

# **Animacy effects in Tamil**

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## Abstract

Animacy is reflected in multiple grammatical phenomena in Tamil. Several of these phenomena (e.g., accusative case marking and verbal agreement) reflect a distinction between humans and others, while locative case marking reflects a distinction between animates and inanimates. This paper describes the relevant phenomena, and proposes an analysis in terms of syntactic features in Lexical-Functional Grammar. The paper also raises questions about differences among animacy systems and suggests that some differences regarding cut-off points in the animacy hierarchy are due to the multifaceted nature of animacy.

## 1 Introduction

Animacy influences the morphology and syntax in many languages, perhaps all.<sup>†</sup> For example, long passives in Norwegian show a strong preference for inanimate over animate subjects (Lødrup 2022), some reflexives in Mandarin and Cantonese require animate antecedents (Lam 2021), and KiSwahili object marking is optional on inanimates but obligatory on animates (Morimoto 2002). See Santazilia (2023) for a large number of additional examples. Animacy effects do not always distinguish between animates and inanimates. Sometimes the line is instead drawn between human referents on the one hand and animals and inanimates on the other. In Maltese, for example, human objects are typically marked with the accusative marker *lil*, but non-human objects are unmarked (Camilleri & Sadler 2012). In other words, grammatical animacy effects do not uniformly reflect the same cut-off point in the animacy hierarchy. A simple version of the animacy hierarchy is provided in (1):<sup>1</sup>

- (1) HUMAN > ANIMATE > INANIMATE

The current paper investigates animacy in the grammar of Tamil, where the distinction between animate/inanimate and between human/non-human both play a role. Section 2 introduces the Tamil animacy data and states the relevant descriptive generalizations. Section 3 spells out a proposal for how to capture the generalizations formally in Lexical Functional Grammar (LFG). Section 4 raises the following question: *Why* do different languages and different phenomena show sensitivity to different cut-off points in the animacy hierarchy? Section 5 offers a brief summary of the paper.

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<sup>1</sup>See Silverstein (1976), and for an overview and discussion of the animacy hierarchy and further references, see Yamamoto (1999: ch. 1). It has become standard to use the term ANIMATE in the hierarchy rather than, e.g., NON-HUMAN ANIMAL. Humans are of course also animate, and in the remainder of the paper the term *animate* is used for humans as well as animals.

## 2 Animacy in Tamil

Most animacy effects in Tamil differentiate between humans and others. The locative case system, however, reflects a distinction between animates and inanimates. The human vs. non-human effects are described in Section 2.1, and the animate vs. inanimate effect (locative case) is described in Section 2.2.

The examples and generalizations provided in this section come from a variety of sources, including the following descriptive grammars and pedagogical materials: Lehmann (1989); Schiffman (1999); Asher & Annamalai (2002); Schiffman (2004); Lockwood (2007). We have also consulted a number of Tamil speakers, and the first author is a Tamil speaker. However, it is important to note that Tamil has millions of speakers in many different geographical areas and countries, and there is rich and interesting dialectal variation.

### 2.1 Humans vs. non-humans

Tamil shows sensitivity to the human/non-human distinction in its pronominal system (Section 2.1.1), verbal agreement paradigm (also Section 2.1.1), number marking (Section 2.1.2), and accusative case marking (Section 2.1.3).

#### 2.1.1 Pronouns and agreement

The third person pronouns are shown in Table 1. The human vs non-human distinction is reflected in both singular and plural. The singular human pronouns distinguish between honorific, masculine and feminine, but there is only one non-human singular pronoun. The plural pronouns distinguish between human and non-human only.<sup>2</sup>

	SINGULAR	PLURAL
MASCULINE	<i>avan</i>	
FEMININE	<i>aval</i>	<i>avargal</i>
HONORIFIC	<i>avar</i>	
NON-HUMAN	<i>atu</i>	<i>avai</i>

Table 1: Third person nominative pronouns

The verbal agreement paradigm echoes the pronominal system. In the singular, the verb displays a three-way split for human subjects (masculine, feminine, honorific), and it has a single agreement morpheme for non-human subjects. When the subject is plural, the verbal agreement distinguishes between human and non-human. The third person present tense forms for the verb *oḍu* ‘to run’ are given in Table 2 (adapted from Lockwood 2007: 20).

The examples in (2)–(11) below contain the forms listed in Tables 1–2. Examples (2)–(4) include human singular subjects:

<sup>2</sup>The form *avargal* is sometimes also used as alternative form for the singular honorific. There is other variation in form as well, and there are many differences between standard written Tamil and more casual spoken Tamil. We mainly use the standard written forms in our paper, and for the most part we do not report on alternate forms.

	SINGULAR	PLURAL
MASCULINE	<i>oodugir-aan</i>	
FEMININE	<i>oodugir-aal</i>	<i>oodugir-aargal</i>
HONORIFIC	<i>oodugir-aar</i>	
NON-HUMAN	<i>oodugir-atu</i>	<i>ooduginr-ana</i>

Table 2: Third person present tense forms for *oodu* ‘to run’

- (2) Maanavi puttakatt-ai paṭitt-**aal**. **Aval** paciyuṭaṇ irunt-**aal**.  
 student(female) book-ACC read.PST-3SG.F she hungry be.PST-3SG.F  
 ‘The (female) student read a book. She was hungry.’
- (3) Maanavan puttakatt-ai paṭitt-**aan**. **Avan** paciyuṭaṇ irunt-**aan**.  
 student(male) book-ACC read.PST-3SG.M he hungry be.PST-3SG.M  
 ‘The (male) student read a book. He was hungry.’
- (4) Vimaṇi puttakatt-ai paṭitt-**aar**. **Avar** paciyuṭaṇ irunt-**aar**.  
 pilot book-ACC read.PST-3SG.HON 3SG.HON hungry be.PST-3SG.HON  
 ‘The pilot read a book. S/he was hungry.’

Examples (5)–(7) contain non-human singular subjects. The examples show that animals, plants and things pattern alike with respect to pronominal forms and agreement marking. *Naay* ‘dog’ in (5) is an animal, *maa maram* ‘mango tree’ in (6) is a plant, and *katavu* ‘door’ in (7) is an inanimate object:

- (5) Naay kuraitt-**atu**. **Atu** paciyuṭaṇ irunt-**atu**.  
 dog bark.PST-3SG.¬HUM it hungry be.PST-3SG.¬HUM  
 ‘The dog barked. It was hungry.’
- (6) Maa maram vekamaaka vaḷarnt-**atu**. **Atu** aḷakaaka  
 mango tree fast grow.PST-3SG.¬HUM it beautiful  
 irunt-**atu**.  
 be.PST-3SG.¬HUM  
 ‘The mango tree grew fast. It was beautiful.’
- (7) Katavu tiraṇt-**atu**. **Atu** niila niraṭṭil irunt-**atu**.  
 door open.PST-3SG.¬HUM it blue color be.PST-3SG.¬HUM  
 ‘The door opened. It was blue.’

The human vs. non-human distinction is reflected in the plural morphology as well, but gender and honorificity is not. The examples below include subjects which refer to humans (8), animals (9), plants (10) and inanimates (11):

- (8) Maanavargal puttakatt-ai paṭitt-**aargal**. **Avargal** paciyuṭaṇ  
 student.PL book-ACC read.PST-3PL.HUM 3PL.HUM hungry  
 irunt-**aargal**.  
 be.PST-3PL.HUM  
 ‘The students read a book. They were hungry.’

- (9) Naaykaḷ kuraitt-**ana**.                      **Avai**                      paciyaṭaṇ irunt-**ana**.  
 dog.PL bark.PST-3PL.¬HUM 3PL.¬HUM hungry be.PST-3PL.¬HUM  
 ‘The dogs barked. They were hungry.’
- (10) Maa maran-kaḷ vekamaaka vaḷarnt-**ana**.                      **Avai**                      aḷakaaka  
 mango tree-PL fast grow.PST-3PL.¬HUM 3PL.¬HUM beautiful  
 irunt-**ana**.  
 be.PST-3PL.¬HUM  
 ‘The mango trees grew fast. They were beautiful.’
- (11) Katavukaḷ tiraṇt-**ana**.                      **Avai**                      niila niraṭṭil irunt-**ana**.  
 door.PL open.PST-3PL.¬HUM 3PL.¬HUM blue color be.PST-3PL.¬HUM  
 ‘The doors opened. They were blue.’

The agreement marking and the pronoun in (8), which has a human subject, differ from the non-human agreement and pronouns in (9)–(11).

### 2.1.2 Plural marking

When nouns refer to more than one entity, plural marking is obligatory on human nouns (12) but often optional on non-human nouns (13)–(14), especially when plurality is independently indicated by a quantifier (Ramasubramoney 2019; Lehmann 1989: 20–21).

- (12) Avan niraia pen-**kaḷ**-ai partt-aan.  
 3SG.M many girl-PL-ACC see.PST-3SG.M  
 ‘He saw many girls.’
- (13) Avan muunru {maṭu/maṭu-**kaḷ**} partt-aan.  
 3SG.M three cow.SG/cow-PL see.PST-3SG.M  
 ‘He saw three cows.’
- (14) Avan niraia {puttakam/puttakan-**kaḷ**} paṭitt-aan.  
 3SG.M many book.SG/book-PL read.PST-3SG.M  
 ‘He read many books.’

The omission of the number marking on non-human nouns is especially common in the modern spoken language.

### 2.1.3 Accusative case

The human vs. non-human distinction is evident in the marking of accusative case. When the direct object has an indefinite interpretation, the accusative case marker is obligatory for human nouns (15)–(16), but optional for non-human nouns (17)–(19):

- (15) Kumaar oru paiyaṇ-**ai** paartt-aan  
 Kumar a boy-ACC see.PST-3SG.M  
 ‘Kumar saw a boy’
- (16) \*Kumaar oru paiyaṇ paartt-aan  
 Kumar a boy see.PST-3SG.M  
 ‘Kumar saw a boy’

- (17) Kumaar oru aamaiy(-**ai**) vaankin-aan  
 Kumar a turtle(-acc) buy.PST-3SG.M  
 ‘Kumar bought a turtle’
- (18) Kumaar oru puuv(-**ai**) paritt-aan  
 Kumar a flower(-acc) pluck.PST-3SG.M  
 ‘Kumar plucked a flower’
- (19) Kumaar oru peṭṭiy(-**ai**) vaankin-aan  
 Kumar a box(-acc) buy.PST-3SG.M  
 ‘Kumar bought a box’

Driemel (2023: ch. 4) discusses the exact conditions under which the accusative marker is omitted for non-human indefinites. The details are complex, but specificity is relevant: specific objects are more likely to be case-marked than non-specific objects. This is not surprising, since specificity plays a similar role in differential object marking in many languages.<sup>3</sup> The specificity effect will be reflected in our formal analysis in Section 3, but other considerations which also play a role are set aside. For example, our consultants seem to be more likely to use accusative case on indefinites in writing than in speech, and we do not attempt to capture this. The important point for our purposes is that there is a clear difference between human and non-human direct objects.

When the object has a definite interpretation, there is no animacy effect. Definite direct objects are obligatorily marked with accusative case, regardless of the animacy of the object noun. Examples (20)–(23) are intended to be interpreted as definite. The accusative case marker *-ai* is then obligatory in both the human example in (20) and the non-human examples in (21)–(23):

- (20) Ram Priyav-**ai** kaatalikkir-aan  
 Ram Priya-ACC love.PRES-3SG.M  
 ‘Ram loves Priya.’
- (21) Kumar kutirai-**ai** cuttappaṭutti-naan  
 Kumar horse-ACC cleaned.PST-3SG.M  
 ‘Kumar cleaned the horse.’
- (22) Kumaar puv-**ai** paritt-aan  
 Kumar flower-ACC pluck.PST-3SG.M  
 ‘Kumar plucked the flower.’
- (23) Aval itliy-**ai** caappitt-aal  
 3SG.F idli-ACC eat.PST-3SG.F  
 ‘She ate the idli(s).’

Taken together, examples (15)–(23) show that definite objects are marked with the accusative case, and so are indefinite human objects. Non-human indefinite objects are not obligatorily case marked. The marking of indefinite objects is thus sensitive to whether the noun has a human referent.

<sup>3</sup>This is the case in, for example, Turkish (Krause & von Heusinger 2019), Tigrinya (Kifle 2007), and Hindi/Urdu (Butt 2025, and references therein).

#### 2.1.4 Exceptional cases

Although Tamil nouns are almost always classified as grammatically human or non-human based directly on the actual biological humanness of the referent, there are some exceptions. We argue that some of the mismatches between biological and grammatical humanness are best explained as lexically specified exceptions, and others are best explained as an alternative conceptual construal of the relevant entity (e.g., personification). The exceptions described below can each be covered by one or the other of these explanations.

In traditional Tamil grammars, the distinction we have referred to here as *human* vs. *non-human* is instead referred to as *rational* vs. *irrational*. The reason for this seems to be that there are some cases where human referents can trigger neuter (non-human) morphology, and these are cases where the referents can be thought of as “irrational”. The terms human and non-human are adopted here rather than rational and irrational in order to conform to the more general linguistic literature on animacy. However, it is true that the distinction between entities that are typically considered rational or irrational aligns almost exactly with the human/non-human split. The following quote is from Sarveswaran (2024: 4):

“[. . .] all nouns in Tamil can be categorised into *uyartiṇai* (rational) and *aḥṛiṇai* (irrational). Entities marked as rational are those perceived as being able to think on their own, while the rest are termed as irrational. For instance, animals, trees, furniture items, and infants are considered irrational, while humans and gods are categorised as rational. This (ir)rationality based marking differs from splits in terms of human vs. non-human, or animacy. For instance, infants are considered irrational just as animals or inanimate objects, even though infants are human and animate. An adult human entity can also still be marked as irrational if they behave in an insane manner.”

There seems to be some disagreement in the judgments of what counts as an irrational adult. This difference might be due to dialectal variation. According to our consultants, non-human morphology on nouns referring to adults is only possible if the intention is to insult those adults. Based on our information, there are no specific nouns referring to human adults that consistently take non-human morphology (although such nouns may exist dialectally). We propose that when non-human morphology is used as an insult, it is a way of signalling an opinion that the person in question should be grouped with – or reconceptualized as – animals rather than fellow respectable humans. This can be compared to the cross-linguistically common practice of insulting people by calling them, for example, pigs or donkeys.

Our consultants do agree with Sarveswaran about infants. Accusative case is not obligatory on the noun *kuṇṇantai* ‘baby’ (24), and *kuṇṇantai* is also compatible with non-human morphology (25)–(26):

- (24)    *Enakku kuṇṇantaikaḷ piṭikkum.*  
         I        baby.PL       love.PST.1 SG  
         ‘I love babies.’

- (25) Kuḻantai aḻut-atu.                      Atu                      paciYuṭan irunt-atu.  
 baby.SG cry.PST-3SG.¬HUM 3SG.¬HUM hungry be.PST-3SG.¬HUM  
 ‘The baby cried. It was hungry.’
- (26) Kuḻantaikaḻ aḻut-aṇa.                      Avai                      paciYuṭan irunt-aṇa  
 baby.PL cry.PST-3PL.¬HUM 3PL.¬HUM hungry be.PST-3PL.¬HUM  
 ‘The babies cried. They were hungry.’

However, if the same noun *kuḻantai* refers to a gendered infant, it is compatible with human morphology:<sup>4</sup>

- (27) Kuḻantai aḻut-aal.                      Aval                      paciYuṭan irunt-aal.  
 baby cry.PST-3SG.F 3SG.F hungry be.PST-3SG.F  
 ‘The baby girl cried. She was hungry.’
- (28) Aaṇ kuḻantaikaḻ aḻut-aargaḻ.                      Avarkaḻ                      paciYuṭan irunt-aargaḻ  
 male baby.PL cry.PST-3PL.HUM 3PL.HUM hungry be.PST-3PL.HUM  
 ‘The male babies cried. They were hungry’.

In the formal analysis in Section 3, *kuḻantai* is lexically specified with a negative HUMAN feature, and it also has an alternative a positive HUMAN feature which is connected to GENDER. It is not always possible to determine the reason why specific lexical items are idiosyncratically marked, but in this particular case it is worth noting that singular human nouns are morphologically male, female or honorific, and none of those classifications are appropriate for a baby when the gender is unknown.

Another exceptional case is gendered pets. Although animals are typically not compatible with human morphology, gendered pets that have names may trigger human morphology:

- (29) Eṇ naaiyiṇ peyar Brownie. Avan                      tuuṇkikkōṇṭirukkīr-aan.  
 my dog name Brownie 3SG.M sleep.PRES-3SG.M  
 ‘My dog’s name is Brownie. He is sleeping.’
- (30) Eṇ naaiyiṇ peyar Brownie. Atu                      tuuṇkikkōṇṭirukkīr-atu  
 my dog name Brownie 3SG.¬HUM sleep.PRES-3SG.¬HUM  
 ‘My dog’s name is Brownie. It is sleeping.’

The subject in examples (29)–(30) is a named pet that is male. Both (29) with human morphology and (30) with non-human morphology are acceptable and natural. This is a case of personification. It involves the conceptualization of a non-human referent as human. As will be discussed in Section 3, this reconceptualization is captured formally by the assignment of a grammatical [HUMAN +] feature to the relevant noun, here *naaiyiṇ*.

Note that animals that are not close pets and are not named trigger non-human morphology even if they are inherently gendered:

<sup>4</sup>It is well known that socially constructed gender is not strictly binary, and it cannot be equated with biological sex, which is also not strictly binary. In reality, sex and gender distinctions are complex and nuanced, but we abstract away from these important nuances in our discussion.



- (31) Kozi mutṭaikaḷ iṭṭ-atu  
 hen eggs lay.PST-3SG.¬HUM  
 ‘The hen laid eggs’
- (32) Maṭu paal koṭukkīr-atu.  
 cow milk give.PRES-3SG.¬HUM  
 ‘The cow gives milk’

The subjects of (31)–(32), *kozi* ‘hen’ and *maṭu* ‘cow’, refer to animals that are biologically female, but since they are animals, they nevertheless do not trigger human agreement (unless they happen to be very close pets). Similarly, *ceeval* ‘rooster’ and *kaalai* ‘bull’ in (33)–(34) refer to male animals, and the agreement marking is non-human:

- (33) Ceeval kuuvikkōṭirunt-atu  
 rooster crow.PST-3SG.¬HUM  
 ‘The rooster was crowing’
- (34) Kaalai sanṭaiyitt-atu  
 bull fight.PST-3SG.¬HUM  
 ‘The bull fought’

The examples in (31)–(34) show that nouns with animal referents typically trigger non-human morphology, even when the biological sex is known. Examples involving pets (e.g., (29) above) can thus not be fully explained by the fact that the sex is known.

Let us summarize this subsection. There are some cases where nouns with human referents can trigger non-human morphology. The noun *kuṣantai* ‘baby’ can be used with non-human morphology if the gender is unknown. If the gender is known, it triggers human morphology: male, female or plural according to what is appropriate. We treat the ‘baby’ case as an instance of idiosyncratic lexical marking. Sometimes non-human morphology can be used with adult humans as an insult. Named pets whose gender is known and who are intimately familiar optionally trigger human morphology. We hypothesize that the insults and personification are cases of reconceptualization of the referents as belonging to an animacy group distinct from the actual biological animacy group.<sup>5</sup>

## 2.2 Animate vs. inanimate

Section 2.1 provided numerous examples showing that animacy is grammatically relevant in Tamil. Specifically, the distinction between human and non-human referents is evident in the pronominal system, verbal agreement marking, and accusative marking of direct objects. This section turns to locative case marking, which is also sensitive to animacy. However, locative case does not differentiate between humans and non-humans, but instead between animates (humans and animals) and inanimates (plants and inanimate objects), as noted by Schiffman (1999: 31–32), Schiffman (2004), Lehmann (1989: 39), and others.

There are two locative case markers which differ in form and distribution: *-itam* and *-il*. The suffix *-itam* (*-gitte* in spoken Tamil) occurs only with animate nouns (35)–(37),

<sup>5</sup>For discussion of the tripartite distinction between linguistic, conceptual and biological animacy, see Bayanati & Toivonen (2019); Trompenaars et al. (2021); Toivonen (Forthcoming).

and *-il* (*-le* in spoken Tamil) occurs with inanimate nouns (38)–(39):<sup>6</sup>

- (35) Uṅkaḷ-**itaṁ** paṇam irukkaā?  
2SG-LOC money have.PRES.Q  
‘Do you have any money (on you)?’
- (36) Kumaar appaav-**itaṁ** vant-aan.  
Kumar father-LOC come.PST-3SG.M  
‘Kumar came to father.’
- (37) Nari-**itaṁ** koḻi irunt-atu  
fox-LOC chicken have.PST-3SG.¬HUM  
‘The fox had a chicken’
- (38) Kuruvi maratt-**il** uṭṭkar-kiratu  
sparrow tree-LOC sit.PRES-3SG.¬HUM  
‘The sparrow is sitting in the tree.’
- (39) Kumaar oru vaaratt-**il** intap pustakattaip patitt-aan.  
Kumar one week-LOC this book.ACC study.PAST-3SG.M  
‘Kumar read this book in a week.’

The locative case marker has many functions: for example, location, goal, and temporal duration. The locative is also part of more complex case markers, such as the ablative, illustrated in examples (40)–(42) (from Lehmann 1989: 42):

- (40) Kumaar appaav-**itaṁ**-iruntu vant-aan.  
Kumar father-LOC-ABL come.PST-3SG.M  
‘Kumar came from (his) father.’
- (41) Kumaar appaav-ai oru puli-**itaṁ**-iruntu kaappaarrin-aan.  
Kumar father-ACC a tiger-LOC-ABL protect.PST-3SG.M  
‘Kumar protected father from a tiger.’
- (42) Kumaar appaav-ai nerupp-**il**-iruntu kaappaarrin-aan.  
Kumar father-ACC fire-LOC-ABL protect.PST-3SG.M  
‘Kumar protected father from fire.’

Note that ‘father’ in (40) and ‘tiger’ in (41) which are both animates take the same locative marker *-itaṁ*, contrasting with *-il* on the inanimate ‘fire’ in (42).

In the singular, *-il* is only used with inanimates. However, as noted by Lehmann (1989: 40) and others, *-il* is used with both inanimates and animates when the noun is in plural and denotes a group within which specific individuals are singled out (identified or extracted). With this interpretation, *-il* is used regardless of the animacy of the noun. Examples (43)–(45) illustrate this use of *-il* for animates (human and animal referents) and inanimates:<sup>7</sup>

<sup>6</sup>Example (35) is adapted from Asher & Annamalai (2002: 35), and examples (38)–(39) are adapted from Lehmann (1989: 39).

<sup>7</sup>Examples (43) and (45) are from Lehmann (1989: 40).

- (43) En maṇavar-kaḷ-**il** niraivat tamizaṛ iru-kkir-aarkaḷ  
 1SG.OBL student-PL-LOC many Tamilian be-PRES-3PL  
 ‘Among my students there are many Tamilians’
- (44) Maatu-kaḷ-**il** muundru paḻuppaaka irukkinṛ-aṇa  
 cow-PL-LOC three brown are.PRES-3PL.¬HUM  
 ‘Three of the cows are brown.’
- (45) Anta maampazaṇ-kaḷ-**il** entaṭ paḻam rumaṇi  
 DEM.PL mango-PL-LOC which fruit Ruman  
 ‘Which fruits among those mangoes are Ruman?’

In summary, locative case is sensitive to a distinction between animates and inanimates. The case marker *-il* occurs only on inanimate nouns in the singular and on both inanimates and animates in the plural when the noun denotes a group from which individuals are selected. The suffix *-iṭam* is used exclusively on nouns that refer to animates (animals and humans), regardless of whether the noun is singular or plural.

### 3 A formal characterization of Tamil animacy

The Tamil data described in Section 2 can be captured by an analysis that adopts an ANIMACY feature which takes a complex feature structure as its value. Similar structures have been adopted previously in LFG; for example, Dalrymple et al. (2009) use comparable complex feature structures in their account of case marking. We propose that in Tamil, the value of the attribute ANIMACY contains the feature HUMAN and/or the feature ANIMATE, which can each take a positive or negative value. The f-structure for (46) given in Figure 1 contains ANIMACY features and serves as an illustration.

- (46) Viṇaṇi puttakattai paṭittaar.  
 pilot book.ACC read.PST.3SG.HON  
 ‘The pilot read a book.’

Formally, there is no need for a complex feature structure, since the facts can also be captured solely by the HUMAN and ANIMATE features. The complex feature structure is instead theoretically motivated: it serves to express the intuition that grammatical reflexes of animacy form a unified class, regardless of where in the animacy hierarchy the distinction is made. The features HUMAN and ANIMATE are bundled with each other but separate from, for example, PERSON and NUMBER. This intuition seems well motivated cross-linguistically. Consider, for example, differential object marking in Romanian and Spanish (related Romance languages). They both mark some direct objects but not others with a case marker: *pe* in Romanian and *a* in Spanish. In Romanian, objects referring to *humans* are case marked, and objects referring to animals and things are not (Chiriacescu & von Heusinger 2009). In Spanish, objects referring to *humans and animals* are case marked, and objects referring things are not (Fábregas 2013).<sup>8</sup> Even though Spanish and Romanian split the animacy hierarchy differently, the differential object

<sup>8</sup>To the best of our knowledge, these generalizations are broadly correct, but there is much more to say about differential object marking in Romanian and Spanish; see, e.g., Barbu & Toivonen (2018) and Kabatek et al. (2021), and references cited there.

PRED	'read(SUBJ, OBJ)'					
TENSE	PAST					
SUBJECT	PRED	'pilot'				
	NUMBER	SG				
	CASE	NOM				
	HONORIFIC	+				
	ANIMACY	<table><tr><td>HUMAN</td><td>+</td></tr><tr><td>ANIMATE</td><td>+</td></tr></table>		HUMAN	+	ANIMATE
HUMAN	+					
ANIMATE	+					
OBJECT	PRED	'book'				
	CASE	ACC				
	SPECIFIC	+				
	ANIMACY	<table><tr><td>HUMAN</td><td>—</td></tr><tr><td>ANIMATE</td><td>—</td></tr></table>		HUMAN	—	ANIMATE
HUMAN	—					
ANIMATE	—					

Figure 1: F-structure for *Vimaṇi puttakattai paṭittaar* ‘The pilot read a book’

marking still reflects animacy in both languages.

Recall from Section 2 that third person pronouns are specified for whether they are human or non-human, and they also signal gender or honorificity in the singular. Sample lexical entries for third person pronouns are provided in (47):

(47) Pronouns

*aval:*

(↑ PRED) = ‘pro’  
(↑ ANIMACY HUM) = +  
(↑ GENDER) = FEM  
(↑ PERSON) = 3  
(↑ NUMBER) = SG

*avar:*

(↑ PRED) = ‘pro’  
(↑ ANIMACY HUM) = +  
(↑ HONORIFIC) = +  
(↑ PERSON) = 3  
(↑ NUMBER) = SG

*atu:*

(↑ PRED) = ‘pro’  
(↑ ANIMACY HUM) = –  
(↑ PERSON) = 3  
(↑ NUMBER) = SG

*avargal:*

(↑ PRED) = ‘pro’  
(↑ ANIMACY HUM) = +  
(↑ PERSON) = 3  
(↑ NUMBER) = PL

*avai:*

(↑ PRED) = ‘pro’  
(↑ ANIMACY HUM) = –  
(↑ PERSON) = 3  
(↑ NUMBER) = PL

The verbal agreement morphology mirrors the pronominal system: third person verbal agreement markers are specified for whether the subject is human or non-human, and third person singular verbs also indicate either gender or honorificity. The agreement morphemes in (48) serve as an illustration:

(48) Agreement markers/incorporated pronouns

<i>-aai:</i>	<i>-atu:</i>
((↑ SUBJ PRED) = ‘pro’)	((↑ SUBJ PRED) = ‘pro’)
(↑ SUBJ ANIMACY HUMAN) = +	(↑ SUBJ ANIMACY HUMAN) = –
(↑ SUBJ GENDER) = FEM	(↑ SUBJ PERSON) = 3
(↑ SUBJ PERSON) = 3	(↑ SUBJ NUMBER) = SG
(↑ SUBJ NUMBER) = SG	
<i>-aargal:</i>	<i>-ana:</i>
((↑ SUBJ PRED) = ‘pro’)	((↑ SUBJ PRED) = ‘pro’)
(↑ SUBJ ANIMACY HUMAN) = +	(↑ SUBJ ANIMACY HUMAN) = –
(↑ SUBJ PERSON) = 3	(↑ SUBJ PERSON) = 3
(↑ SUBJ NUMBER) = PL	(↑ SUBJ NUMBER) = PL

Tamil is a pro-drop language. The agreement markers therefore have an optional PRED feature. This PRED feature is present when the clause does not contain an overt independent subject and absent when an independent subject noun or pronoun provides a PRED feature (Bresnan & Mchombo 1987; Toivonen 2023).

The two case markers that were considered in Section 2 are sensitive to different splits in the animacy hierarchy. Accusative case is obligatory on nouns with human referents, but it only occurs on indefinite non-human nouns if their interpretation is specific (Section 2.1.3). Locative case differs in form depending on whether it attaches to an animate or inanimate noun (Section 2.2). The lexical entry for the accusative case marker is provided in (49):

(49) Accusative case

<i>-ai:</i>
(↑ CASE) = ACCUSATIVE
{(↑ ANIMACY HUMAN) = + ∨ (↑ SPECIFIC) = + }

The lexical entry for accusative case includes a specification that ensures that the noun is human or specific (or both): it cannot be non-specific and non-human.

The lexical entries for the locative case markers are provided in (50):

(50) Locative case

<i>-iṭam:</i>	<i>-il:</i>
(↑ CASE) = LOCATIVE	(↑ CASE) = LOCATIVE
(↑ ANIMACY ANIMATE) = +	{(↑ ANIMACY ANIMATE) = – ∨ (↑ GROUP) = + }

The examples in Section 2.2 showed that the locative case marker *-iṭam* appears on animate nouns only, but the distribution of *-il* is more complex. The locative marker *-il* appears freely on inanimates, but it can also appear on animates if the interpretation is one where the locative case-marked noun denotes a group from which an individual is extracted. We formalize this with a [GROUP +] feature, borrowed from Jones’s (2015) work on Meryam Mir. This GROUP feature “foregrounds the membership of a collection

Recall that the entries for pronouns proposed in (47) include HUMAN features, but not ANIMATE features. Locative case-marked pronouns will, however, be specified for both ANIMACY features, because the case marker provides an ANIMATE feature (unless the GROUP feature is used). As a result, the non-human pronoun *atu* has two locative forms (as noted by, e.g., Asher & Annamalai 2002: 230–231): an *-iṭam* form for animals and an *-il* form for inanimates. An example of a locative pronoun referring to an animal is provided in (51):

- The entries in (47)–(50) are functional categories, and they each contain exactly one feature from the ANIMACY feature complex. The entries in (47)–(49) include the HUMAN feature, and the entries in (50) include the ANIMATE feature.<sup>9</sup> These functional categories can be contrasted with nouns, which are lexical categories. The lexical entries for nouns include both features of the ANIMACY feature complex. This is because all nouns can, for example, trigger agreement, which reflects a HUMAN specification, and they can also take locative case, which reflects an ANIMATE specification. Example lexical entries of nouns are given in (52):

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(52) Nouns:

<i>maṇavi:</i>	<i>maṇavargal:</i>
(↑ PRED) = ‘student’	(↑ PRED) = ‘student’
(↑ ANIMACY HUMAN) = +	(↑ ANIMACY HUMAN) = +
(↑ ANIMACY ANIMATE) = +	(↑ ANIMACY ANIMATE) = +
(↑ GENDER) = FEM	(↑ PERSON) = 3
(↑ PERSON) = 3	(↑ NUMBER) = PL
(↑ NUMBER) = SG	
<i>naay:</i>	<i>katavu:</i>
(↑ PRED) = ‘dog’	(↑ PRED) = ‘door’
(↑ ANIMACY HUMAN) = –	(↑ ANIMACY HUMAN) = –
(↑ ANIMACY ANIMATE) = +	(↑ ANIMACY ANIMATE) = –
(↑ PERSON) = 3	(↑ PERSON) = 3

The lexical entry for *naay* ‘dog’ and *katavu* ‘door’ are not specified for number. This is because the morphologically unmarked versions of non-human nouns are compatible with singular or plural interpretations (Section 2.1.2). If the plural morpheme *-kal* is added, the noun is interpreted as plural.

We assume that in language *production*, nouns get assigned animacy features on-line based on whether they are conceptualized as belonging to the category of humans (and gods), animals, or things (including plants). This approach naturally accounts for mismatches between biological categories and grammatical animacy categories in cases of personification and ‘de-personification’ (insults). If an animal or thing is conceptualized as a human (that is, personified), then it will be flagged as a human grammatically.

In language *comprehension*, the agreement morphology, case marking, and pronouns often indicate the animacy of nouns. In some cases, the morphology does not indicate the animacy. For example, when a direct object bears accusative case, the morphology does not directly determine its animacy. In such cases, we assume that the animacy may remain underspecified, or else filled in according to the listener’s extralinguistic knowledge or assumptions.

A more conventional analysis would posit default animacy specifications on all nouns. We believe that such an analysis would yield the same results, and it would also be more standard. The defaults would then be overridden for personification, etc. Regardless of whether the analysis adopts online or default specifications, inherent animacy features must be specified for some lexical entries; for example, *kuzantai* ‘baby’.

The compatibility of the word *kuzantai* with non-human morphology is due to lexical specifications, but only when the gender is not known. We propose the lexical entry in (53). The last two lines in the lexical entry ensure that *kuzantai* is grammatically [HUMAN +] when the entry has a gender feature and otherwise [HUMAN –]. When *kuzantai* is [HUMAN +], it is compatible with MASCULINE or FEMININE gender; the specific gender is left unspecified in (53), but could be specified with a further disjunctive equation.

- (53) *kuzantai*:  
 (↑ PRED) = ‘baby’  
 (↑ PERSON) = 3  
 (↑ ANIMACY ANIMATE) = +  
 (↑ NUMBER) = SG  
 { [ (↑ GENDER) ∧ (↑ ANIMACY HUMAN) = + ] ∨  
 (↑ ANIMACY HUMAN) = – }

The grammatical facts follow as expected: Since *kuzantai* can be [HUMAN –], the accusative case marker is optional when *kuzantai* is an object. Regardless of its HUMAN specification, *kuzantai* is [ANIMATE +], and thus compatible with the locative *-itam* affix.

## 4 The animacy hierarchy

Animacy effects are very common in the grammars of the world’s languages. As noted in the introduction, the cross-linguistic animacy distinctions are not uniform: they reflect different cut-off points in the animacy hierarchy. Two common splits are (1) human vs. non-humans and (2) animates (humans and animals) vs. inanimates, but the distinctions can also be more nuanced. For example, “lower” animals (e.g., worms) may be grouped with inanimates (Kittilä et al. 2011: 5).

Why should grammars be sensitive to different cut-off points in the hierarchy? Once a distinction is grammaticalized, there might not be any *why*. A child exposed to a language learns the grammar of that language. But why are there differences in which animacy distinctions are grammaticalized?

One possibility is that *culture* determines how to organize nominals according to animacy. For example, if animals are highly valued in a culture, perhaps they are grouped with humans in the language spoken by the practitioners of the culture. The idea that grammatical animacy is tightly connected to culture has been argued for in the interesting and influential work of Robin Wall Kimmerer on Potawatomi. In Potawatomi and other Algonquian languages, gods, humans, animals and some inanimates form one group (“animates”), and the other group (“inanimates”) includes only inanimates. Kimmerer (2013: 64) describes the division as follows:

“To whom does our language extend the grammar of animacy? Naturally, plants and animals are animate, but as I learn, I am discovering that the Potawatomi understanding of what it means to be animate diverges from the list of attributes of living beings we all learned in Biology 101. In Potawatomi 101, rocks are animate, as are mountains and water and fire and places. Beings that are imbued with spirit, our sacred medicines, our songs, drums, and even stories, are all animate. The list of the inanimate seems to be smaller, filled with objects that are made by people.”

Kimmerer (2013, 2017) argues that the animacy marking reveals something deep about Potawatomi culture, and indeed indigenous cultures more generally. She offers the fol-



lowing interpretation (Kimmerer 2013: 63):<sup>10</sup>

“So it is that in Potawatomi and most other indigenous languages, we use the same words to address the living world as we use for our family. Because they are our family.”

It is possible (perhaps likely) that there are some connections between culture and grammatical animacy marking, and these connections can be interesting in individual cases. However, the exact nature of the connections between culture and grammatical animacy are unclear, and it seems that they are indirect and imprecise.

Work by Dahlstrom (1995), Goddard (2002), Lockwood (2017: ch. 3.2), and others, shows convincingly that there is no *direct* link between culture and grammatical animacy in Algonquian. In Potawatomi and other Algonquian languages, some inanimates pattern with animates and others do not. The pattern is not predictable based on cultural significance. For example, the fact that *mkedémen* ‘blackberry’ is animate and *min* ‘blueberry’ is inanimate in Potawatomi is not culturally determined. Lockwood (2017: p. 47) further notes: “I have seen no compelling evidence to suggest that power or cultural significance explains why ‘blood’ (*[mskwé]*) is inanimate but ‘snot’ (*[skigem]*) is animate.”<sup>11</sup>

Furthermore, the Algonquian languages are not uniform in how they divide their inanimate vocabulary. For example, the word for tobacco is animate in some Algonquian languages but inanimate in others (Goddard 2002). These differences between languages are not obviously predictable based on cultural differences.

The evidence from Algonquian thus does not indicate that animacy marking is directly predictable from the culture within which the language is spoken. However, it is possible to interpret Kimmerer’s claims more generally: perhaps the crucial point is that some languages have inclusive animacy marking and others do not, and this reflects whether the culture is inclusive more generally. Kimmerer continues her line of argumentation by noting the following (Kimmerer 2013: 64):

“English does not give us many tools for incorporating respect for animacy. In English, you are either a human or a thing. Our grammar boxes us in by the choice of reducing a nonhuman being to an *it*, or it must be gendered, inappropriately, as a *he* or a *she*.”

Kimmerer further ponders whether perhaps the world might be a better place if more languages adopted a grammatical system such as that of Potawatami (Kimmerer 2013: 65):

“Maybe a grammar of animacy could lead us to whole new ways of living in the world, other species a sovereign people, a world with a democracy of species, not a tyranny of one – with moral responsibility to water and wolves, and with a legal system that recognizes the standing of other species. It’s all in the pronouns.”

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<sup>10</sup>We have chosen to include multiple direct quotes by Kimmerer because we find them thought-provoking, and also because we do not want to risk accidentally mischaracterizing her position.

<sup>11</sup>In the Lockwood quote, we replace example numbers by the Potawatomi words in those examples.

This quote further illustrates Kimmerer’s position that linguistic animacy can have a direct influence on culture.

Kimmerer is right that English does not make use of grammatical animacy as much as some other languages, and the distinction in third person singular pronouns (*she/he* vs. *it*) roughly separates humans from animals and things. However, the English third person plural pronoun *they* does not differentiate between people, animals and things. Furthermore, many other big European languages (e.g., the Romance languages) use the same third person singular pronouns to refer to people, animals and things (e.g., *elle/il* in French).

It is not difficult to find further facts about grammatical animacy that do not seem to be directly governed by cultural factors. Recall, for instance, the generalizations about differential object marking in Romanian and Spanish, briefly described in Section 3 above. In Romanian, only objects referring to *humans* are case marked, whereas in Spanish, objects referring to *humans and animals* are case marked. We have not come across any suggestion in the literature that the different cut-off points in the animacy hierarchy for case-marking in the two languages would be culturally motivated.

Let us now return to the topic of this paper: animacy in Tamil. Since Tamil exhibits two different splits in the animacy hierarchy, a direct appeal to a cultural explanation is not likely. On the contrary, the fact that the Tamil grammar reflects both a human vs. non-human distinction and an animate vs. inanimate distinction can be taken as an argument *against* a hypothesis holding that grammatical animacy is directly connected to culture.

We conclude that cultural considerations are not likely to offer a satisfactory explanation (or at least not a complete explanation) for why we find different cut-off points in the animacy hierarchy across languages and phenomena. Instead we suggest that this diversity reflects the multifaceted nature of animacy: What we call *animacy* is not a uniform property, but rather it is a conglomerate of properties.

What exactly is animacy? In biology, the basic meaning of animate is ‘alive’. However, it turns out not to be all that easy to determine exactly what it means to be alive, even for biologists. The definition of ‘life’ is a point of debate within and across the fields of biology, chemistry and philosophy (e.g., Nurse 2020; Gómez Marquéz 2021; Fantini et al. 2024). Moreover, ‘being alive’ does not suffice for explaining linguistic animacy, as pointed out by Kittilä et al. (2011: §4), Yamamoto (1999: ch 1); and others. Plants, for example, are living organisms, but plants are nevertheless typically grouped with inanimate objects rather than with animals in grammars.

Studies in neuroscience and psychology show that humans are sensitive to multiple factors that (imperfectly) correlate with animacy: the capacity for sentience, reason, emotion, language, and self-propelled motion; having a face; the ability to deliberately perform actions, and so on (Carey 2009; Hofrichter et al. 2021; Jozwik et al. 2022; a.o.). Even young children are sensitive to animacy properties such as self-propelled motion and having a face (Opfer & Gelman 2010, a.o.). Agency, or the ability to perform actions, seems to be especially significant for grammatical animacy (see, e.g., Silverstein 1976), although other aspects of animacy, such as the capacity for emotions, are recognized to play a role as well (Yamamoto 1999; Becker 2014).<sup>12</sup>

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<sup>12</sup>Matters are complicated by the fact that humans do not (psychologically or linguistically) classify entities according to whether they actually have agency or a face or the capacity for reason, emotion,

We hypothesize that differing cut-off points in the animacy hierarchy can at least in part be explained by the fact that different aspects of animacy have been grammaticalized. For example, if ‘having language’ is the crucial factor, then the distinguishing line is drawn between humans and non-humans. If ‘being sentient’ is relevant, then perhaps humans and animals are grouped together, distinct from inanimates. Once the feature is grammaticalized, new learners will not know what factor was originally decisive, and the distinction may be reinterpreted as a difference between, for example, humans and others.

Our explanation for why the Tamil grammar shows evidence of two different cut-off points would then be that the phenomena originally reflected different aspects of animacy. An investigation of the history of the relevant morphology in Tamil is beyond the scope of this paper, but we offer some speculative remarks that are intended to serve as an illustration of how the multifaceted nature of animacy might lead to different animacy cut-off points.

Recall that a distinction between human and non-human is evident in Tamil pronouns, agreement, plurals, and accusative case. This reflection of animacy may have originally been tied to ‘the capacity to reason’, as indicated by the reference to *rationality* in the Tamil grammatical tradition. An anonymous reviewer expresses the intuition that the human vs. non-human distinction in Tamil is influenced by “social deixis, honorificity, and contextual conceptualization”.

The locative system in Tamil includes two forms: *-il* for inanimates and *-itam* for animates. One possible explanation for this animacy distinction is that the two forms were originally tied to different meanings: *-il* for physical location and *-itam* for some other relation, perhaps one having to do close vicinity or connection. Objects can certainly be placed on humans and animals, so it is possible for animates to be locations. However, inanimates make for more natural locations, and inanimates would be more commonly referred to as locations. The *-il* ending could therefore be grammaticalized as restricted to inanimates. This leaves animates with no locative case. The original meaning of *-itam* is extended as a generic locative, but restricted to animates only, as *-il* is available for inanimates.

The particular scenarios we outline for the emergence of the two animacy splits in Tamil are nothing but speculative suggestions. These speculations are intended to illustrate our more general point, which is that a focus on different animacy-related properties may explain differences in cut-off points along the animacy hierarchy.

## 5 Concluding remarks

Animacy is reflected in multiple grammatical phenomena in Tamil. This paper has aimed to describe those grammatical animacy effects and to capture the effects formally in LFG. The analysis involved spelling out the relevant syntactic features of nouns and also the features of the functional morphemes that reflect animacy in Tamil: pronouns, verbal agreement morphemes, accusative and locative case. The lexical features adopted

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sentence, etc. What is instead relevant is whether humans conceptualize entities as having these capacities or perceive them as having a face, instigating movement and actions, etc. See Toivonen (Forthcoming) for references and discussion.

in the analysis are almost exclusively drawn from an inventory of features that are standardly used in LFG for analyzing the syntax of a wide range of languages. However, the adoption of a complex feature structure as the value of the feature ANIMACY is an unusual choice, although not without precedent (Dalrymple et al. 2009).

The Tamil data show that two different animacy splits can occur within the same language: several phenomena are sensitive to the human vs. non-human distinction, and locative case marking is sensitive to the animate vs. inanimate distinction. Although we have not come across previous literature that directly addresses this point, we find it unlikely that multiple animacy splits in the same language is unique to Tamil. Cross-linguistically, it is clear that different cut-off points in the animacy hierarchy occur, even when comparing the same phenomenon in closely related languages. This is illustrated by the differential object marking systems in Spanish and Romanian. Section 4 discussed possible explanations for *why* there are differences in animacy splits. We suggested that the multifaceted nature of animacy is relevant: differences in animacy splits might originally reflect distinct aspects of animacy.

## References

- Asher, Ronald E. & E. Annamalai. 2002. *Colloquial Tamil: the complete course for beginners*. Routledge. <https://doi.org/10.4324/9781315649696>.
- Barbu, Roxana-Maria & Ida Toivonen. 2018. Romanian object clitics: grammaticalization, agreement and lexical splits. In Miriam Butt & Tracy Holloway King (eds.), *Proceedings of the LFG'18 Conference*, 67–87. Stanford: CSLI Publications. <https://typo.uni-konstanz.de/lfg-proceedings/LFGprocCSLI/LFG2018/lfg2018-barbu-toivonen.pdf>.
- Bayanati, Shiva & Ida Toivonen. 2019. Humans, animals, things and animacy. *Open Linguistics* 5. 156–170. <https://doi.org/10.1515/opli-2019-0010>.
- Becker, Misha. 2014. *The acquisition of syntactic structure: animacy and thematic alignment*. Oxford: Clarendon Press. <https://doi.org/10.1017/CBO9781139022033>.
- Bresnan, Joan & Sam Mchombo. 1987. Topic, pronoun, and agreement in Chicheŵa. *Language* 63(4). 741–782. <https://doi.org/10.2307/415717>.
- Butt, Miriam. 2025. Lexical semantics vs. Dependent Case: Urdu/Hindi datives. In Miriam Butt, Jamie Y. Findlay & Ida Toivonen (eds.), *Proceedings of the LFG'25 Conference*, University of Konstanz: PubliKon.
- Camilleri, Maris & Louisa Sadler. 2012. On the analysis of non-selected datives in Maltese. In Butt & King (eds.), *Proceedings of the LFG'12 Conference*, 118–138. <https://typo.uni-konstanz.de/lfg-proceedings/LFGprocCSLI/LFG2012/papers/lfg12camillerisadler.pdf>.
- Carey, Susan. 2009. *The origin of concepts*. Oxford: Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780195367638.001.0001>.

- Chiriacescu, Sofiana & Klaus von Heusinger. 2009. Pe-marking and referential persistence in Romanian. In Arndt Riester & Edgar Onea (eds.), *Focus at the syntax-semantics interface. Working Papers of the SFB 732*, vol. 3, 1–17. University of Stuttgart. <http://dx.doi.org/10.18419/opus-5710>.
- Dahlstrom, Amy. 1995. Motivation vs. predictability in Algonquian gender. In David H. Pentland (ed.), *Papers of the 26th Algonquian Conference*, 195–231. University of Manitoba.
- Dalrymple, Mary, Tracy Holloway King & Louisa Sadler. 2009. Indeterminacy by underspecification. *Journal of Linguistics* 45. 31–68. <https://www.jstor.org/stable/40343771>.
- Driemel, Imke. 2023. *Pseudo-noun incorporation and differential object marking*. Oxford University Press. <https://doi.org/10.1093/oso/9780192866400.001.0001>.
- Fábregas, Antonio. 2013. Differential object marking in Spanish: state of the art. *Borealis: An International Journal of Hispanic Linguistics* 2(2). 1–80. <http://dx.doi.org/10.7557/1.2.2.2603>.
- Fantini, Jacques, Mélanie Matveeva, Marine Lefebvre & Henri Chahinian. 2024. What is life? Rethinking biology in light of fundamental parameters. *Life* 14(3). <https://doi.org/10.3390/life14030280>.
- Goddard, Ives. 2002. Grammatical gender in Algonquian. In H. C. Wolfart (ed.), *Papers of the 33rd Algonquian Conference*, 195–231. Ottawa: University of Manitoba.
- Gómez Marquéz, Jaime. 2021. What is life? *Molecular Biology Reports* 48(8). 6223–6230. <https://doi.org/10.1007/s11033-021-06594-5>.
- Hofrichter, Ruth, Hasan Siddiqui, Marcus N. Morrissey & M. D. Rutherford. 2021. Early attention to animacy: change-detection in 11-month-olds. *Evolutionary Psychology* 19(2). <https://doi.org/10.1177/14747049211028220>.
- Jones, Stephen. 2015. Number in Meryam Mir. In Miriam Butt & Tracy Holloway King (eds.), *Proceedings of the LFG'15 Conference*, 103–123. Stanford: CSLI. <https://typo.uni-konstanz.de/lfg-proceedings/LFGprocCSLI/LFG2015/papers/lfg15jones.pdf>.
- Jozwik, Kamila M., Elias Najarro, Jasper J. F. van den Bosch, Ian Charest, Radoslaw M. Cichy & Nikolaus Kriegeskorte. 2022. Disentangling five dimensions of animacy in human brain and behaviour. *Communications Biology* 5. 1247. <https://doi.org/10.1038/s42003-022-04194-y>.
- Kabatek, Johannes, Philipp Obrist & Albert Wall (eds.). 2021. *Differential object marking in Romance: the third wave*. Berlin: De Gruyter. <https://doi.org/10.1515/9783110716207>.
- Kifle, Nazareth Amlesom. 2007. Differential object marking and topicality in Tigrinya. In Miriam Butt & Tracy Holloway King (eds.), *Proceedings of the LFG'07*

- Conference*, 5–25. Stanford: CSLI. <https://typo.uni-konstanz.de/lfg-proceedings/LFGprocCSLI/LFG2007/papers/lfg07amlesom.pdf>.
- Kimmerer, Robin. 2013. *Braiding sweetgrass: indigenous wisdom, scientific knowledge and the teachings of plants*. Milkweed Editions. <https://milkweed.org/book/braiding-sweetgrass>.
- Kimmerer, Robin Wall. 2017. Learning the grammar of animacy. *Anthropology of Consciousness* 28(2). 128–134. <https://doi.org/10.1111/anoc.12081>.
- Kittilä, Seppo, Katja Västi & Jussi Ylikoski. 2011. Introduction to case animacy and semantic roles. In Seppo Kittilä, Katja Västi & Jussi Ylikoski (eds.), *Case, animacy and semantic roles*, 1–26. Amsterdam: John Benjamins. <https://doi.org/10.1075/tsl.99.01kit>.
- Krause, Elif & Klaus von Heusinger. 2019. Gradient effects of animacy on differential object marking in Turkish. *Open Linguistics* 5(1). 171–190. <https://doi.org/10.1515/opli-2019-0011>.
- Lam, Chit Fung. 2021. A constraint-based approach to anaphoric and logophoric binding in Mandarin Chinese and Cantonese. In Miriam Butt, Jamie Y. Findlay & Ida Toivonen (eds.), *Proceedings of the LFG'21 Conference*, 202–222. Stanford: CSLI Publications. <https://typo.uni-konstanz.de/lfg-proceedings/LFGprocCSLI/LFG2021/lfg2021-lam.pdf>.
- Lehmann, Thomas. 1989. *A grammar of modern Tamil*. Pondicherry Institute of Linguistics and Culture.
- Lockwood, Hunter Thompson. 2017. *How the Potawatomi language lives: a grammar of Potawatomi*. Ph.D. thesis, University of Wisconsin, Madison. <https://digital.library.wisc.edu/1711.dl/A5BAB4H4GQCAD8F>.
- Lockwood, Michael. 2007. *Basic Tamil verb tables*. Madras: Tambaram Research Associates.
- Lødrup, Helge. 2022. The grammatical realization of the long passive in Norwegian. In Miriam Butt, Jamie Findlay & Ida Toivonen (eds.), *Proceedings of the LFG'22 Conference*, 222–244. <https://lfg-proceedings.org/lfg/index.php/main/article/view/2/9>.
- Morimoto, Yukiko. 2002. Prominence mismatches and differential object marking in Bantu. In Miriam Butt & Tracy Holloway King (eds.), *Proceedings of the LFG'02 Conference*, 292–314. Stanford: CSLI. <https://typo.uni-konstanz.de/lfg-proceedings/LFGprocCSLI/LFG2002/pdfs/lfg02morimoto-num.pdf>.
- Nurse, Paul. 2020. *What is life? Understanding biology in five steps*. Penguin and David Fickling Books.
- Opfer, John E. & Susan A. Gelman. 2010. Development of the animate–inanimate distinction. In Usha Goswami (ed.), *The Wiley-Blackwell handbook of childhood cognitive development* (2nd edn.), Wiley-Blackwell. <https://doi.org/10.1002/9781444325485.ch8>.

- Ramasubramoney, Anusha. 2019. Number and honorificity in spoken Tamil. Unpublished manuscript, Mumbai University.
- Santazilia, Ekaitz. 2023. *Animacy and inflectional morphology across languages*. Brill.
- Sarveswaran, Kengatharaiyer. 2024. Morphology and syntax of the Tamil language <https://doi.org/10.48550/arXiv.2401.08367>. Preprint arXiv:2401.08367.
- Schiffman, Harold F. 1999. *A reference grammar of spoken Tamil*. Cambridge University Press.
- Schiffman, Harold F. 2004. The Tamil case system. In Jean-Luc Chevillard & Eva Wilden (eds.), *South-Indian horizons*, 295–305. Institut Français de Pondichéry. <https://doi.org/10.4000/books.ifp.7736>.
- Silverstein, Michael. 1976. Hierarchy of features and ergativity. In Richard Dixon (ed.), *Grammatical categories in Australian languages*, 112–172. Canberra: Australian Institute of Aboriginal Studies.
- Toivonen, Ida. 2023. Pronoun incorporation. In Mary Dalrymple (ed.), *The handbook of Lexical Functional Grammar*, 563–601. Berlin: Language Science Press. <https://doi.org/10.5281/zenodo.10185960>.
- Toivonen, Ida. Forthcoming. The tripartite distinction between grammar, cognition and the world. Draft.
- Trompenaars, Thijs, Teresa Angelina Kaluge, Rezvan Sarabi & Peter de Swart. 2021. Cognitive animacy and its relation to linguistic animacy: evidence from Japanese and Persian. *Language Sciences* 86. 1–17. <https://doi.org/10.1016/j.langsci.2021.101399>.
- Yamamoto, Mutsumi. 1999. *Animacy and reference: a cognitive approach to corpus linguistics*. Amsterdam/Philadelphia: John Benjamins. <https://doi.org/10.1075/slcs.46>.