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Research Article

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Interspecies Identification in Nature Observations: Modal Expressions and Open Reference Constructions with Non-Human Animate Reference in Finnish

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Abstract: This paper deals with the intermediate position of non-human animates on semantic prominence scales and illustrates the complexity and the context-driven aspect of linguistic animacy. The focus is on deontic and dynamic modals, as well as the zero person and passive constructions, in Finnish. These types of structures have been described as reserved for human reference. The corpus of this study is collected from a radio program where listeners call in to present questions arising from their nature observations. It consists of 263 occurrences of modal and open reference constructions with non-human animate reference. The paper aims to determine the properties that make non-human animates acceptable referents in the constructions under study and shows that prioritizing human reference is not a grammatical property of these constructions. Rather, they encode shared intersubjective, interspecies experience. Seeking to understand the behavior of the other animate being, speakers display recognition of non-human beings' concerns and interests: they use linguistic constructions that engage them and all other interlocutors as potential participants of the situation, even when the situation described is not typical of humans. The non-human animates' capacities, environment and life span are unfamiliar to the interlocutors and motivate their questions and explanations, but there are physical states and processes as well as mental experiences common to all animates that allow for the interlocutors to adopt the non-human viewpoint.

Keywords: animal reference, non-human animates, animacy, agency, empathy, modality, zero person, passive, Finnish

1 Introduction

1.1 Objectives of the study

This paper addresses the human/non-human interface on the linguistic animacy scale, from a cognitive-functional perspective. The analysis illustrates the complexity and the context-driven aspect of the linguistic animacy category (see Taylor 2003: 28) and the problematics of classification of entities within it (see Comrie 1989: Chapter 9; Yamamoto 1999; 2006; Dahl 2008). The semantic category of non-human animates is rarely treated in linguistic literature, as the main line of division in analysis is drawn between

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human and *inanimate* (see e. g. Meir et al. 2017: 200). Non-human animates, if mentioned, have the status of a peripheral category somewhere between the two, qualified through the negation of the human category (see the discussion on the extensions of animacy and personhood in Dahl & Fraurud 1996: 62–63).

The paper sheds light on the interplay between human and non-human classes through an analysis of discourse on nature observations, focusing on deontic and dynamic modal expressions, as well as zero person and passive constructions with non-human animate reference in Finnish. All these constructions have been considered as reserved primarily for human reference.

Deontic modals entail an intentional participant who is a source of volition and subject to obligation. As expressions of capacities and constraints, dynamic modals also imply the presence of an intentional being. Capacity is about being able to do something potentially, ‘if one wishes to do so’. The expressions of constraint, on the other hand, entail not only the state of affairs construed as necessary, but also the alternative states of affairs that are in line with the will of the participant who is concerned by the constraint (Laitinen 1992: 194; 1997). When a speaker uses deontic and dynamic modals with reference to another being, they display recognition of the interests and concerns of the entity referred to. Intentionality and agentive, goal-oriented activity have been regarded as typical of humans (see e. g. Heine 1995: 125). For example, Bergs & Heine (2010: 115) refer to the presence of human control when distinguishing root modalities from epistemic modalities.

Both the zero person and the passive construction produce generic open reference where the referent of a participant in the situation is left unidentified. Syntactically, the zero person construction behaves otherwise like a third person singular clause but leaves implicit a noun phrase argument in a position where it would appear in a specific person constructions (see Laitinen 2006, Kaiser & Vihman 2006). For illustration, consider example (1), which concerns the claws of the Eurasian blue tit and includes a zero subject.¹

- (1) *näillä kynsillä Ø saa aika tiukan otteen* (14032012)
 DEM.PL.ADE claw.PL.ADE Ø get.3SG pretty tight.GEN grip.GEN
 ‘with these claws **one** [= Ø] can get a pretty tight grip’

As with the zero subject construction, the Finnish passive includes no overt subject. However, the passive verb has its own morphological marking: the affix *-TA-* followed by the personal ending *-Vn* (*sano-ta-an* ‘say-PASS-PASS’).² The construction is sometimes called *the impersonal* to convey the absence of the subject argument and to distinguish the construction from Indo-European passives (e. g. Blevins 2003, Kaiser & Vihman 2006; on the terminology concerning the Finnish passive, see Manninen & Nelson 2004, Helasvuo 2006: 234). With these reservations in mind, I will follow in this paper the tradition in Finnish linguistics of calling this form *passive*.³

The implicit argument in both the zero person and the passive construction is interpreted in the discourse context with reference to one or several, more or less non-specific animate entities, potentially including the speaker and/or the interlocutor(s). These constructions thus entail the presence of a conscious being and the ability of the speaker to identify with the position of the being. This explains why the zero person and the passive are taken to be reserved for human reference (see e. g. Blevins 2003: 473; Helasvuo 2006; Kaiser & Vihman 2006; Tommola 2010): the human viewpoint is considered to be the position which human language users can identify with.

The objective of this study is to examine exactly what properties determine a referent’s acceptability in modal and open reference constructions, all of which entail recognizing certain aspects of the situation in which the referent is involved. In doing so, the paper shows that prioritizing human reference is not a grammatical property of these constructions (cf. Blevins 2003: 475–476), but the result of an interpretation

1 The slot where a nominal argument would appear in a specific person construction but which is left open in a zero person construction is indicated in this example and throughout the paper with Ø.

2 In colloquial Finnish, the passive is also used as the first person plural form of the verb, preceded by the personal pronoun *me* ‘we’. Occurrences of the passive with specific first person plural reference were excluded from the data of the present study.

3 The (im)personal status of the zero person and the passive will be discussed further in this paper (Section 1.3).

depending on the participant roles and the way in which the referent is viewed (see Yamamoto 1999: 51–52). In data where speakers share knowledge on animals and aim to make animal behavior understandable, non-human animates rank high on the scales of animacy, agency and empathy. The speakers construe the event from the viewpoint of the non-human animate even when the situation as such is not typical of humans. The analysis provides information on the contextual factors that come into play to allow this identification.

By comparison, texts involving exclusively human affairs typically entail the idea of humans as a category distinct from all the rest and are likely to include relatively few references to other animates (see e. g. Zaenen et al. 2004: 123; Stibbe 2012: 25–33). Shore (1988: 160) has reported that the Finnish passive is used in biology and biochemistry texts when referring to shrews and even enzymes (see also Sulkala & Karjalainen 1992: 288; Hakulinen et al. 2004: § 1322). In these texts, according to Shore (1988: 160), “a universe can be created in which humans play no part and, thus, a human participant is ruled out”. The present paper aims to demonstrate that, on the contrary, when the speakers seek to make sense of the animal referent’s behavior, the human/non-human distinction is not clear-cut or exclusive.

I start by presenting the data of the study (1.2), and the main points concerning modality and person in Finnish (1.3). I then briefly outline the conceptual foundations of the study by discussing the representation of non-human animates in light of the notions of *animacy*, *agency* and *individuality* (2.1). I also give some examples of how non-human animates appear in lexis and grammar (2.2). After this, I present the results of the analysis concerning modal (3.1) and open reference constructions (3.2). In section 4, I discuss the conceptualization of non-human animates, in terms of similarity and otherness within the class of animate beings. Section 5 concludes the paper.

1.2 Data

The corpus includes 156 deontic and dynamic modal constructions and 107 open reference constructions with non-human animal reference.⁴ They were collected by examining the conversations in three broadcasts of the radio program *Luontoilta* ‘Nature Night’ in which listeners ask a panel of wildlife experts questions arising from their nature observations. The questions are presented live during the broadcast either by the listeners who call in to the studio or by the host of the radio show who reads aloud the messages sent by the audience (via email or Facebook).

The conversational data collected from the three broadcasts amounts to a little more than 40 000 words.⁵ Table 1 shows the length of each broadcast, as well as the number of experts present in the studio (including the host) and the number of listeners participating by calling in or sending a message.

Table 1. The *Luontoilta* broadcasts studied

Date of the broadcast	Length	Number of experts	Number of listeners participating (calls/messages)
15.2.2012	1h 44 min	4	27 (11/16)
14.3.2012	1h 46 min	6	23 (17/6)
13.6.2012	1h 42 min	4	21 (13/8)

Typically, the conversations consist of a short narrative, reporting the (actual or hypothetical) human-wildlife encounter, and a discussion between the caller and the experts or between the experts. The experts dominate the talking time. Table 2 shows the proportion of turns taken by each expert and the callers.

⁴ The two parts of the data set overlap partially, since modal verbs can occur with the zero person or (with some restrictions) passive reference.

⁵ I have excluded from this count sequences where the question and the answer only concern plants, with no reference to animals. The conversations were transcribed by me.

Table 2. The distribution of turns by participant in the *Luontoilta* conversations

Date of the broadcast	Participant	% of all turns
15.2.2012	Expert 1 (host)	35
	Expert 2	21
	Expert 3	16
	Expert 4	8
	Total host + experts	80
	Total callers	20
14.3.2012	Expert 1 (host)	19
	Expert 2	18
	Expert 3	12
	Expert 4	12
	Expert 5	8
	Expert 6	7
	Total host + experts	76
Total callers	24	
13.6.2012	Expert 1 (host)	28
	Expert 2	17
	Expert 3	15
	Expert 4	13
	Total host + experts	73
	Total callers	27

The corpus of the study is in line with the distribution of turns in the conversations: 80% of the modal and open reference constructions included in the corpus come from the experts' turns and only 20% from the callers' turns. Because of this asymmetry, as well as the relatively limited number of occurrences included in the corpus, no comparison between the experts' and the callers' turns or other quantitative generalizations can be drawn.

Table 3 shows the animal classes implicitly or explicitly referred to in the constructions, as well as the proportion of constructions referring to each class out of all constructions included in the corpus. References to the class with a general term (*lintu* 'bird', *nisäkäs* 'mammal', *hyönteinen* 'insect') are included in the count.

Table 3. The animal classes referred to in the corpus

Animal class	Number of references	% of all animal references
Birds	149	57
Mammals	63	24
Insects	30	11
Others	21	8

The "Others" class includes references to reptiles, fish, enzymes and the general category of animals (*eläin*). The individual species most often referred to are the following: brown bear (16 occurrences), common crane (13), western capercaillie (11), dragonfly (10), mallard (10) and white wagtail (10).

1.3 On modality and person in Finnish

The semantic category of modality can be separated into three types: deontic, dynamic and epistemic modalities. Each type is organized around the poles of necessity and possibility. In this paper, deontic and dynamic modalities are explored. They entail participants with certain qualities, namely agency, consciousness and control (see Laitinen 1997), whereas epistemic modalities concern propositional truth values (see, e. g., Boye 2012: 31). Deontic modality involves obligations generated by an intentional agent or social norms, as well as different types of permission. Dynamic modalities include capacities and abilities, on the one hand, and internal needs and circumstantial constraints, on the other (see, e. g., Palmer 2001; for a recent discussion on modal categories, see Kehayov 2017: 18–51).

Intention and *volition* are notions close to modality. In this paper, they refer to the tendency of the agent toward action or inaction (cf. Talmy 1988). Some volitional expressions can be considered as belonging to the domain of deontic modality. Desiring the realization of a state of affairs is conceiving it, to a certain degree, as necessary. *Intentionality* is a broader concept. It refers to the property of directing attention toward something and entails thus the capacity of the mind to represent, consciously or unconsciously, objects and events that are not present in the construed actual reality (see Searle 1983).

Modality manifests itself in a number of grammatical elements and in several aspects of language. Here, I focus on modality on a morphological, lexical and clausal level by analyzing the use of verb moods (the imperative, in ex. 2), modal verbs (*pystyä* ‘be able to’, in ex. 3) and directive clauses (ex. 2) that entail non-human animate reference.

(2) (The speaker is holding a salamander on her hand.)

ja tota mä aattelin et mee siit talvehtimaa
 and PTCL 1SG think.PST.1SG COMP go.IMP.2SG PTCL hibernate.INF.ILL
et mee sit samaan paikkaan (13062012)
 COMP go.IMP.2SG PTCL same.ILL place.ILL
 ‘and so I thought **go (ahead)** and hibernate **return** to where you came from’

(3) *ne [kyyt] pystyy ihan hyvin hyvin liikkumaa lyhyitä*
 3PL viper.PL be.able.to.3SG quite well well move.INF.ILL short.PART.PL
matkoja jäitäki pitkin (15022012)
 distance.PART.PL ice.PL.CLT along
 ‘they [the vipers] **are** quite **capable** of moving short distances even on ice’

Finnish has four moods: indicative, imperative, conditional and potential. The data contain no occurrences of the potential, the uses of which are somewhat limited in contemporary Finnish. The imperative mainly encodes commands and permissions, although it carries a variety of other modal meanings in dialectal data (Forsberg, submitted for publication; Peltola 2016; Duvallon & Peltola 2017: 22–23). The conditional expresses epistemic meaning. However, its original semantics, namely the meaning of intention, can still be observed in some of its uses (Kauppinen 1998). The indicative is the unmarked mood. Table 4 summarizes the mood inflection in Finnish, with the verb *katsoa* ‘to look at’, using only simple present forms.⁶ In active forms, the modal affix, marked in italics, follows the verb stem and precedes the person affix.⁷ In passive, the modal affix is inserted between the passive markers *-TA-* and *-Vn*.

⁶ For a more exhaustive presentation of the Finnish verbal system, see e. g. Tommola (2010).

⁷ The second person singular imperative is expressed with the simple vowel stem followed by a kind of sandhi (marked here with the superscript x) (see Tommola 2010: 514).

Table 4. Mood inflection in Finnish (simple present of the verb *katsoa* ‘to look at’)

	1SG	2SG	3SG	1PL	2PL	3PL	PASS
Indicative	katso-n	katso-t	katso-o	katso-mme	katso-tte	katso-vat	katso-taan
Imperative	-	katso ^x	katso-koon/t	katso-kaa-mme	katso-kaa	katso-koon/t	katso-tta-koon/t
Conditional	katso-isi-n	katso-isi-t	katso-isi	katso-isi-mme	katso-isi-tte	katso-isi-vat	katso-tta-isi-in
Potential	katso-ne-n	katso-ne-t	katso-ne-e	katso-ne-mme	katso-ne-tte	katso-ne-vat	katso-tta-ne-en

Most of the modal constructions investigated for this study contain a modal verb. The category is defined here in broad terms, as the corpus includes not only core modal verbs expressing several types of modal meanings, such as *voida* ‘can’ (see Kehayov & Torn-Leesik 2009), but also verbs with a more specific reading that denote volition, such as *tykätä* ‘to like’, or possibility under certain physical or mental conditions, such as *mahtua* ‘to fit’, ‘to be able to (in terms of size)’, *tarjeta* ‘to be able to (without being cold)’ (see Flint 1980; Kehayov 2017: 170–171).

Furthermore, the corpus contains five directive clauses where the potential agent is a non-human animate. Three of these include a verb in passive, the other two involve the second person of the imperative (see ex. 2, above).

As for the personal system, in addition to the three persons in singular and plural, Finnish grammar includes the zero person and the passive, which can both be considered as part of the grammatical person system (Helasvuo & Laitinen 2006).⁸ They denote the generalized agent or experiencer (cf. Langacker 2009: 115–117).

In zero person utterances, the verb is in the third person singular. One of the semantically prominent NP positions (e.g. actor, undergoer or possessor) in the clause is left open. The personal reference in zero person utterances is then constructed in the speech situation indexically and distributionally (one person at a time), in other words each interlocutor can potentially identify with the situation, more specifically, with the referent of the null argument. Consequently, the zero person reference produces a more or less generic, modal reading (Laitinen 2006). The zero can appear at different syntactic positions. Example (4) presents a case of zero subject:

- (4) *Junassa* \emptyset *nukahtaa* *nopeasti*.
 train.INE \emptyset fall.asleep.3SG fast
 ‘one [= \emptyset] falls asleep fast in the train.’

The zero person has been described as implying a non-specific human being. Laitinen (2006: 210, note 2) remarks, however, that zero person utterances can be used with reference to animals when the speaker identifies themselves with the animal referent.⁹

The Finnish passive is marked by the affix *-TA-*, which is subject to consonant gradation, vowel harmony and assimilation (see e. g. Karlsson 1999: 16–17, 28–38; Helasvuo 2006: 236) and which is followed by a special personal ending *-Vn*. When used as an open reference form (see example 5), the passive does not allow an explicit subject.

- (5) *Suomessa* *syödään* *paljon perunoita*.
 Finland.INE eat.PASS lot potato.PL.PART
 ‘In Finland, **people/they** eat a lot of potatoes’

⁸ To be precise, there are several passive constructions in Finnish (see Hakulinen et al. 2004: § 1313; Helasvuo 2006). Only the so-called unipersonal passive is under focus in the present paper, as it codes open reference. (See, however, Section 4, for some remarks on an anticausative form which is also called *derivational passive* in Finnish linguistic literature.)

⁹ Note that, in addition to the open reference constructions, the zero subject can appear in Finnish in several other contexts, namely in utterances with referentially specific anaphoric zero (see Hakulinen & Laitinen 2008). The absence of the subject pronoun is motivated by various contextual factors (see Helasvuo & Laitinen 2006: 179–183).

At the same time, the Finnish passive implies unspecified, multiple agents which have been said to be human (Shore 1988; Blevins 2003; Helasvuo 2006). It entails the idea of a collective action, which is carried out by a group that the speaker may or may not be part of. As a result, the passive can be used to open up a dialogical space in discourse allowing the speaker and the interlocutor(s) to place themselves at the position of the implied referent.¹⁰

When it comes to their referential potential, both the Finnish passive and the zero person construction are fundamentally personal (see Helasvuo 2006; Laitinen 2006). They leave the personal reference in the clause unspecified, each in their own way, but they invite the interlocutor to fill in the referential gap with a conscious, animate referent, potentially including one or both of the speech act participants. In other words, these constructions allow for the speaker and the interlocutors to identify with the situation described. This means that the implicit argument is strongly present on a semantic level, although its discourse status is downgraded, so that, for example, it is not available for definite pronominal reference (Kaiser & Vihman 2006). To convey this referential mechanism, the term *open reference construction* is used in the present paper when referring to both constructions, instead of *impersonal*.

2 The semantic category of non-human animates

2.1 Non-human animates on the animacy scale

Animacy is an ontological category, one of the most essential distinctions organizing our knowledge of the world (Dahl & Fraurud 1996: 58). In language structures, it interacts with a number of morpho-syntactic, semantic and discursive factors, e. g. gender (Dahl 2000b), definiteness, countability, verb agreement, subjecthood, agency and control, topicalisation (Comrie 1989: Chapter 9; Dahl & Fraurud 1996), anaphoric reference (Kibrik 1996: 271–272) and figure/ground organization in spatial relations (Creissels & Mounole 2011).

From a linguistic perspective, animacy appears as a gradient category. On the classic hierarchy of animacy, the speech act participants display the highest degree of animacy, whereas non-human animates are placed between humans and inanimates (Silverstein 1976). In Foley & Van Valin's (1985: 288) hierarchy (shown in 6), the focus is on linguistic forms. Langacker's (1991: 307) scale (7) takes into account the nature of the referents (for a discussion on the animacy scales, see Yamamoto 1999: 24–36). I have indicated the position of the non-human animates with bold letters.

(6) speaker/addressee > 3rd person pronouns > human proper nouns > human common nouns > **other animate nouns** > inanimate nouns

(7) speaker > hearer > human > **animal** > physical object > abstract entity

The animacy scale is a type of prominence hierarchy that organizes categories of reference and links them with various grammatical properties (Lockwood & Macaulay 2012). It interacts, for example, with hierarchies of empathy and agency.¹¹ The entities that rank high on the animacy scale can be found at the top of these scales, as well.

Empathy is a multidimensional, cross-disciplinary concept used for describing the capacity of putting oneself in place of the other (see Herlin & Visapää 2016). According to Kuno & Kaburaki's (1977: 653) Humanness Hierarchy, humans evoke empathetic response in speakers more than animals, animals more than inanimates. DeLancey (1981) accounts for this in terms of relative eligibility for viewpoint placement. By selecting certain grammatical and lexical means, the speaker can indicate which of the available viewpoints they are adopting when describing an event. The viewpoint of the referents that rank high on

¹⁰ Concerning the use of the dialogical passive in written data, see Makkonen-Craig (2011).

¹¹ For correlations between the animacy hierarchy and other types of prominence hierarchies, see Comrie (1989: 197–199).

the animacy-empathy hierarchy is expected to override that of the referents in lower positions, because human speakers themselves are at the top of the scale.

The data from the present study suggest that viewpoint placement does not fundamentally depend on the distinction between human and non-human, as such. The capacity of putting oneself in the other participant's place is, above all, a matter of perceived similarity and common concerns (Langacker 1991: 306–307; see also Dahl 2008: 149). In what follows, we will see that, in the goal of understanding the other, speakers find similarities equally with non-human animates.

In a similar way, agency, the capacity to “volitionally initiate physical activity” (Langacker 1991: 285), has been considered to be something typically human.¹² Blevins (2003: 480), for example, argues that human reference is to some degree implicit in the notion of agent. Accordingly, in Van Valin & Wilkins's (1996: 314–315) typology of agentive properties, humans appear at the top of the scale, whereas animals rank around the mid-level.

This latter hierarchy also distinguishes between less agentive “lower” animals and more agentive “higher” animals. It has been argued that certain animals, such as dogs and other pets, are anthropomorphized and thus considered as more prototypically animate than wild animals, especially poikilotherms (cold-blooded creatures). According to this view, certain animals could be brought closer to the most central member of the category of the cognitive animacy scale (the human *self*) in fictive or figurative language use (see the discussion in Yamamoto 1999: 13–14).

Sealey & Oakley's (2013) study concerning the linguistic representation of animals in a wildlife documentary series showed, indeed, a tendency to use the English gendered personal pronouns *she* and *he* to refer to mammals more than to reptiles and amphibians. The latter were referred to more often with the neuter pronoun *it* (also used for inanimate entities) than other types of animals (Sealey & Oakley 2013: 408–412). As shown in Section 1.2 (Table 3), the majority of the constructions included in the corpus of the present study refer explicitly or implicitly to birds and mammals, which have been counted among the “higher” animals. On the other hand, mammals do not stand out as a special category as clearly as one would expect, considering their biological proximity to humans as motivating the animacy and empathy scales. Constructions described as reserved for human reference are used for birds, insects and reptiles, as well, in this corpus, and this happens in a discourse that cannot be qualified as fictive or figurative, but rather informative.

The linearity of the animacy scale and the sharp distinctions on it are difficult to reconcile with the diversity of the members of the class of animates. The linguistic conceptualization of ‘animacy’ does not in all cases match the biological distinctions between different classes of animates or between animate and inanimate (see Comrie 1989: Chapter 9; Yamamoto 1999; Zaenen et al. 2004; Bayanati & Toivonen, in this issue). For example, if we think of the primacy of the speech act participants, which rank on top of the linguistic animacy scale, there is no reason to think that human or non-human 3rd person entities are somehow conceptualized as less animate than first and second person (Dahl 2008).¹³ Instead, the distinction is motivated by the fact that referring to animate beings with the 1st and 2nd person forms is particularly unmarked, as the speaker and the hearer of the speech situation are likely to be animate beings. The animacy of a 3rd person referent is not expected in the same way, and marking it becomes more relevant (de Hoop 2013: 41). In other words, we are not dealing with different degrees of animacy as such but with the likelihood of an animate being appearing as a referent in different person-referring expressions.

Furthermore, the point of view of a 3rd person entity may be less accessible to the speaker than that of a 2nd person referent, as the latter, but not necessarily the former, typically shares the same spatio-temporal setting with the speaker (see Langacker 1991: 307). Consequently, the order between 2nd and 3rd person referents is not a matter of contrasting inherent properties of these referents, but that of sharing a similar experience in a given situation. In the same way, the entire category of animates can be reconsidered by looking at the degree to which the speaker can identify with the point of view of the referent and the

¹² DeLancey (1981: 645) notes that this is the case “at least in the world of human discourse”.

¹³ See also DeLancey (1981: 645), for a similar critique concerning the agency scale. On the socio-culturally determined, context-bound aspect of agency, see Ahern (2001).

contextual factors that come into play to allow this identification. This means that the distinction between types of animates on the linguistic animacy scale is not clear-cut and fixed but flexible and context-bound.

The approach just described entails two different understandings of the linguistic concept of animacy. Yamamoto (1999; 2006) proposes to distinguish between *animacy* as such, defined in terms of the semantic feature [+/-alive], and *inferred animacy*, involving “mostly mental aspects of animacy deriving from life concept proper, including sentiency and the attribution of empathy, etc.” (Yamamoto 2006: 31). When speaking of the degree of identification with a referent, we are dealing with inferred animacy rather than animacy as such.

Another consequence of this approach is that the animacy scale takes a form where different animate beings are not arranged according to a preexisting, fixed order. Dahl (2000a) introduces the notion of *egophoric reference* that covers not only reference to the speech act participants, but also generic and logophoric reference. Egophoric reference contrasts with *allogophoric reference* which involves non-generic 3rd person, in other words, “all others”. This binary model does not foreground the difference between human and non-human, but rather that between the *self* and others. On the basis of this distinction, Dahl (2008) sets out a three-step cognitive scale (presented in (8), below) where “the self is the model for other animate individuals, which are in their turn models for inanimate objects when understood as individual ‘things’” (Dahl 2008: 149) and where the middle position can be occupied by both humans and animals, as they both are animate and non-self (for a discussion on Dahl’s model, see Primus 2012: 86–87).

(8) self – other animate individuals – inanimate objects

The idea of understanding other animate beings by using one’s own experience as a model will turn out to be essential when we look at the data of this study.

Another important point in Dahl’s (2008) model, in view of the present study, is the notion of individuality, i.e. the property of being independent of others, directly identifiable and persisting through time (Fraurud 1996; Dahl 2008: 147–148; Vogels, Krahmer & Maes 2013).¹⁴ Instead of placing entities in a fixed order that corresponds to a certain culturally determined view of the environment and humans’ position in it, entities can be regarded as more or less distant or close to the *self* in terms of the amount of knowledge we have about them. Entities that we are more familiar with have more weight in our memory, become more individuated and have more potential to attract our empathy (see Fraurud 1996: 79–80). Sharing knowledge about non-human animates is the main function of the discussions analyzed for this study.

2.2 Non-human animates in lexis and grammar

I now take a brief look at certain words and constructions coding non-human animate reference, in order to demonstrate that while this type of reference is rarely treated in linguistic literature, lexis and grammar contain somewhat fine-grained information on the physical, cognitive and intersubjective properties of non-human animates. I draw on Finnish examples, as background for the study.

First, non-human animates appear in language structures as physiological beings with perceptible, spatial properties. These are distinct from human spatial properties and therefore require distinct vocabulary. Understanding expressions of posture (e. g. *kiemuralla* ‘coiled’, *takajaloillaan* ‘on hind legs’) and verbs of movement (e. g. *luikertaa* ‘to slither’, see Sivonen 2005: 106–113), gesture (*nokkia* ‘to peck’) or sound (*hinnua* ‘to neigh’) presupposes a certain amount of knowledge of the physical properties of the referent (cf. Onikki-Rantajääskö 2001: 232).

As for grammatical structures, animacy interacts with the syntactic functions of NPs, as well as the semantic roles connected to them, in a number of ways (see Dahl & Fraurud 1996). The most common observation is the link between animacy, agency and the grammatical subject (Dahl & Fraurud 1996: 58). This connection appears, for example, in the argument structure of the Finnish verb *kuulua* ‘to be audible’ /

¹⁴ Blanche-Benveniste (1978) adopted the notion of *individuality* instead of *humanness* in grammatical analysis.

‘to appear’. When denoting auditory perceptibility, i.e. a non-agentive state, *kuulua* rarely accepts animate subjects, either human or non-human (see 9). The subject position is typically occupied by NPs referring to non-material, inanimate entities, namely the perceivable sound itself (10).

- (9) *?Naapuri / koira kuului sisälle asti.*
 Neighbor / dog be.audible.PST.3SG inside.ALL all.the.way.to
 ‘The neighbor / the dog was audible from inside the house.’

- (10) *Nauru / haukunta kuului sisälle asti.*
 laughter barking be.audible.PST.3SG inside.ALL all.the.way.to
 ‘The laughter / the barking was audible from inside the house.’

On the other hand, as a verb of appearance, used mostly in negative clauses, *kuulua* ‘to appear’ is mainly construed with (human or non-human) animate subjects. These clauses refer to entities that are in control of their own movements and whose actions are displayed as meaningful in the interaction (11) (Peltola 2018; cf. Hakulinen et al. 2004: § 1321; von Waldenfels 2012: 215).

- (11) *Naapurina / koiraa ei kuulu kotiin.*
 neighbor.PART / dog.PART NEG.3SG appear.CONNEG home.ILL
 ‘The neighbor / the dog is not coming home.’

Another example of contexts where the question of non-human animate agents comes up are expressions of possession. The prototypical possessor is a highly individuated human (e. g. Koptjevskaja-Tamm 2001: 961; Fried 2009: 234). In linguistic literature, a non-human animate possessor is used as an example when discussing the conceptually inalienable relation between body parts, particularly internal organs, and their “possessor”: the relation is not the same when the organ of a dead animal is in the possession of a butcher or a cook and when the organ is part of a living animal (see e. g. Crowley 1996: 398; Lichtenberk 2009: 278–279; Willemsen et al. 2009: 40–41). This reflects the situation of the non-human animate category in the intersection of animate and inanimate entities, in certain discourses. Alive, the animal can appear as a possessor who is in an inalienable relation to its body parts, comparable to human possessors. When it comes to a dead animal, the relationship between the possessor and the body part is no longer permanent and inseparable.¹⁵ From a mobile agentive being, the animal is transformed into the fixed spatial location of the body parts. Otherwise, animate beings are a marked option as spatial locations for other entities (Creissels & Mounole 2011).

So far, I have presented examples of how the conceived physical and cognitive properties of animal referents are encoded in lexis and grammar. In what follows, we will observe that grammar can also code animals as participating in the same intersubjective sharing of experience with humans.

According to studies on the pronominal system in contemporary English, humans and animals are treated differently with regard to gender selection. For pronouns with human reference, there is a strong correlation between gender and the biological sex of the referent. When the referent of the pronoun is an animal, the choice between the sex-specific *s/he* and the neuter *it* depends on the speaker’s point of view, specifically, whether the animal referent is viewed as an individual and personal being or not (Gardelle 2013, and the studies cited therein on pp. 181–182).

Since the end of the 19th century, the use of the 3rd person pronouns in standard written Finnish has followed a comparable norm: *hän* (‘s/he’, plural *he* ‘they’) is reserved for human reference only, whereas

¹⁵ In a comparable way, when referring to dead animals, the [-animate] feature may influence the choice of pronoun, namely in terms of gender selection (Gardelle 2013: 184).

se ('it', plural *ne* 'they') is used for all other animate beings and inanimate entities.¹⁶ Laitinen (2009) has shown that in early written Finnish, from the 16th to the 19th century, as well as in spoken dialects and contemporary colloquial language the division of labor between the two pronouns is quite different. *Se* is the default third person pronoun, whereas *hän* is used when reporting the thoughts or words of another being. The distinction human/non-human does not play a role in the choice of pronoun (Laitinen 2009, 2012; Mikkola & Laitinen 2013; see also Kaiser, this issue).

The following example, extracted from the data of the present study, illustrates the use of *hän/he* in a context where the speaker interprets the behavior of animals, here mice.

- (12) *mennessäni lisäämään tammikuun lopulla lintulaudalle*
 go.INF.INE.POSS.1SG add.INF.ILL january.GEN end.ADE bird.feeder.ALL
syötävää koin mukavan yllätyksen kun hiirulaiset
 eat.PTCP.PRS.PART experience.PST.1SG nice.GEN surprise.GEN when mouse.PL
olivat vallanneet sen, viikon verran seurasin
 AUX.PST.3PL take.over.PTCP.PST DEM.GEN week.GEN about follow.PST.1SG
niiden toimia, eivät olleet moksiskaan kun syötin
 3PL.GEN activity.PART.PL NEG.3PL be.PTCP bothered as feed.PST.1SG
heitä juustolla ynnä muilla herkuilla
 3PL.PART cheese.ADE and other.PL.ADE yummy.PL.ADE
 (14032012)

'when I was going to add some more food in the bird feeder I experienced a nice surprise as the mice had taken over it, I followed **their** (= **niiden 'se.PL.GEN'**) activities for about a week, **[they]** didn't mind as I gave **them** (= **heitä 'hän.PL.PART'**) cheese and other yummys'

When the speaker reports that he has observed the mice's visits on the bird feeder, he uses the default third person pronoun *se* (genitive plural *niiden*): the human subject looks at the animal from a distance, through the eyes of an observer. When the point of view of the animal referent is taken into account, namely the reaction of the mice to the feeding (*eivät olleet moksiskaan* '[they] didn't mind'), the predicate describing the cognitive state of the animal referent occurs with an anaphoric null subject, which gives a strong prominence to the speaker's identification with the viewpoint of the being whose mental state is reported. However, an overt object argument is needed in the construction with the verb *syöttää* 'to feed'. The pronoun *hän* (partitive plural *heitä*) is selected, instead of *se* (partitive plural *niitä*), as the speaker continues to acknowledge the animal viewpoint (see Hakulinen & Laitinen 2008: 174).

In the colloquial spoken variants of Finnish, it is thus possible to construe non-human animate referents as members of the intersubjective community whose behavior can be interpreted in a meaningful way. Through the study of modal and open reference constructions in Finnish, the following section sheds light on the contexts where this type of conceptualization is likely to occur and the properties of non-human animates in these contexts.

¹⁶ The second half of the 19th century was the time when Finnish was developed and standardized so that it fulfill the criteria of a national language. Adopting a new, written language form meant also endorsing a new way of categorizing and conceptualizing the human, the nature and the world. Distinguishing between human and non-human animals in personal pronouns was part of this process (Mikkonen & Laitinen 2013).

3 Results: Explaining the non-human way of life

3.1 Non-human animate agents in deontic and dynamic modal constructions

Among the 156 constructions with a verb carrying deontic, dynamic or volitional modal meaning, the majority coded dynamic possibility or constraint, as shown in Table 5.¹⁷

Table 5. Modal constructions according to type of modality

Dynamic modality	107
Capacity, possibility	66
Constraint	41
Deontic modality	26
Permission	12
Obligation	14
Volition	23
TOTAL	156

The expressions of animal capacity are motivated by some sort of relation of opposition. They may involve unexpectedness, as in (13), where the ability of the cold-blooded viper to move on a cold surface is against expectations. In (14), the speaker opposes the intolerance of the human organism to false morels and the capacity of the reindeer to consume the same mushroom. The clitic *-PA* in *poropa* 'reindeer-PA' codes the contrastive relation (cf. Hakulinen et al. 2004: § 833).¹⁸

- (13) *ne [kyyt] hankkii hankkii sopivan lämpötilan aurinkoa ottamalla*
 3PL viper.PL get.3 get.3 good.GEN temperature.GEN sun.PART take.INF.ADE
aamusella ja sen jälkeen niin ne pyrkii pitämään pitämään
 morning.ADE and DEM.GEN after PTCL 3PL try.3 keep.INF.ILL keep.INF.ILL
tän lämpötilan ja ne pystyy ihan hyvin hyvin liikkumaa
 DEM.GEN temperature.GEN and 3PL be.able.to.3SG quite well well move.INF.ILL
lyhyitä matkoja jäitäki pitkin (15022012)
 short.PART.PL distance.PART.PL ice.PL.PART.CLT along
 'they [the vipers] get get to a good temperature by sunbathing in the morning and after this they try to keep to keep this temperature and they **are** quite **capable** of moving short distances even on ice'

- (14) *meil ei oo sellaisia entsyymejä jotka kykenee*
 1PL.ADE NEG.3SG be.CONNEG that.kind.of enzyme.PL.PART REL.PL be.able.to.3
hajottamaan korvasienen näitä myrkyllisiä yhdisteitä,
 break.down.INF.ILL false.morel.GEN DEM.PL.PART toxic.PL.PART compound.PL.PART
mutta poro-, mutta poropa pystyy (14032012)
 but reindeer but reindeer.CLT be.able.to.3SG
 'we don't have these enzymes that can break down the toxic compounds in false morels, but the reindeer-, but the reindeer **are able [to do it]**'

¹⁷ When looking at modal expressions in their context, the limit between dynamic and deontic modalities is not always clear-cut, and both readings may be equally possible. This is the case in example (19), presented below. Furthermore, example (17), also analyzed below, leaves undetermined the selection between deontic permission and obligation. In Table 5, both these borderline cases are counted among constructions coding deontic obligation.

¹⁸ Note that the inability to break down the toxins is attributed here to the enzymes of the human organism, not to the humans. This shows that dynamic modality can, in the type of discourse studied here, involve so-called lower animals, as well (see also Shore 1988: 160).

When it comes to dynamic constraints, non-human animates are regarded as having their own inclination to act in a certain manner in a given situation. The circumstances force them, however, to adopt another course of action. The following example illustrates such constraint. One of the experts is reflecting on the situation where an elk is giving birth.

- (15) *jos [Ø:lla]¹⁹ on kaks vasaa niin eikö todellakin [Ø:n]*
 if Ø.ADE be.3SG two calf.PART PTCL NEG.3.Q actually Ø.GEN
kannattas synnyttää ne pikkase edes eri kohtaa [...]
 be.in.one's.interest.CONN.CONNEG deliver.INF 3PL little even different spot.ILL
jos se [hirviemo] joutuu pakenee jommankumman luota tai varsinki
 if 3SG elk.mother have.to.3SG flee.INF.ILL one.or.the.other.GEN from or especially
sen jälkimmäisen luota ni siin on niinku mahikset että ainaki
 DET.GEN second.GEN from PTCP DEM.INE be.3SG PTCL chance.PL COMP at.least
toinen poikane säilyy
 other calf survive.3SG
 (13062012)

'if one [= Ø] has two calves then wouldn't it actually **be in one's [= Ø's] interest** to deliver them in places that are at least a bit distant from each other [...] if she [the elk mother] **has to** flee and leave one or the other or especially the second one then there is a chance that at least one of the calves survives'

The extract starts with an interrogative clause coding practical necessity where the verb *kannattaa* 'to be in one's interest' implies that the subject referent should proceed in a certain manner in order to reach a goal that is beneficial to her (Hakulinen et al. 2004: § 1555). The animal referent is thus regarded as capable of goal-oriented action and in control of the course of events. The clause includes zero person reference: the action in question ('delivering two calves in different places') is viewed as advantageous to any referent that potentially could find herself in the situation (on the zero person constructions in the *Luontoilta* data, see Section 3.3.)

Example (15) also includes a hypothetical clause entailing that the elk would be inclined to stay with her calves. The modal verb *joutua* 'to have to' denotes necessity due to constraining conditions. As a result, the elk mother is viewed as forced to flee and to leave her progeny alone, in case she is threatened by an external factor. The fleeing is conceived as a choice made unwillingly by the animal.

In contexts of deontic modality, the non-human animate participants of events are confronted with the norms of human society or the will of an individual human participant. Example (16) comes from a sequence where the interlocutors talk about a dragonfly with a damaged eye. One of the listeners has been able to photograph the insect from an unusually close distance.

- (16) *tää vaurio tässä näkökentäs sehän on siis altis nimenomaan*
 this damage this.INE view.field.INE DEM.CLT be.3SG PTCL disposed particularly
liikenäkemiseen tämmönen verkkosilmä et onks se synnä
 movement.see.NMLZ.ILL this.type.of compound.eye PTCL be.3SG.Q DEM reason.ESS
siihen et se päästää näin lähelle [...] (13062012)
 DEM.ILL COMP 3SG let.3SG this close.ALL

'this damage in the field of view I mean this type of compound eye is particularly disposed to detect movement so is this the reason why it [the dragonfly] **lets** [the photographer] come so close [...]

As the modal verb *päästää* 'to let' encodes permission, the situation, namely the encounter between the dragonfly and the photographer, is construed as being controlled by the non-human animate participant who authorizes the human to approach. With the interrogation, the speaker is seeking a motivation behind

¹⁹ The symbol Ø appears with a case ending, here and in example (21), to make the construction transparent. The case ending was not produced by the speaker.

the reaction of the animal.

In example (17), the roles between the non-human and the human participant are reversed, in terms of control. The imperative utterance enacts the deontic authority (see e.g. Stevanovic 2013: 18–21) of the human to decide upon the animal's behavior. Reporting her own speech, the speaker addresses a salamander that she found on her way to the cellar. She is holding the animal in her hands while speaking.

- (17) *ja tota mä aattelin et mee siit talvehtimaa*
 and PTCL 1SG think.PST.1SG COMP go.IMP.2SG PTCL hibernate.INF.ILL
et mee sit samaan paikkaan (13062012)
 COMP go.IMP.2SG PTCL same.ILL place.ILL
 'and so I thought **go (ahead)** and hibernate **return** to where you came from'

The directive clauses including the second person singular forms of the imperative can be interpreted, on the one hand, as commands: the speaker is telling the animal to follow a certain course of action. On the other hand, on the basis of our knowledge of the encounters between humans and wild animals, we can consider that the salamander is inclined to leave the hands of the human to return to its natural state. Following this reading, the speaker is authorizing the animal to proceed according to its will.²⁰

In (18), the action of the animal is considered in the light of the norms of human society. The speaker criticizes the sensationalistic manner in which the press presents wolves in Finland.

- (18) *se on niinku melkein mitä tahansa sudet tekee ne sy- syöpö- peuran*
 DEM be.3SG PTCL almost whatever wolf.PL do.3 3PL eat.3 deer.GEN
ni sit on peuran raato siinä niiku et sudet söi peuran
 PTCL PTCL be.3SG deer.GEN carcass there PTCL PTCL wolf.PL eat.PST.3 deer.GEN
ja, niin no mikä niiden ois pitäny syödä (15022012)
 and PTCL PTCL Q 3PL.GEN AUX.COND.3 have.to.PTCP.PST eat.INF
 'it's like whatever wolves do they e- eat a d- deer so there's a deer carcass there [on the newspaper photo] sort of wolves ate a deer and, well then what **were** they **supposed to** eat'

The question on the last lines of the extract concerns the expectations of the press and of society in general. The obligation expressed by the modal verb *pitää* 'to have to' involves the wolves and is determined by the humans. The animal is therefore regarded as subject to the norms of society and, as such, part of the community.

It is not impossible that the source of deontic obligation be identified within the animal community. In example (19), the meaning of the necessive construction *on tultava ulos* 'must come out' can be interpreted in two different ways. First, it can be viewed as a dynamic constraint: the chick will have to come out because of hunger or some other internal need. Second, it may correspond to a deontic obligation, in other words, a norm set by the bird mother or the community in general.

- (19) *se emo syöttää sitä syöttää poikanen niinku vaatii*
 DET mother feed.3SG 3SG.PART feed.3SG chick PTCL demand.3SG
lisää ruokaa ja lopuks se emo tajuu et nyt tää
 more food.PART and eventually DET mother understand.3SG COMP now DET
homma n- täytyy keskeyttää et ei anneta enää et
 thing must.3SG stop.INF COMP NEG.3 give.PASS.CONNEG anymore PTCL
poikasen on tultava ulos (14032012)
 chick.GEN AUX.3SG come.PTCP.PRS out
 'the bird mother feeds him feeds the chick sort of demands more food and eventually the mother realizes one [= Ø] has to stop this now let's not give anymore the chick **has to come out**'

²⁰ On the simultaneous presence of permission and obligation in imperative constructions, see Peltola (2016).

The intention of the animal referent is furthermore coded by verbs entailing different degrees and types of will and preference. These typically occur in contexts where the habitual behavior and environment of the species are discussed. In example (20), the verb *tykkää* ‘to like’ appears in a clause where the speaker describes the milieu favored by dragonflies.

- (20) *ne on hyvin liikkuvia ja nopeita eläimiä ja*
 3PL be.3 very dynamic.PL.PART and quick.PL.PART animal.PL.PART and
ne tykkää tykkää kerääntyä sit joukoiksi
 3PL like.3 like.3 gather.INF PTCL group.PL.TRANSL
tämmösille ruovikkoisille lahdille tai tai paikkoihin
 this.type.of.PL.ALL reedy.PL.ALL bay.PL.ALL or or place.PL.ILL
missä nyt on paljon ravintoa (15022012)
 where PTCL be.3 much food.PART
 ‘they are very dynamic and quickly moving animals and they **like** they **like** to gather on reedy bays or
 or in places where there’s a lot to eat in general’

In this section, I have shown that, in a discourse where the speakers aim to explain the animal way of life, modal expressions conceptualize non-human animates as agents capable of goal-oriented actions who can select, in a given situation, the most favorable outcome for them. They are presented as being able to use their potential capacities, including those that are unknown to humans, and to choose an alternative course of action when the preferred one is excluded. In human-animal encounters, they appear as a party equally in control of the situation. These uses of modals reveal that speakers are inclined to interpret the behavior of non-human animates and consider it as meaningful. In what follows, I show that, in open reference constructions, non-human animates are also viewed as participating in the same intersubjective sharing of experience with humans.

3.2 Adopting the position of the non-human animate in open reference constructions

Table 6 presents the types of open reference constructions in the data, according to the number of occurrences. The zero person constructions are more frequent than the passive. In addition, the data contain five occurrences of other types of open reference, namely three occurrences of generic second person singular and two independent infinitive constructions.

Table 6. Open reference constructions

Zero person	70
Passive	32
Other	5
TOTAL	107

Among the zero person constructions studied for the present data, 27 out of 70 (39 %) entailed dynamic or deontic modal meaning (possibility, constraint or volition). Modal verb constructions are, indeed, one of the most typical contexts of occurrence for the Finnish zero person (Laitinen 2006: 212). I have demonstrated in the previous section that the non-human animate referents of root modal constructions are viewed as intentional beings with the capacity of making choices and controlling the situation and their own state. The non-modal zero person occurrences include expressions of physical or mental state, such as feeling of warmth or cold, shelter, lack and haste – contexts typical of zero person reference in general (Laitinen 2006: 213). These represent basic sensations that the human interlocutors can recognize.

The zero person constructions with non-human animate reference typically appear in contexts where the speaker discusses the most advantageous strategy to be adopted by an animal in a given situation, in view of survival, as in (21) and (22). The following examples also illustrate that, even though the underlying choices and sensations are recognizable to the speakers, the situation as such need not be typical of humans. In (21), the speaker reflects on the complete metamorphosis of insects. Example (22) involves the chances of a single starling surviving in the middle of the Finnish winter.

- (21) *siitä on ollut [Ø:lle] mo- monenlaista hyötyä*
 DEM.ELA AUX.3SG be.PTCP.PST Ø.ALL ma- many.kind.of.PART advantage.PART
ettei Ø itse asiassa niinku nopeasti, nopeasti tota, vaihda
 COMP.NEG.3SG Ø actually PTCL quickly quickly PTCL change.CONNEG
muotoaan
 form.PART.POSS.3
 (15022012)
 'it's been useful **to one** [= Ø] in ma- many ways that **one** [= Ø] actually doesn't change form sort of quickly'

- (22) *se on tuosta lahden ylikin lähteä lentämään nii eh eh*
 DEM be.3SG there.ELA bay.GEN across.CLT leave.INF fly.INF.ILL PTCL uh uh
siittä ei Ø varmaankaa selviä se on kostiaa ja
 DEM.ELA NEG.3SG Ø surely survive.CONNEG DEM be.3SG damp.PART and
kylymää, kylmää eikä Ø levähtämään pääse
 cold.PART cold.PART NEG.3SG.CLT Ø rest.INF.ILL be.able.to.go.CONNEG
 (15022012)
 'like trying to fly over the bay for example uh uh surely **one** [= Ø] won't survive it's damp and cold, cold and **one** [= Ø] can't have a rest'

In both examples, the speaker invites the interlocutors to put themselves in the position of the non-human animate. In (21), the speaker compares two potential ways of metamorphosing, rapid and non-rapid, pointing out the benefits of the latter from the subject referent's viewpoint. In (22), the speaker considers one of the alternatives available for the animal who is struggling to survive. The two clauses with zero subject in (22) are separated by a clause describing the difficult conditions above the sea. Evoking the physical experience caused by the cold and damp is a way of making the situation of the non-human animate more accessible for the interlocutors, as this experience is likely to be shared by different types of animate beings. The zero subjects leave the semantic argument positions of the undergoer and the actor open and, in this way, allow for the interlocutors to share the experience of the non-human animate.

Apart from generic clauses, zero person constructions with non-human animate reference appear in contexts with a more specific reading (see Laitinen 2006: 212–213). In (23), the zero person construction occurs in a sequence of reported speech where the speaker quotes the thoughts of the bear he is facing.

- (23) *katsoimme noin minuutin aikaa toisiamme*
 look.PST.1PL about minute.GEN during each.other.1PL
karhu näytti toiminnallaan,
 bear show.PST.3SG action.ADE.POSS.3SG
ää kiipeäisikö Ø mäntyyn turvaan vai mitä tehdä (15022012)
 hum climb.COND.3SG.Q Ø pine.ILL safe.ILL or Q.PART do.INF
 'we looked at each other for about a minute the bear was acting like, hum should **one/I** [= Ø] climb up the pine to be safe or what to do'

As with examples (15) and (16), the animal is viewed in this extract as making a conscious choice at a moment of risk. The conditional mood codes the intention of the agent (Kauppinen 1998: 171). The clause

with zero person reference describes the action of the bear in a certain spatio-temporal setting, which is why a rather specific reading emerges. Nevertheless, in contrast to clauses with overt subject or anaphoric null subject, the zero person leaves the subject position open in such a way that, even when the clause is interpreted as referentially specific, the meaning ‘what anyone would do in the given situation’ remains. Note that, in this example, the zero person construction is followed by a referentially open infinitive clause (*mitä tehdä* ‘what to do’) which entails an even more unspecified reference, as it leaves open, not only the personal reference, but also the temporal and modal meaning of the verb (Visapää 2008: 75–78).

The Finnish passive implies unspecified multiple agents which may or may not include the speaker. In everyday conversation, passive constructions mostly denote actions or activities (as described by Helasvuo 2006: 243–244). The data from the present study is in line with this tendency. Among the 32 verbs in passive form collected from the data, 21 belonged to this type.

The examples analyzed above showed that the zero person construction is used in contexts concerning the ways in which non-human animate beings overcome situations where their survival is at stake. In a similar way, the passive construction occurs when an animal participant has to choose when and how to act. The decision making process is expressed by imperative clauses where the passive form refers to the first person plural, as in (24), or by declarative clauses with an inchoative reading, as in (25).²¹ Example (24) demonstrates the conventional use of the passive in reference to the first person plural, even in the absence of the personal pronoun (see section 1.3.) (Hakulinen et al. 2004: § 1326; see also Hakulinen 1987).

- (24) *se emo syöttää sitä syöttää poikanen niinku vaatii*
 DETmother feed.3SG 3SG.PART feed.3SG chick PTCL demand.3SG
lisää ruokaa ja lopuks se emo tajuu et nyt tää
 more food and eventually DET mother understand.3SG COMP now DET
homma n- täytyy keskeyttää et ei anneta enää et
 thing must.3SG stop.INF COMP NEG.3 give.PASS.CONNEG anymore PTCL
poikasen on tultava ulos (14032012)
 chick.GEN AUX.3SG come.PTCP.PRS out
 ‘the bird mother feeds him feeds the chick sort of demands more food and eventually the mother realizes one [= Ø] has to stop this now **let’s not give** anymore the chick has to come out’

- (25) *mut jos ne on tankannu hyvin ne on hyvässä kunnossa*
 but if 3PL AUX.3 nourish.PTCP.PST well 3PL be.3 good.INE condition.INE
ja muuttovietti on kova ni,
 and migration.instinct be.3SG strong PTCL
tiettyinä aikana sitte lähdetään (15022012)
 certain.ESS moment.ESS PTCL leave.PASS
 ‘but if they have nourished themselves well they are in condition and the migration instinct is strong then, at a certain moment **they/one leave/s**’

The sequence presented in (24) was already analyzed in Section 3.2 (example 19), with respect to its modal elements. The directiveness of the passive construction (*ei anneta enää* ‘let’s not give anymore’), included in the reported speech of the bird mother, furthermore entails that the non-human animate participant has control of the situation. As the passive implies reference to multiple agents, the clause denotes a collective action in which the virtual interlocutor of the quoted speech is potentially participating. In (25), the declarative passive clause occurs at a moment where the speaker relates the collective decision of the migratory birds to move on. The passive highlights the high degree of agency in the act of departing.

²¹ I have translated, in examples (25) and (26), the Finnish passive into English with both the third person plural form and the indefinite pronoun *one*, in order to foreground the implication of multiple agents as well as the unspecified, potentially speaker-inclusive reference produced by the passive.

In example (26), the collectiveness of the passive opens up the possibility for the speaker and the interlocutors to place themselves in the situation of the fish which is observing its position and environment in the dark. The extract comes from a sequence where the speaker has just explained the functioning of the fish's inner ear. The passive construction is preceded by an active clause with a generic singular subject NP (*kala* 'fish.SG'). The passive construes the event as the habitual, collective experience of the fish school.

- (26) *ja tällä tavalla kala pystyy aistimaan pimeässä*
 and this.ADE way.ADE fish.SG can.3SG sense.INF.ILL dark.INE
tai syvällä syvälläkin hyvinki pimeässä
 or deep.ADE deep.ADE.CLT very.CLT dark.INE
että miten päin ollaan että miten päin orientoidutaan
 COMP Q direction be.PASS COMP Q direction orient.PASS
siinä ympäristössä että (13062012)
 DET.INE environment.INE PTCL
 'this way the fish_{sg} can sense in the dark and deep even in the deep in very dark places **in** which position **they/one are/is** and how to **orient themselves/oneself** in that environment'

Using a pronominal subject here (*miten päin ne ovat* 'in which position **they** are', *miten päin ne orientoituvat* 'how **they** orient themselves') would result in presenting the animal referents as an object of observation. By using the passive, the speaker invites the interlocutors to recognize aspects of spatial existence that they share with the animal referent, namely the effect of darkness.

In this section, I have examined open reference constructions in which the potential subject referent is a non-human animate. Leaving open the position of the experiencer, the zero person construction indicates that the interlocutors recognize the described experience of the animal referent and place themselves as potential referents at the open argument slot. In a similar way, when using passive constructions with animal reference, speakers offer the possibility for the interlocutors to view themselves as potential participants of the collective action. The variation of readings of the Finnish passive construction in spoken language data suggests that, similarly to its equivalent in Estonian (see Torn-Leesik & Vihman 2010), the reference of the passive is essentially specified by the discourse context.

When entities remain off-stage and implicit, they are, in cognitive grammar terms, considered as subjectively construed: they convey the tacit presence of the conceptualizer, not the explicit target of conceptualization (e. g. Langacker 1999, 2006). In this sense, the open reference constructions code maximal personal involvement and conceptualize the experience subjectively: the experience is "seen through the eyes of an invisible speaker" (Laitinen 2006: 231). By using constructions where the position of the experiencer or the agent is kept open for different types of animates, the human interlocutors engage themselves as potential participants of the situation and seek in this manner to display the animal experience.

4 Discussion: Animal – close and distant

The analysis in this study showed that, in *Luontoilta* conversations, non-human animates appear as actors in situations of decision-making and experiencers of mental or physical states. This is in line with Sealey & Oakley's (2014) findings concerning the use of non-epistemic modal verbs in English with reference to plants and animals in a wildlife documentary series: these living beings were presented as making choices and pursuing goals. The functions of the modal and open reference clauses in the discourse concerning animals can be highlighted by contrasting them with the uses of constructions that set a distance between the viewpoint of the human observer and that of the observed animal. In what follows, I present, for illustration, two examples of such constructions. First, the *Luontoilta* conversations include sequences with animal reference and nominalization, as in (27) where the speaker is describing the first moments after the birth of a calf.

- (27) *mut sen mä täs mikä mulla tuli mieleen niin,*
 but DEM.GEN 1SG here Q 1SG.ADE come.PST.3SG mind.ILL PTCL
tässähän tapahtuu myös tällä hirvenvasalla leimautuminen (13062012)
 here.CLT happen.3SG also DET.ADE calf.ADE imprint.NMLZ
 'but what I what came to my mind is that, in this situation **the imprinting occurs in the calf**'

The example includes a combination of deverbal nominalization (*leimautuminen* 'imprinting') and an abstract verb (*tapahtua* 'to occur'). This type of configuration where the experience is "reconstructed in the form of nominals (nouns, nominal groups, nominalizations), as a world of things, symbolically fixed so that they can be observed and measured, reasoned about, and brought to order" (Halliday 2001: 189) is typical of scientific language use. Syntactically, the non-human animate noun occupies the position of an abstracted habitive adverbial that frames the event expressed in the clause (see Huumo 1995). The event is viewed as taking place autonomously, without the interference of an agent.

The second example of constructions displaying distance between the viewpoints of the human and the non-human is presented in (28). It includes an anticausative derivative verb *peittyä* 'to be covered' expressing that the event takes place without the intervention of an intentional agent (see Kulonen-Korhonen 1985; for anticausatives in Finnic languages, see Kehayov 2017: 134). The sequence comes from an exchange where a caller (A) is describing the salamander she held on her hand.

- (28) A: *se oli siin kymmenisen senttii suurin piirtein [...]*
 3SG be.PST.3SG PTCL about.ten centimeter.PART approximately
se oli
 3SG be.PST.3SG
 B: *mm*
 A: *mun kämmenellä niinku pitkin pituutta*
 1SG.GEN hand.ADE PTCL along length.PART
mun kämmen niinku peitty siihen
 1SG.GEN hand PTCL cover.ANTIC.PST.3SG 3SG.ILL
ku se oli tos kämmenellä et (13062012)
 when 3SG be.PST.3SG there hand.ADE PTCL
 'A: it was about ten centimeters approximately [...] it was
 B: mm
 A: on my hand like lying flat my hand **was** like **covered with it** when it was
 there on my hand'

The focus is on the subject referent (the human body part) assuming the role of a patient and affected by the change of state expressed by the verb. The construction highlights the result, while the action and its executor (here, the non-human animate) occupy the background (Hakulinen et al. 2004: § 336). Furthermore, the semantics of the verb *peittyä* 'to be covered', when constructed with an adverbial in illative singular, entail the uncountable nature of the entity referred to by the adverbial (*siihen* 'it.ILL', referring anaphorically to the salamander). In other words, the animal referent displays, not only a low degree of agency, but also a low degree of individuality.²²

The representation of the animal referent as an undifferentiated entity is motivated by the context of reporting observations. In this sequence, the non-expert speaker (A) describes the size and the position of the animal so that the expert (B) can identify the species. The viewpoint is that of the human participant, whereas the non-human is placed in the position of an observed object. A similar type of distance between the human and the animal viewpoint was displayed in the clause with nominalization in (27): the animal behavior is treated in a more general framework of scientific human knowledge without regard to the

²² On the correlation between animacy and countability, see Comrie (1989: 189–190). On the use of mass nouns with reference to animals in scientific discourse, see Stibbe (2012: 73).

viewpoint of the individual animal. There is, indeed, a long tradition in Western scientific discourse to avoid projecting similar characteristics to human and non-human animals and to consider explanations based on this type of analogy as unreliable (for a discussion, see Sealey & Oakley 2013: 400–402). Examples (27), extracted from an expert's turn, and (28), presenting a description of an animal by a non-expert caller, illustrate the fact that in the *Luontoilta* data both experts and amateurs vary their positioning with regard to the animal viewpoint.

Non-human animates' status in the *Luontoilta* conversations as decision-makers and experiencers of mental or physical states makes them acceptable referents in modal and open reference constructions. The human feature is not a necessary condition, and the situation in which the non-human being is presented need not be typical of humans (cf. e. g., Hakulinen et al. 2004: § 1322). On the contrary, the sequences studied often involve phenomena atypical of humans. The human reference has been regarded as prevailing in these constructions because they entail capacities and properties that we are used to associating with humans in discourse that concentrates exclusively on the human existence and where the distinction between humans and other animates is sharp and impermeable. When the constructions are observed in a discourse with an interspecies scope, the grammatical properties of these constructions are also shown in another light.

In the *Luontoilta* discussions, non-human animates appear at once as different and familiar. The animal participants' physical appearance, behavior, environment and life span are unfamiliar to the speakers and motivate their questions and explanations. At the same time, the speakers recognize interests common to all animate beings, beyond this otherness, e. g. the desire to survive, to protect one's progeny and to avoid physical pain. These properties reinforce the individuality of the non-human animate and bring it closer to the "self", on Dahl's (2008) three-step prominence scale (discussed above in 2.1). The perceived common concerns between non-human animates and themselves make it possible for the human interlocutors to identify with and make sense of the motivations behind the animal way of life (see also Searle 1983: 5).

The analysis unveils how tightly linguistic animacy is woven together with the notion of empathy (see Section 2.1). The empathetic process includes understanding the other's situation, as well as an affective reaction to it (Herlin & Visapää 2016). In the *Luontoilta* data, speakers mainly share knowledge, which is why the cognitive aspect of empathy tends to come to the fore. However, as speakers often seek understanding by evoking shared mental or physical experience, the affective involvement is inseparably present.

The ways in which non-human animacy is construed in discourse are linked to different culturally determined and situationally selected views of the human/non-human relationship. The distinctions between the types of animates on the linguistic animacy scale are not clear-cut and fixed but flexible and context-bound. Earlier studies have shown that the positioning with regard to the non-human animal viewpoint in texts where understanding the animal behavior is not at the fore is quite different from the positioning observed in the *Luontoilta* data. For example, news reports of collisions involving birds and an airplane tend to show little concern for the non-human participants and their behavior (Kuha 2011). In animal product industry texts studied by Stibbe (2012: 28–31, 40–47), the distinction between human and non-human is of utmost importance. Animals are conceptualized as inanimate resources and objects. Interestingly, certain counter-discourses, such as that of animal liberation movements, also tend to resort to objectifying non-human animals, as these are presented as mere victims of human actions (Stibbe 2012: 76–79).

In the *Luontoilta* discussions, the sequences where human speakers display identification with the concerns and the interests of a non-human being are reflections of what Lestel (e. g. 2004; 2011: 396) calls *hybrid communities*, shared locally by human and non-human animals. These communities are founded on common codes and mutual recognition. Using the constructions investigated in the present study with reference to non-human animates is motivated by this interactional dimension of human/non-human relationships. Attributing intentionality to an animal does not depend on predetermined criteria but on

everyday interspecies contacts and cohabitation (see Lestel 2004: 119–122).²³

Viewing non-human animals as participating in the same intersubjective sharing of experience with humans is undoubtedly nothing new in human language use (see e. g. Laitinen's (2009, 2012) findings, referred to in Section 2.2, concerning the personal pronoun system in Finnish in which the human feature is not a decisive criterion, except for the relatively recently constructed written language). The fact that certain grammatical constructions, namely those encoding identification, are so strongly associated with human reference is likely due to the types of discourse we are observing them in. In the public sphere of contemporary Western societies, it has not until recently been very common to come across with situations where adult language users speak or write about animals as individuals with identifiable interests and concerns. Taking into account the cultural context and the discourse type is essential in view of understanding the complexity of the human/non-human interface on the animacy scale.

Furthermore, the permeability of the limits within the linguistic animate class, but also between animate and inanimate entities, can be accounted for by the fact that the concept of animacy brings together several aspects of what it is to 'be alive' (e. g. capacity for emotional, mental and physical experience, initiation of action, movement). Displaying just one of these aspects seems to be a sufficient condition for the entity to gain in prominence in a certain discourse context. In other words, it may be that animacy alone is not the decisive factor in language and cognitive processing but also an entity's perceived agency, causality and capacity for movement. Lowder & Gordon (2015) found that inanimate nouns referring to natural forces are treated in sentence structure in a way similar to animate nouns because these entities are capable of creating their own energy. In Vogels, Kraemer and Maes's (2013) study, even those inanimate referents that do not have this capacity, such as 'stone', were pronominalized to a rate comparable to that of lexically animate entities when they were perceived as animate on the basis of their movement.²⁴

5 Conclusion

In this paper, non-human animate reference was placed under focus. Taking as a point of departure the intermediate position of non-human animates on the scales of semantic prominence, my aim was to account for non-animate reference in Finnish modal and open reference constructions, associated with human reference in linguistic literature. In the sequences analyzed, non-human individuals are presented in circumstances where they make choices and aim to control the situation in view of their own interests. These non-human animates rank high on the scales of animacy, agency and empathy. On the other hand, I briefly evoked situations where speakers lean on scientific knowledge or report their observations and thus present non-human animates with properties of inanimate, non-individual entities.

The analysis showed that the interface between human and non-human on the linguistic animacy scale is complex and permeable. The position of non-human referents on the scale, and more precisely their distance or closeness to the highest degree of egophoric prominence, the *self*, depends on the type of discourse and the way in which the participants are viewed in the situations described. This position is not predetermined on the basis of biological categories. Speakers who seek to understand the non-human way of life display their membership in hybrid interspecies communities where actions and interactions are regarded as meaningful. In search for this meaning, the human interlocutors in the *Luontoilta* data explain observations concerning non-human beings by using linguistic constructions that allow them to take the position of the actor or the undergoer and, in this way, to make sense of the animal behavior, despite the unfamiliarity of the action or the situation. It has previously been postulated that the constructions

²³ Borrowing the terms from studies on animal consciousness (see e. g. Allen & Trestman 2015), one can state that, on the basis of the grammatical constructions used, the speakers of the *Luontoilta* data attribute animals with phenomenal and access consciousness. On the one hand, animal referents are construed as having "a subjective experience of life or being [...], a proprietary perspective that individuals have on their own perceptual, cognitive and emotive processes". On the other hand, they are viewed as capable of "higher cognitive processing tasks such as categorization, reasoning, planning, and voluntary direction of attention" (Allen & Trestman 2015).

²⁴ On the ways in which animacy affects pronominalization, see e.g. Fukumura & van Gompel (2010).

reserved for human reference can be used for other animate beings (and even inanimate entities) when describing acts and states typical of humans. When investigating the *Luontoilta* data, this criterion does not seem to apply: a complete metamorphosis or ability to fly, for instance, are not typical of humans. These constructions help to understand otherness: the observed non-human animate being becomes a potential object of identification in discourse.

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Abbreviations

1, 2, 3 – first, second, third person, ADE – adessive, ALL – allative, ANTIC – anticausative, AUX – auxiliary, CLT – clitic, COMP – complementizer, COND – conditional, CONNEG – connegative, DEM – demonstrative, DET – determiner, ELA – elative, ESS – essive, GEN – genitive, ILL – illative, IMP – imperative, INE – inessive, INF – infinitive, NEG – negation, NMLZ – nominalizer, PART – partitive, PASS – passive, PL – plural, POSS – possessive suffix, PRS – present, PST – past, PTCL – particle, PTCP – participle, Q – question marker, REL – relative, SG – singular, TRANSL – translative

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