

Marco García García\*, Beatrice Primus  
and Nikolaus P. Himmelmann

## Shifting from animacy to agentivity

<https://doi.org/10.1515/tl-2018-0002>

The target article argues for a need to distinguish between covert and overt (ly marked) shifts in animacy and claims that understanding these shifts allows for “a deeper understanding of animacy and its effects on language” (abstract target article).<sup>1</sup> The paper certainly contains a number of interesting observations regarding these shifts, as well as about the relationship between conceptual and grammatical animacy. However, we are not convinced that the kind of animacy shifts discussed in the paper really get us to the core of the role of animacy in grammar. Instead, we argue that animacy-related constraints in grammar reflect the fact that animate beings (and, as we will see, some inanimate ones as well) are potential agents. Hence, such constraints are best understood in terms of semantic-role-related features such as sentience and autonomous motion, i.e. an analysis based on semantic roles. The possibility of such an analysis is also mentioned in the target article (in the last sentence of Section 5), but considered to apply only in a few marginal instances. We would hold, on the contrary, that a semantic-role-based analysis covers the most frequent and typical examples of animacy-related constraints, or at least in those instances where animacy appears to be relevant for the coding of argument structure, of which Differential Object Marking (DOM) is a prime example. Our comments will be restricted to DOM examples, acknowledging that the target article also deals with a few other example types mostly taken from Aristar (1997).

---

**1** Abbreviations used in this paper: 1, 2, 3: first, second, third person; ART: article; DAT: dative; DOM: differential object marking/marker; ERG: ergative; F: feminine; INDF: indefinite; INF: infinitive; IPFV: imperfective; NOM: nominative; OBJ: object; PL: plural; POSS: possessive; PST: past; SG: singular.

---

**\*Corresponding author: Marco García García**, Romance Department, University of Cologne, Albertus-Magnus-Platz, D-50923 Cologne, Germany, E-mail: marco.garcia@uni-koeln.de  
**Beatrice Primus**, Institute for German Language and Literature, University of Cologne, Albertus-Magnus-Platz, D-50923 Cologne, Germany, E-mail: primus@uni-koeln.de  
**Nikolaus P. Himmelmann**, Department of Linguistics, University of Cologne, Albertus-Magnus-Platz, D-50923 Cologne, Germany, E-mail: sprachwissenschaft@uni-koeln.de

To begin with, we would like to point out that animacy shifts in fairy tales, as mentioned for Malayalam (introduction), and in personifications, as in the Spanish example (4) below, are not convincing evidence for the central role of animacy in grammar because they do not obey specific grammatical or semantic constraints (some pragmatic generalizations may be possible). Fictional and figurative use of language may deviate from the rules of ‘ordinary’ (i.e. nonfictional or nonfigurative) language in various ways (cf. Thorne 1988; Zwaan 1994). Semantics, in particular, enjoys much freedom (see also the ‘toothbrush’ example in the target article). Figurative usage is a pervasive phenomenon in language, applying to a multitude of phenomena, and not something that is specific to animacy. And, when animacy shifts occur in figurative speech, they apply to a broad range of phenomena, including, for example, the choice of pronouns (e.g. referring to a car as ‘she’). Inasmuch as context-based associations suffice to license such shifts, there is no need to invoke grammatical machinery such as selectional restrictions to explain them (as the authors do for the ‘toothbrush’ example in section 3).

Turning to DOM, the first major problem of the shift approach pertains to instances where DOM occurs with inanimates without there being an animacy shift. This is a highly systematic phenomenon, as can be illustrated for both Malayalam and Spanish, two of the three DOM languages discussed in the target article. DOM with inanimates is first discussed for Malayalam in the target article as follows:

Take for example Malayalam, which is considered a one-dimensional differential object marking language, in which all and only animate objects are assigned accusative case (Aissen 2003). Egger (2016) found that speakers of Malayalam in fact use accusative case-marking on inanimate objects when these are characters in a fairy-tale. We hypothesize that in the absence of such a fairy-tale context, the use of an accusative case-marker on an inanimate object could itself elicit such an interpretation in the sense that an inanimate entity is conceptualized as animate. (p. 2)

Indeed, the accusative markers do occur on inanimate objects, but, importantly, they usually do not trigger a shift in animacy. According to Asher and Kumari (1997) and two experts consulted by us,<sup>2</sup> direct objects of transitive verbs are obligatorily marked with the case suffix *-e* if they are human. This also holds for most, but not all animates. The selection of this object marker is also influenced by definiteness. In addition, when both arguments are

---

<sup>2</sup> We are very grateful to Thomas Anzenhofer and Jana Koshy for help with the Malayalam data.

inanimate, it is possible to mark the inanimate object in some circumstances, as shown in (1a, b) by examples from Asher and Kumari (1997: 204).

- (1) a. *Kappal tiramaalaka]-e bheediccu.*  
 ship waves-OBJ split.PST  
 ‘(The) ship broke through (the) waves.’  
 b. *Tiramaalaka] kappal-ine bheediccu.*  
 waves ship-OBJ split.PST  
 ‘(The) waves split (the) ship.’

Our claim is that the pattern illustrated in (1a, b) is typical for DOM with inanimates in ‘ordinary’ Malayalam language (as well as in Spanish, as will be shown below). We cannot identify an animacy-related shift in such instances. The nominal referents, as well as the selectional restrictions of the verb, can be taken literally, i.e. as inanimates. Instead of assuming a type shift that reconceptualizes ships and waves as animates in (1a, b), we suggest that the role-dependent hypothesis for DOM given in (2) is better suited to explaining these and a large variety of related examples:

- (2) Role-dependent DOM: A differential object marker is licensed by an object qualifying as a minimal or potential proto-agent in a given event. The proto-agent properties may either be subcategorized by the verb or assigned according to intrinsic properties of the object referent (cf. Primus 2012: 81; García García 2007: 71, García García 2014: 145).

The semantic-role account of DOM formulated in (2) is based on Dowty’s proto-role approach. In this kind of approach, semantic roles are viewed as a cluster of non-mutually exclusive and interacting features (entailments in Dowty’s work) which are determined for each argument with respect to a given verbal predicate. The proto-agent features proposed in Dowty (1991) are volition, causation, autonomous (i.e. self-propelled) movement, and sentience. Further properties such as possession may also be included (e.g. Primus 2012) without changing the logic of this kind of proposal.

Importantly for our discussion, four of the five agentivity features just mentioned imply, or at least strongly favor, the animacy of the participant exhibiting them: volition, autonomous movement, sentience and possession. By contrast, none of the proto-patient properties (e.g. causally affected or change of state) are related to the animacy of the participant to which they apply. Animacy and agentivity are assumed to be independent but interacting notions (the details of the interaction still in need of being properly worked out). Other proposals using a

set of agentive features (e.g. Cruse 1973; Lakoff 1977; Haiden 2012) or agentive microroles (Van Valin and Wilkins 1996; Van Valin and LaPolla 1997) are also well equipped, in principle, to capture the close relation between animacy and agentivity. All such proposals offer a good starting point for comparing the treatment of DOM in terms of animacy with an explanation in terms of agentivity.

With this in mind, let us return to Malayalam. With the verb *bheediccu* ‘split’ in (1a, b), both the ship and the waves have properties of a potential agent in the event described by the predicate. They are inanimate entities with their own source of energy that enables them to cause the splitting of the other. In Dowty’s terms, both ship and waves may act as autonomous movers and causers of the event denoted by the predicate *bheediccu* ‘split’. This situation licenses a differential object marker, as stated in (2) above.

In the next pair of examples (3a, b), from Asher and Kumari (1997: 204), only the subject referent is capable of causing the respective event:

- (3) a. *Tiiyyə kuṭil naḥippiccu.*  
       fire hut destroy.PST  
       ‘Fire destroyed (the) hut.’  
    b. *Veḷḷam tiiyyə keṭutti.*  
       water fire extinguish.PST  
       ‘Water extinguished (the) fire.’

A fire may cause the destruction of a hut and water may cause the extinction of a fire, but the reverse is not true (fire cannot extinguish water, nor can a hut destroy fire). The objects in (3a, b) lack the properties of a potential agent in the event denoted by the predicate. As a consequence, they do not license the DOM marker (unless interpreted as definite, however, in which case they may do so). In short, DOM with inanimates in ordinary (nonfictional) Malayalam discourse can be captured by agentivity features on the level of literal meaning more adequately than by assuming an animacy shift to be at work.

Apart from the empirical problems with which it is confronted, the shift approach also runs into theoretical problems. While being somewhat ambivalent as to what is considered overt marking and what is not, the target article appears to revive the idea that animacy *per se* needs marking. However, this extra marking is puzzling in light of the view, quoted at the beginning of the target article in (it seems to us) approving terms, that “it is redundant to mark animacy *per se* (as it is clear from the lexical content of the nominal in question)” (Malchukov 2008: 210), a view that we certainly share. If taken seriously, DOM facts, then, cannot be explained simply with reference to animacy distinctions, whether shifted or not. The semantic-role approach, on the other hand, holds that what triggers the extra

marking seen in DOM constructions are constellations in which two core arguments are both ‘qualified’ to participate as proto-agents in the event being expressed. The Malayalam examples in (1a, b) and (3a, b) already provided a brief illustration of this basic idea. In the following, we give a fuller illustration of the range of phenomena it can account for with DOM examples from Spanish.

As is well known, DOM in Spanish is mainly restricted to animates, more precisely to humans (cf. Laca 2006: 442; García García in press: 220). In some cases, however, DOM is also found with inanimate objects. One case in point is the example in (4), also cited in the target article:

- (4) *Llam-ó a la muerte.*  
 call-3SG.PST DOM the death  
 ‘S/he called out to Death.’

We agree with the authors that there is indeed an animacy shift in (4), more precisely a personification of the abstract referent *muerte* ‘death’. However, we will show that this is a rather marginal case of DOM with inanimate objects. More importantly, we will argue that animacy shifts do not allow for a straightforward explanation of DOM, in particular in combination with the verb *llamar* ‘to call’. First of all, it is important to be clear on the fact that *llamar* has at least three meanings (see Table 1).

**Table 1:** *llamar* and DOM with inanimate objects (adapted from García García 2014: 103).

		DO	a DO
<i>llamar</i> <sub>1</sub>	‘to call, to name’	0% (0/24)	100% (24/24)
Object and predicative NP adjacent			
Object and predicative NP not adjacent		79% (83/105)	21% (21/105)
<i>llamar</i> <sub>2</sub>	‘to call’	17% (1/6)	83% (5/6)
<i>llamar</i> <sub>3</sub> <i>la atención</i>	‘to call attention to’	100% (55/55)	0% (0/55)
Total		73% (139/190)	27% (51/190)

Table 1 shows the distribution of DOM with inanimate objects in combination with *llamar* according to three different verb meanings. The results are from a corpus analysis based on the *Base de Datos de Verbos, Alternancias de Diátesis y Esquemas Sintáctico-Semánticos del Español* (ADESSE), an open source database of 1.5 million words.<sup>3</sup> These results allow for a number of observations: First, the

<sup>3</sup> For details see <http://adesse.uvigo.es/index.php/>.

vast majority of cases showing DOM with inanimates are attested in combination with *llamar<sub>1</sub>*, i.e. in double object constructions such as in (5):

- (5) a. *llam-ar a una silla silla, chaise o Stuhl*  
 call-INF DOM INDF.ART chair chair, chaise or Stuhl  
*constituy-e otr-a-s tant-a-s convencion-es*  
 constitute-3SG other-F-PL several-F-PL convention-PL  
 ‘To name a chair “chair”, “chaise” or “Stuhl” constitutes a number of further conventions.’
- b. *aquell-a choza pequeñ-ísim-a que Juana llam-aba su casa*  
 that-F hut small-SUPER-F that Juana call-IPFV[3SG] POSS home  
 ‘This tiny little hut that Juana called her home.’  
 (García García 2014: 102)

Note that when the direct object and the predicative noun phrase (NP) are adjacent, as in (5a), DOM is categorical. This suggests that DOM is triggered by syntactic factors that might be motivated by ambiguity avoidance between the object and the predicative NP. Crucially, these frequent and categorical cases of DOM with inanimate objects do not involve any animacy shift.

Second, Table 1 shows that *llamar<sub>2</sub>*, which corresponds to the use of this verb in (4), is rather rare. While the database shows a total of 45 tokens of *llamar<sub>1</sub>* with DOM, including adjacent and nonadjacent serializations of the object and the predicative NP, there are only five tokens of DOM with *llamar<sub>2</sub>*. Although in some of the relevant examples DOM can be correlated with a (metonymic or metaphorical) shift in animacy, there are also clear cases where no animacy shift occurs, (6) being a typical example.

- (6) *¡Hans, puñeta, llam-a al ascensor!*  
 Hans, damn, call-3SG DOM.the elevator  
 ‘Hans, damn, call the elevator!’  
 (García García 2014: 189)

While it is not possible to explain the occurrence of DOM in (6) with reference to an animacy shift, the role-semantic generalization in (2) allows for a straightforward account. *Llamar<sub>2</sub>* selects for an object argument that must be able to show an appropriate reaction to the calling event. Such a reaction presupposes some kind of perception (in a broad sense) and a subsequent physical response, such as the goal-oriented movement of the object referent. Put differently, *llamar<sub>2</sub>* requires an object with a small number of proto-agent properties, namely perception and movement. Typically, these requirements

are fulfilled by humans and higher animals. However, as shown in (6), at least some kinds of inanimate referents, such as machines and vehicles, can also serve this function, an issue that we will elaborate in greater detail below. As a consequence, the inanimate object *ascensor* ‘elevator’ is marked with DOM.

An explanation along similar lines can also be given with respect to the example in (4) *llama a la muerte* ‘(s)he called out to Death’, showing how the role-semantic approach also sheds light on the distribution of animacy shifts. As in (6), *llamar*<sub>2</sub> in (4) selects as the object argument a minimal proto-agent including at least some kind of perception. According to (2), the object hence requires DOM. However, in contrast to an elevator, it is hard to conceive of an abstract referent such as ‘death’ being able to show the appropriate reaction to the calling event. Therefore, the animacy of the object must be shifted. This account predicts that animacy shifts such as in (4) only arise in cases where the inanimate object cannot be associated – in its literal meaning – with the minimal proto-agent properties selected by the predicate, a hypothesis that certainly requires much further scrutiny.

Note that the notion of animacy shift alone does not suffice to explain the interpretation of the kind of personifications seen in (4). A plausible interpretation of the personification in (4) is that the subject referent calls for death to come. This reading cannot be captured by simply shifting the semantic type of ‘death’, plausibly classified in its literal meaning as an abstract entity or an event, to the logical-semantic type human. The semantic-type human (or person) has a multitude of properties that are totally irrelevant for the reading at hand. By contrast, the semantic role features entailed by *llamar*<sub>2</sub> guide the interpretation towards the relevant properties of the arguments in the situation denoted by the verb, i.e. to react to the call in an appropriate way.

A final observation to be drawn on the basis of Table 1 is that *llamar* is also commonly used as part of the light verb construction *llamar*<sub>3</sub> *la atención* ‘to call attention to’. In these cases, the inanimate direct object does not function as a proper participant of the denoted event. Consequently, it cannot function as a (potential) agent, and will thus never receive DOM.

Summing up the discussion of DOM with *llamar*, it can be concluded that animacy shifts are neither a necessary nor a very frequent condition for DOM when this verb occurs with inanimate objects. The role-semantic generalization in (2), on the other hand, allows us to account for both cases of DOM: those involving an animacy shift, such as (4), and those that do not, such as (6).

DOM with inanimates, such as the elevator in (6), are illuminating in yet another respect. The authors of the target article argue in favor of animacy as an ontological category, with human, animate and inanimate entities representing discrete subtypes in the domain of entities. They are well aware that more

subtypes are needed, and they therefore dissociate conceptual animacy, which is assumed to be a gradient notion, from grammatical animacy, which they claim to be organized in discrete, binary oppositions. Vehicles and machines, including elevators, form an intermediate class between human and inanimate on a more elaborate animacy hierarchy (cf. Zaenen et al. 2004). However, how can one explain why vehicles and machines, despite being biologically inanimate, occupy a relatively high position on the animacy hierarchy, “be it on a hierarchy that is gradient or hierarchically structured by several binary oppositions?” The notion of shifting animacy has no explanation to offer in this regard, at least as far as we are able to discern.

By contrast, a semantic-role account explains their human-like behavior as follows: Elevators, along with even simpler devices such as thermostats, have a sensor system registering pertinent changes in their environment (e.g. an electric signal for elevators and a change in temperature for thermostats) and are able to act without direct human intervention in response to such changes (cf. Tomasello et al. 2005). In Dowty’s terms, they have the agentive features of sentience and autonomous movement relative to a specific type of event. It is no coincidence that artifacts with such properties are called “artificial agents” or “intelligent agents” in the domain of Artificial Intelligence (e.g. Russell and Norvig 2003). Other artifacts such as ships, as well as natural forces such as waves, wind and fire mentioned in connection with the Malayalam examples in (1) and (3) above, lack a sensor system but have their own source of energy which enables them to perform certain actions independently of human intervention. One of the differences to human agents is that artificial agents and natural forces are only capable of a limited number of specific actions, a restriction that human agents do not have. Due to their restricted range of action, artificial agents and natural forces do not constitute a uniform type: each acts in its own specific way. Elevators, for example, move autonomously in a fixed way as a reaction to calling them by pressing a button (leaving more intelligent elevators aside), but they are not able to move in different ways, e.g. to crawl, strut or jog, as humans do. Put differently, *the elevator is crawling* involves a meaning shift, *the elevator is coming* does not. In sum, an additional slot – or several additional slots – on the animacy hierarchy will not suffice to explain under which circumstances and in what ways certain inanimates are similar to humans.

The advantages of the role-semantic approach become even more evident with respect to the second type of examples of DOM with inanimate objects that the authors provide in the target article, including the one in (7).



- (7) *En esta receta la leche puede sustituir al huevo.*  
 In this recipe the milk can.3SG replace DOM.the egg  
 ‘In this recipe, milk can replace the egg.’

Here, the inanimate object *al huevo* ‘the egg’ must be case marked although – once again – there is no accompanying shift in animacy. As admitted by the authors, this type of data does not fit their shifting approach. Arguing that such cases differ with respect to both canonical cases of DOM with animate objects and cases of DOM involving animacy shifts, they mention an alternative approach involving semantic roles and the distinguishing function of case marking. An explanation along these lines has been elaborated in Weissenrieder (1991), García García (2007; 2014) and Primus (2012).

One of the basic insights of this alternative explanation, which in our view applies to all instances of DOM whether or not they involve animate objects or animacy shifts, is that DOM with inanimate objects is generally restricted to a small number of verb classes, including verbs of replacement such as *sustituir* ‘to replace’, and verbs of sequencing such as *preceder* ‘to precede’. These types of verbs can be subsumed under the more abstract class of reversible predicates, since they both point to a reversible relation between their co-arguments. This can be illustrated with respect to (7), which certainly does not encode an asymmetric substitution event in which the milk and the egg function as the respective proto-agent and proto-patient arguments. Rather, the milk and the egg are conceived of as replaceable ingredients. Note that (7) entails neither proper causation on the part of the subject referent with respect to the object referent nor proper affectedness on the part of the object referent. In line with the role-semantic generalization in (2), DOM in (7) can be motivated by assuming that the direct object *the egg* acts as a potential proto-agent (cf. Primus 2012: 78). As the verb *sustituir* ‘to replace’ does not specify in which sense the milk is involved instead of the egg, it is not possible to determine the proto-agent entailments for these arguments out of context. However, a plausible interpretation is that the milk and the egg serve equivalent causal functions: They can both be used to cause a specific change of state concerning the taste, consistency, fat or protein content, or some other characteristic property of the food in question. Thus, the milk and the egg allow for a natural interpretation as potential proto-agents involving the property of causing a change of state in another implicit participant (the food being prepared).

It is important to note that DOM with reversible predications such as in (7) constitutes a highly systematic and predictable phenomenon (cf. García García

2014: Ch. 6.2; Delbecque 2002: 114). Apparently, such cases also present a diachronically stable pattern of DOM (cf. the analysis of *preceder* ‘to precede’ and *seguir* ‘follow’ in García García in press: 230, as well as the diachronic observations concerning reciprocal constructions of the type *estas hipótesis se excluyen la una a la otra* ‘these hypotheses exclude each other’ in Müller 1971: 508). Thus, we are not dealing with exceptional, but rather core cases of DOM with inanimate objects (cf. Kabatek 2016). It goes without saying that the absence of an animacy shift in a reversible predication such as in (7) is no coincidence. Although animacy shifts are clearly not incompatible with such predications, they are neither necessary nor very frequent.

The insights into DOM with inanimate objects and its explanation within a role-semantic approach have also been extended to the canonical domain of animate objects (cf. Primus 2012; García García 2014; Kabatek 2016). Let us briefly illustrate how our role-semantic generalization in (2) can account for such cases on the basis of the following minimal pair, which is also referred to in the target article.

- (8) *Conozco \*a/∅ esta película.*  
 know.1SG \*DOM/∅ this film  
 ‘I know this film.’
- (9) *Conozco a/\*∅ este actor.*  
 know.1SG DOM/\*∅ this actor  
 ‘I know this actor.’

In both of these events, the direct objects function as respective proto-patient arguments. However, while the inanimate object *esta película* ‘this film’ in (8) is restricted to this role-semantic function, the human object *este actor* ‘this actor’ in (9) also qualifies as a potential proto-agent. Part of the meaning of ‘actor’ is that it denotes a human being capable of knowing something or somebody. This involves the proto-agent property of sentience and, as a consequence, the actor might also know the subject referent. This is actually a very natural interpretation when the verb *conocer* ‘to know’ is uttered in a perfective tense, as in *conocí a este actor* ‘I got to know this actor’. That is, with a human object *conocer* suggests a reciprocal state of affairs between two participants becoming or being acquainted with each other. In this way, the human object *este actor* ‘this actor’ qualifies as a potential proto-agent and thereby licenses DOM in (9). In contrast, the inanimate object *esta película* ‘this film’ in (8) does not allow for an interpretation as a potential proto-agent. DOM is therefore not licensed in this case.

This concludes our discussion of the theoretical problem whereby the shift approach appears to contradict the widely held view that animacy *per se* does not need overt marking. Specifically, the shift approach appears to be unable to account for the full range of facts relating to DOM in a cross-linguistic perspective. The role-semantic approach, on the other hand, offers a straightforward and comprehensive account for DOM with inanimate objects, including cases with and without animacy shifts, as well as DOM with animate objects. We will now turn to a second theoretical problem raised by the shift approach: its heavy reliance on selectional restrictions, conceived of as nominal features that verbs subcategorize for (cf. Asher 2014 for a recent type-theoretical proposal).

It is here that there is perhaps the most direct conflict between the shift approach and the semantic-role approach espoused by the current commentators. Historically speaking, semantic roles were part of a more encompassing move to eliminate noun-based selectional restrictions from the grammar of verbs. To include animacy among such selectional restrictions dates back to the mid-1960s (e.g. Katz and Fodor 1963; Katz and Postal 1964; Chomsky 1965). In Chomsky (1965), for instance, the relevant feature list includes [+Count], [+Animate], [+Human], [+Abstract]. Thus, for example, the lexical item *frighten* would be lexically marked “as allowing an Abstract Subject and an Animate Object” (Chomsky 1965: 114). This is also the analysis of the object of the semantically similar verb *scare* offered in the target article (section 3).

However, the importance of animacy considerations in selectional restrictions is better understood if we move from noun-based selectional features to semantic-role-based features (cf. Dahl 2008: 145). Following the seminal paper by Fillmore (1968), the assumption that verbs impose semantic role restrictions on their arguments has gained ground. Subsequently, verbs such as *frighten* and *scare* have been analyzed as selecting an object experiencer (e.g. Perlmutter 1979; Croft 1993; Dowty 1991). Since the experiencer role and, more specifically, sentience as its defining feature can only be fulfilled by animate beings, animacy information need no longer be specified as a selectional restriction for these verbs.

Replacing animacy with sentience in the lexical entry of these verbs eliminates some of the substantial disadvantages of older conceptualizations of selectional restrictions. First, the feature [+Animate] is too broad and cannot separate animate object verbs into distinct, grammatically relevant subclasses. Besides psychological predicates such as *frighten* and *scare*, there are communication verbs such as *nominate* and *acclaim*, interactional verbs such as *help* and *assist*, and diverse others such as *kill* and *envy*. The abovementioned psychological predicates belong to a class of verbs with specific semantic and syntactic properties that are not shared by the other animate-object verbs (e.g.

Perlmutter 1979; Dowty 1991). This subclass of verbs can be characterized as verbs that select a stimulus subject and an experiencer object. Second, the semantic role feature sentience may be used to delimit grammatical commonalities across subclasses of verbs. Thus, for example, the experiencer tends to precede the stimulus with non-causative psychological verbs (cf. oblique experiencers in German: *dem Kind gefällt das Buch* ‘the child (DAT) likes the book (NOM)’, as well as with ditransitive verbs such as *show the child the picture* or *tell the boy the story*). In sum, semantic-role-based features enable us to subclassify verbs into grammatically relevant subclasses and to capture commonalities across subclasses of verbs. Selectional restrictions are either too broad, e.g. [+Animate], or too narrow, e.g. [+Fluid] for *drink*, for this purpose.

Another important advantage of semantic role features such as sentience in comparison to animacy as a selectional restriction is that they figure prominently in general argument-coding principles, which are the backbone of semantic role theories starting with Fillmore’s (1968) *Subject Selection Principle*. This point can be illustrated with a specific pattern of DOM that occurs with a restricted class of contact verbs such as *hit*, *bite* and *kick* in Dutch and other Germanic languages, and that also play a very prominent role in the target article. With these verbs, animate arguments are coded as direct objects but inanimate ones as prepositional objects, as shown in (10) and (11):

(10) *De hond beet de man.*  
 the dog bit the man  
 ‘The dog bit the man.’

(11) *De hond beet in het brood.*  
 the dog bit in the bread  
 ‘The dog bit the bread.’

According to De Swart (2014) and the target article (introduction), the preposition signals a shift in the selectional restrictions of the verb, making it compatible with inanimate arguments. Overt marking in this case – and here we fully agree with the authors – changes the verbal semantics: ‘bite into something’ is different from ‘bite someone’. But in this type of example, animacy seems to be only an epiphenomenon of the semantic role feature sentience. The target article appears to agree with this assessment when, referring to De Swart (2014), it observes (p. 2): “These verbs take animate arguments as direct objects but inanimate ones as prepositional objects, due to an implication of sentience (hence, animacy) on behalf of the undergoer argument of these verbs.”

The advantage of sentience as a semantic role notion in comparison to animacy as a noun-based selectional restriction is evident from de Swart's (2014: 446) explanation for this alternation, which builds on the Paradigmatic Argument Selection Principle from Ackerman and Moore (2001):

Following Ackerman and Moore's (2001) approach to argument encoding alternations based on Dowty's (1991) Proto-Roles proposal for thematic roles, I claim Dutch DOM to be of a paradigmatic nature. This means that the encoding alternation under discussion is not driven by a need to distinguish the subject from the object, as in syntagmatic DOM, but that it is used to signal a thematic difference between two groups of objects, that of animate and inanimate ones. Crucially, animate, but not inanimate, undergoers exhibit the property of sentience, an argument entailment shown to be associated with physical contact verbs in Dutch. As a result, inanimates show a lower number of Proto-Properties and hence, in line with the Paradigmatic Argument Selection Principle of Ackerman and Moore (2001), receive a more oblique (prepositional) encoding. (De Swart 2014: 446)

We are not aware of an approach that makes use of the traditional noun-based selectional restrictions that would be able to provide an equally precise explanation of the alternation observed in the above example pair.

In conclusion, the authors argue in favor of animacy as a fundamental concept in grammar and cognition, referring inter alia to Dahl's (2008) influential paper on animacy. In this paper, Dahl argues for introducing PERSON as an ontological category, an idea that is further elaborated in the target article within type-theoretical semantics. However, under closer scrutiny, it is clear that, in line with the argument developed here, Dahl takes agentivity to be the aspect of animacy that is crucial for grammar. For Dahl, animacy principally pertains to the distinction between "persons, that is, essentially human beings perceived as agents, and the rest of the universe [...] Indeed, the notion of "personhood" seems to embody what is quintessential to animate beings, both the roles as agent and experiencer, and the focus on the individual" (Dahl 2008: 145–146). Grammatical manifestations of animacy are thus expected to be sensitive to specific agentivity-related features, rather than to shifts in animacy.

## References

- Ackerman, Farrell & John Moore. 2001. *Proto-properties and grammatical encoding: A correspondence theory of argument selection*. Stanford: CSLI Publications.
- Aissen, Judith. 2003. Differential object marking: Iconicity vs. economy. *Natural Language and Linguistic Theory* 21. 435–483.
- Aristar, Anthony R. 1997. Marking and hierarchy: Types and the grammaticalization of case-markers. *Studies in Language* 21. 313–368.

- Asher, Nicholas. 2014. Selectional restrictions, types and categories. *Journal of Applied Logic* 12. 75–87.
- Asher, Ronald E. & T.C. Kumari. 1997. *Malayalam*. London/New York: Routledge.
- Chomsky, Noam. 1965. *Aspects of the theory of syntax*. Cambridge, MA: MIT Press.
- Croft, William. 1993. Case marking and the semantics of mental verbs. In J. Pustejovsky (ed.), *Semantics and the Lexicon*, 55–72. Dordrecht: Kluwer.
- Cruse, Donald A. 1973. Some thoughts on agentivity. *Journal of Linguistics* 9. 11–23.
- Dahl, Östen. 2008. Animacy and egophoricity: Grammar, ontology and phylogeny. *Lingua* 118. 141–150.
- Delbecque, Nicole. 2002. A construction grammar approach to transitivity in Spanish. In K. Davidse & B. Lamiroy (eds.), *The nominative & accusative and their counterparts*, 81–130. Amsterdam: John Benjamins.
- Dowty, David R. 1991. Thematic proto-roles and argument selection. *Language* 67. 547–619.
- Egger, Julia. 2016. Asking the magic mirror: Fairytales and animacy in Malayalam. Unpublished term paper, Radboud University Nijmegen.
- Fillmore, Charles J. 1968. The case for case. In E. Bach & R. T. Harms (eds.), *Universals in linguistic theory*, 1–90. New York: Holt, Rinehart & Winston.
- García García, Marco. 2007. Differential object marking with inanimate objects. In G. A. Kaiser & M. Leonetti (eds.), *Proceedings of the Workshop “Definiteness, specificity and animacy in Ibero-Romance Languages”* (Arbeitspapier des Fachbereichs Sprachwissenschaft 122), 63–84. Konstanz: Universität Konstanz.
- García García, Marco. 2014. *Differentielle Objektmarkierung bei unbelebten Objekten im Spanischen*. Berlin: de Gruyter.
- García García, Marco. in press. Nominal and verbal parameters in the diachrony of DOM in Spanish. In I. A. Seržant & A. Witzlack-Makarevich (eds.), *Diachrony of differential argument marking*, 207–239. Berlin: Language Science Press.
- Haiden, Martin. 2012. The content of semantic roles: Predicate-argument structure in language and cognition. In M. Everaert et al. (eds.), *The theta system: Argument structure at the interface*, 52–77. Oxford: Oxford University Press.
- Kabatek, Johannes. 2016. Wohin strebt die differentielle Objektmarkierung im Spanischen? *Romanistisches Jahrbuch* 67. 211–239.
- Katz, Jerrold J. & Jerry A. Fodor. 1963. The structure of a semantic theory. *Language* 2. 170–210.
- Katz, Jerrold J. & Paul M. Postal. 1964. *An integrated theory of linguistic descriptions*. Cambridge, MA: MIT Press.
- Laca, Brenda. 2006. El objeto directo. La marcación preposicional. In C. Company (ed.), *Sintaxis histórica de la lengua española. Primera parte: La frase verbal*, 423–475. México, D.F.: Universidad Nacional de México.
- Lakoff, George. 1977. Linguistic gestalts. *Papers from the 13th Regional Meeting of the Chicago Linguistic Society*, 236–287.
- Malchukov, Andrej. 2008. Animacy and asymmetries in differential case marking. *Lingua* 118. 203–221.
- Müller, Bodo. 1971. Das morphemmarkierte Satzobjekt der romanischen Sprachen (Der sogenannte präpositionale Akkusativ). *Zeitschrift für romanische Philologie* 87. 477–519.
- Perlmutter, David M. 1979. Working 1s and inversion in Italian, Japanese and Quechua. *Proceedings of the 5th Annual Meeting of the Berkeley Linguistic Society*, 277–324.

- Primus, Beatrice. 2012. Animacy, generalized semantic roles and differential object marking. In M. Lamers & P. de Swart (eds.), *Case, word order, and prominence: Interacting cues in language production and comprehension*, 65–90. Dordrecht: Springer.
- Russell, Stuart J. & Peter Norvig. 2003. *Artificial intelligence: A modern approach*. Upper Saddle River, New Jersey: Prentice Hall.
- de Swart, Peter. 2014. Prepositional inanimates in Dutch: A paradigmatic case of differential object marking. *Linguistics* 52. 445–468.
- Thorne, James. 1988. “What is a poem?” in the taming of the text. In W. Van Peer (ed.), *Explorations in language, literature and culture*, 280–291. London: Routledge.
- Tomasello, Michael, Malinda Carpenter, Josep Call, Tanya Behne & Henrike Mol. 2005. Understanding and sharing intentions: The origins of cultural cognition. *Behavioral and Brain Sciences* 28. 675–691.
- Van Valin, Robert D. & Randy LaPolla. 1997. *Syntax. Structure, meaning and function*. Cambridge: Cambridge University Press.
- Van Valin, Robert D. & Wendy Wilkins. 1996. The case for ‘effector’: Case roles, agents, and agency revisited. In M. Shibatani & S. A. Thompson (eds.), *Grammatical constructions: Their form and meaning*, 289–322. Oxford: Clarendon.
- Weissenrieder, Maureen. 1991. A functional approach to the accusative *a*. *Hispania* 74. 146–156.
- Zaenen, Annie, Jean Carletta, Gregory Garretson, Joan Bresnan, Andrew Koontz-Garboden, Tatiana Nikitina, M. Catherine O’Connor & Tom Wasow. 2004. Animacy encoding in English: Why and how. In D. Byron & B. Webber (eds.), *Proceedings of the ACL workshop on discourse annotation*, 118–125. Barcelona: Association for Computational Linguistics.
- Zwaan, Rolf A. 1994. Effect of genre expectations on text comprehension. *Journal of Experimental Psychology: Learning, Memory and Cognition* 20. 920–933.