arguments for nothing, while *kenka* 'fights' suggests that we are dealing with a range of situations, and not with a range of people.

Without a second example, the context is the only factor that determines the interpretation of the example, and therefore the common property of the category. This also means that, ideally, the speaker must choose her example very carefully, in order to provide the best representative item of the category, as to correctly direct the categorization. Such a process may require a greater cognitive effort and the risk of creating misunderstanding is not completely nullified.

Nevertheless, exemplifying construction with one example are attested (in particular with *nado*). This pattern could be a good strategy when 1) it is not hard to select a good (prototypical) exemplar of the category, 2) the interpretation of the example in the context is not particularly demanding, and 3) category members are fairly homogenous. Let us consider for example (128) again, repeated here as (135).

(135) *mēru* *toka* *o* *shi-hajimeta*.
email TOKA ACC do-begin:PAST
'I started doing emails and such.'

It is not very hard to interpret *mēru* 'emails' in the context of a girl describing her first experiences with a mobile phone. Secondly, the target category is also

quite homogenous, including message-type means of communication. In this regard, this instance is very different from (130), where the members of the category appear to be much more heterogeneous. Other examples are provided below.

(136) *Furuhonya* *toka* *no* *naka,* *haraisage* *no*
secondhand.bookstore TOKA GEN inside on.sale GEN
amerikan-komikku *ga* *atte* *ne.*
american-comics NOM exist:TE PP
'In secondhand bookstores and such, there are American comics on sale!'

(137) *Konna* *sensēshonaruna* *taitoru* *no* *dōga* *ga,* *yūchūbu*
such sensational title GEN video NOM YouTube
nado *ni* *tōkō-sarete-iru.*
NADO LOC post-do:PASS:TE-ASP:NPS
'A video with such a sensational title is posted on YouTube and such.'

In (136), interpreting the example *furuhonya* 'secondhand bookstores' according to the context of buying American comics is not particular demanding and the target category is also quite homogenous (i.e. PLACES WHERE PEOPLE CAN BUY COMICS). The same applies to (137).

The above seems to show some consequences also at the linguistic level. Figure 7 illustrates data regarding the numbers of examples and the syntactic properties of the examples.

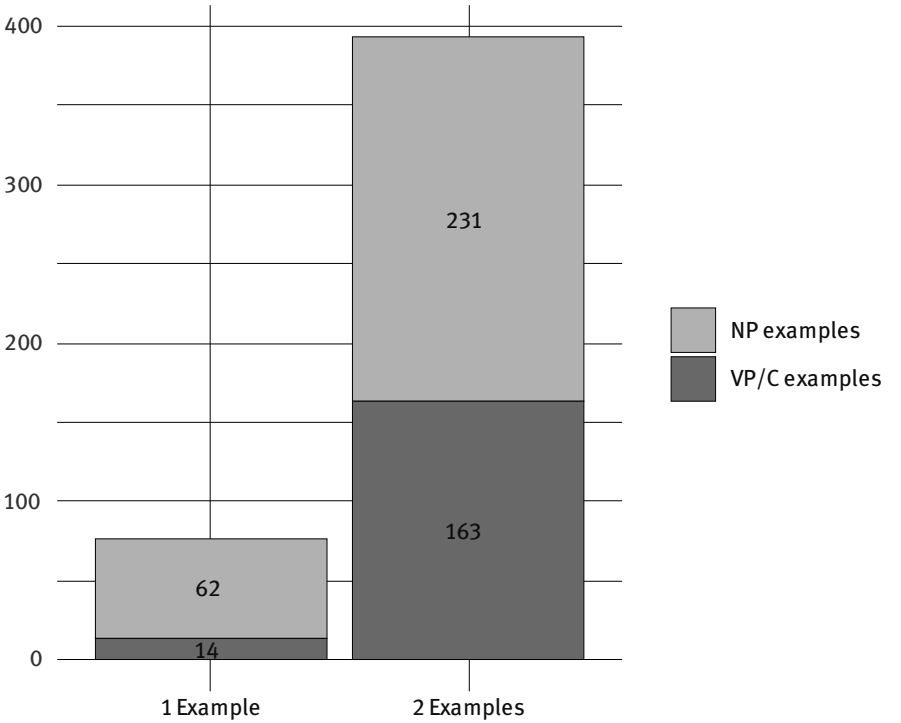

Fig. 7: Correlation between the number and syntactic properties of the examples (non-lexicalized categories)

Whenever speakers provide one example, they tend to encode it by a noun (82%, cf. the average for non-lexicalized categories is 64%). On the contrary, when speakers provide two examples, this tendency is less strong (59%). As previously noted, since nouns are usually cognitively less complex than verbs, it is easier to process them as representative of a larger set. The fact that a single example must be processed solely on the basis of the context is likely a reason for the preference for noun phrases.

What has been said up to this point explains the preference for two examples rather than one. However, it does not explain the preference for two examples rather than a long list of examples. This can be explained by the notion of *linguistic economy*, that is, a tendency towards the minimum amount of effort that is necessary to reach the maximum result. Since two examples are the minimum requirement for inferring the common property by associative reasoning, adding further elements may be considered redundant and ultimately not use-

ful for the creation of the category. Furthermore, there might be also a cognitive reason. If each example is to be considered a further clue towards the category, it follows that every time a new example is added, all the previous ones need to be re-interpreted on the basis of the new example looking for a common property that covers them all (cf. Lang 1984; Perelman and Olbrechts-Tyteca 1969). For instance, if we add *video game* to the list of examples *a book or a magazine*, the common property may shift from 'something to read' to 'something to kill time'. If the list of examples is too long, this process may be not only cognitively taxing, but it can also create potential misunderstandings.

Nonetheless, a long list of examples can be used to achieve other communicative goals, for instance, to emphasize the high number of category members or their heterogeneity (cf. Overstreet 1999: 45). Consider again (132), repeated here as (138), and (139).

(138) *Mata, kinkō dake dewanaku, Narita ya Haneda,*
also suburbs only COP:NEG:INF Narita YA Haneda
Aomori, Nagano, Toyama, Ōsaka nado e no basu
Aomori Nagano Toyama Ōsaka NADO to GEN bus
rosen mo ari, arayuru kōtsū-shudan no
route also exist:INF every transportation-means GEN
yōsho tonatte-imasu.
important.point become:TE-ASP:POL:NPS
'Also, there are bus routes not only to the suburbs, but also to Narita, Haneda, Aomori, Nagano, Toyama, Osaka, etc., making [Ikebukuro station] an important point for all means of transportation.'

(139) *Shibafu ni nekorogattari, tenbō-dai ni*
lawn LOC lie.down:TARI viewing.platform LOC
nobottari, umi o mitari, dōkutsu ni haittari to,
climb:TARI sea ACC see:TARI cave LOC enter:TARI LK
Enoshima o mankitsu-suru.
Enoshima ACC enjoy-do:NPS
'Enjoy Enoshima, (doing things like) lying down on the lawn, climbing to the viewing platform, watching the sea, entering the cave, and so on.'

In (138), the speaker wants to emphasize the fact that from Ikebukuro it is possible to easily reach not only the suburbs of Tokyo, but also many important travel destinations in Japan, such as Narita and Haneda airports, Nagano, To-

yama and Osaka. Similarly, in (139), the speaker wants to emphasize all the possible different activities that tourists can do when exploring the island of Enoshima.

To sum up, it appears that there is a strong correlation between the number of examples provided and the necessity of having the minimum amount of information to infer the category by associative reasoning. This further confirms the existence of a more general correlation between the cognitive functions of examples and their linguistic encoding.

4.3.4 General considerations about the animacy parameter

A semantic parameter that has not been considered so far is animacy. While data confirm a general tendency to use concrete entities as examples, animate entities are rarely used in exemplifying constructions (cf. Figure 8).

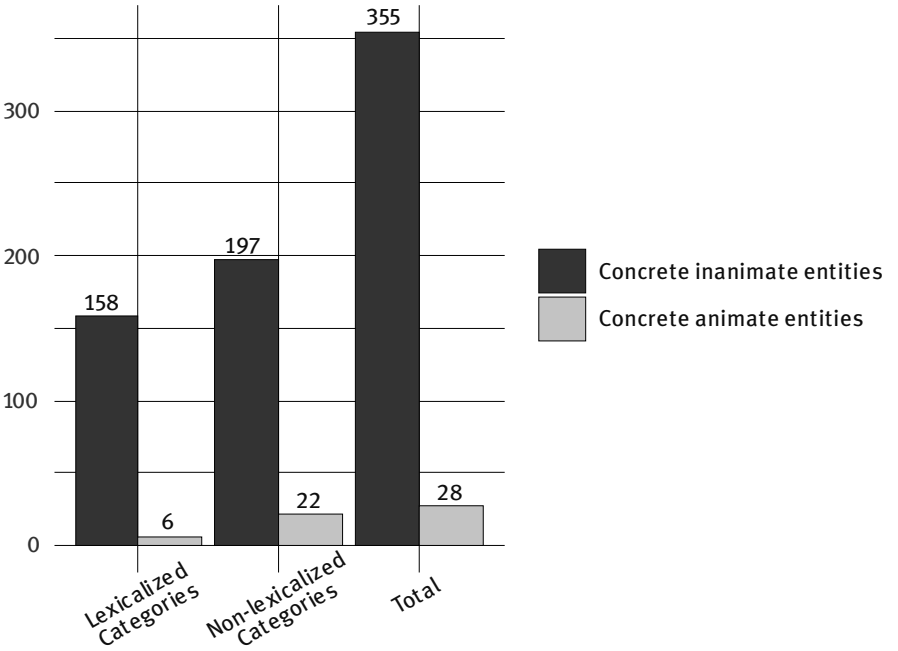

Fig. 8: Frequency of animate and inanimate entities as examples

We argue that there are two likely reasons behind the low frequency of animate entities as examples: 1) the availability of category labels designating categories of animate entities and 2) the degree of definiteness of the entities used as examples.

Categories of animate entities are prototypical 'lexicalized natural categories' (cf. Rosch 1973; Overstreet 1999). In other words, they have a stable underlying representation that is often associated with familiar words or short expressions (e.g. *cats*, *felines*, *mammals*, *vertebrates*). As a consequence, there are many taxonomic lexical hierarchies of categories of animate entities. Most of the terms designating these categories have been created for scientific purposes and, while some of them are still prerogative of the scientific lexicon, others have become part of the everyday lexicon (e.g. *felines*, *primates*, *reptiles*). For all these reasons, we can assume that there are less lexical gaps in these hierarchies. It follows that, in many cases, to designate these categories, speakers can easily select simple (e.g. *insects*, *poultry*) or complex labels (e.g. *small mammals*), instead of providing concrete examples. Looking at the data, it appears that exemplification is used to fill possible gaps in taxonomical lexical hierarchies. Consider the distribution of 1) proper names, 2) human common nouns and 3) animate non-human nouns in Figure 9.

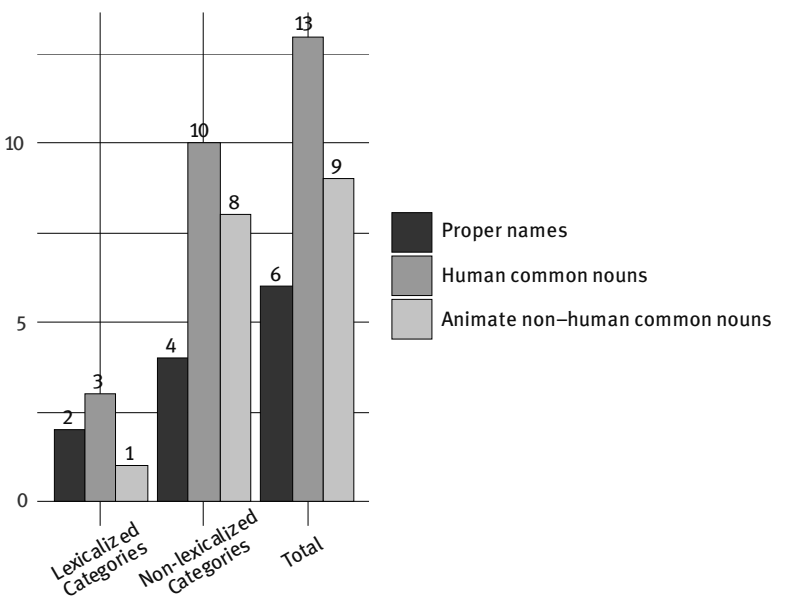

Fig. 9: Frequency of animate entities as examples

Exemplification appears to be more frequently used with human common nouns. More specifically, out of 13 occurrences of human common nouns used as examples, 8 occurrences designate superordinate categories of professions, as shown in (140) and (141).

(140) *Dōjitsu ni wa Tōkyō-tonai no byōin*
same.day LOC TOP Tokyo-metropolitan.area GEN hospital
de, ishi ya kankoshi, yakuzaishi-ra yaku 70-nin
LOC doctor YA nurse pharmacist-PL about 70-person
ni sesshu-shita.
DAT inoculation-do:PAST
'On the same day, about 70 people including doctors, nurses and pharmacists were vaccinated at the hospitals in Tokyo.'

(141) *Yūmeina kagakusha ya supōtsu-senshu, ātisuto nado,*
famous scientists YA athlete artist NADO
sekai ya jikoku de toppu de aru koto o
world YA country LOC TOP COP AUX:NPS NML ACC
shōmei dekireba, kono hōhō de eijū-ken o
proof POT:COND this way INS permanent-residence ACC
eru koto ga dekiru.
obtain:NPS NML NOM POT:NPS
'If a famous scientist, athlete, artist, etc. can prove that she/he is the top [in her/his field] in the world or her/his own country, she/he can obtain permanent residence in this way.'

It is noteworthy that there are not many hypernymic words designating superordinate categories of professions. Although the creation of an *ad hoc* complex label is always an option, we should note that the professions used as examples are still more salient since they mostly reside in the basic level of categorization and refer to human activities: in (140), 'doctor' and 'nurse' are much more accessible than 'people who work in the medical field'. Unsurprisingly, in many cases, labels are not used. On the contrary, since there are plenty hypernymic words to designate superordinate categories of animals, the need to provide concrete examples decreases accordingly. In such cases, exemplification is mainly used to cover specific lexical gaps in taxonomical hierarchies. For instance, in (142) the speaker makes reference to specific sub-set of vertebrates that encompasses small animals, while in (143) the speaker wants to make reference to a category of migratory birds similar to swan.

(142) *kogata no honyūrui ya chōrui nado no*
small.size GEN mammal YA bird NADO NML
sekitsuidōbutsu made,
vertebrate to
'[...] to vertebrates such as small mammals and birds'

(143) *Hyōko wa hakuchō-rui nado no kyūsoku-chi*
hyōko TOP swan-kind NADO GEN resting-place
ni natte-iru.
DAT become:TE-ASP:NPS
'lake Hyōko has become the resting place of swans and other similar birds.'

The second reason for the low frequency of animate entities as examples concerns the fact that animacy hierarchy is closely associated with the definiteness hierarchy (Croft 2003: 132). More definite referents tend also to be the higher in the animacy hierarchy (i.e. pronouns and then proper names). With regard to exemplification, this can be an issue since categories are the result of grouping together items that share some specific properties in a context. Therefore, when these items are categorized together, they stop having specific individual definiteness and referentiality, in order to become representative of a wider set. This seems also to explain why speakers tend not to create categories of highly definite referents, such as pronouns. Moreover, this can also explain why, contrary to other animate entities, proper names tend to occur slightly more frequently with category labels. Proper names designate highly specific individuals. Because of this, identifying the context-relevant common property that motivates the categorization process might be difficult. Therefore, the speaker might feel compelled to add category labels to better explain the reason for grouping together these specific individuals in a specific context. For instance:

(144) *Tōkyō Verdy sūpābaizā no Ramosu Rui-san ya*
Tokyo Verdy supervisor GEN Ramos Ruy-Mr YA
Yokohama FC torishimariyaku kaichō no Okudera
Yokohama FC company.director president GEN Okudera
Yasuhiko-san, supōtsu jānarisuto no Nakanishi Tetsuo-san ra,
Yasuhiko-Mr, sport journalist GEN Nakanishi Tetsuo-Mr PL
sakkā-kai o daihyō-suru katagata kara no
soccer-world ACC representative-do:NPS people from GEN

messēji *o* *zehi* *go-ran* *kudasai.*
message ACC by.all.means HON-see please
'Be sure to check out the messages from the representatives of the soccer world such as Tokyo Verdy Supervisor Rui Ramos, Yokohama FC Chairman Yasuhiko Okudera and sports journalist Tetsuo Nakanishi.'

Here, the category label plays an important role in making explicit why these individuals are grouped together in a specific context: they are all important figures in the soccer world.

While the explanations proposed above are corroborated by linguistic data, we firmly believe that the correlation between animacy/definiteness and categorization processes calls for further investigations, since it could constitute another confirmation of the close interaction between the linguistic level and the cognitive level.

4.4 The role of placeholder labels

In Section 4.1, it was noted that category labels can be seen as important evidence of the reference to a conceptual category. In the case of non-lexicalized categories (and thus, without an explicit category label), non-exhaustivity becomes a crucial factor in order to determine whether the category is included in the 'what-is-said' part of the utterance. Nevertheless, even in the case of non-lexicalized categories, the speaker can encode the explicit reference to a conceptual category by means of placeholder labels.

In Chapter 2, while providing a working definition of the notion of *category label*, we proposed the exclusion of words such as *koto* 'thing', *mono* 'thing', *toki* 'time', *kēsu* 'case', *baai* 'case/situation' whenever used as labels without any further specification (i.e. without modifiers). This was motivated by the fact that these words do not provide any significant reference to a specific class of items. For this reason, we decided to call this type of labels 'placeholder labels'. In the corpus, there are 14 occurrences of placeholder labels, which have been analyzed as instances of non-lexicalized categories.

Although placeholder labels do not specify in any way the defining property of the category, they are not useless with respect to the categorization process. On the contrary, like 'proper' category labels, their reference to a set, however vague or unspecific, acts a as guarantee that the speaker is making reference to a larger set of elements, and the mentioned items should be conceived only as examples. Consider the following examples:

(145) *Konyōna chīsana kaisha ni mo, keiei rinen*
such small company LOC even management idea
ya kigyō bijon toitta ***mono*** *wa hitsuyō deshou ka?*
YA business vision such.as **thing** TOP necessary MOD Q
'Do you need things like management philosophy or corporate vision even in such a small company?'

(146) *gēmu-nai de wa, kenka de tatakattari daberi de*
game-inside LOC TOP quarrel LOC fight:TARI chat INS
komyunikēshon o tottari toitta ***koto*** *ga dekiru.*
communication ACC take:TARI such.as **thing** NOM POT:NPS
'In the game, it is possible to do things such as fighting or communicating by chat.'

While *mono* 'thing' in (145) and *koto* 'thing' in (146) hardly add any substantial information about the defining property of the category, they do emphasize the non-exhaustive interpretation of the list of examples. In fact, it seems that the actual purpose of these words is to indicate that the linked items should be considered only as representative of a larger group of elements (the generic *mono* or *koto*), thus highlighting the existence of a wider conceptual category.

The above also applies to placeholder labels such as *toki* 'times', *kēsu* 'cases' and *baai* 'cases/situations', which only specify that the examples are states of affairs. For instance,

(147) *Kaze o hiki-yasukattari hada no toraburu ga yoku*
cold ACC catch-easy:TARI skin GEN trouble NOM often
okoru yōna ***toki*** *wa, karada no teikō-ryoku ga*
occur:NPS like **time** TOP body GEN resistance-power NOM
yowamatte-iru kamoshiremasen
weaken:TE-ASP:NPS MOD:POL
lit. 'In times when we are prone to catching colds and skin troubles often happen, the resistance of the body may weaken.'
id. 'when we are prone to catching colds and skin troubles often happen, the resistance of the body may weaken.'

(148) *Mata, tantōsha ga taishoku-suru koto de,*
also person.in.charge NOM retirement-do:NPS NML because
shisaku ga keizoku dekinaku-nattari,
measure NOM continuation do:POT:NEG:INF-become:TARI

tsukatte-ita *tsūru* *ga* *tsukaikonasenaku-nattari,* *to*
use:TE-ASP:PAST tool NOM master:POT:NEG:INF-become:TARI QT
iu ***kēsu*** *mo* *yoku* *miukeraremasu.*
say **case** also often see:PASS:POL:NPS
'Also, as the person in charge retires, we often see cases in which measures cannot be continued or the tools we have been using cannot be mastered.'

As explained in Section 2.2.1, we decided to exclude these words whenever used as labels without any modifying clause attached. This was due to the fact that instead of making clear the common property of the category, their scope is to indicate *i*) that the exemplars are states of affairs and *ii*) the type of semantic relationships among the exemplars. For example, in (148), the speaker wants to present a range of possibilities resulting from a specific issue (i.e. the person in charge of something retires). Moreover, she wants to commit to all these options as being the case, although each happens in a separate situation (cf. the notion of *separative conjunction* in Mauri and Ariel 2018). In this sense, the role of the placeholder label 'cases' is to suggest this interpretation: the examples are all *cases*, that is, alternatives that may happen in different situations. In other words, labels like 'cases' and 'times' do not provide semantic information about category members, but they indicate how these members relate to each other.[46]

We argue that the actual function of placeholder labels is to further highlight the non-exhaustivity nature of the encoded set, and therefore, they can be considered as non-exhaustive markers, similarly to *ya*, *nado*, *tari* and *toka*. The underlying mechanism is indeed the same, although performed by lexical means. In other words, placeholder labels act as semantic clues, but their purpose is not to semantically specify the target category, but to indicate the very presence of a larger set of items. Since in Japanese it is possible to codify non-exhaustivity by means a wide range of strategies (even relatively rare strategies such as non-exhaustive connectives such as *ya, tari, toka*), the usage of these placeholder labels may not seem particularly important. However, these constructions can be essential in those languages that do not have dedicated non-

46 A structural element that seems to further validate the idea that these words should not be interpreted as proper labels but as dummy elements, is the fact that they tend not to be directly linked to the examples by means of connectors. Instead, they often work as heads of relative clauses (e.g. *dekinai baai* 'situations in which it is impossible', *shimattari shita kēsu* 'cases in which for example').

exhaustive markers (beyond general extenders, which are not always considered appropriate for formal language and written texts), such as English or French.

(149) *However, be prepared to see **things like** mental instability, depression, pornography, drug abuse and aggression.*

(150) *Ce sac de rangement pour dossier de siège multi-poches est un outil idéal pour les conducteurs et les voyageurs, où vous pouvez ranger un tas de **choses comme** les téléphones mobiles, magazines, mouchoirs, des livres, des collations, des boissons, des parapluies et garanti pour garder l'intérieur de votre véhicule bien organisé et propre.*

In these examples, *things like* and *choses comme* do not offer any sort of specifications regarding the category. For once, they do not make clear the defining property of the category, which needs to be inferred solely by comparing the examples. Nevertheless, we can argue that they act as clue to indicate the presence of a larger set of elements (that is, the existence of a category) beyond those explicitly mentioned. Therefore, semantically, they highlight the non-exhaustivity of the list to which it is attached.

Finally, although the frequency of placeholder labels in the corpus is quite low, it is still interesting to examine how they correlate with the semantic and syntactic properties of the examples, as illustrated in Table 12.

Tab. 12: Placeholder labels and types of examples.

	koto	mono	toki	kēsu	baai	Total
Concrete things (NP)	0	0	0	0	0	0
Abstract things (NP)	1	1	0	0	0	2
SoAs (VP)	4	1	3	1	2	11
SoAs (NP)	1	0	0	0	0	1

Two interesting aspects emerge from Table 12. First, in the corpus, placeholder labels do not occur with categories of concrete things. However, they occur three times with categories of abstract things (cf. (145)) and once with categories of states of affairs encoded by nouns. Secondly, even placeholder labels that are not dedicated to states of affairs (e.g. *koto*) are frequently used with categories of states of affairs encoded by verbs (cf. (146)). These two aspects are notewor-

thy because they further confirm the tendencies discussed in Chapter 3 regarding the lexicalization process. Categories of concrete things seem less likely to be encoded through placeholder labels since speakers can find more easily characterizing labels to refer to them. On the other hand, since categories of complex entities such as states of affairs encoded by verbs are more difficult to lexicalize (i.e. creating a characterizing category label), speakers may feel the need to use placeholder labels. In this way, speakers can make explicit the existence of a category without having to semantically specify it.

4.5 Context dependence and category clues

At the beginning of this chapter, we have defined non-lexicalized categories as those linguistic constructions where the speaker makes reference to a conceptual category only by means of examples, without mentioning a category label. Following this definition, it might seem that the examples are the only semantic clues given by the speaker to infer the target category. Nevertheless, this perspective is fallacious because cognitive categories and concepts are not elaborated in isolation (cf. Barsalou 2003; Murphy 2002), but as part of a broader knowledge of the world and of the contextual interaction. Therefore, while analyzing category labels and examples in (partial) isolation is useful to understand how conceptual categories are linguistically encoded, it is important that we also consider the key role of the context in which they are interpreted.

In the previous sections, we have seen how the context can influence the identification of the defining property of the category. Specifically, the associative inference through which categories are constructed, is anchored in and depends on the specific speech situation, "including the relationships between the interlocutors, and encyclopedic knowledge, including information related to the speaker, the listener, to their background and habits, etc." (Mauri 2017: 302). It follows that, without having access to the broader context, in some cases, it may be almost impossible to really understand the category. Consider (151).

(151) *Hoteru* *de* *yaru* *geki* *toka* *jikan* *o* *kakete*
Hotel LOC play drama TOKA time ACC spend:TE
isshōkenmei *yōi-shita* *noni...*
very.hard preparation-do:PAST yet
'We prepared very hard spending time over the drama to play at the hotel and such, and yet...'

Here the speaker provides one single example: *hoteru de yaru geki* 'drama to play at the hotel'. Here, it would be impossible to correctly infer the category without knowing that 1) the speaker is making reference to a cancelled trip to Disneyland, and 2) Japanese schoolchildren often prepare some activities to do during school trips (e.g. little dramas to play to other people). In other words, the context is essential to understand the target category.

At this point, the question arises: should we consider the broader context as a clue towards the target category? Clearly, we cannot consider it as an explicit clue since it does not make overt and direct reference to the category or to its defining property, in the same way examples and labels do. In a sense, we may even say that context seems to play a background role: it is a sort of cognitive background through which examples and labels are interpreted to correctly infer the category. On the contrary, examples and labels have a more active role, since they provide explicit semantic hints to categories. However, we argue that specific contextual elements can act as clue to categories, playing an acting role in the inferential process. Consider (152).

(152) *Tada tatoeba takuhaibin ga kuru hi toka,*
however for.example courier NOM come:NPS day TOKA
tomodachi ga asobinikuru hi toka. Sōiu hi wa,
friend NOM visit:NPS day TOKA such day TOP
genkan no nioi wa yōchūi-shitai basho
entrance GEN smell TOP need.special.attention-do:DES place
desu. Gaiki no nioi ni nareta hito ga,
COP:POL:NPS open.air GEN smell DAT be.used:PAST people NOM
saishoni haitte kuru basho da kara desu.
first enter:TE come place COP:NPS because COP:POL:NPS
'However, for example, the day the courier comes, the day friends visit you, etc. In such days, the smell of the entrance is what you want to be careful about. Because [the entrance] is the place people who are used to the smell of open air first enter.'

The occurrence above is part of an article about how to remove the smell of pets. This is the context that acts as a background and that we should consider to correctly identify the target category. Nevertheless, it is noteworthy that the context does also provide some semantic clues towards the identification of the defining property of the category. For instance, the expression *gaiki no nioi ni nareta hito* 'people who are used to the smell of open air' suggests the type of people that are involved in the target category of situations. Moreover, *genkan*

'entrance' and *haitte kuru* 'come in' suggest the types of places and the types of events that are relevant to the target category. When the hearer considers all these cues together, the identification of the target category becomes easier. Generally speaking, the existence of instances like (152) suggests that the context can direct the inferential process in different ways.

As noted in Section 2.2.4, the context is not just an inert setting, but it is a multi-dimensional element that includes different components, such as the shared knowledge of the participants and their interpersonal relation. Moreover, it also encompasses pure linguistic components, such as the preceding discourse and the immediately adjacent co-text (cf. Mauri 2017: 302; Croft and Cruse 2004).

All these components can actively work to influence the construction of the target category by providing contextual clues that direct the inferential process. Nevertheless, since our research aims at investigating the linguistic encoding of conceptual categories, it is only natural that we focus our analysis on the linguistic context (Croft and Cruse 2004: 102). In particular, in our corpus data, two types of contextual clues are attested: 1) linguistic elements that are not proper labels (cf. Section 2.2.1), but nonetheless provide some semantic clues towards the identification of the category, and 2) linguistic elements that establish a contrast with the members of the category and thus by comparison help to identify the defining property of the category (see also Overstreet 1999: 53-55). The former is what Barotto and Mauri (2018) refer to as *abstract (re)formulation*, since these elements are often presented as reformulations of the list of examples (e.g. they are introduced by reformulation markers) or vice versa. Consider (153).

(153) ***Kaigai*** ***ni*** *ikanai* *hito* *ya* ***sumanai*** ***hito***
abroad **LOC** go:NEG:NPS people YA **live:NEG:NPS** **people**
ni *wa* *amari* *ennonai* *biza.* *Daga,* *ryūgaku* *ya*
DAT TOP not.much unrelated viza but studying YA
shūshoku *nado* *de* *tan-chōkikan,* ***kaigai*** ***ni***
finding.a.job NADO INS short-long.period **abroad** **LOC**
sumu *baai,* *biza* *ga* *hitsuyō* *tonaru.*
live:NPS case visa NOM necessary become:NPS
'Visas do not concern **people who do not live abroad** or do not go abroad. However, if you **live abroad** for a short or long period of time studying, finding a job, or something like that, a visa becomes necessary.'

Here, the speaker is making reference to a category of activities that characterize the act of living in a (foreign) country: studying, finding a job, etcetera. Beyond the list of examples, the speaker also provides an explicit clue on how to correctly interpret the target category, namely the expression *kaigai ni sumu* 'to live abroad'. While it would be a stretch to consider it as a proper category label (following the working definition provided in Section 2.2.1), at the same time it is true that it helps the inferential process because it suggests the defining property of the category. In other words, it works as an abstract formulation of the category, that is, an optional linguistic element that guides further the inferential process towards the identification of the relevant property shared by the examples. Unlike category labels that make an explicit reference to a category, clues do not automatically involve the identification of a category (therefore, they cannot work in isolation without other strategies), since they perform an ancillary function.

Beyond the abstract formulation, the speaker also highlights the contrast between not living abroad (*kaigai ni [...] sumanai hito* 'people who do not live abroad') and actually living abroad (*kaigai ni sumu* 'to live abroad'). This facilitates the identification of those activities that discriminate between people who do not actively live in a place (e.g., tourists) and people who are effective residents and part of the society of that specific country. Therefore, the activities that characterized the second group are, for example, studying at the university, finding a job, working, attending to other types of schools, etc., and they all require a visa.

Let us consider a few other examples of category clues.

(154) *Tokuni ōkuno hito ga muzukashiku kanjiru*
in.particular many people NOM difficult:ADV feel
no wa jibun no ie no naka de no
NML TOP oneself GEN house GEN inside LOC GEN
satsuei dewanaidarouka. Utsushitakunai mono
photographing perhaps photograph:DES:NEG:NPS thing
ga utsutte-shimattari, hikari ga fushizen dattari
NOM photograph:TE-ASP:TARI light NOM unnatural COP:TARI
kage ni natte-shimattari.
shadow DAT become:TE-ASP:TARI
'In particular, I think that many people find it difficult to take picture in their own houses. Something they don't want to take picture of end up in the picture anyway, the light is unnatural or becomes dark, etc.'

In (154), the author refers to a category of problems relating to photography: 1) *utsushitakunai mono ga utsutteshimattari* 'ending up taking picture of things (people) don't want to photograph', and 2) having trouble with the light (i.e. *hikari ga fushizen dattari kage ni natteshimattari*). The identification of the defining property of the category is facilitated by the statement in the preceding sentence about the fact that people may feel that taking picture inside of their own houses is difficult. Due to this category clue, the reader can infer that the following list of issues (and thus the category) represents a specific type of difficulties that people face while taking picture indoor. It is interesting to note that, in isolation, this statement would not explicitly invoke the identification of a precise category of issues. However, in this context, that is, followed by a list of concrete examples, it acts as a category clue.

(155) *kankyō-mondai nitaisuru sutaffu no ishiki*
environment-problem regarding staff GEN awareness
ga kōjō-shita to iu. [...] Dekirudake erebētā ni
NOM rise-do:PAST QT say as.much.as.you.can elevator DAT
noranaide kaidan o tsukattari, sha ni norazuni
get.on.without stair ACC use:TARI car DAT ride.without
jitensha o tsukattari to, sutaffu sorezore no nichijō
bicycles ACC use:TARI LK staff each GEN everyday
ga sukoshizutsu henka-shite-kimashita.
NOM little.by.little change-do:TE-come:POL:PAST
'[As the project progressed] staff members' awareness about environmental issues improved. [...] Each and every day, the staff has changed little by little, using stairs as much as possible instead of the elevator, using bicycles instead of using cars, etc.'

In the example above, the abstract formulation *kankyō mondai nitaisuru sutaffu no ishiki* 'the awareness of staff members regarding environmental issues' allows to better understand the common property of the list of actions described immediately after (i.e. using stairs instead of the elevator, using bicycles instead of cars, and so on): they are all actions done by staff members in order to be more environmentally conscious.

In other cases, the speaker provides linguistic elements that establish a contrast with the examples. These elements function similarly to abstract (re)formulations, but they help the hearer to identify the target category by negation.

(156) *Keiki mo taihen da kedo, kenkō ga daiichi.*
economy also great COP:NPS but health NOM first
Kega ya byōki o shinai yōni onegai shimashita.
injury YA illness ACC do:NEG:NPS for request do:POL:PAST
'Economy is also important, but health comes first. I pray not to get hurt or sick (or something).'

In the utterance above, the speaker describes her wishes for the next year. She explains that even if she has some troubles with money, she thinks that health always comes first. Therefore, she wishes to avoid any kind of health-related issues (e.g. injuries, illnesses and so on). In this case, *kenkō* 'health' facilitates the interpretation of the following category which encompass everything opposite to the notion of being healthy.

(157) *Taitei no jōhō wa intānetto o*
most GEN information TOP internet ACC
kensaku-sureba shunji-ni kotae ga mitsukaru
searching-do:COND in.a.moment answer NOM be.found:NPS
yōninari, hon de shirabetari, hito ni tazunetari
become:INF book LOC check:TARI people DAT ask:TARI
suru koto wa hettekite-imasu.
do:NPS NML TOP decrease:TE-ASP:POL:NPS
'As for most information, if you search on the internet, you will find the answer in a moment, and things like searching in books or asking to people are getting less frequent.'

In (157), the speaker refers to a conceptual category through a list of examples: *hon de shirabetari, hito ni tazunetari suru* '(doing things like) checking on books, asking to people'. The elaboration of this list is facilitated by the contrast between the examples and the contextual clue *intānetto o kensakusur[u]* 'to search on the internet'. By processing this contrast, the hearer can identify the members of the list as traditional ways to collect information, which stand in opposition to modern ways, such as using the internet. The contrast ultimately facilitates the inferential process towards the target category.

All the above shows that, even without an explicit category label, there can be still other elements in the linguistic context that help the identification of the defining property of the category and the construction of the category itself. Therefore, it can be argued that the inference of contextually relevant categories is not merely the result of the comparison between examples in isolation, but a

much more dynamic process where other elements can make a significant contribution to the inferential process as well. This ultimately confirms the centrality of context and the fact that it should not be considered merely as some inert background to the cognitive process. Moreover, categorization cannot be regarded merely as an abstract manipulation of information. On the contrary, categorization is "*something we do*, in talk, in order to accomplish social actions" (Edwards 1991: 517). This means that categorization not only cannot be detached from the context but can also be actively driven by it.

5 Exemplification beyond categorization

5.1 Introduction

In this chapter, we will discuss two functions attested in the corpus that cannot be considered exemplification *proper*. These functions are hedging (cf. (158)) and the strengthening of the negation (cf. (159)).

(158) *Amuze ni hairitai toka (wara)?*
Amuse DAT get.in:DES TOKA laugh
'Do you want to join Amuse LOL?'

(159) *Danjite nanimo yoi koto nado arimasen!*
absolutely nothing good thing NADO exist:POL:NEG:NPS
'There is absolutely nothing good about it.'

In (158), the exemplifying marker *toka* is used to soften the illocutionary force of the question/joke, whereas in (159), the exemplifying marker *nado* is used to strengthen the negation, emphasizing the absence of good points regarding a specific issue. Although in both cases, the main purpose of the marker is not to perform exemplification proper (in the sense of providing an example of a larger set of similar elements) and make reference to a conceptual category, the relationship between these functions and the notion of categorization is still worthy of discussion.

Before moving to the analysis of these functions, it is important to make some methodological and quantitative remarks. These functions were identified through some parameters. First of all, the broader linguistic and (whenever possible) extra-linguistic context was always considered and specific linguistic elements (such as the modality and the polarity of the utterance) were monitored. For instance, the hedging function tends to co-occur with linguistic strategies that reduce the speaker's commitment, such as modal verbs, epistemic devices (Fraser, 1980: 348; Pietrandrea 2005) and evidentiality markers (cf. Givón 1982; Aikhenvald 2004; de Haan 2005). Moreover, hedging also tends to occur in those linguistic contexts where the speaker is compelled to attenuate her assertiveness, for example when she is giving an order or a suggestion to the hearer. More generally, epistemic and deontic modalities were carefully monitored, since they are ideal contexts for instances of hedging.

At the discourse level, we also monitored the organization of texts and referential paths in conversation (Robert 2008), revealing the topic continuity

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(Givón 1983) of categories and examples. In this regard, we distinguish between cases where the category is the topic of discourse and stays active through the subsequent text, and cases where the speaker selects the example as the actual topic. The latter case indicates that the example should not be interpreted only as a pointer towards the category, but rather as having an independent and discourse relevant reference. For instance, let us examine again example (158), repeated here as (160), while also considering the broader co-text.

(160) A: *Mazu wa, amU to iu yunitto mei nitsuite*
first TOP amU QT say unit name about
o-tazune shimasu. Amuze ni hairitai ***toka*** *(wara)?*
HON-ask do:POL:NPS Amuse DAT get.in:DES TOKA laugh
'First of all, I would like to ask about the unit name amU. Do you want to join Amuse LOL?'

B: *Amuze mo mochiron ki-ni-narimasu ne (wara)!*
Amuse also of.course being.interested:POL:NPS PP (laugh)
Demo hontō wa Amuze wa kankei nakute, amU
but reality TOP Amuse TOP connection NEG:TE amU
to iu yunitto mei wa, watashi-tachi no namae no
QT say unit name TOP I-PL GEN name GEN
kashiramoji na n desu.
initials COP NML COP:POL:NPS
'Of course we are also interested in Amuse LOL! But really there is no connection with Amuse, the unit name amU is the acronym of our names.'

In (160), Speaker A makes a joke about Speaker B's name as performer (*amU*), suggesting it might have some connection to a famous Japanese entertainment company called Amuse. The part of the utterance marked by *toka* (i.e. whether Speaker B wants to join Amuse) is the topic of the exchange and stays active through the subsequent reply of Speaker B. This indicates that the further alternatives encoded by the exemplifying marker *toka* serve the only purpose of making Speaker A's question/joke less direct or vaguer. Topic continuity is an important parameter also to identify instances of exemplifying constructions used to strengthen the negation, since the purpose of the speaker is to firmly deny a specific element that, in some cases, may be a recurrent topic in the co-text.

Using the parameters discussed above, we identify 42 occurrences of exemplifying constructions used as hedging devices and 4 occurrences of exemplifying constructions used to strengthen the negation. Table 13 illustrates the distribution of the different functions in our corpus.

Tab. 13: Distribution of the functions of Japanese exemplifying constructions

	Exemplification proper	Hedging	Strengthening of negation
ya	250	0	0
nado	248	0	2
tari	237	12	1
toka	219	30	1
Total	954	42	4

Looking at the data, the first point of interest is that, in the corpus, the number of instances of exemplifying constructions used as hedging devices or to strengthen the negation is quite limited, especially compared to the number of instances of exemplifying constructions used to make reference to conceptual categories. These numbers are likely determined by the nature of the data. The Japanese corpus of the Leipzig Corpora Collection consists mainly of articles drawn from online newspapers and magazines. Journalistic texts tend to widely use exemplification to provide concrete instances of abstract issues to better explain them (cf. Zillmann and Brosius 2000). On the other hand, especially in the case of articles describing objective facts, hedging strategies or devices that overly strengthen the negation are used less frequently and, in some cases, they may even be considered inappropriate for the style of the journal.

Interestingly, in the corpus, hedging functions and the strengthening of the negation tend to become more frequent in specific types of articles, such as 1) transcripts of interviews, 2) newspaper editorials (in which the author expresses her/his opinion and thus may need hedging strategies to attenuate the assertiveness of personal statements) and 3) articles reviewing products where the author expresses opinions and provides suggestions to the readers. This observation leads us to another element that likely influence the frequency and distribution of discursive functions, namely the distinction between written language and spoken language. If we compare our data to those of other quantitative studies (cf. data on *nado*, *tari* and *toka* in Taylor 2010), it clearly emerges that the frequency of hedging functions is higher in spoken conversation, rather than in written texts.

Along these lines, it is noteworthy that we found no instance of *nado* used as a hedging device despite this function is attested in several descriptive grammars (see Martin 1975: 161; Chino 2001: 43). The reason for this is likely due to the type and size of the corpus data used in the present study. In written text, *nado* is mainly used as an exemplifying marker (cf. Taylor 2010: 88), and depending on the type of texts (e.g. editorials or articles expressing the writer's opinion about a given topic), is occasionally used as a device to strongly negate something (cf. the notion of *highlighting* in Taylor 2010). The hedging function is much more pervasive in spoken language, but, as noted in Section 1.5.2, *nado* is mainly a feature of the written (formal) language. Interestingly, in some transcripts of interview or message boards, *nado* as a hedging device is attested (although its frequency is still quite low, compared to that of *nanka* e *nante*). For instance, the following occurrence is not part of our corpus data, but it was collected from an online magazine:

(161) A: *Kyō* *wa* *afureko* *shonichi* *toiu* *koto* *desu* *ga,*
today TOP dubbing first.day QT NML COP:POL:NPS but
koe *no* *chōshi* ***nado*** *wa* *ikaga* *desu* *ka?*
voice GEN condition NADO TOP how COP:POL:NPS Q
'Today is the first day of dubbing, how is the condition of our voice?'

B: *Kyō* *wa,* *chōshi* *ī* *desu* *ne.*
today TOP condition good COP:POL:NPS PP
'Today it is in good condition.'

The above is part of an interview. Topic continuity of the word *chōshi* 'condition/tone (of voice)' highlights the fact that *nado* is only used to make the question less direct.

In the corpus, there are also no instances of *ya* as a hedging strategy or as a strategy to strengthen the negation. In other words, in all the collected and analyzed occurrences, *ya* is used to perform exemplification proper. In this case, the type of texts in the corpus is not the reason for the limited functional range of *ya*, since there are no grammars or studies on Japanese exemplifying markers that attest the usage of *ya* to perform these other functions. The reason for this is more likely linked to the nature of the marker itself, that is, the fact that *ya* can only be used as a connective and therefore it is the only marker under consideration that must be used with at least two elements. In this regard, Suzuki (1998a: 268) notes that "since *ya* requires the presence of more than one entity, the use of *ya* emphasizes the function of enumeration, rather than the

implication of lack of specification" which according to her is a pivotal feature to evoke pragmatic functions such as hedging.

This fact is confirmed by data from our corpus. In all instances of exemplifying markers used to perform hedging or the strengthening of negation, the speaker uses a single example (cf. (158) and (159)), rather than two or more. This fact is interesting because in Chapter 3 and 4, we have seen that, in our corpus, exemplifying constructions usually encompass two (or – albeit less frequently – three) examples. Exemplifying constructions that perform exemplification proper and encompass a single example, are quite rare, especially in the case of non-lexicalized categories. This can be explained considering two occurrences that are identical, except for the number of examples. For instance,

(162) a. *Koe* *ī* *kara* *seiyū* ***toka*** *dō* *desu* *ka?*
voice good because voice.actor TOKA how COP:POL:NPS Q
'Since you have a good voice, what about [becoming] something like a voice actor?

b. *Koe* *ī* *kara* *seiyū* ***toka*** *kashu* ***toka*** *dō* *desu* *ka?*
voice good because voice.actor TOKA singer TOKA how COP:POL:NPS Q
'Since you have a good voice, what about [becoming] something like a voice actor or a singer?' [invented example from (162a)]

In (162b), the presence of two examples (i.e. *seiyū* 'voice actor' and *kashu* 'singer') and the explicit reference to a larger set (i.e. *toka*) trigger an inferential process leading to the identification of a shared property (cf. *common integrator* in Lang 1984) and thus of a broader category PROFESSIONS IN WHICH THE VOICE IS THEIR PRIMARY TOOL (see Mauri 2017). On the contrary, in (162a) the presence of a single example in the context of a suggestion (and thus of a potentially face-threatening act) can trigger the 'salient example' interpretation (see Narrog 2012: 147). In this specific case, considering also the broader context and the topic continuity (a funny story about a voice actress receiving the suggestion of becoming a voice actress from strangers), we can argue that the speaker of (162b) uses the exemplifying construction with *toka* to hedge his suggestion, making it more subtle and indirect.

Of course, in cases like (162b), it is possible to assume that speaker is using the reference to a category to achieve a specific communicative purpose, beyond the simple mention of a set. For instance, the act itself of providing differ-

ent options may be used as a strategy to attenuate the commitment. Nevertheless, since the speaker is actually referring to a conceptual category, the underlying process is the same analysed in Chapter 3 and Chapter 4. On the contrary, in instances like (162a), whether the speaker is really making reference to a broader category of similar options is matter of discussion and it strongly depends on the type of speech act and the broader context. Since in this chapter we are mainly focusing on instances of exemplifying constructions without clear reference to conceptual categories, examples like (162b) – that is, instances where it is still possible to identify an actual categorization process – are not considered in this chapter.

In the following sections, we will analyze instances of exemplifying constructions to perform hedging operations (cf. Section 5.2) and to strengthen the negation (cf. Section 5.3). In the end, we will discuss the relationship between these functions and categorization processes (cf. Section 5.4).

5.2 Exemplifying constructions as hedging strategies

In our analysis of Japanese exemplifying markers as hedging devices, we will not follow a specific classification system (cf. Kaltenböck et al. 2010: 1-15). However, in order to show the types of hedging functions performed by Japanese exemplifying markers, we use the scheme of functions/levels of analysis presented by Kaltenböck et al. (2010: 6). This scheme allows us to describe the various hedging operations in a transparent manner (see also Barotto 2018). Specifically, we distinguish: 1) hedges that operate at the semantic level by affecting the propositional content, 2) hedges that operate at the pragmatic level by reducing the illocutionary force, and 3) hedges that operate at the pragmatic level by affecting the felicity conditions of the utterance. Let us consider these hedging operations in depth.

PROPOSITIONAL CONTENT: strategies that convey semantic approximation "by indicating some markedness, that is, non-prototype, with respect to class membership of a particular item" (Fraser, 2010: 19). This type of hedging is attested for *toka* and it frequently (cf. Taylor 2001) occurs in two specific contexts: 1) to approximate numbers or measurements (cf. *rounders* in Prince et al. 1982), as shown in (163) and 2) after a (direct or indirect) quotation to indicate that it is not verbatim, but simply an "approximation" of the main topic, as shown in (164).

(163) *are de 8man **toka** dattara zettai kau*
I DET 80,000 TOKA COP:COND absolutely buy:NPS
kedo saa
PP PP
'if [the recorder] is **about** 80,000 [yen] or so, I will definitely buy it.'

(164) *Danshi ga kore o tsukete-itara "a-, koitsu*
boy NOM this ACC put:TE-ASP:COND ah this.guy
*kanojo iru na" **toka** omotte-shimai sō.*
girlfriend AUX:NPS PP TOKA think:TE-ASP EVID
'If a boy used this, I would think **something like** "ah, that guy has a girlfriend!".'

Beyond these two specific uses, *toka* can also be used to signal that a lexical choice is less than perfect in a given context (see the notion of 'approximation' in Mihatsch 2010; Ghezzi 2013). Let us consider (165).

(165) *Sarani, kabushiki-tōshi wa renai to onaji da*
moreover stock-investment TOP love to same COP
tomo suru. "Aite o sagashite, tsukiatte, uwaki
also do:NPS partner ACC search:TE associate.with:TE affair
***toka** sarete, wakareru, to iu sutōrī wa issho"*
TOKA do:PASS:TE part.from:NPS QT say story TOP same
to Wakabayashi-san.
QT Wakabayashi-Mr
'Moreover, stock investment is the same as romance. Mr. Wakabayashi says that "The story is the same: finding a partner, dating, being "cheated", and parting ways".'

The speaker compares stock investments to love stories, stating that the steps involved are the same. All the words that he uses to describe this notion can work in both contexts of love and business (e.g. *sukiatte* 'dating' but also more generally 'being associate with'), except *uwaki* which specifically means (to have) 'an affair, extramarital sex'. To indicate that he means something slightly different given the context of business, the speaker marks it with *toka*.

ILLOCUTIONARY FORCE INDICATION: strategies used by speakers to weaken the illocutionary force of the speech act. They are comparable to Fraser's (1975) hedged performatives and partially correspond to Caffi's (2007) hedges. In the corpus,

this function is attested for *toka* (166) and *tari* (167), but it can also be performed by *nado* as shown in (161), repeated here as (168).

(166) *Saigoni kongo no keikaku* ***toka*** *oshiete kudasai.*
finally future GEN plan TOKA inform:TE please
'Finally, please tell us about your future plans.'

(167) *Kōkūken ni hararete-iru shīru no yōna mono*
plane.ticket DAT stick:PASS:TE-ASP:NPS sticker GEN like thing
desu. Mitame wa tadano shīru desu
COP:POL:NPS appearance TOP common sticker COP:POL:NPS
ga, rippana yakuwari ga aru node, kuregureno
but fine part NOM AUX:NPS because earnestly
*jibun no nimotsu o uketoru made wa sute****tari***
self GEN luggage ACC receive:NPS till TOP throw:TARI
shinaide kudasai ne.
do:NEG:TE please PP
'It is like a sticker on the airline ticket. It looks just like a common sticker, but it has a crucial role, so please do not throw it away until you have picked up your baggage.'

(168) *Kyō wa afureko shonichi toiu koto desu ga,*
today TOP dubbing first.day QT NML COP:POL:NPS but
koe no chōshi ***nado*** *wa ikaga desu ka?*
voice GEN condition NADO TOP how COP:POL:NPS Q
'Today is the first day of dubbing, how is the condition of our voice?'

FELICITY CONDITIONS: strategies that indicate "different degrees of uncertainty on the part of the speaker" (Caffi 2007: 70) and operate by reducing the speaker's commitment. In this regard, exemplifying markers are used to imply some possibilities in a subtle way. They are comparable to Prince et al.'s (1982) plausibility shields and partially correspond to Caffi's (2007) hedges. In the corpus, this function is attested only for *tari* (169). Nevertheless, it is possible to find occurrences of *toka* used in such a way (cf. (170)).

(169) *Shasai PC ga choito kakkidzuite-iru yōni*
on-board PC NOM a.little become.active:TE-ASP:NPS looking
*omoe****tari*** *shite. Kono nyūsuna n desu kedo ne.*
seem:TARI do:TE this news NML COP:POL:NPS PP PP

'It **seems** that the on-board PCs are becoming a little more active. This is the news!'

(170) *Sekitateru* *yōnishite* *7-ji* *ni* *modotta* *monono,*
hurry.up:NPS to.be.sure.to:TE 7 o'clock at return:PAST but
gyōsha *no* *sugata* *nashi.* *Kekkyoku* *8-ji-sugi* *datta*
contractor GEN figure without Eventually 8-o'clock-past COP:PAST
kana, *yattekita* *no* *wa.* *Nebō-shita* ***toka.***
MOD come.around:PAST NML TOP oversleep-do:PAST TOKA
'To be sure to hurry up, I returned home at 7 o'clock, but there was no trace of the contractors. Eventually I think it was past 8 o'clock when they came around. **Maybe** they overslept (or maybe something else happened).' (Barotto 2018: 31)

This wide range of hedging functions allows Japanese exemplifying markers to be versatile strategies when the speaker wants to achieve important discourse effects such as vagueness and politeness (see Fraser 2010: 25-29). Vagueness is a discourse-pragmatic strategy that occurs "when the information you receive from a speaker lacks the expected precision" (Fraser 2010: 26). Although vagueness in language is traditionally considered a flaw, several scholars have argued that vague language can be, in some circumstances, as useful and effective as precise language (see Austin 1962: 125; Channell 1994; Williamson 1994; Jucker et al. 2003). Speakers can adapt their contributions to make them suitable to the situation, for example by varying their precision and vagueness in such a way "that they give the right amount of information for the purpose of the conversation" (Channell 1994: 173-174). For instance, if a speaker does not know the exact details, vague expressions allow her to be truthful according to the evidence available. Moreover, vague strategies can also allow the speaker to indicate that some piece of information is not particularly relevant, so that the attention can be focused on what is considered the most important point of the utterance. Consider (171).

(171) *Shōgakkō* *no* *koro* ***toka*** *wa* *hoka* *no* *kata*
elementary.school GEN time TOKA TOP other GEN person
mo *onaji* *da* *to* *omou* *n* *desu* *ga,* *saishoni*
also same COP:NPS QT think NML COP:POL:NPS but at.first
sawatta *no* *wa* *pokekon* *desu* *ne.*
touch:PAST NML TOP pocket.computer COP:POL:NPS PP

'**Around** the time I was in elementary school, I think it is the same also for other people, but the thing that I touched at first was a pocket computer!'

The example above is part of an interview during which a young web engineer is asked to talk about his first encounter with computers. He explains that his first experiences in this regard happened around the time he was in elementary school (cf. *shōgakkō no koro toka* 'around the time of elementary school'). The relevant information, however, is that his first encounter was with a pocket computer (a calculator-sized computer popular during the '80s). This information is relevant because he made his first attempts with computer programming by means of the pocket computer, as he explains in the following turn (*chīpuna pokekon de bēshikku o yatte…* 'I did the program language BASIC with a cheap pocket computer…'). Therefore, the exemplifying marker *toka* not only indicates that the timeframe is vague, but also that it is not the most relevant part of the answer.

As previously noted, *toka* is frequently used to approximate numbers (see the notion of *vague additive* by Channell 1994: 43). In this respect, exemplifying constructions can be employed to designate "not precise numbers of quantities, but rather intervals of numbers whose extent is apparently not exactly specified" (Channell 1994: 43). Consider (172).

(172) A: *Yahari, mēru wa hinpanni sōjushin-suru no deshou ka?*
also, email TOP frequently send.and.receive-do:NPS NML MOD Q
'Also, do you frequently send a receive emails?'

B: *Heikinteki-ni dato 10-tsū **toka** kana.*
average-ADV if.it.is.the.case 10-CLF TOKA MOD
'On the average, I guess **around** 10.'

The exchange above is part of an interview. Speaker B is asked about the average number of emails she sends and receives daily. Since people do not usually keep track of the number of emails they send/receive, she is hesitant about the

exact number. She uses *toka* to give an estimate of the number of emails (*10 tsū toka* 'around 10') and the epistemic maker *kana* to express uncertainty.[47]

Finally, in some cases, intentional vagueness can also be due to social norms preventing speakers from being too direct. For example:

(173) *Shitsureina hanashi da ga, kono rimokon dake*
rude talk COP:NPS but this remote only
miru to, 980 en ***toka*** *de utte sō na…*
look:NPS when 980 yen TOKA INS sell:TE look.like PP
'It is rude to say, but just when you look at the remote, it looks like **maybe** it is sold for **about** 980 yen.'

In (173), the speaker reviews a recorder whose market price is around 180 thousand yen. However, he notes that the recorder's remote does not look like it is worth that much. On the contrary, it looks like it can be sold for about 980 yen (which is a very low price). The speaker is aware that he is saying something that may sound impolite (*shitsureina hanashi da ga* 'it is rude to say, but…'), thus he uses *toka* not only to provide an approximation (like in (172)), but also to sound less direct.

Besides vagueness, politeness is another important discourse effect that can be achieve through exemplification. In anthropology, the notion of *politeness* refers to "a battery of social skills whose goal is to ensure everyone feels affirmed in a social interaction" (Foley 1997: 270). As a term used in the analysis of linguistic interaction (see Brown and Levinson 1987), it is based on the assumption that individuals have a self-image or 'face' that they want to preserve and be respected by others (Goffman 1955). In this regard, Brown and Levinson (1987) assume the existence of positive and negative politeness strategies. On the one hand, positive politeness strategies are directed toward the positive face (i.e. the individual's desire to be appreciated in social relationships) by communicating that the speaker's wants are in some ways similar to those of the addressee. On the other hand, negative politeness strategies are used by speakers to minimize a challenge to the hearer's negative face, that is, the individual's desire for freedom of action and from imposition.

Brown and Levinson give much attention to negative politeness strategies including the hedging of the illocutionary force to avoid imposition. It is in this sense that exemplifying constructions can be employed in a wide range of con-

47 In particular, *kana* is often used to provide uncertain information as a reply to a direct question (see Matsugu 2005).

texts to make the utterance more polite, simply by presenting the potentially face-threatening element or utterance as an example out of several (potential but equally valid) alternatives. These alternatives should be conceived merely as a fuzzy background to weaken the illocutionary force of the utterance or the speaker's commitment, rather than actual options available to the hearer. In this regard, a typical instance of negative politeness is the use of exemplification to mark (and thus, to hedge) suggestions, questions, requests, orders, and other directive acts that may represent a threat to the hearer's freedom of action. For instance:

(174) *Koe ī kara seiyū* ***toka*** *dō desu ka?*
voice good because voice.actor TOKA how COP:POL:NPS Q
'Since you have a good voice, what about [becoming] something like a voice actor?'

The utterance above is quoted in a blog post written by a voice actress, in which she recounts a funny episode. While shopping, she was approached by people suggesting that she should become a voice actress and to whom she replied *moo yattemasu* 'I already am'. To better encode his suggestion to a stranger, the speaker of (174) decides to present *seiyū* 'voice actor/actress' as an example by means of *toka* in order to make the advice less direct and thus to minimize the potential imposition on the hearer.

(175) A: *Saigoni kongo no keikaku* ***toka*** *oshiete kudasai.*
finally future GEN plan TOKA inform:TE please
'Finally, please tell us about your future plans.'

B: *Seiryoku-teki-ni katsudō o tsudzukete, angura-kai o kakkitsukeraretara to omoimasu.*
influence-like-ADV active ACC continue:TE underground-world ACC animate:POT:COND QT think:POL:NPS
'I hope I can continue to be active and animate the underground world'

In (175), Speaker A asks to Speaker B about her future plans. He uses *toka* to avoid sounding too direct. In this case, the purpose of the exemplifying marker is not to make reference to an actual category of alternatives similar to the mentioned example, but to weaken the tension that might result from a direct question. Accordingly, Speaker B answers explaining her future plans.

Exemplifying markers can also be used to make suggestions without sounding too commanding or direct, as illustrated in (167), repeated here as (176).

(176) *Kōkūken ni hararete-iru shīru no yōna mono*
plane.ticket DAT stick:PASS:TE-ASP:NPS sticker GEN like thing
desu. Mitame wa tadano shīru desu ga,
COP:POL:NPS appearance TOP common sticker COP:POL:NPS but
rippana yakuwari ga aru node, kuregureno jibun no
fine part NOM AUX:NPS because earnestly self GEN
*nimotsu o uketoru made wa sute**tari** shinaide*
luggage ACC receive:NPS till TOP throw:TARI do:NEG:TE
kudasai ne.
please PP
'It is like a sticker on the airline ticket. It looks just like a common sticker, but it has a crucial role, so please do not throw it away until you have picked up your baggage.'

The speaker explains what to do in case luggage gets lost during a plane trip. In particular, she advises to carefully preserve the sticker that is attached to the plane ticket during the check-in, because it is crucial to file a claim later. Since the speaker is asking the hearer not to do something (thus, limiting the hearer's freedom of action), she avoids sounding too direct by presenting the recommendation as a potential example of something that should be avoided. The polite tone of the sentence is also reflected by the usage of *kureguremo* (misspelled as *kuregureno* by the author of the article) to mark *jibun no nimotsu* 'your baggage' and make the request more sincere and thus more polite.[48]

While questions and directive acts are breeding grounds for politeness strategies, declarative utterances asserting personal tenets can represent a challenge to the hearer's face as well. In these cases, the speaker can use exemplification to reduce her commitment towards the utterance. Let us consider (177).

(177) *Nita mono fūfu to iu kotoba ga*
resamble:PAST person spouses QT say expression NOM
aru yōni, kattenagara desu ga, yahari
exist:NPS so.that taking.the.liberty COP:POL:NPS but still

48 In this regard, the function of *kureguremo* is similar to that of honorific markers (cf. *go-*) and it cannot be properly translated in English.

saisho kara umakuiku kappuru niwa
beginning from go.smoothly:NPS couple for
*iwakan o kanjinakat**tari** suru mono desu.*
uncomfortable.feeling ACC feel:NEG:TARI do:NPS NML COP:POL:NPS
'So that there is a proverb that says "like man like wife", I am taking the liberty to speak, but still for a couple that worked well from the beginning, it **may be** that they have not felt a sense of incompatibility.'

In (177), the speaker comments on a famous couple who recently divorced. He argues that, since the couple worked well and smoothly at the beginning of the relationship, they might have not realized that they were not a good match. The implication is that they are not seen as very suitable for each other, as a couple is supposed to be (the proverb indicates that husband and wife should be similar in order to get along). Here, the function of *tari* is to hedge the commitment of the speaker, since he is aware of commenting on a private, and therefore delicate, issue. For instance, he uses the fixed expression *kattenagara* that, depending on the context, can be translated as 'doing without asking, taking the liberty to do'. In this context, it means that he speaks on his own initiative and consequently he might be wrong. Therefore, he mitigates his commitment towards the problematic comment through *tari*, attenuating the assertiveness of the entire utterance.

5.3 Exemplifying constructions to strengthen the negation

In this section, we address the last function attested in our corpus, namely, the strengthening of the negation. Consider the following occurrences:

(178) *ichiji hayatta "Nihon wa owaru" to iu no*
once be.popular:PAST Japan TOP finish:NPS QT say NML
wa mainasu no kanjō o yobiokosu
TOP negative GEN feeling ACC call.to.mind:NPS
kangaekata toshite, watashi ga mottomo kiraina kotoba
way.of.thinking as I NOM extremely dislike word
no hitotsu desu. [...] Danjite nanimo yoi koto
GEN one COP:POL:NPS absolutely nothing good thing
***nado** arimasen!*
NADO exist:POL:NEG:NPS

'"Japan is over", which was once popular, is one of the expressions I dislike the most as a way to evoke negative emotions. [...] There is nothing good about it!'

(179) *Mata, uketottemo, zettaini henji o okut**tari** shitaraikemasen.*
also receive:COND absolutely reply ACC send:TARI do:IMP:NEG:NPS
'Also, even if you receive the email, you absolutely must not reply.'

(180) *Aitsu, zenzen kanojo **toka** inai n da yo.*
that.guy absolutely girlfriend TOKA AUX:NEG:NPS NML COP:NPS PP
'That guy doesn't have a girlfriend at all!'

In the occurrences above, exemplifying markers are not used to mark actual examples of a larger set. Instead, they appear to be used to strengthen the negation. In (178), the speaker expresses his distaste for a certain way of thinking, stressing that there is (absolutely) nothing positive in it. In (179), the speaker wants to make sure that the addressee does not reply to email she might receive. Finally, in (180) the speaker's purpose is to strongly negate the possibility that a certain person has a girlfriend.

In the literature, this type of function has been examined mainly with regard to *nado* (see Morita 1980; Chino 2001; Lee 2004; Chen 2005; Sawada 2018). For instance, Lee (2004) tries to explain the relationship between the different functions of *nado*, including exemplification and the emphasis to negative evaluations, suggesting that they arise depending on the speaker's modality (i.e. positive/neutral vs. negative modality). Sawada (2018) briefly analyse the relationship between this particular use of *nado* and negative polarity items such as *totemo* 'very', which denote a high scalar value. In this regard, Sawada notes that it is natural to use *totemo* with the particle *nado* instead of other case markers, because *nado* "signals that the given proposition/event is currently under discussion and that the speaker construes it negatively" (2018: 116). This relationship is attested also in our occurrences, as shown in (178) with *danjite* 'absolutely', (179) with *zettaini* 'absolutely' and (180) with *zenzen* 'not at all'.

As for the hedging functions, the strengthening of negation through exemplifying markers can give rise to certain types of discourse effects as well. For instance, in the literature, the strengthening of negation is often linked (in some cases even grouped together) with the so-called 'pejorative connotation' through which the speaker shows contempt toward a specific entity (see Martin 1975: 162; Chino 2001: 44; Suzuki 1998a):

(181) *Tanaka-san nado wa, totemo shachō ni*
Tanaka-Mr NADO TOP very president DAT
wa narenai.
TOP become:POT:NEG:NPS
(lit.) 'Mr Tanaka absolutely could not become the president of the company.' (id.) 'There is no way that anyone like Tanaka [that the likes of Tanaka] could become president of the company.' (Chino 2001: 44)

(182) *Aitsu kara nado hanagami ichimai demo*
that.guy from NADO tissue.paper one-piece even
moraitakunai.
receive:DES:NEG:NPS
'From the likes of him I wouldn't even accept a Kleenex.'
(Martin 1975: 162)

When the marked entity is the speaker herself or someone related to her, this construction might also be interpreted as a way to show modesty (cf. Chino 2001: 44):

(183) *Watashi nado, sonna muzukashii shiken ni wa totemo*
I NADO such difficult exam DAT TOP very
gōkaku dekimasen.
passing POT:POL:NEG
(lit.) 'Someone like me could never pass a difficult examination like that.' (id.) 'There is no way that I [the likes of me] could pass such a difficult test.' (Chino 2001: 44)

The act of strongly negating something may often give rise to a pejorative reading (see for instance (178) and (180)). However, we believe that these two phenomena should be considered separately since the pejorative reading can also occur in utterances with a positive polarity (cf. Taniguchi 2017) and there are cases in which the negative polarity is emphasized without a clear pejorative connotation, as shown in (179).

5.4 Exemplification and the widening effect

In Chapter 1, exemplification was defined as a process through which one or more instances should be construed as representative members of a wider (given or potential) set of elements (cf. Lyons 1989: x; Manzotti 1998: 108). In our

analysis on categorization *via* exemplification, we saw how the implication of a larger set can be used by speakers to refer to conceptual categories. In Chapter 3, it was shown that this close relationship between the instance and the set is often mirrored at the linguistic level (see also Rodríguez Abruñeiras, 2015: 17, 55), when speakers use together examples and a category label that makes direct reference to the larger set. However, as noted in Chapter 4, while the relationship between the example and set is a key core of the exemplification process (see Lyons 1989: x), at the linguistic level the presence of an explicit category label is not required. This is possible because exemplifying markers encode a procedural meaning. They lead the hearer to interpret the marked element as an example taken from a larger set of similar elements.

As noted in Section 1.2.3, the ability to widen the reference to include items similar to the example(s) has often been indicated as the reason why exemplifying strategies can be used as hedging devices. On top of that is the interchangeability of examples (Manzotti 1998: 121), which basically means that the mentioned item should be conceived just as one possibility among several other equally valid options (Mihatsch 2010: 108). Since the construal of a larger set is also the underlying mechanism that enables exemplifying markers to be used in the reference of conceptual categories, where is the difference between categorization and hedging? We argue that the distinction lies in the different ways the set is processed by the speaker. When exemplifying strategies are used to make reference to conceptual categories, examples are subordinate to the category (cf. Lyons 1989: x) since they are used to specify or to abstract higher-order entities. This means that the profiled set does exist, and it is the actual referent of the utterance. However, when exemplifying strategies are used as hedges, the roles of examples and sets are reversed. In the case of semantic approximation, the purpose of profiling a set is to signal a divergence between a concept and the linguistic element selected by the speaker to designate that specific concept (Andersen 2000: 27). In the case of pragmatic hedging, the purpose of profiling a set is to weaken the illocutionary force of the utterance or the speaker's commitment by suggesting that there may be other equally valid options beyond the one mentioned. In both cases, it is likely that the speaker has only the example in mind and does not aim to introduce the set as a referent in the utterance. On the contrary, the set is merely a tool to achieve a *fuzzy* effect (cf. Prince et al. 1982) at the semantic level or at the pragmatic level.

Moreover, the set even assumes slightly different roles depending on the type of hedging function. In the case of semantic approximation, the speaker is considering other potential values of the set. For example, in (184) the speaker

takes into consideration the possibility that it might be twenty-nine minutes or thirty-one, etcetera.

(184) *Shudō* *de* *30-bu* *toka* *kakete* *sesseto*
manual INS 30-minute TOKA take.time:TE diligently
migaita *baai [...]*
polish:PAST case
'When I brushed it assiduously by hand for around 30 minutes [...]'

In this case, the inference of a set is not used to create and communicate an actual category, but to widen the extension of the example and to guide the hearer to consider neighboring values: the closest they are to the example, the more likely they are to be true (see Mihatsch 2010: 107-108).

In the case of pragmatic hedging, however, the actual identity of other values is not relevant. What is relevant (and what enables the hedged interpretation) is the potential existence of other values similar to the one mentioned by the speaker. Consider the following occurrences:

(185) A: *Ashita* *toka* *hima* *desu* *ka?*
Tomorrow TOKA free COP:POL:NPS Q
'Are you free like tomorrow?'

B: *Hima* *desu* *desu* *(wara).*
free COP:POL:NPS COP:POL:NPS laugh
Itsudemo *hima* *desu.*
always free COP:POL:NPS
'I am free lol. I am always free.'

A: *Jitsuwa* *ashita* *kibarashi* *ni* *kōen* *ni* *demo*
Actually tomorrow recreation for park LOC or.something
ikou *ka* *to* *omotte-ru* *no* *desu [...]*
go:VOL Q QT think:TE-ASP:NPS NML COP:POL:NPS
'Actually, tomorrow I am thinking of going to the park for recreation [...]' (Barotto 2018: 33)

(186) *Moshikasuruto* *kimi* *no* *koto* *ga* *suki* *dattari* *shite...*
perhaps you GEN thing NOM like COP:TARI do:TE
'Maybe she likes you...' (Barotto 2018: 35)

Example (185) is part of an exchange between users in a message board. Speaker A is organizing a visit to the park for the next day and asks Speaker B whether she can join her on that specific day. Reading the full context, it is clear that *ashita* 'tomorrow' is the only date considered by Speaker A. Nevertheless, she adds the exemplifying marker *toka* so that Speaker B can construe it merely as an option among potentially many others (e.g. the day after tomorrow, etcetera). The actual identity of these other options is not relevant, but their potential existence is functional at hedging the illocutionary force of the question. In (186) the speaker responds to a middle school boy looking for love advice. In particular, the boy is asking the members of the message board whether they think his childhood crush might reciprocate his feelings. Since the speaker is making assumptions about the feelings of a stranger on the basis of reported evidence, she hedges the assertiveness of the utterance using *tari shite* at the end. Her motive is not to guide the hearer towards the identification of other similar hypotheses, but rather to express an opinion while reducing her commitment through a fuzzy background of potential alternatives (Barotto 2018: 35). Thus, the inference of a potential larger set creates the fuzziness required to reflect the speaker's communicative intent.

The hedging functions of exemplifying markers demonstrates that speakers can exploit the characterizing core of exemplification, that is, the implicit reference to a set, with high versatility, to the point that they can even switch the roles of example and set. While usually, it is said that examples are subordinate to the set they represent (Lyons 1989), in the case of hedging, the set is given a subordinate status to the example (which is the actual referent) in order to achieve specific communicative functions. Could this mechanism be used also to explain the strengthening of negation through exemplifying markers? Naively, this seems at odd with the fact that, in this specific case (even more than pragmatic hedging) the speaker is focusing only on the mentioned item. Thus, it is not surprising that in some studies, an external explanation beyond exemplification was formulated in order to account for functions such as the strengthening of the negation (but also the pejorative connotation). In this regard, Kinjo (1996) proposes a unified account using the notion of *frame* (in a broader sense than Fillmore 1976).[49] She suggests that this type of functional range (exemplification, hedging, strengthening of the negation, pejorative connotation, etc.) can be explained if we assume that the underlying meaning of the exemplifying marker is inappropriateness within a given frame of context. Although this for-

49 Although her analysis focuses only on the functions of *nante* 'etcetera, or something', the overall account is interesting also for the markers under analysis in this study.

mulation can explain functions such as hedging and the strengthening of negation, it seems less convincing when it used to explain the exemplification function itself.[50]

Instead of searching for a different explanation or underlying semantics, we argue that the strengthening of the negation can still be linked to the semantics of exemplification, that is, the ability to profile a larger set. Along these lines, for instance, Suzuki (1998a: 267) suggests that the pejorative function is triggered by the "lack of specification" denoted by exemplifying markers which, in some context, may indicate the speaker's unwillingness to commit to the marked item and/or be interpreted as the speaker's contempt toward the item itself. Furthermore, she notes that the "lack of specification" can also be used to lower the speaker's commitment and achieve hedging (Suzuki 1998a: 273).

In the case of the strengthening of the negation, exemplifying markers work in a similar way, configuring a set of similar elements which is ultimately refuted in its entirety. In other words, exemplification allows the speaker to negate not only the mentioned entity, but also any other possible entities similar to the one mentioned. The ultimate effect is an emphasis of the negation, because its scope has been widened to an entire category of similar elements. Consider the following occurrences:

(187) A: *Hitoritabi-suru* *saini* *anzenna* *kuni* *wa*
travelling.alone-do:NPS in.case.of safe country TOP
doko *deshou* *ka?*
where COP:MOD Q
'Where is a safe country to travel alone?'

B: *Zettaini* *anzenna* *kuni* *nado* *arimasen.*
Absolutely safe country NADO exist:POL:NEG
Dokodemo *anata* *no* *kōdō* *shidai* *desu.*
anywhere you GEN action dependent.upon COP:POL:NPS
'There is no absolutely safe country. Anywhere it depends upon your actions.' (Barotto 2019: 10)

50 Kinjo (1996) explains the exemplifying function through a self-monitoring mechanism: the speaker presents the element knowing that the hearer might consider it inappropriate in some way. However, since often examples are chosen on the basis of being 'prototypical' (i.e. the best example) of the set they represent, this explanation is less convincing.

(188) *Mata, uketottemo, zettaini henji o okuttari*
also receive:COND absolutely reply ACC send:TARI
shitewaikemasen.
do:IMP:NEG
'Also, even if you receive the mail, you absolutely must not reply.'

In (187), Speaker A asks the user of a message board to name a safe country to travel alone. Speaker B replies that there is no absolutely safe country in the world, but it always (*dokodemo* 'anywhere') depends on the traveller's actions. By adding *nado* to *anzenna kuni* 'safe country', Speaker B is not only negating the existence of a 'safe country', but also the existence of anything similar to that, broadening the scope of the negation. In (188), the speaker uses the exemplifying marker *tari* not to designate a category of similar actions to 'reply', but to firmly ask not to (do anything like) reply to the email. Like in the case of hedging, the actual existence of the set is not relevant. In most cases, if we consider the topic continuity, it becomes evident that the speaker wants to refer only to the mentioned element. For instance, in (187), 'safe country' is the only topic it stays active throughout the exchange. Another example is provided below.

(189) *Neko wa kainushi o wasuretari shimasen!*
cat TOP owner ACC forget:TARI do:POL:NEG
'cats do not forget their owners!'

"Neko wa suguni wasureru" to, yoku iwaremasu [...]
cat TOP soon forget QT often say:PASS:POL:NPS
'it is often said that "the cat will soon forget" [...]' (Barotto 2019: 13)

In (189), the idea about cats forgetting their owners is the only recurrent topic of the article. Therefore, it is unlikely that the speaker wants to make reference to actual similar elements in the title (*neko wa kainushi o wasuretari shimasen* 'cats do not forget their owners'). The more likely explanation is that she wants to firmly refute this idea. In other cases, it is difficult to even imagine actual alternatives to the one mentioned (cf. 'nothing good' in (178)). Therefore, once again, the profiled set is functional to the achievement of a communicative effect and not part of the actual reference.

To sum up, in this section we examined how two functions performed by exemplifying markers, namely hedging and the strengthening of negation, can be traced back to the core ability of exemplification to profile a larger set and

thus to widen the reference. On the one side, the 'widening effect' of exemplification is crucial in making reference to conceptual categories because it allows to include the category into the reference of the utterance. On the other side, the 'widening effect' can profile a set of similar alternatives which in turn can be used as a tool to achieve other functions and thus different communicative effects.

6 Towards a unitary account of exemplification

We started our investigation by selecting four strategies used in Japanese to specifically encode exemplification (Chapter 1). Then, we overturned our perspective, from a top-down to a bottom-up approach, thus assuming the possibility for these same markers to cover other functions beyond exemplification (Chapter 2). The reason for this choice was *i*) to monitor the functional behavior of the markers in the actual language, *ii*) to investigate potential connections between functions and the notion of categorization, and *iii*) to improve our understanding of exemplification process. The actual analysis (Chapter 3, 4, and 5) has revealed a varied and complex picture. In this final chapter, the functional domains of the examined exemplifying constructions are compared, described and schematized, in order to point out interesting correlations and ultimately to highlight potential functional and structural patterns regarding exemplification.

This final stage of the analysis is developed in three phases. First, in Section 6.1, we consider the data of lexicalized and non-lexicalized categories together in order to have a clearer picture of the domain of 'proper' exemplification and identify tendencies in the way examples are encoded and processed. In Section 6.2, we analyze the functions of exemplification attested in the corpus, considering their relationship with categorization and introducing the notions of actual and potential non-exhaustivity. Finally, in Section 6.3, we will briefly examine the diachronic level, to determine whether the correlations attested at the synchronic level can be explained by looking at the diachronic developments of the markers here under study.

6.1 Examples and exemplification: the general picture

In Chapter 3 we proposed to consider the lexicalization of a category not as an inherent feature of conceptual categories themselves but as a linguistic strategy chosen by speakers in a specific situation. The analysis of Japanese exemplifying markers confirms this hypothesis: speakers can use exemplification to make reference to conceptual categories without an explicit category label, disproving the idea that examples hold a subordinate (non-independent) status and can function merely as reformulating tools. Figure 10 illustrates the frequency of lexicalized and non-lexicalized categories across the exemplifying markers under examination.

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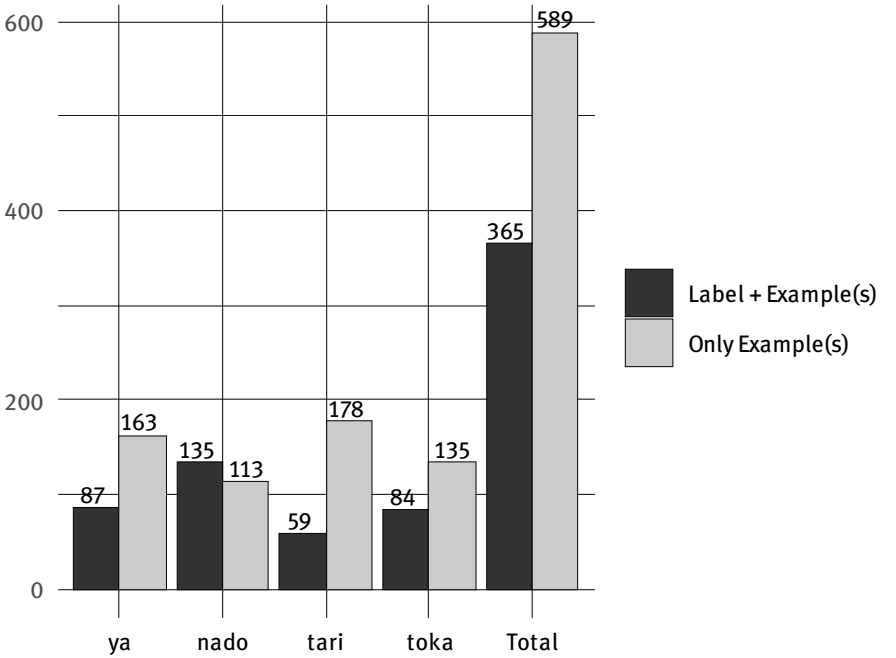

Fig. 10: Frequency of lexicalized and non-lexicalized categories

These data clearly show that speakers have two main strategies to make reference to conceptual categories in discourse, representing two distinct cognitive processes. The first strategy is lexicalization (i.e. the act of giving a name to a conceptual category), which represents a top-down approach to categorization whereby the speaker identifies the property (or at least part of the property) that characterizes the conceptual category and tries to lexicalize it by means of a word or some linguistic expressions (even complex ones). The second strategy is exemplification (i.e. the act of mentioning one or more exemplars of the category), which represents a bottom-up approach to categorization, whereas the speaker moves from a few (prototypical) category members to abstract the entire category. These two strategies are equally useful and can be employed separately, depending on the context, the type of conceptual category the speaker wants to designate and the speaker's communicative aim.

The type of category seems particularly crucial in determining the linguistic strategy to be used. For instance, in Chapter 3 we saw that lexicalization is highly influenced by the type of category: because of their internal complexity (cf. Givòn 2001), categories of states of affairs tend to be labeled by means of gener-

ic nouns, complex expressions (e.g. noun phrases encompassing a relative clause) or even placeholder labels (cf. Section 4.4). Even more crucially, when we compare data of lexicalized and non-lexicalized categories, it appears that categories of states of affairs tend to be referred to by speakers more frequently by means of exemplification alone (i.e. without any label):

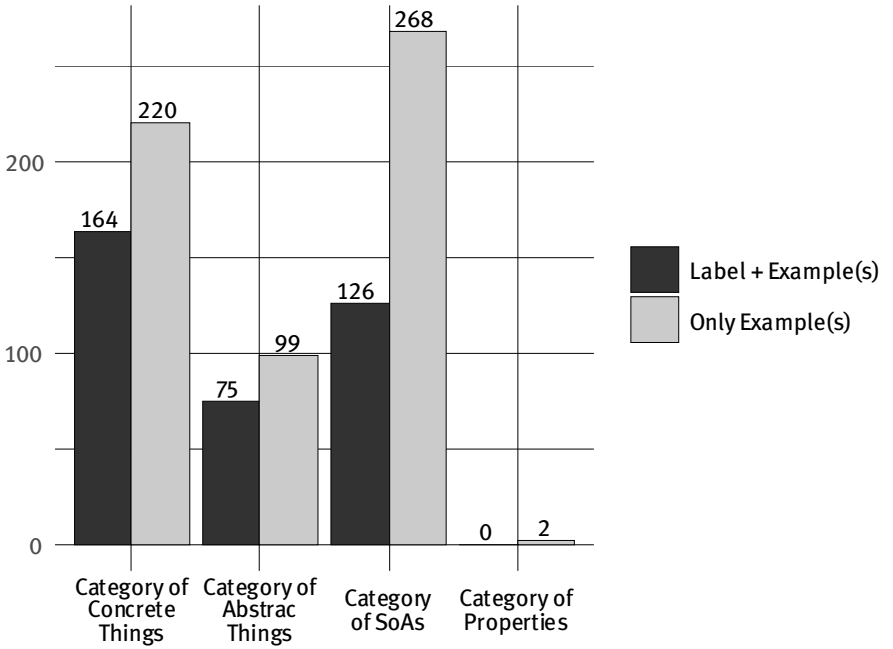

Fig. 11: Frequency of lexicalized and non-lexicalized categories with respect to the category type

In Figure 11, we can see that exemplification alone is used to make reference to different types of conceptual categories. However, it is preferred (68%) to lexicalization when category members are states of affairs (cf. 57% when category members are concrete things). This is due to the fact that, as already noted, states of affairs are complex entities and therefore, in some contexts, finding characterizing labels may prove to be difficult. In such cases, speakers prefer to provide examples, using a bottom-up approach to construe the category and thus avoiding altogether the taxing task of lexicalizing the shared property of the category. This confirms the crucial role of exemplification as a heuristic technique: a process that facilitates the elaboration and communication of

complex ideas. Examples are thus used as 'mental shortcuts' to ease the cognitive load of the speaker in creating and communicating conceptual categories. Of course, as in many cases with heuristics, exemplification is a practical (and concrete) method, but it may sometimes "ignore part of the information" (Gigerenzer and Gaissmaier 2011: 451). For instance, it strongly relies on the ability of the hearer to correctly infer the category and, contrary to labels, it does not provide any explicit summary that may facilitate or guide such process.

The fact that exemplification is used as a 'tool of ease' is also mirrored in the way exemplification is encoded in discourse. In most occurrences (68%), examples are encoded by noun phrases, as shown in Figure 12.

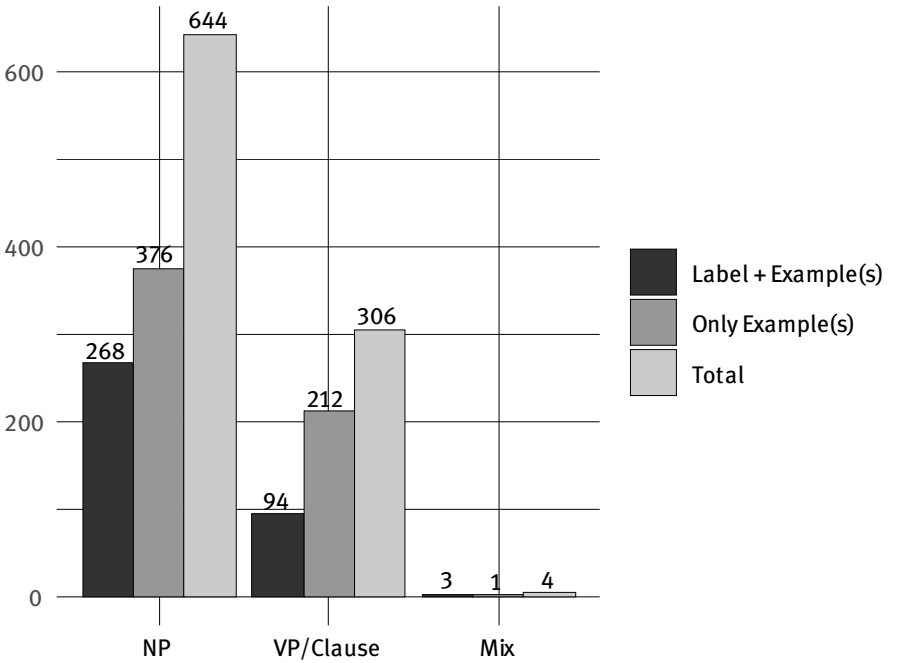

Fig. 12: Frequency of lexicalized and non-lexicalized categories with respect to the syntactic properties of the examples

This fact is interesting because it appears that often speakers choose to use noun phrases even when they want to make reference to category of states of affairs (cf. (190)) and properties (cf. (191)).

(190) *Kasai ya hason nado niyoru songai o kabā-suru.*
fire YA damage NADO due.to damage ACC cover-do:NPS
'It covers damages resulting from fire, breakage and so on.'

(191) *Dēta no eizoku-sei ya fukugen-sei o sonae, [...]*
data GEN persistence YA resiliency ACC possess:INF
'With data persistence and resiliency, [...]'

We argue that the usage of nominalized forms can be traced back to the construal of entities as examples. As noted in Chapter 3 and Chapter 4, in most cases, examples are things (typically concrete things) rather than states of affairs or properties. This means that, even though the categories represented by these examples are highly *ad hoc*, they still resemble natural or common categories in some way (cf. Rosch 1973, 1975), in the sense that, they can be seen as "categorizations which humans make of the concrete world" (Rosch et al. 1976: 382). Interestingly, categories created from other types of entities seem to replicate in some way categories of concrete things by encoding their exemplars as nouns instead of verbs or adjectives. In doing so, nominalized examples can profile states of affairs and properties without having to consider their distribution through time and space or their gradable nature. This ultimately leads to a simplification of the examples and thus of the exemplification process itself, which may play an important part in the usage of exemplification as a heuristic technique.

Another interesting point emerging from Figure 11 and Figure 12 concerns the frequency of categories of properties and the lack of examples encoded by adjectives (e.g. *he is handsome, good-looking, kind, etcetera*). Since, theoretically speaking, there are no clear linguistic or cognitive constraints that can explain their low frequency in our corpus, we believe that this potential tendency is worthy of further study, both considering other languages beyond Japanese and through psycholinguistics experiments.

Another linguistic parameter worth discussing is the number of examples included in the exemplifying construction. Figure 13 illustrates the overall data on the number of examples in the corpus.

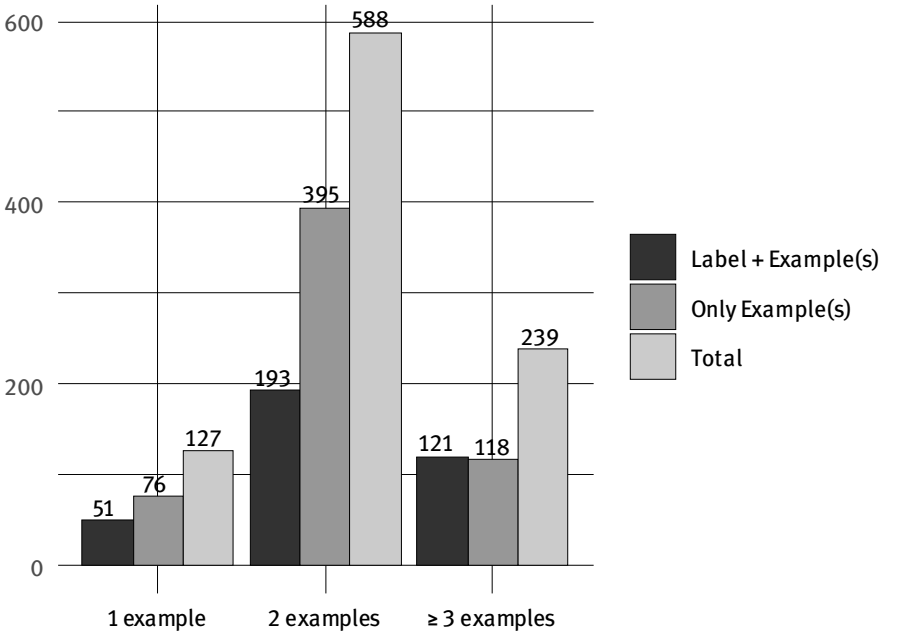

Fig. 13: Frequency of lexicalized and non-lexicalized categories with respect to the number of examples

In Section 4.3.3 we have argued that the reason for the high frequency of two examples, especially in the case of non-lexicalized categories, can be traced back to the necessity of comparing the examples to understand what they have in common in a specific context. On the contrary, the usage of a single example is rather infrequent, especially when category labels are not used and thus the category needs to be inferred through the single examples provided by the speaker. Generally speaking, this fact confirms that, at the cognitive level, exemplification is strongly linked to the notion of 'numerosity' (and, thus, also 'non-exhaustivity', cf. Section 4.2), in the sense that by definition an example always presupposes the existence of a larger number of similar items. In this regard, the usage of a single example may be perceived as quite marked. As noted in Section 4.3.3, when the speaker wants to make reference to a category through a single example, the example chosen by the speaker is often highly prototypical and the category quite homogeneous (e.g. *mēru toka* 'email and stuff', *yūchūbu nado* 'YouTube etcetera'). Furthermore, in most cases, the example is a noun rather than a verb phrase or a clause (cf. Section 4.3.3). In some contexts (e.g. epistemic or deontic contexts), the markedness of a single exam-

ple may activate the implication that there is something worthy of notice in it, since that specific example was purposefully chosen by the speaker from a set of alternatives. We argue that this markedness is what allows functions such as hedging and the strengthening of negation to emerge. Unsurprisingly, these functions are always performed by exemplifying constructions encompassing a single example (cf. Taylor 2010: 80).

Along these lines, another interesting tendency concerns the correlation between *i*) the number of examples, *ii*) the syntactic properties of examples and *iii*) the function performed by the exemplifying construction:

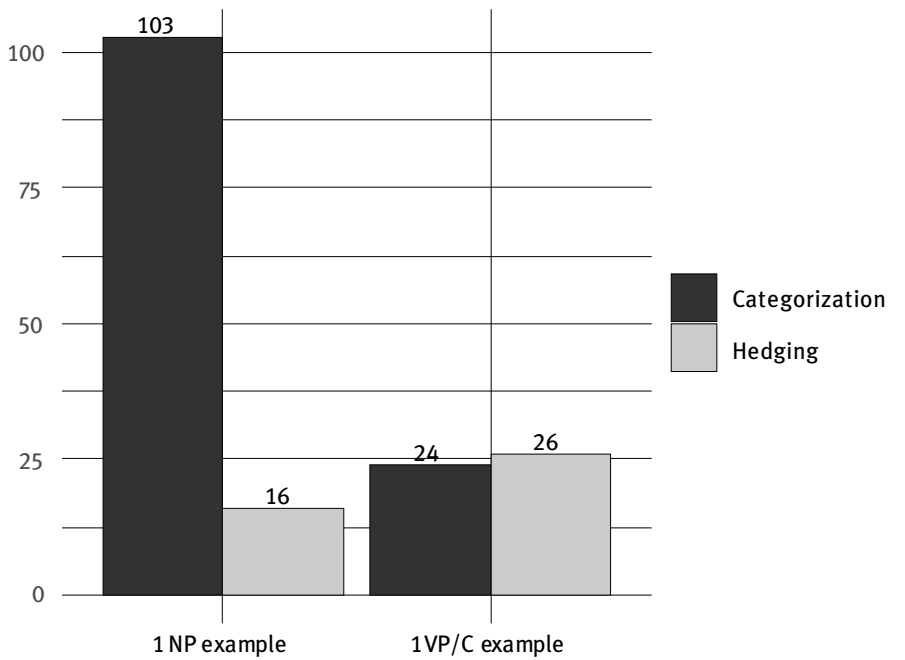

Fig. 14: Correlation between functions and syntactic level of single example occurrences

According to the data in Figure 14, when single examples are encoded by noun phrases, in most cases they are used to make reference to a conceptual category. On the contrary, single examples encoded by verbal phrases or clauses are more frequently used in hedged contexts where exemplification is only a tool to lower the illocutionary force of the speech act or the speaker's commitment (cf. Section 5.2). Even more crucially, when we focus only on those occurrences with a single VP/clausal example, we can see that 1) in case of exemplification proper

(and thus categorization), the exemplifying marker has scope over a verbal phrase or a clause usually included in a larger sentence (cf. (192)), whereas 2) in the case of hedging, the exemplifying marker is placed at the end of the sentence and it has scope over the entire utterance (cf. (193)).

(192) *Nokoru* *23-ken* *wa,* *kōfun-shite* *iraira-suru*
remain 23-case TOP excitement-do:TE getting.nervous-do:NPS
nado *shita* *kēsu* *datta.*
NADO do:PAST case COP:PAST
'The remaining 23 were cases in which, for instance, [the patient] got nervous and excited.'

(193) *Amuze* *ni* *hairitai* ***toka*** *(wara)?*
Amuse DAT get.in:DES TOKA laugh
'Do you want to join Amuze LOL?'

As noted by Taylor (2010: 61), when the scope of the exemplifying marker is extended to the entire utterance, it is more likely that the function of the marker is not exemplification proper but hedging. This fact is particularly noteworthy because, as noted in Chapter 3 and 4, examples show the exact opposite tendency: they tend to be encoded by noun phrases, not only because in most cases they designate (concrete) things, but also because noun phrases are also frequently used to make reference to categories of states of affairs. On the contrary, it is very unusual that an entire utterance is used as a single example to refer to a category. This fact is confirmed by our corpus data: there are no occurrence of entire utterances used as single examples. This means that, generally speaking, when used in exemplifying constructions, nouns are more likely to be elaborated as examples in the sense of items representative of a category, utterances are more likely to be elaborated as hedged elements.

6.2 The domain of exemplification: from actual non-exhaustivity to potential non-exhaustivity

The analysis of Japanese exemplifying constructions has revealed the multifunctionality of exemplifying markers. In the corpus, beyond exemplification proper, exemplifying markers are also used as hedging devices (Section 5.2) or to intensify the negative polarity of the utterance (Section 5.3). To better understand the relationships between these functions, we can use the semantic map model (see Croft 2001; Haspelmath 2003; Georgakopoulos and Polis 2018). As

illustrated by Haspelmath (2003: 213), "[a] semantic map is a geometrical representation of functions in "conceptual/semantic space" which are linked by connecting lines and thus constitute a network". In the network, functions are arranged in such a way to display the relationships occurring among them: *i*) two functions are placed onto the map if there is at least one language that has different formal expressions for the two functions (thus they cannot be considered the same function) and *ii*) two functions are connected through a line only if there is at least one language that uses the same formal expression for the two functions. Since we are dealing with functions that do not pertain only to the semantic level, the term 'functional map' is used instead. Figure 15 shows the functions performed by Japanese exemplifying functions.

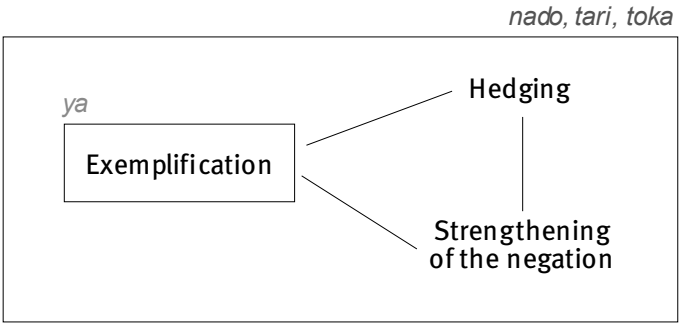

Fig. 15: Functional Map of Japanese exemplifying constructions

The more significant pattern emerging from the functional map is the fact that the ability to perform specific functions strongly depends on how the exemplifying marker is used within the exemplifying construction. As noted in Section 5.1, the connective *ya* is the only exemplifying marker that cannot be used to perform hedging functions or the strengthening of the negation (cf. also Suzuki 1998a: 267). Crucially, *ya* is also the only exemplifying marker in the analysis that shows peculiar and very restrictive distributional properties: it can only be used to join noun phrases and it is the only marker that cannot be used with a single example. As noted in Section 6.1, exemplifying markers that can extend their scope to the entire utterance (often occupying a final-utterance position) are more likely to perform hedging functions. This is likely due to the fact that, while nouns tend to be elaborated as examples (see Chapter 3 and 4), utterances are more likely to be elaborated as requiring some sort of hedging operation to mitigate the assertiveness or the illocutionary force. *Ya* cannot be used in such a

way since it can only be attached to nouns and cannot even occur in an utterance-final position.

The second reason is probably the most crucial and concerns the number of examples. When speakers perform exemplification, they tend to provide two or three examples (cf. Section 6.1). Moreover, strategies that emphasize the high number (and heterogeneity) of the examples are frequently used (cf. Section 3.5.2) together with exemplifying constructions. This emphasis on numerosity is likely linked to the fact that exemplification itself is a process through which the speaker can suggest the existence of a larger set. To mirror this cognitive mechanism, the linguistic encoding of exemplification is often built around the idea of numerosity (and heterogeneity) and, crucially, of non-exhaustivity. While it is possible to mention only one examples to make reference to a category (especially when the example is very prototypical or when it has a complex episodical interface), in some context, a 'salient example' reading might emerge (Narrog 2012: 147). In other words, the single example can end up being interpreted as particularly important to the point of overshadowing the other potential elements.

Considering the above, we argue that the functional extension from exemplification to functions such as hedging and the strengthening of the negation is again strictly related to the notion of non-exhaustivity and the way it is processed by speakers. Specifically, moving from the left side of the functional space (cf. in Figure 15) to the right side, non-exhaustivity goes from being actual non-exhaustivity to potential non-exhaustivity. Let us consider the following utterances:

(194) Exemplification
mēru ***toka*** *o* *shi-hajimeta.*
email **TOKA** ACC do-begin:PAST
'I started doing emails and such.'

(195) Hedging
Saigoni *kongo* *no* *keikaku* ***toka*** *oshiete* *kudasai.*
finally future GEN plan **TOKA** inform:TE please
'Finally, please tell us about your future plans.'

(196) Strengthening of the negation
Aitsu, *zenzen* *kanojo* ***toka*** *inai* *n* *da* *yo.*
that.guy absolutely girlfriend **TOKA** AUX:NEG:NPS NML COP:NPS PP
'That guy doesn't have a girlfriend at all!'

In (194), the speaker exemplifies to refer to an actual category of emails and other types of electronic messages. On the contrary, as noted in Chapter 5, in (195) and (196), the speaker is not interested in creating a category of similar elements. In the first case, the purpose of the speaker is to ask the addressee about her future plans. In a way, the what-is-said part of the utterance can be paraphrased as 'I want to ask you about your plans without sounding too forward'. Therefore, the set of similar elements is only potential and exploited to create a fuzzy background that mitigates the illocutionary force of the request. Similarly, in (196), the speaker wants to mark in some way the element that she is strongly refuting. The purpose of the set is only to profile potential similar elements that could be negated as well.

The act of exemplification 'proper' in (194) can be considered a case of actual non-exhaustivity, where the existence of other similar elements is not only presupposed, but it is part of the what-is-said (see Section 4.2). On the other hand, we argue that (195) and (196) are instances of potential non-exhaustivity. In such cases, the presupposition is that there might be other options beyond the one explicitly mentioned by the speakers. However, the set is not part of the what-is-said of the utterance. This means that contrary to exemplification proper, it does not matter what these alternatives are and whether they are available or not. In other words, potential non-exhaustivity allows to construe a given item as a "salient exemplar" purposely chosen from a larger set in order to communicate something about that specific item. The differences between actual non-exhaustivity and potential non-exhaustivity profiled by exemplification are illustrated in Figure 16.

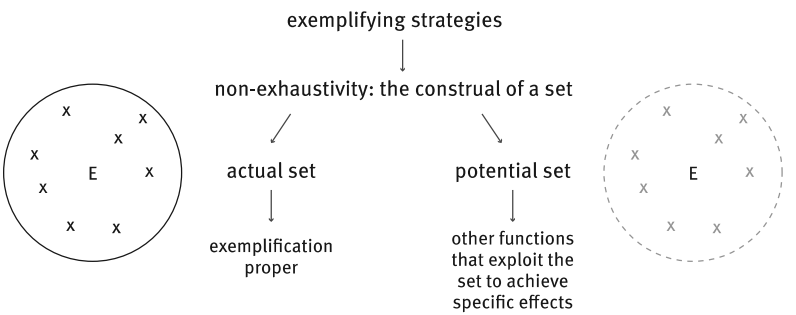

Fig. 16: Actual non-exhaustivity and potential non-exhaustivity

The basic cognitive operation behind exemplification is thus exploited to achieve a range of discursive functions. In our corpus, only hedging and the strengthening of negation are attested. However, when evidence from the literature and studies on exemplification are considered, we can see that this range of discourse functions is actually quite wide. For instance, Ohori (2004: 52-53) suggests that, in certain contexts, *toka* can perform what can be called a "pragmatic highlighting":

(197) *tenchoo-**toka*** *sasugani* *chotto*
manager-TOKA living.up.to.expectation a.bit
waratte-shimau-tteiu *kanji* *datta*
laugh.TE-perfect-QT feeling COP.PAST
(lit.) 'the feeling/atmosphere was that the manager, (while) living up to expectation, had to laugh a bit'
(id.) 'the story was that even the manager (of the restaurant) couldn't help giggling (encountering that funny situation)' (Ohori 2004: 52)

According to Ohori, the interpretation is that the speaker is talking about the manager since he is the one who most deserves the mention. This is achieved by construing *tenchoo* 'manager' as "an entity [who] is specifically chosen out of some set" (Ohori 2004: 53) by means of exemplification. A similar function is also attested in Italian, where the analytic exemplifying marker *per esempio* 'for example' can be used to highlight a specific item (cf. Barotto and Mauri 2019):

(198) A: *perché da sole poi è difficile*
B: *no da sole oddio anche a Londra c'avrei un'amica che sta lì ormai da quindici anni*
A: *be' questo **per esempio*** (LIP Corpus)

A: 'because [moving abroad] alone is difficult'
B: 'not alone I mean also in London I would have a friend who has been there for fifteen years'
A: 'well this **for example**'

In (198), *per esempio* is used to mark the anaphoric demonstrative pronoun *questo* 'this' which makes reference to the previous utterance of Speaker B. The implication is that it is easier moving abroad if you can live with a family friend (thus in contrast to the idea that, generally speaking, moving abroad *è difficile* 'is difficult'). Here, *per esempio* is used not to perform exemplification proper

but to construe the idea of moving abroad to live with a family friend as a highly salient (or particularly relevant) exemplar (cf. the notion of *exemplary*). Such diverse markers can perform similar functions due to the fact that both exploit the basic core of exemplification, that is, the construal of a (potential) set to highlight the selected exemplary item.

In our analysis, we have considered markers that are still used to perform exemplification (that is, to make reference to an actual set of elements). However, there can exist markers that have developed towards the functions triggered by potential non-exhaustivity while gradually losing the exemplification function. This seems to be the case of Japanese *nante*. The marker *nante* is generally considered to have developed from the combination of *nado* and *to* (Suzuki 1998a: 268; Martin 1975).

As noted by Suzuki (1998b: 458), "when one says X *nante*, X is one member of a group of entities which are similar to X". Although in some studies *nante* is still described as an exemplifying marker (cf. also Kinjo 1996; Iwasaki 2013: 67), it seems that nowadays *nante* is seldom used to enumerate examples (Suzuki 1998a: 269). More commonly, *nante* appears to be used to perform functions triggered by potential non-exhaustivity, such as hedging (cf. (199)), strengthening of the negation (cf. (200)), and conveying a pejorative connotation (cf. (201)).

(199) *"Kimi tte meiku shinakute-mo kirei da ne"*
you TOP make-up not-doing-even beautiful are FP
nante *iwarechau kamo.*
PR be-told-end-up may
'You may be told something like "You are beautiful even without make-up".' (Suzuki 1998a: 266)

(200) *Doko de futte-iru no? Nagoya-shinai ni*
Where LOC rain:TE-ASP:NPS Q Nagoya-city LOC
sunde-imasu ga watashi no chiiki wa ame
live:TE-ASP:POL:NPS but I GEN area TOP rain
nante *futte-imasen yo!*
NANTE rain:TE-ASP:POL:NEG PP
'Eh? Where is it raining? I live in Nagoya, but it is not raining in my area!' (Barotto 2019)

(201) *Kosodate* *o* *orosokanishite-iru* *nante* *kakarete-mo*
raising-child OBJ is-neglecting PR even-is-written
kinishimasen. *Hahaoya* *dearu* *koto* *o* *hookisuru*
not-care mother am NML OBJ abandon
nante *arienai* *n* *desu* *mono.*
PR not-possible NML is FP
'Even if they (journalists) write that I am neglecting parenting, I don't care. Because it's not possible for me to abandon being a mother, you know.' (Suzuki 1998a: 262)

It follows that the map in Figure 16 may also be seen as a diachronic map and that exemplifying markers (or more generally, markers that imply the existence of a larger set from which the marked item has been selected) can develop towards the functions triggered by potential non-exhaustivity, losing their exemplifying function (and their reference to actual non-exhaustivity) over time.

6.3 A diachronic glance on Japanese exemplifying markers

Synchronic investigation can reveal instances of linguistic constructions having more than one use or function, and consequent tendencies and correlations. However, it cannot formulate strong hypotheses about the relationship and implications between these functions. Recent investigations on semantic maps and on methods of representing polyfunctionality (see van der Auwera 2013; Narrog 2009; Narrog and van der Auwera 2011) have highlighted the important role of the diachronic dimension, both to explain and predict processes of functional extension. In this regard, van der Auwera (2013: 165) notes that a possible reason for the polyfunctionality of a marker can be that one function has developed out of another. It follows that diachronic maps can offer more information, making the mapping itself more restrictive and predictive.

Our case is even more complex since we are investigating four markers which are very dissimilar from each other at different levels (cf. Section 1.5), but which exhibit quite homogeneous functional spaces. It is therefore natural to wonder whether the diachronic dimension can help us to better understand this functional homogeneity and extension. In what follows, we will provide a brief diachronic excursus of the four markers under consideration.

Greenberg (1987: 131) traced the non-exhaustive connective *ya* back to the Altaic ***j*-** interrogative root. According to him, this interrogative root is well attested in all branches of Altaic to form different interrogative markers and constructions: for instance, in Sakhalin Ainu *-ya* means 'or', and in the Hokkai-

do dialect Batchelor (north of Japan) the construction *ya* X *ya* Y can be interpreted as 'whether X or Y' (see Greenberg 1987). Nowadays, comparative linguists reject the very existence of an Altaic family (cf. Vovin 2005; Georg 2017) and Japanese is usually classified as part of the smaller Japonic family (cf. Vovin 2010). Nevertheless, the interrogative meaning of *ya* is still attested in various works on Old or Classical Japanese (cf. Vovin 2003; Frellesvig 2010):

(202) *tuwi* *n-i* *wotoko* *af-ase-z-ar-am-u* ***ya***
finally DV-INF man meet-CAUS-NEG/INF-be-TENT-FIN PRT
'Would [he] not finally make [her] marry a man?' (Vovin 2003: 432)

(203) *saku* *be-ku* *nari-nite*
bloom.CONCL NEC-ACOP.INF become-PERF.GER
ara-zu ***ya***
exist-NEG.CONCL Q
'shouldn't it have started to bloom?' (Frellesvig 2010: 71)

In Old Japanese, two interrogative markers are attested, namely *ya* and *ka* (Vovin 2003, 2008). Over time, especially through Middle Japanese, the functional spaces of *ya* and *ka* have changed repeatedly, avoiding potential overlapping. For instance, in Old Japanese, *ya* was mostly used in rhetorical questions (e.g. questions directed to the speaker herself). According to Frellesvig (2010: 253, 359), through Early Middle Japanese *ya* largely replaced *ka* inside yes/no questions as a way to solicit the hearer's confirmation, then it was gradually reinterpreted as an expression of uncertainty (e.g. 'I wonder'), often used in combination with various modal forms.[51] The use of *ya* as sentence interrogative in non-rhetorical sentences declined since Late Middle Japanese in favor of sentence final *ka*. By the end of Late Middle Japanese, *ya* developed uses as a connective 'and, or, or the like' (Frellesvig 2010: 359). Some traces of its past usage as interrogative remains in Modern Japanese in fixed expressions such as *are ya kore (ya)*, equivalent of *are ka kore (ka)* "that and/or this" (see Martin 1975: 157).

The usage of *nado* began during the Heian period (794-1192, cf. Martin 1975: 163; Shirane 2005: 233). According to different studies and grammars (see for instance Yamaguchi 1988; Hoffmann 1876; Martin 1975), *nado* derives from the combination of the indefinite interrogative *nani* 'what' and the conjunctive

51 The combination of *ya* and a modal form of *ar-* gave rise to the marker *yara*, which is another connective encoding non-exhaustivity (see Frellesvig 2010: 335). This means that also *yara* is linked to the irrealis mood, further confirming our discussion.

marker *to* 'and' passing through an intermediate stage *nando*: *nanito* > *nando* > *nado*.[52] Frellesvig (2010: 359) attests the use of *nando* and *nado* together with the connective *ya* in Late Middle Japanese to express non-exhaustivity (i.e. 'such as, etc.'). For instance,

(204) *Sasuga-ni* *mushi* *no* *koe* ***nado***
even.so insect GEN voice and.other.such.things
kikoe-tari
be.audible-AUX
'Even so one could hear the voice of the insects and other such things.'
(Shirane 2005: 232)

Because of its meaning, some studies treat Old/Classical Japanese *nado* as a special type of plural denoting a group of similar items to the one mentioned (cf. the notion of similative plural). For instance, Vovin (2003: 40) refers to *nado* as a suffix denoting 'representative plurality', in contrast with the additive plural suffix *-domo* (*na-domo* name-PLUR 'names'). On the contrary, Shirane (2005: 233) notes that *nado* should not be considered as a plural suffix but as an adverbial particle signaling exemplification (i.e. *reiji*). Following the analysis of Mauri and Sansò (2019, 2021) on the status of similative plurals, it is likely that *nado* was an exemplifying marker also in Old Japanese and thus was not part of the number paradigm (contrary to other suffixes like *-domo*, *-ra* and *-tachi*). In this regard, the indefinite interrogative nature of *nani* 'what' in the original word *nanito* may have influenced the development into an exemplifying marker by denoting a certain level of indeterminacy in the element marked by *nado* and thus implying the existence of other similar unspecified referents (cf. Yamaguchi 1988: 23).

The exemplifying converb *-tari* originated from the perfect auxiliary *-tari* which was used to denote the completion of an event in Old Japanese (cf. Shinzato 2005; Narrog 2012). Around Late Middle Japanese (Frellesvig 2010: 330), the perfect auxiliary *-tari* developed into three different verbal suffixes: *i*) the past/perfect *-ta*, *ii*) the past/conditional *-tara* and finally *iii*) the representative/exemplifying *-tari*. While there are some occurrences of the latter also in Late Middle Japanese, exemplifying *-tari* does not become established until

52 Interestingly, the form *nanito* (and its variant *nanitote*) has also developed into a homonym interrogative pronoun *nado* (*nadote*) 'why' in Early Middle Japanese (see Vovin 2003: 139; Frellesvig 2010: 245) that likely coexisted for a period with the non-exhaustive marker *nado* 'etcetera'. In Modern Japanese, only the latter has survived.

Modern Japanese (Frellesvig 2010: 390). Exemplifying *-tari* lost its aspectual perfective meaning, developing into what Narrog (2012: 145-148) calls a 'subordinating mood'. He notes that this new *tari* "is not specifically an irrealis subordinate mood, but it does lead to a lower factuality of the event portrayed, since through *-Tari* the event becomes marked as unspecific, i.e. not bound to a specific time, and ambiguous between a singular and a plural reading" (Narrog 2012: 147). According to Narrog, this lower factuality is what enables the modern functions of *tari* to emerge, such as exemplification and hedging. A similar interpretation is given by Suzuki (1998a) who recognizes what she calls a 'lack of specificity' as the underlying meaning of this construction.

Finally, as already noted in Section 1.5, *toka* has originated from the combination of the marker *to* (which can be interpreted both as the comitative and conjunctive marker *to* or as the quotative marker *to*) and the interrogative/indefinite marker *ka*. Interestingly, in the grammars of Japanese written in the '70s (e.g. Martin 1975: 156) *toka* is still described as '*to ka*', with a space between the two markers, indicating that the process of combining may still ongoing. On the contrary, more recent studies (e.g. Suzuki 1998a; Ohori 2004; Taylor 2010, 2015) tend to describe *toka* as a single, one-word marker.

This brief diachronic outline shows that despite the different paths these markers have undergone and their different distributional and structural properties, all of them, at some point in their history, have been related to the notion of *irrealis* or lower factuality in some way. Interestingly, this type of diachronic development or synchronic functional extension (i.e. from irrealis marker to exemplifying strategy) can also be found in other languages. For instance, in Italian, several epistemic markers can be used as exemplifying strategies, especially in spoken conversation: the epistemic marker *magari* 'maybe' (cf. (205), see Masini and Pietrandrea 2010), epistemic expressions *non so, che so, che ne so* 'I don't know' and parenthetical expressions like *metti*, *mettiamo* and *poniamo* 'let us suppose' which are frequently used to introduce hypothetical facts (cf. (206) and (207), see Schneider 2007; Lo Baido 2018):

(205) *assistiamo sempre alle stesse immagini eh cambiano soltanto* ***magari*** *i nomi delle battaglie o il numero dei dei feriti eccetera*
'we always see the same images eh the only different things are **for example** the names of fights or the number of of injured people etcetera' (Lip Corpus)

(206) *non sono un'amante della **non so** di discoteche e cose così*
'I'm not a fan of **for example** of nightclubs and things like that' (KIParla Corpus)

(207) *quando lei ha una citazione che supera **poniamo** le due righe*
'when you have a quote that exceeds **for example** two lines' (KIParla Corpus)

This pattern is interesting because, when we consider the ontological status of exemplification, it appears that examples and irrealis entities share some similarities. First, we can argue that there is a parallelism between the lack of factuality that characterizes irrealis entities and the lack of specificity or referentiality proper to examples. As was noted several times through the analysis, by their own nature, examples can exist only by virtue of them being representative of the larger set from which they have been chosen. This property of examples is often encoded at the linguistic level by means of strategies that lower the specificity of the reference (cf. Mauri 2017) such as general extenders. These strategies allow the speaker to suggest that there is something more (relevant) of the element(s) mentioned, which is only a pointer to the larger set it represents. Secondly, examples exabit some intrinsic irrealis value due to the fact that the notion of exemplification itself assumes the interchangeability of particular instances (cf. Manzotti 1998). Examples are, primarily, arbitrary choices, because the selected item is just one of a number of other potential examples. This fundamentally means that there are always other equally representative items that can be added to the list or that can replace the mentioned one.

7 Conclusion and prospects

The aim of this research was to investigate the relationship between categorization and exemplification through a corpus-based analysis of Japanese exemplifying constructions. Exemplification was defined in functional terms, as a process through which the speaker provides one or more representative entities of a larger set. The status of examples can thus be encoded by suggesting the existence of further similar entities, that is, by means of non-exhaustivity. This functional definition of exemplification allowed us to identify four Japanese exemplifying markers to be analyzed, without relying on distributional or formal parameters. The investigation of the attested patterns of usage has revealed different tendencies and has shown the mechanisms and principles at work in the coding and processing of exemplification.

The attested patterns demonstrate that category labels and examples are not competing strategies to communicate conceptual categories, but rather they frequently complement each other, co-occurring within the same construction. Both labels and examples provide a specific semantic contribution to the inferential process by covering any lacks in the reference encoded by the other element. On the one hand, labels allow to make clear and direct reference to the defining property of the category. However, since labels are built through an abstraction process, their creation and interpretation may require a certain amount of cognitive effort on the part of the speaker, depending on the type of category and the specific context. On the other hand, examples allow to contextualize and actualize the conceptual category, but they only hint at its defining property, without encoding it clearly and directly as labels can do. To be successfully interpreted, examples need to be elaborated as representative of a higher-level entity and compared to each other (and to the context) to understand what shared property makes them relevant. This process may require extra cognitive effort on the part of the hearer, depending on the type of category and the specific context.

This functional cooperation is mirrored at the linguistic level in the way labels and exemplifying constructions are typically encoded. As noted in Chapter 3, the syntactic and semantic properties of labels show clear tendencies with how examples are selected and encoded. In particular, the process of lexicalization (i.e. the creation of a specific category label for a given ad hoc category) can be explained by means of a continuum: the more category members (represented by the examples) resemble 'prototypical nouns' (in the sense of Givon 2001: 51), 1) the more frequently the lexicalization process takes place, and 2) the easier is for the speaker to create specific labels to denote the category. On the

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contrary, the more the examples resemble 'prototypical verbs' (in the sense of Givon 2001: 52), 1) the less frequently the lexicalization process takes place, and 2) the more lexicalization relies on complex labels or, alternatively, unspecific broad simple labels. Therefore, it could be argued that category labels and examples are cognitively selected and linguistically encoded so as to ease the communicative effort of inferring and elaborating the conceptual category they refer to.

Beyond category labels and examples, the analysis has also revealed the important role played by two other elements in the process of communicating conceptual categories in discourse: non-exhaustivity and context. Non-exhaustivity is a crucial linguistic tool to trigger inferential processes because markers that directly encode it (e.g. non-exhaustive connectives and general extenders) can be seen as indexical items. In this regard, non-exhaustive markers activate the presupposition of unspecified open variables that can be saturated only by having access to the context. Ultimately, non-exhaustivity allows speakers to make the conceptual category coincide with the 'what-is-said' part of the utterance meaning. Furthermore, the analysis has also suggested that context should not be considered only as some inert background to the categorization process, but as an active contributor. More specifically, the co-text can provide semantic clues towards the identification of the defining property of the category, directing the overall inference to the conceptual category. Categorization is thus actively driven by the context, which means that it should be seen as a highly dynamic process.

The relationship between exemplification and categorization is not restricted to the usage of examples to make reference to conceptual categories. In this regard, the analysis has revealed that the ability of exemplification to presuppose the existence of a larger category can be exploited by speakers to perform other functions, such as hedging and the strengthening of the negation. Specifically, when the speaker provides a single example in specific linguistic environments (e.g. face-threatening acts or utterance in which the speaker expresses her opinion), a 'salient example' reading might emerge. In the case of hedging, the hearer is guided to interpret the example merely as an option arbitrarily chosen from a larger set of possibilities. The ability to open a paradigmatic axis of options is thus used to achieve important discourse effects such as vagueness or politeness. In the case of the strengthening of the negation, the implication of a set is used to widen the scope of the negation, to the point that the speaker is refuting not only the entity construed as an example, but also any other similar element. This function as well can be used to achieve further discourse effects, such as suggesting the speaker's contempt toward the mentioned entity.

To sum up, the major results of this study can be described as follows. First of all, the analysis has shown the crucial role of exemplification as a means to make reference to conceptual categories in discourse, highlighting 1) that examples do not have a subordinate status to general formulations (i.e. category labels) and 2) the versatility of exemplification in making reference to complex or problematic categories (e.g. categories of states of affairs).

Secondly, the analysis has also confirmed the role of exemplification as a heuristic technique (in the sense of a process that facilitates the elaboration and communication of complex ideas) also when it is used to make reference to conceptual categories. This is actualized in two ways. On the one hand, exemplification is frequently used without any category label whenever the cognitive load of communicating conceptual categories is particularly heavy, such as in the case of categories of states of affairs. On the other hand, the analysis has also revealed that exemplification tends to be linguistically encoded so as to resemble natural categories in some way. For instance, whenever possible, speakers prefer concrete things as examples. When concrete things cannot be used because they cannot represent well the category the speaker wants to designate, examples still tend to be encoded as nouns or noun phrases (and thus, eliminating complex interconnections such as the distribution across space and times or the existence of participants and their roles). This ultimately leads to a "simplification" of the examples, confirming the fact that exemplification is a process aiming at simplifying the elaboration of complex information.

Third, the analysis has revealed the strong link between exemplification, categorization and non-exhaustivity. By definition, exemplification implies the existence of a larger set or category from which the examples have been chosen. At the linguistic level, this is achieved through non-exhaustivity and thus linguistic strategies that directly encode (as in the case of non-exhaustive markers such as non-exhaustive connectives and general extenders) or at least imply (as in the case of exemplifying markers 'proper' such as *for example*) the existence of further similar elements. This fact is crucial to make reference to conceptual categories through exemplification. However, we have seen that the notion of non-exhaustivity can also account for several other functions performed by exemplifying markers, even beyond exemplification proper. These functions can be achieved because the non-exhaustivity directly encoded (or at least implied) by exemplifying markers is used by speakers to create widening effect, that is, the implication of a paradigmatic axis of alternatives. To better explain this fact, we distinguish between actual non-exhaustivity and potential non-exhaustivity. The former refers to the ability of exemplifying constructions to include the reference to further similar entities into the 'what-is-said' part of the

utterance. The latter refers to the ability of exemplifying constructions to presuppose the existence of a set of similar entities without including it into the 'what-is-said' part of the utterance. Potential non-exhaustivity allows speakers to use the implication of categorization to perform several other functions (e.g. hedging, strengthening of the negation, highlighting) and it seems to be triggered by specific circumstances, such as the usage of a single example. Data suggest that actual and potential non-exhaustivity can also be seen as two steps of a diachronic development and that different exemplifying markers can be positioned in different stages (e.g. *ya* can only be used to achieve functions related to actual non-exhaustivity, *nante* is likely used to achieved functions related to potential non-exhaustivity).

There are two directions along which this research could be continued. First, the attested tendencies may be verified on other languages through a corpus-based approach or through a cross-linguistic typological approach. More specifically, it would be interesting to test some of them on languages having a different word order than Japanese. If tendencies that do not strongly rely on the word order (e.g. frequency of lexicalization and all the relative tendencies between category labels and examples, the preference for examples expressed by noun phrases, frequencies related to the number of examples) were confirmed by investigating other languages, the research on exemplification would improve especially with regards to its validity at the cognitive level. With greater and more varied evidence, the attested tendencies on the linguistic coding of exemplification might be better supported, making the resulting generalizations more powerful. This would ultimately confirm the role of exemplification as a universal cognitive mechanism, with evident and investigable impacts on the modalities of linguistic coding.

The second direction in which this study may be continued is diachronic. Exemplifying markers seem to have interesting links with the notion of irrealis. Three makers under examination in this study have been irrealis (interrogative) makers at some point of their existences (i.e. *ya, nado, toka*), and one marker has shown a strong correlation with irrealis mood (i.e. *tari*). This does not seem to be a language-specific diachronic pattern since similar developments have been attested also in other languages. We can thus assume that the irrealis dimensions may be a driving force underlying the notion of non-exhaustivity or exemplification. Moreover, the diachronic development from actual non-exhaustivity to potential non-exhaustivity should also be investigated in depth considering other languages beyond Japanese.

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