5.6 Gender and Animacy

Abstract

The animacy hierarchy is a multidimensional scale sensitive to shape, agency, movement, and individuation. Distinctions are made at many points along this hierarchy in Slavonic languages: virile (male human), human, and animate. This is achieved primarily by Genitive-Accusative case marking, though other grammatical environments may also be involved. Historically, animacy in Slavonic has recruited Genitive marking associated with pronouns and perception verbs, and additionally fed on morphology recycled from u-stems and the dual number. All Slavonic languages that retain declension also display facultative animacy: the marking of inanimate objects with animate morphology, and there is variation in how animate morphology is applied to some items. Animacy has been approached via feature analysis, differential object marking, prototypicality, and psycholinguistic methods.

Keywords: animacy hierarchy, virility, facultative animacy, morphology, u-stem, dual number

5.6.1 What is animacy?

We begin with a broad definition of animacy before turning to the facts of animacy in relation to the Slavonic languages and theoretical approaches to the study of animacy.

From the perspective of linguistics, animacy includes any phenomenon that makes a distinction among referents on a scale starting at the top with the speaker and human beings like the speaker, followed by animals, with plants and concrete objects further down, and ending in substances and abstractions (cf. Janda 1996a, Dahl 2008). We can loosely refer to this scale as the ‘animacy hierarchy’ (cf. Silverstein 1976), so long as we bear in mind several caveats. These caveats pertain to cross-linguistic variation, multidimensionality, and scalar effects observed with respect to animacy.

The first caveat is that there is no single universal animacy hierarchy, since languages differ in how distinctions are arranged along this scale. Even within the Slavonic language family there is ample evidence of cross-linguistic variation in the articulation of animacy, as described in 5.6.2.1.

The second caveat is that the ‘animacy hierarchy’ (whether taken as an abstraction or with respect to a given language) is not a simple one-dimensional scale. Animacy is not a specific characteristic of referents, but rather a bundle of interacting perceptions that typically include overall shape, agency, movement, and individuation (Yamamoto 2006). A human being is the paragon of animacy: a unique individual that can control their own movement. The movement of humans and animals is self-controlled yet uneven, as opposed to the smooth but externally motivated movements of inanimate objects like clouds and vehicles. Animacy interacts with and is influenced also by other categories, each of which may or may not have linguistic correlates depending upon the language. These categories include gender (and numeral classifier systems), definiteness, proper vs. common nouns, count vs. mass, person, and argument role (Dahl 2008: 142–143). For more on gender in Slavonic, see Berdicevskis this volume (5.5). Since masculine vs. feminine is typically referential with respect to animate beings, neuter tends to fall lower on the animacy hierarchy, or at least have fewer animate referents. In Slavonic languages there is a tendency to rank masculine above feminine in terms of animacy, particularly in the distinction of ‘virile’ (for male human beings) as a grammatical category (see 5.6.2.1). Numeral classifier systems typically have a classifier specialized for reference to humans and/or animates. Animates are typically referred to using count nouns, whereas inanimates may be referred to by both count and mass nouns. According to Comrie (1989: 128), the most natural transitive construction has a subject that is higher in both animacy and definiteness than the object. A corpus study of Swedish by Dahl and Fraurud (1996) gives statistical support to this claim, finding that NPs referring to persons (as opposed to all others) are more likely to be grammatical subjects or indirect objects and to be definite or referred to by a proper noun. First- and second-person reference is also more strongly associated with reference to human beings than third-person reference. Over 97% of transitive sentences ‘obey the constraint that the subject should not be lower than the object in animacy’, and in some languages (e.g., Navajo) this is an absolute constraint (Dahl and Fraurud 1996: 53–54).

The relationship between animacy and argument roles motivates a cross-linguistic tendency to overtly mark less expected combinations. Statistical distributions yield the following expectations: subjects and indirect objects should most often be animate, while direct objects should most often be inanimate. Therefore in Accusative-marking languages, animates should receive overt marking for Accusative case and/or inanimates should receive overt marking for Nominative and Dative case. As we see in Section 2, Slavonic languages conform to typological expectations in implementing the Genitive-Accusative for animates, but deviate from this norm in providing overt marking for referents high on the animacy scale in the Nominative Plural and Dative and Locative Singular. In Slavonic languages the overall tendency is to provide overt marking for animates or viriles (Janda 1999) whenever distinctions are made.

The third caveat demands that we acknowledge several kinds of gradience with respect to animacy. As Dahl (2008: 144) put it, ‘the animate:inanimate divide is seldom a Berlin wall’. The animacy hierarchy does not come pre-cut at fixed points, but behaves instead like a complex continuum, with any number of possible loci for distinctions. Distinctions along this scale may behave as grammatical rules or as tendencies, which can be relatively strong or weak. Even when distinctions seem rather clear, the categories that emerge tend to ‘leak’. A salient example of such leakage is facultative animacy, in which inanimate lexemes are treated as if they were animate, a pan-Slavonic phenomenon discussed in 5.6.2.3. A further source of gradience is subjective evaluation: for example, speakers may vary in whether or not they recognize as animate creatures that are very small or relatively immobile or usually encountered only as food.

Distinctions along the animacy hierarchy may be associated with word order, syntax, and morphology. For the purposes of this article we will focus primarily on the morphological marking of animates, humans, and male humans by means of case endings and morphosyntactic agreement since these are the phenomena most relevant to the Slavonic languages. Phenomena relating to the lower end of the animacy hierarchy, such as distinctions among locations and substances as opposed to concrete objects (e.g., Genitive and Locative endings in *-u* in West and East Slavonic, cf. Janda 1996b: Chapters 3.7–3.8) will be left aside.

5.6.2 What is animacy in Slavonic?

A basic animate vs. inanimate distinction among masculine nouns in the singular is part of the shared inheritance of all Slavonic languages that have retained nominal inflection. On this basis, Slavonic animacy is often referred to as a ‘subgender’ (Corbett 1991: 42,163). However, the high end of the animacy hierarchy has been further elaborated by additional distinctions that have arisen in West and East Slavonic languages. We begin with an overview of animacy distinctions in Slavonic, followed by a historical account of the genesis of these distinctions.

5.6.2.1 Overview of animacy in Slavonic

Table 1 gives an overview of the morphological marking on nouns of distinctions along the animacy hierarchy in Old Church Slavonic plus the major modern Slavonic languages in which nominal morphology persists (i.e., leaving aside Bulgarian and Macedonian). The rows in Table 1 are grouped to represent South Slavonic, East Slavonic, and West Slavonic. The columns represent four types of marking on nouns that distinguish referents higher on the animacy hierarchy: the use of the Genitive case marking in place of the Accusative (Genitive-Accusative abbreviated ‘GenAcc’) in the Singular and Plural, distinctive marking for the Nominative Plural, and distinctive marking of the Dative and/or Locative Singular. The Genitive-Accusative Plural in East Slavonic languages is the only marking that includes all three genders; elsewhere the information in Table 1 pertains only to Masculine nouns. This table and the discussion that follows necessarily suppress many details. For more details on morphological endings that express animacy in Russian, see Parker this volume (5.7.3).

Table 1: Animacy in nominal morphology among major Slavonic languages

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | GenAccSg | GenAccPl | NomPl | Dat &/or LocSg |
| OCS | Virile |  |  | DatSg Virile (weak) |
| Slovene | Masc animate |  |  |  |
| BCSM | Masc animate |  |  |  |
| Russian | Masc animate | animate all genders |  |  |
| Belarusian | Masc animate | animate all genders |  | LocSg Virile, some inanimates |
| Ukrainian | Masc animate | animate all persons, animals optional |  | LocSg Virile, some animates |
| Polish | Masc animate | Virile | Virile |  |
| Slovak | Masc animate | Virile, plus few animals | Virile, plus few animals | DatLocSg Masc animate |
| Czech | Masc animate |  | Virile, Masc animate | DatLocSg Masc animate (weak) |

*Genitive-Accusative Singular*

In Old Church Slavonic we observe the Genitive-Accusative Singular largely restricted to Virile nouns, especially healthy, free adults (Lunt 1974: 46), although Huntley (1993: 137) shows that Genitive-Accusative Singular alternates with Nominative-Accusative marking all across the animacy hierarchy, finding that the Genitive-Accusative Singular is more common for proper and common personal nouns, more common for nouns that also have a personal adjective, more common for definite reference, and more common for objects of verbs than of prepositions. Example (1) illustrates the Genitive-Accusative Singular in Old Church Slavonic.

1) OCS GenAccSg, Codex Marianus Mt 22:37 (foni.uio.no)

|  |  |  |  |
| --- | --- | --- | --- |
| *vъzljubiši* | *g[ospod]-a* | *b[og]-a* | *tvo-ego* |
| love | lord-genacc.sg | god-genacc.sg | your-genacc.sg |

‘Love the **Lord your God**’

The Genitive-Accusative Singular is associated with a wider category of Masculine animates (both humans and animals) in modern Slavonic languages that have nominal inflection, as illustrated in examples (2) with a man and (3) with a dog.

(2) Croatian GenAccSg, Zlatko Karlo 2008 (http://riznica.ihjj.hr)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *Doveli su* | | *dobr-og* | | *trener-a,* | *čovjek-a* |
| brought | | good-genacc.sg | | coach-genacc.sg | man-genacc.sg |
| *koji* | *je* | | *mlad* | |  |
| who | is | | young | |  |

‘They brought a **good coach**, a **man** who is young’

(3) Croatian GenAccSg, Vjesnik online 2006 (http://riznica.ihjj.hr)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| *Čovjek…* | *je… ostavio* | *ps-a* | *sam-oga* | *doma* |
| man | left | dog-genacc.sg | itself-genacc.sg | home |

‘The man left the **dog** home **alone’**

*Genitive-Accusative Plural*

In East Slavic we find the Genitive-Accusative also for Plural animates, where it marks all genders (optional for animals in Ukrainian). In example (4), the words for both ‘people’ and ‘animals’ (Neuter in gender) are marked as animate in this way.

(4) Russian GenAccPl, Aleksej Zajcev 1990 (ruscorpora.ru)

|  |  |  |  |
| --- | --- | --- | --- |
| *Dom,* | *ljud-ej* | *i* | *životn-yx* |
| house.acc.sg | people-genacc.pl | and | animal-genacc.pl |

|  |  |  |  |
| --- | --- | --- | --- |
| *prababušk-a* | *obnosila* | *nevysok-im* | *zabor-om.* |
| great-grandma-nom.sg | enclosed | not-tall-ins.sg | fence-ins.sg |

‘Great-grandma enclosed the house, the **people**, and the **animals** with a modest fence.’

Note that the ‘inanimate’ Accusative Plural is still found in certain Russian constructions such as *idti v gosti* ‘visit’, *pojti v soldaty* ‘become a soldier’.

In Polish and Slovak the Genitive-Accusative Plural marks only Viriles (and is optional for a few animals in Slovak), as demonstrated in this example, showing the Genitive-Accusative with ‘men’, but the (Nominative‑)Accusative (AccPl) with ‘women’.

(5) Slovak GenAccPl, InZine 2001-mar (korpus.sk)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *skupin-a* | *sa rozdelí* | *na* | *muž-ov* | *a* | *žen-y* |
| group-nom.sg | is divided | into | man-genacc.pl | and | woman-acc.pl |

‘the group is divided into **men** and women’

Genitive-Accusative marking is associated with Genitive-Accusative morphosyntactic agreement. We observe this in the endings for the pronominal ‘your’ in example (1) and the endings for ‘good’ and ‘itself’ in (2) and (3). For more on Slavonic agreement patterns, see Nesset this volume (6.3).

*Nominative Plural*

Differential marking of Nominative Plural forms for referents high on the animacy hierarchy is restricted to West Slavonic languages. In Polish and Slovak, the use of distinctive Nominative Plural forms follows the same restriction to viriles (plus some animals in Slovak) observed for the Genitive-Accusative Plural in those languages.

(6) Polish NomPl, Maciej Czujko 2006 (nkjp.pl)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *przychodzą* | *do* | *mnie* | | *studenc-i,* | *lekarz-e,* |
| come | to | me.gen | | student-nom.pl | doctor-nom.pl |
|  |  |  | |  |  |
| *profesorz-y,* | *pielęgniark-i* | |  |  |  |
| professor-nom.pl | nurse-nom.pl | |  |  |  |

‘**Students**, doctors, **professors**, and nurses come to me’

In example (6), two nouns receive a distinctive Nominative Plural form which involves a stem-final consonant alternation: *student* > *studenci* and *professor* > *profesorzy*. This is actually the same ending for both words (original \**‑i* which conditions consonant mutation), a fact that is somewhat obscured by Polish orthography. The word for ‘doctor’ has the ending ‑*e*, which is shared by all soft stem Masculine nouns. The word for ‘nurse’ is feminine, and it receives the same Nominative Plural ending as animals and inanimates, namely original \*‑*y* (later > *-i* after velars) which does not condition consonant mutation.

The original \**‑i* with consonant mutation is the most common and neutral Nominative Plural for nouns of virile reference in Polish, however two variants are also available. One is the ‑*owie* ending, which is mostly honorific (but required for certain nouns, particularly those with monosyllabic stems). In the National Corpus of Polish the \**‑i* form *profesorzy* appears only 25 times, whereas the honorific Nominative Plural *profesorowie* appears in 1000 examples. The remaining option is the use of the original \*‑*y*. This is the same ending used for women (cf. ‘nurses’ in example 6), animals, and inanimates. When this ending is used with nouns of virile reference, the effect is derogatory. This ending is commonly used with nouns referring to marginalized male human beings such as the ‘bastards’ in this example:

(7) Polish NomPl, Andrzej Sapkowski 2002 (nkjp.pl)

|  |  |  |  |
| --- | --- | --- | --- |
| *bękart-y* | *tron-u* | *nie* | *dziedziczą* |
| bastard-nom.pl | throne-acc.sg | not | inherit |

‘**bastards** don’t inherit the throne’

Like Polish, Slovak has several Nominative Plural endings used with nouns of virile reference (-*ovia*, -*i*, -*ia*), however these are distributed according to morphological and phonological properties of the noun and there is no promotion or demotion of viriles comparable to what we observe in Polish.

In Czech the use of Nominative Plural endings distinguishes Masculine animates. The ending -*i* is found with the majority of Masculine animate stems, including viriles. In addition, the endings -*ové* and -*é* are found among nouns of virile reference. Many virile reference nouns can take both -*i* and -*ové*, though some, such as a-stem viriles like *hrdina* ‘hero’ in example (8), require -*ové*. The -*i* ending entails consonant mutations, as we see in the Nominative Plural forms of these words in (8): *mučedník* ‘martyr’, *kolaborant* ‘*collaborator*’, and *slaboch* ‘weakling’.

(8) Czech NomPl, Oto Mádr 2007 (korpus.cz)

|  |  |  |  |
| --- | --- | --- | --- |
| *Existovali* | *hrdin-ové* | *a* | *mučedníc-i,* |
| existed | hero-nom.pl | and | martyr-nom.pl |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| *ale* | *též* | *kolaborant-i* | *a* | *slaboš-i.* |
| but | also | collaborator-nom.pl | and | weakling-nom.pl |

‘There were **heroes** and **martyrs**, but also **collaborators** and **weaklings**.’

Like the Genitive-Accusative, distinctive Nominative Plural endings also occasion morphosyntactic agreement, both for adjectives and for verbs. However, Czech animate verb endings in *-i*, as in *existovali* ‘existed’ in example (8), are merely orthographic conventions since <ly> and <li> are pronounced identically.

*Dative and Locative Singular*

There was a tendency in Old Church Slavonic to use the -*ovi* Dative Singular ending with reference to male human beings, as we see in example (9).

(9) OCS DatSg, Codex Marianus Mt 11:4 (foni.uio.no)

|  |  |  |
| --- | --- | --- |
| *šedъše* | *vъzvěstite* | *ioan-ovi* |
| having.gone | report | John-dat.sg |

‘Go back and report **to John**’

In both Czech and Slovak the ending *-ovi* is associated with Masculine animate nouns in both the Dative (example 10) and the Locative (example 11) Singular.

(10) Czech DatSg, Jan Kosek 2011 (korpus.cz)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| *Tato* | *slov-a* | *jsou* | *adresována* | *profesor‑ovi* |
| those | word-nom.pl | are | addressed | professor-dat.sg |

‘Those words are addressed **to the professor**’

(11) Czech LocSg, Magazín Víkend DNES 2011(korpus.cz)

|  |  |  |  |
| --- | --- | --- | --- |
| *Příběh* | *o* | *univerzitn-ím* | *profesor-ovi* |
| story.nom.sg | about | university-masc.loc.sg | professor-loc.sg |

‘A story about a university **professor’**

Differential marking of this type in Ukrainian pertains only to the Locative Singular, where ‘nouns denoting persons may take the ending *-ovi*’ (Shevelov 1993: 959), as in *o seljanynovi* ‘about the peasant’. In Belarusian, by contrast, LocSg -*u* has spread to ‘nouns with a stem in a palatalized or formerly palatalized consonant which denote human beings, for example, *ab vučnju, ab pesnjaru* “about the pupil, about the poet”’ (Mayo 1993: 903).

5.6.2.2 Related phenomena: a-stem viriles, vocatives, possessives, and numerals

In addition to the differential marking of nouns summarized in Table 1, there are several other ways in which behavior of nouns with animate or virile reference is distinct in the Slavonic languages. All Slavonic languages have a-stem Masculine nouns, all of which are specialized for human reference, mostly as viriles, some as common-gender nouns. These two types are labeled “*papa*-type nouns” and “double-gender nouns” respectively in Berdicevskis this volume (5.5). Even though these nouns have the usual a-stem Accusative Singular -*u* ending, they exhibit the same morphosyntactic agreement as other Masculine animate nouns that have Genitive-Accusative endings (cf. examples 2 and 3), as shown in this example:

(12) Russian GenAccSg agreement with a-stem virile, Tat’jana Tronina 2004 (ruscorpora.ru)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *Zaranee* | *sovetuju* | *požalet’* | *svo-ego* | *prestarel-ogo* | *dedušk-u* |
| primarily | I.advise | pity | your-genacc.sg | elderly-genacc.sg | grandfather-acc.sg |

‘First of all I advise you to take pity on **your elderly grandfather**’

The a-stem human reference nouns sometimes have inflectional endings that further distinguish them from a-stem feminine nouns. For example, in Czech these nouns have the ‑*ovi* ending in the Dative and Locative Singular and follow the paradigm of Masculine animate o-stem nouns throughout the Plural (cf. Nominative Plural *hrdinové* ‘heroes’ in example 8). The a-stem type is frequently used to make diminutives for names of male humans, as in Russian *Dima* from *Dmitrij* and *Griša* from *Grigorij*.

Vocatives are inherently skewed toward human (and occasionally animal) reference and are widespread in the Slavonic languages. Reflexes of the original Slavonic Vocative are still productive in the following modern languages: Polish, Czech, Ukrainian, BCSM, Macedonian (where the Vocative is receding, cf. Friedman 1993: 263–264), and Bulgarian. Russian has within the past two centuries developed a ‘new’ Vocative (Andersen 2012) that truncates the ‑*a* in a-stem names for both women (*Maš*! from *Maša*) and men (*Dim*! from *Dima*). Possessive adjectives are likewise associated with humans and animals, as in the following Czech phrases, where the first two adjectives derived from words referring to people express individual possession, whereas the third one expresses a relationship to all animals of the type named (cf. Cvrček et al. 2010: 203–204). For more on possessive adjectives in Slavonic see Šarić and Alvested this volume (6.1), and for relevant agreement patterns, see Nesset this volume (6.3).

(13) Czech possessive adjectives (korpus.cz)

*bratrovo auto, tetina slova, kraví hlavy*

‘**brother’s** car, **aunt’s** words, **cow’s** heads’

Most of the Slavonic languages have some use of numerals specific to the counting of (usually male) human beings. Russian collective numerals such as *dvoe* ‘2’, *troe* ‘3’, *četvero* ‘4’, *pjatero* ‘5’ tend to have human referents. Polish and Slovak have special virile-only numerals that require specific syntax. Compare example (14), which has a virile referent ‘man’ in the Genitive Plural, a special virile numeral *dwóch* ‘2’, and Neuter Singular agreement in the Past tense, with example (15), which has a female human referent ‘woman’, and the usual numeral and verbal agreement expected for all feminine nouns.

(14) Polish virile numeral syntax, Marek Krajewski; Mariusz Czubaj 2009 (nkjp.pl)

|  |  |  |
| --- | --- | --- |
| *Podeszł-o* | *dwóch* | *mężczyzn.* |
| Came.up-n.sg | two.virile | man.gen.pl |

‘**Two men came up**.’

(15) Polish non-virile numeral syntax Andrzej Sapkowski 1996 (nkjp.pl)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| *Za* | *sągi-em* | *siedział-y* | *dwie* | *kobiet-y.* |
| behind | wood.pile-ins.sg | sat-pl | two | woman-nom.pl |

‘Two women sat behind the woodpile.’

Although Bulgarian and Macedonian have mostly been left aside here due to their lack of nominal morphology, these languages have developed virile numerals (Townsend and Janda 1996: 193–194). In Bulgarian these numerals tend to end in -*ma*, as in *dvama* ‘2’, *četirima* ‘4’, *šestima* ‘6’ (Scatton 1993: 209), whereas in Macedonian these numerals end in ‑*ca* or ‑*mina*, as in the corresponding *dvajca*, *četvorica*, *šestmina* (Friedman 1993: 267).

5.6.2.3 History of animacy in Slavonic

Given the complexity of distinctions summarized in Table 1, it is no surprise that a host of historical factors have contributed to the marking of animacy distinctions in the modern Slavonic languages. We observe a dynamic history of both pushes and pulls in the relationships between form and meaning. Pushes exert pressure to maintain distinctions whose overt representation had been eroded through phonological change and morphological leveling. The most important push was the loss of final consonants in Early Proto-Slavic. Pulls come in the form of opportunities to elaborate distinctions by repurposing extra morphology that became available after the merger of six theme-vowel and six consonant-stem declensions into three genders in Late Common Slavic (Janda 2014). The most important pulls were Dual morphology that became reinterpreted as Plural and u-stem morphology that was inherited by o-stems in the merger of declensions. Both the pushes and the pulls targeted Masculine nouns which became the focus of most of the animacy distinctions in Slavonic languages.

In Proto-Indo-European, o-stem Masculine nouns had a Nominative Singular desinence \*-*os* which was distinct from the Accusative Singular \*-*om*. The phonotactics of Late Common Slavic dictated rising sonority for all syllables, which was violated by the final consonants in those two desinences. The solution for these and many other word forms was to truncate the final consonant. For the o-stem Masculine nouns this truncation yielded -*ъ* for both the Nominative Singular and the Accusative Singular (Feinberg 1978, Townsend and Janda 1996), creating a situation without morphological cues to determine whether a Masculine noun was the subject or the direct object of a verb. This ambiguity was shared also by jo-stems and i-stems, both of which also included Masculine animate nouns. This was a potential problem for a language that did not use word order to disambiguate syntax, particularly when both the subject and the direct object of a verb were animate, as in this hypothetical sentence: *otьcь ljubitъ bratrъ* ‘father loves brother/brother loves father’. As pointed out by Klenin (1983), the implementation of the Genitive-Accusative Singular to resolve such ambiguity was motivated also by the existence of Genitive-Accusative forms in pronominal paradigms, plus the fact that a number of verbs (particularly verbs of perception) governed the Genitive case. Thus in Late Common Slavic we can presume that it was possible to say both *otьcь ljubitъ jego* ‘father loves him’ and *otьcь viditъ bratra* ‘father sees brother’, and this may have supported the use of the Genitive-Accusative in a sentence like *otьcь ljubitъ bratra* ‘father loves brother’. Note that both Feminine and Masculine (mostly virile) a- and ja-stem nouns always had an Accusative Singular that was distinct from the Nominative Singular; futhermore the lack of such a distinction among Neuter nouns was unproblematic since these nouns rarely serve as the subjects of transitive verbs.

The story of the Genitive-Accusative Plural in West and East Slavonic is more complicated than one might suppose, since it cannot have been occasioned by any potential confusion of subjects and direct objects of transitive verbs as described above for the Singular number. Masculine nouns in Slavonic languages inherited distinct endings for marking subjects and direct objects, namely -*i* for Nominative Plural and -*y* for Accusative Plural. Furthermore, in West Slavonic, original Accusative Plural -*y* spread to the Nominative Plural only for nouns with referents low on the animacy hierarchy (inanimates in Czech, non-viriles in Polish and Slovak), which means that the Nominative and Accusative Plural were consistently distinct for referents high on the animacy hierarchy throughout the histories of those languages. And in East Slavonic languages the Genitive-Accusative Plural becomes established before the Accusative Plural -*y* spread to the Nominative Plural for all Masculine o-stem nouns. Therefore the Genitive-Accusative Plural cannot be understood as a simple ‘spilling over’ of the same Genitive-Accusative from the Singular, since the conditions for that spread were not present. Instead, it seems that the Dual number played a role in the morphological articulation of the animacy hierarchy in East and West Slavonic (Janda 1998, 2000). In the Dual number, Nominative and Accusative have always been syncretic, at least since Late Common Slavic, setting the stage for the same potential problem in distinguishing animate or virile subjects vs. objects. The Genitive-Accusative Plural as a marker for virility (Polish and Slovak) and animacy (East Slavonic) was preceded and likely facilitated by a Genitive-Accusative Dual. There are attestations of a Genitive-Accusative Dual in both Old Polish and Old Russian (note that Krys’ko 1994: 97–99, 100 acknowledges a Genitive-Accusative Dual in Old Russian, but nevertheless claims that the Genitive-Accusative Plural is a separate innovation). We must remember that the Slavonic Dual was not a number of the same status as the Singular and the Plural. The Slavonic Dual was used primarily for paired items, and thus best understood as a specialized Plural. When the Dual was lost in most Slavonic languages (surviving only in Slovene and Sorbian), it was supplanted by Plural morphology, namely Genitive-Accusative Plural on both nouns and agreeing modifiers, although some Dual morphology persists even to this day, namely the virile/animate Polish *dwóch*/Russian *dvux* ‘2’ when used with Genitive-Accusative Plural.

(16) Russian GenAccPl with numeral *dvux* ‘2’, Evgenij Vesnik 1997 (ruscorpora.ru)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| *V* | *komnat-e...* | *uvidel* | *dvux* | *očen’* |
| in | room-loc.sg | saw | two-genacc | very |

|  |  |  |
| --- | --- | --- |
| *èffektn-yx* | *molod-yx* | *dam* |
| glamorous-genacc.pl | young-genacc.pl | women.genacc.pl |

‘In the room I saw **two** very **glamorous young women**’

In East Slavonic languages the Accusative Plural -*y* ultimately spread to the Nominative Plural across all Masculine nouns, thus aligning all three genders in sharing a Nominative-Accusative Plural syncretism, which, along with other cross-gender leveling of oblique Plural paradigms (such as Russian and Polish -*am*/-*om*, -*ami*, -*ax*), probably helped motivate the subsequent spread of the Genitive-Accusative Plural from Masculine to Feminine (as shown in example 16) and Neuter. The Dual is also the likely source (via the Dative-Locative Dual form in \**dъvěma* ‘2’ in Late Common Slavic) for the Bulgarian virile numerals mentioned above in 5.6.2.2.

Czech is the only West or East Slavonic language without a Genitive-Accusative Plural, and a confluence of factors may be at play here (Janda 1998: 438). Unlike other West and East Slavonic languages, Old Czech underwent a series of sound changes (called *přehláska*) that spurred proliferation rather than consolidation of nominal paradigms, thus maintaining and even increasing distinction across declension classes instead of levelling Plural inflections. Very early on, Old Czech replaced the Nominative-Accusative Dual ending -*a* for o-stems with the u-stem equivalent in -*y*, which was syncretic with the o-stem Accusative Plural in -*y*. Thus the Old Czech Accusative Dual of Masculine hard stem nouns did not differ from the Accusative Plural to begin with and therefore the Dual could not serve as a model for the Plural. The South Slavonic languages followed a different path. Despite the fact that original *\*i* and *\*y* merged in BCSM and Slovene, the distinction between Nominative and Accusative Plural was retained by spreading the soft stem ending -*e* in the Accusative Plural (Townsend and Janda 1996: 152).

When the u-stem nouns were absorbed into the Masculine o-stem paradigm, they brought along surplus inflectional endings. Aside from the Nominative Singular, Accusative Singular, and Accusative Plural, where the two paradigms overlapped, all other u-stem endings were distinct from the corresponding o-stem endings. All Singular and Plural u-stem endings survive somewhere in the modern Slavonic languages, and several of these provide differential marking of referents high on the animacy hierarchy (Janda 1996b: Chapter 3). The u-stem paradigm is the source of virile Nominative Plural endings in original \*‑*ove*, yielding virile Polish ‑*owie* and Slovak ‑*ovia*, as well as animate Czech ‑*ové*. The u-stem Dative Singular in ‑*ovi* is associated with animate referents in both Czech and Slovak, where it has also spread to the Locative Singular, and that case also shows this ending in association with virile referents in Ukrainian. The Locative Singular in -*u* that is associated with virile referents in Belarusian likewise comes from the u-stem paradigm.

The Vocative, which is used almost exclusively for human/animal referents, has also been a beneficiary of morphology from the u-stems (Janda 1996b: 103–107). The u-stem Vocative ending -*u* spread to jo-stem nouns already in the prehistoric period, as seen in BCSM and Bulgarian. To the extent that the Vocative is still used in Macedonian, -*u* can be observed across all Masculine nouns. In Czech the Vocative in -*u* in jo-stems underwent *přehláska* sound change > -*i*; in addition, Vocative -*u* spread to Masculine stems ending in a velar consonant. A similar spread to velar stems is also observed in Polish and Ukrainian, where the -*u* ending has spread further to *ja*-stem nouns naming both men and women (with considerable variation in both languages). Some examples of Vocative forms that have come from u-stems in modern languages appear in (17).

(17) Vocative forms in modern languages that are reflexes of u-stem -*u*

Bulgarian: *učitelju* ‘teacher’

BCSM: *mužu* ‘husband’

Czech: *muži* ‘man’, *člověku* ‘man, person’

Polish: *mężu* ‘husband’, *dziadku* ‘grandfather’, *mamusiu* ‘mom’

Animate and virile Nominative Plural Polish -*e*, Slovak -*ia*, and Czech -*é* are reflexes of consonant stem and i-stem morphology (Townsend and Janda 1996: 155–156).

5.6.2.4 Facultative animacy in Slavonic

The Genitive-Accusative Singular is observed as a marker of animacy for Masculine nouns in all Slavonic languages that retain nominal declension, and in all these languages the distinctive morphology normally used for animates is sometimes extended to inanimate nouns. This phenomenon is usually referred to as ‘facultative animacy’ (Swan 1988). Facultative animacy is particularly widespread in Polish and Czech, where it has also attracted the most scholarly attention (cf. Frarie 1992, Riley 1999, Fuchs 2014; for facultative animacy in Serbian, see Stefanović 2008: Chapter 4).

On the face of it, the types of categories reported for facultative animacy seem to defy logic: for example, we find names for machines, mushrooms, dances, and games; food, alcohol, and tobacco products; planets, mathematical terminology, and toys. Fuchs (2014) has found that Polish native speakers overwhelmingly choose to use animate Genitive-Accusative Singular ‑*a* with recent English borrowings, even when the ‘English’ borrowings are actually nonce words. For example, 80% of respondents used the Genitive-Accusative form *wuga* when asked to insert *wug* in a sentence like *Jeszcze muszę spakować \_\_\_\_\_ ale nie wiem czy się zmieści* ‘I still have to pack \_\_\_\_\_\_, but I don’t know if it will fit’.

However, language phenomena are rarely random, and since native speakers tend to agree on the assignment of animacy, there is reason to expect there to be some patterns. Like the distribution of -*a* vs. -*u* for the Genitive Singular in Polish (Janda 1997), facultative animacy appears to be motivated by a confluence of factors that include polysemic extension by means of metonymy and metaphor, as well as morphology and the overall shapes of objects.

Both Frarie (1992) and Riley (1999) observe numerous instances of polysemic extension occasioned by the metonymic use of names for people and animals to refer to objects, and spread of animacy to other similar items. Brand names often use the name of a human inventor, as in the case of cars and appliances. Example (18) shows the Genitive-Accusative Singular in Polish with the brand name *ford* ‘Ford (car)’. In example (19) we see extension to *mercedes* ‘Mercedes’ in Czech, despite the fact that the latter is the name of the daughter of an Austrian automobile entrepreneur. Example (20) takes this trend further, giving Genitive-Accusative Singular marking to a brand name that is merely an invented word: *jeep* ‘Jeep’. Animals are also often used to name inanimate objects, including cars, as seen in example (21).

(18) Polish GenAccSg with *ford* ‘Ford (car)’, Janusz Głowacki 1997 (nkjp.pl)

|  |  |  |  |
| --- | --- | --- | --- |
| *Kid* | *wyprowadził* | *z* | *garaż-u* |
| Kid.nom.sg | brought | from | garage-gen.sg |

|  |  |
| --- | --- |
| *błyszcząc-ego* | *ford-a* |
| shiny-genacc.sg | Ford-genacc.sg |

‘Kid brought **the** **shiny Ford** out of the garage’

(19) Czech GenAccSg with *mercedes* ‘Mercedes (car)’, Aleš Palán 2005 (korpus.cz)

|  |  |  |
| --- | --- | --- |
| *arcibiskup…* | *nabídl* | *jubilant-ům* |
| archbishop.nom.sg | offered | celebrant-dat.pl |

|  |  |  |  |
| --- | --- | --- | --- |
| *sv-ého* | *mercedes-a* | *a* | *šofér-a* |
| own-genacc.sg | Mercedes-genacc.sg | and | driver-genacc.sg |

‘The archbishop offered the celebrants **his own Mercedes** and **driver’**

(20) Polish GenAccSg with *jeep* ‘Jeep’, Hubert Klimko Dobrzaniecki 2007 (nkjp.pl)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| *Wypożyczyliśmy* | *z* | *Agnieszk-ą* | *duż-ego* | *jeep-a* |
| rented | with | Agnieszka-ins.sg | large-genacc.sg | Jeep-genacc.sg |

‘Agnieszka and I rented **a** **large Jeep**’

(21) Czech GenAccSg with *jaguar* ‘Jaguar (car)’, Petr Prouza 2008 (korpus.cz)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| *David* | *zastavil* | *jaguar-a* | *u* | *krajnic-e* |
| David.nom.sg | stopped | Jaguar-genacc.sg | by | roadside-gen.sg |

‘David stopped **the Jaguar** by the side of the road’

Literary works, operas, ballets, and performances tend to receive Genitive-Accusative marking if they are named for animate beings, and this effect is stronger with names of people (such as the opera *Evgenij Onegin*) than animals (like the ballet *Konek-Gorbunok*; Gurin 2005).

Names of mushrooms show how the presence of an animate homonym can affect a whole category of objects. The word *ryžik* in Russian can serve as a name for a person or animal with reddish hair or fur (similar to English *Rusty*). However, this word is also the name of a mushroom, and is animate in this meaning. In Russian, many other names of mushrooms are also reportedly used with animate morphology, such as *borovik* ‘porcini’, *maslenok* ‘yellow boletus’, and *muxomor* ‘fly agaric’, as in example (22).

(22) Russian GenAccSg with *muxomor* ‘fly agaric’, F. K. Sologub 1905 (ruscorpora.ru)

|  |  |  |  |
| --- | --- | --- | --- |
| *bos-oj* | *mal’čišk-a* | *sxvatil* | *muxomor-a* |
| barefoot-m.nom.sg | boy-nom.sg | grabbed | fly.agaric-genacc.sg |

‘the barefoot boy grabbed **the fly agaric**’

In Czech and Polish the Genitive-Accusative Singular ending is used even with the umbrella terms for ‘mushroom’ *hřib* and *grzyb*.

This type of pattern is repeated for many other groups of nouns. For example, in Polish the word for ‘cancer’ is *rak*, which is a homonym of the word for ‘crayfish’, and Swan (1988: 31, 37) suggests that this may inspire the use of animate morphology with other dreaded diseases such as *tężec* ‘lockjaw’ and *syf(ilis*) ‘syphilis’. In Czech, *talián* is used both as a colloquial word for ‘Italian’ and to refer to ‘Italian sausage’, and Frarie (1992) shows that the Genitive-Accusative Singular is also observed with other words for ‘sausage’: *buřt*, *špekáček*, *vuřt*. In Russian, *kazačok* can refer to both a ‘boy servant’ and a type of dance, and Frarie shows that we find animate uses also for other names of dances: *gopak*, *trepak, kamarinskij*.

The extension of animacy to inanimates is also motivated by both morphological and physical similarities. Derivational morphemes that are often used to derive virile nouns can also appear on inanimate nouns and might contribute to the extension of animate morphology. Examples of such morphemes and nouns with those morphemes that exhibit facultative animacy are in (23); note, however, that most of the Russian examples also show homonymy with nouns that have virile referents.

(23)

Polish -*ak*: *straszak* ‘cap pistol’; -*ek*: *cukierek* ‘candy’; -*ik*: *naleśnik* ‘pancake’; -*ec*: *latawiec* ‘kite’,

Czech -*ák*: *borovák* ‘white mushroom’; -*ík*: *budík* ‘alarm clock’; -*tel*: *jmenovatel* ‘denominator (mathematics)’; -*ec*: *dělenec* ‘dividend (mathematics)’

Russian -*tel’*: *istrebitel’* ‘fighter plane/fighter pilot’; -*ec*: *Zaporožec* ‘Zaporožec (car)/Zaporozhian Cossack’; -*ik*: *podosinovik* ‘red boletus’; -*ščik*: *bombardirovščik* ‘bomber plane/bomber pilot’

Objects that are shaped like animate beings may be named after those beings, and thus inherit animate inflectional morphology as well, as we see with the word for ‘bow’ in example (24). There are additionally words that designate objects that look like human beings, such as ‘snowman’, as illustrated in example (25).

(24) Polish GenAccSg with *motyl* ‘butterfly’ > ‘bow’, Andrzej Bart 2009 (nkjp.pl)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *Sabina…* | *pamięta* | *motyl-a* | *z* | *niebieski-ej* | *taft-y,* |
| Sabina-nom.sg | remembers | bow-genacc.sg | from | blue-f.gen.sg | taffeta-gen.sg |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *któr-ego* | *mam-a* | *miała* | *na* | *gorsi-e* | *sukienk-i.* |
| which-genacc.sg | mother-nom.sg | had | on | bosom-loc.sg | dress-gen.sg |

‘Sabina remembers **the** blue taffeta **bow that** her mother had on the bosom of her dress’

(25) Czech GenAccSg with *sněhulák* ‘snowman’, Jiří Hajíček 2014 (korpus.cz)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *dvojčat-a* | *začala* | *řvát,* | *že* | *chtějí* | *sněhulák-a,* |
| twin-nom.pl | started | scream | that | want | snowman-genacc.sg |

|  |  |  |  |
| --- | --- | --- | --- |
| *kter-ého* | *jim* | *tatínek* | *slíbil* |
| that-genacc.sg | them | father.nom.sg | promised |

‘the twins started to scream that they wanted **the snowman that** their father had promised’

In the opposite direction, we see the metaphorical naming of a human being by means of an inanimate object, where the original meaning of *bolvan* ‘boulder’ has now been overtaken by ‘block(head)’, as in example (26).

(26) Russian GenAccSg with *bolvan* ‘boulder’ > ‘blockhead’, Mixail Gigolašvili 2007 (ruscorpora.ru)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *ty* | *v* | *ee* | *glaz-ax* | *postepenno* | *prevraščaeš’sja* |
| you | in | her | eyes-loc.pl | gradually | are.transformed |

|  |  |  |
| --- | --- | --- |
| *v* | *nudn-ogo* | *bolvan-a* |
| into | boring-genacc.sg | blockhead-genacc.sg |

‘in her eyes you gradually turn into **a boring blockhead**’

Some fixed expressions display facultative animacy, as in the sample in (27). Note that in the last example the item that receives the Genitive-Accusative Singular ending is not even a noun, but rather the first person singular conditional auxiliary used to refer to ‘what I would have done’.

(27) Fixed expressions with GenAccSg

Polish *dostać kosz-a* [get basket-genacc.sg] ‘get dumped by a woman’; *stać dęb-a* [stand oak-genacc.sg] ‘stand on end’

Czech *dostat padák-a* [get parachute-genacc.sg] ‘get fired’; *pozdě bych-a honit* [late would-genacc.sg chase] ‘it’s no use crying over spilled milk’

As many of the examples in this section suggest, facultative animacy is associated with colloquial use (Swan 1988: 9, Riley 1999: 72). It is also the case that some transitive verbs and prepositions are more likely to occasion the use of Genitive-Accusative morphology. Facultative animacy is primarily expressed in the Genitive-Accusative Singular, with individual variation across words and contexts. For example, in Czech, *sněhulák* ‘snowman’ (cf. example 25) is treated as an animate word across the board, so the Nominative Plural is animate *sněhuláci*, and all modifiers use the *-í/-i* endings associated with animates; furthermore, the Dative and Locative singular is likewise animate *sněhulákovi*. By contrast, *buřt* ‘sausage’ shows facultative animacy only with the Genitive-Accusative Singular *buřta* and modifiers; all other forms of this word follow the norms for inanimates: Nominative Plural *buřty* (not \**buřti* or \**buřtové*) and Dative and Locative Singular *buřtu* (not \**buřtovi*).

5.6.2.5 Variability

In addition to the variability observed for facultative animates, there is variability also in the use of morphology with nouns that refer to animate beings. This is particularly the case with nouns that name creatures that are very small, items of seafood, and words used to designate deceased or as-yet unborn persons. Most of the available scholarly literature on this issue concerns Russian, and discussion here is mostly limited to that language.

Timberlake (2004: 169) notes, with respect to Russian, that ‘[a]nimacy fades out with lower orders of animals’. Whereas insects tend to be animate, there is variation for words designating microorganisms, with the exception of *virus* ‘virus’ which is uniformly claimed to be inanimate (Ickovič 1980: 86, Naruševič 2002, Timberlake 2004: 170, Røkenes 2010). Røkenes finds in both corpus searches and questionnaires that *ameba* ‘amoeba’ is nearly always animate, whereas *bakterija* ‘bacteria’ is predominantly inanimate, and *mikrob* ‘microbe’ shows variation. Variation for sea creatures such as *krab* ‘crab’, *ustrica* ‘oyster’, *omar* ‘lobster’, *krevetka* ‘shrimp’ is attributed by Ickovič (1980:85) to a lack of familiarity with them as anything other than menu items in most of Russia, and Røkenes finds that these words are less likely to be marked animate when plural and/or in the context of recipes. In Russian beings that are not fully formed (*èmbrion* ‘embryo’, *zarodyš* ‘fetus’) tend to be inanimate, as do corpses (*trup*), however, other words for deceased persons (*pokojnik*, *mertvec*) tend to be animate, and in Polish all words referring to dead people (even corpses) behave as animates.

5.6.3. Theoretical approaches to animacy in Slavonic and in general

Animacy has been approached from various theoretical and empirical perspectives. With the possible exception of structuralism, all of these approaches continue to be viable and are also mutually compatible.

5.6.3.1 Structuralism

Structuralism strives to describe linguistic categories in terms of privative binary features, such that a feature entails one set of items that receive the positive value of the feature including only marked elements, as opposed to another set of items that is neutral to the feature and can thus include elements with both marked and unmarked values. Stankiewicz (1958: 29–30) applies these criteria of traditional feature analysis to animacy in Slavic languages, but runs afoul of facultative animacy. Because the items that receive the Nominative-Accusative are all referentially inanimate, whereas items with the Genitive-Accusative include both referentially animate and inanimate items, Stankiewicz reasoned that the only option is to declare that inanimate is the marked value, whereas animate is unmarked. Jakobson (1960/1984:142) indicated a contrary interpretation (but without supporting argumentation), probably because the marked member of an opposition should belong to the item that is less expected (here, an animate Direct Object).

5.6.3.2 Differential object marking

Slavonic animacy comports well with the definition of differential object marking given by Malchukov and de Swart (2009: 345): ‘one set of direct objects is case marked in one way and another set in a different way depending on features of the object’. More specifically, Slavonic animacy is the asymmetric type of differential object marking, with an alternation between an unmarked zero expression of case and overt case marking (Malchukov and de Swart (2009: 341). Differential object marking is cross-linguistically consistent in distinguishing objects along the animacy hierarchy, probably because both indexing (encoding of the semantic roles Agent and Patient) and differentiating (keeping Agent and Patient distinct) functions are well-served, and Malchukov (2008) shows how these functions can be formulated as Optimality Theory constraints. Eckhoff (2015) uses the framework of differential object marking to investigate the use of Genitive-Accusative in Old Church Slavonic, where she finds that human objects are typically high-prominence and definite and are usually marked Genitive-Accusative, whereas Nominative-Accusative is reserved for the first mention of a subsequently prominent referent.

5.6.3.3 Prototypicality and categorization

Dahl (2008: 149) suggests a ‘three-step cognitive scale, corresponding to the animacy hierarchy: the self is the model for other animate individuals, which are in their turn models for inanimate objects when understood as individual “things”’. Dahl’s scale is, in effect, a radial category with the (human) self as a prototype, with extensions to animals and some inanimates, and this scale parallels the differentiation we see with viriles, animates, and facultative animacy in Slavonic languages. Details of the structure of this hierarchy show that only continuous sections are categorized by overt marking, focusing on items most relevant to human beings (Enger and Nesset 2011). Frarie 1992, Janda 1996a, and Riley 1999 converge on a description of animacy centered on human beings and associations with them, with progressive extensions motivated by similarities in name, shape, and function. This animacy category is consistent with what is known about the formation of conceptual categories both in general and of animacy in particular. Rakison and Poulin-Dubois (2001) report that infants gradually construct a multi-layered notion of animacy rooted in perception of motion as self-propelled, irregular, goal-directed, and intentional vs. the opposite, and that this notion emerges at the same time that infants start to produce two-word utterances and pretend play scenarios that encode agents and patients.

5.6.3.4 Psycholinguistics

Because the ability to distinguish animate beings from inanimate objects is part of the universal human experience, animacy attracts the attention of psychologists and psycholinguists. Caramazza and Shelton (1998) find that animate and inanimate conceptual categories are domain-specific knowledge systems that can be selectively impaired in people with brain damage. One means of investigating animacy effects is by measuring the electrophysiological responses of people when they are exposed to transitive sentences. The two most common measures are the event-related potentials called the ‘N400’ (a negative value after 400 milliseconds), and the ‘P600’ (a positive value after 600 milliseconds). Prior research has established that the N400 response is associated with exposure to semantically anomalous sentences, whereas the P600 is associated with syntactically anomalous sentences. However, a series of studies surveyed by Bornkessel-Schlesewsky and Schlesewsky (2009) report that sentences that are implausible due to a conflict with the animacy hierarchy, like *The hearty meals were devouring…*, lack the expected N400, but do show a P600. The authors interpret this finding in terms of a syntax-semantics interface of prominence scales that include animacy, along with case marking, argument order, definiteness, and person. Paczynski and Kuperberg (2011: 1451) report a N400 for animate direct objects, suggesting that ‘animacy impacts the semantic processing of direct objects’ also. Szewczyk and Schriefers (2010) performed similar tests using Polish and found that the P600 elicited by sentences with implausible animacy values was of a much higher amplitude than that elicited by semantic violations.

Another type of psycholinguistic experiment measures reading time when the animacy of the subject and object are varied. Mak et al.’s (2002) experiments on reading times for Dutch relative clauses show that animacy matters and therefore semantic information (not just syntactic strategy) is used to guide the parse when reading a sentence.

5.6.4. Directions for future research

The emergence of animacy is an enduring topic of human developmental psychology. The wide variety of ways in which animacy is realized and encoded in Slavonic languages provides a series of perspectives on how animacy can interact with linguistic expression. Most of the scholarly investigations into Slavonic animacy reviewed here predate the era of widely accessible and searchable corpora. Corpus data, as well as psycholinguistic experiments and statistical analysis could greatly expand our understanding of animacy both in the Slavonic languages and in languages in general.

References

Andersen, Henning (2012). ‘The new Russian vocative: Synchrony, diachrony, typology’, *Scando-Slavica* 51: 122–167.

Bornkessel-Schlesewsky, I. and M. Schlesewsky (2009). ‘The role of prominence information in the real-time comprehension of transitive constructions: a cross-linguistic approach’ *Language and Linguistics Compass* 3: 19–58.

Caramazza, A. and J. R. Shelton (1998). ‘Domain-specific knowledge systems in the brain: the animate–inanimate distinction’, Journal of Cognitive Neuroscience 10: 1–34.

Comrie, Bernard (1989). *Language Universals and Linguistic Typology*. Chicago: University of Chicago Press.

Corbett, Greville (1991). *Gender*. Cambridge: Cambridge University Press.

Cvrček, Václav, Vilém Kodýtek, Marie Kopřivová, Dominika Kováříková, Petr Sgall, Michal Šulc, Jan Táborský, Jan Volín and Martina Waclawičová (2010). *Mluvnice současné češtiny 1.* Prague: Karolinum.

Dahl, Östen (2008). ‘Animacy and egophoricity: grammar, ontology and phylogeny’, *Lingua* 118: 141–150.

Dahl, Östen and Kari Fraurud (1996). ‘Animacy in grammar and discourse’, in D. Fretheim and J. Gundel (eds), *Reference and Referent Accessibility*. Amsterdam/Philadelphia: John Benjamins, 47–64.

Eckhoff, Hanne Martine (2015). ‘Animacy and differential object marking in Old Church Slavonic’, *Russian Linguistics* 39: 233–254.

Enger, Hans-Olav and Tore Nesset (2011). ‘Constraints on diachronic development: the Animacy Hierarchy and Relevance Constraint’, *STUF* 64: 193–212.

Feinberg, Lawrence E. (1978). ‘Thematic vowel alternation in common Slavic declension’, *Folia Slavica* 2: 107–122.

Frarie, Susan E. (1992). *Animacy in Czech and Russian*. University of North Carolina at Chapel Hill.

Friedman, Victor A. (1993). ‘Macedonian’, in Bernard Comrie and Greville G. Corbett (eds), *The Slavonic Languages*. London: Routledge, 249–305.

Fuchs Zuzanna (2014). ‘[Gender and Analogical Extension: From animacy to borrowings in Polish](https://scholar.harvard.edu/zzfuchs/publications/gender-and-analogical-extension-animacy-borrowings-polish)’, *New Insights into Slavic Linguistics* [Internet] 3: 115–127. <https://scholar.harvard.edu/zzfuchs/publications/gender-and-analogical-extension-animacy-borrowings-polish>

Gurin, Grigorij B. (2005). ‘Sobstvennye naimenovanija s točki zrenija kategorii oduševlennosti v sovremennom russkom jazyke: perspektivy izučenija’. <http://www.dialog-21.ru/media/2451/guring.pdf>

Huntley, David (1993). ‘Old Church Slavonic’, in Bernard Comrie and Greville G. Corbett (eds), *The Slavonic Languages*. London: Routledge, 125–187.

Ickovič, V. A. (1980). ‘Suščestvitel’nye oduševlennye i neoduševlennye v sovremennom russkom jazyke (norma i tendencija)’, *Voprosy jazykoznanija* 4: 84–96.

Jakobson, Roman O. (1960/1984). ‘The gender pattern of Russian’, in Linda R. Waugh and Morris Halle (eds), *Russian and Slavic Grammar: Studies 1931–1981*. Berlin: Mouton, 141–143.

Janda, Laura A. (1996a). ‘Figure, ground, and animacy in Slavic declension’, *Slavic and East European Journal* 40, 325–355.

Janda, Laura A. (1996b). *Back from the brink: a study of how relic forms in languages serve as source material for analogical extension* (= *LINCOM Studies in Slavic Linguistics* 01). Munich/Newcastle: LINCOM EUROPA.

Janda, Laura A. (1997). ‘Implementation of the figure-ground distinction in Polish’, in Keedong Lee, Eve Sweetser, and Marjolijn Verspoor (eds), *Lexical and syntactic constructions and the construction of* meaning. Amsterdam/Philadelphia: John Benjamins, 149–163.

Janda, Laura A. (1998). ‘Linguistic innovation from defunct morphology: Old dual endings in Polish and Russian’, in Robert A. Maguire and Alan Timberlake (eds), *American Contributions to the Twelfth International Congress of Slavists*. Bloomington, IN: Slavica, 431–443.

Janda, Laura A. (1999). ‘Whence virility? The rise of a new gender distinction in the history of Slavic’, in Margaret H. Mills (ed), *Slavic gender linguistics*. Amsterdam/Philadelphia: John Benjamins, 201–228.

Janda, Laura A. (2000). ‘From number to gender, from dual to virile: bridging cognitive categories’, in Yishai Tobin and Ellen Contini-Morava (eds), *Lexical and grammatical classification: same or different?* Amsterdam: John Benjamins, 73–86.

Janda, Laura A. (2014). ‘Introduction to Slavic Historical Morphology: Slavic Noun Classes / Die Entwicklung der Verbalklassen im Slavischen’, in: Karl Gutschmidt, Sebastian Kempgen, Tilman Berger, Peter Kosta (eds), *Die slavischen Sprachen / The Slavic Languages. Ein internationales Handbuch zu ihrer Struktur, ihrer Geschichte und ihrer Erforschung. An International Handbook of their Structure, their History and their Investigation.* Band 2 / Volume 2. [Handbooks of Linguistics and Communication Science. Handbücher zur Sprach- und Kommunikationswissenschaft HSK 32.2].  Berlin/Munich/Boston: Walter de Gruyter: Mouton, 1565–1582.

Klenin, Emily (1983). *Animacy in Russian: a new interpretation*. Columbus, OH: Slavica Publishers.

Krys’ko, V. B. (1994). *Razvitie kategorii oduševlennosti v istorii russkogo jazyka*. Moscow: Lyceum.

Lunt, Horace (1974). *Old Church Slavonic Grammar*. The Hague: Mouton.

Mak, W. M., W. Vonk, H. Schriefers (2002). ‘The influence of animacy on relative clause processing’, *Journal of Memory and Language* 47: 50–68.

Malchukov, A. L. (2008). ‘Animacy and asymmetries in differential case marking’, *Lingua* 118: 203–221.

Malchukov, A. and P. de Swart (2009). ‘Differential case marking and actancy variations’, in A. Malchukov and A. Spencer (eds), *The Oxford Handbook of Case*. Oxford: Oxford University Press, 339–355.

Mayo, Peter (1993). ‘Belorussian’, in Bernard Comrie and Greville G. Corbett (eds), *The Slavonic Languages*. London: Routledge, 887–946.

Naruševič, A. (2002). ‘Neskol’ko voprosov o kategorii oduševlennosti / neoduševlennosti’, *Russkij jazyk* 41. <http://rus.1september.ru/article.php?ID=200204103>

Paczynski, Martin and Gina R. Kuperberg (2011). ‘Electrophysiological evidence for use of the animacy hierarchy, but not thematic role assignment, during verb-argument processing’, *Language and Cognitive Processes*, 26: 1402–1456, DOI: [10.1080/01690965.2011.580143](https://doi.org/10.1080/01690965.2011.580143)

Rakison, D. H. and D. Poulin-Dubois (2001). ‘Developmental origin of the animate–inanimate distinction’, *Psychological Bulletin* 127: 209–228. doi:10.1037/0033-2909.127.2.209

Riley, Timothy G. (1999). *It’s Alive!: Grammatical animacy in Russian, Polish, and Czech.* University of Washington.

Røkenes, Erle (2010). *Animatumkategorien i russisk: en empirisk undesøkelse av ord for sjødyr og mikroorganismer.* University of Tromsø.

Scatton, Ernest A. (1993). ‘Bulgarian’, in Bernard Comrie and Greville G. Corbett (eds), *The Slavonic Languages*. London: Routledge, 188–248.

Shevelov, George Y. (1993). ‘Ukrainian’, in Bernard Comrie and Greville G. Corbett (eds), *The Slavonic Languages*. London: Routledge, 947–998.

Silverstein, Michael (1976). ‘Hierarchy of features and ergativity’, in R. M. W. Dixon (ed.), *Grammatical Categories in Australian Languages*. New Jersey: Humanities Press, 112–171.

Stankiewicz, E. (1958). ‘The grammatical categories of the Slavic languages’, *International Journal of Slavic Linguistics and Poetics* 11: 27–41.

Stefanović, Marija (2008). *Kategorija animatnosti u srpskom i ruskom jeziku*. Novi Sad: Akademska knjiga.

Swan, Oscar E. (1988). *Facultative Animacy in Polish. A Study in Grammatical Gender Formation.* The Carl Beck Papers in Russian and East European Studies No. 606. Pittsburgh: University of Pittsburgh.

Szewczyk, Jakub M. and Herbert Schriefers (2010). ‘Is animacy special? ERP correlates of semantic violations and animacy violations in sentence processing’, *Brain Research* 1368: 208–221. [doi](https://en.wikipedia.org/wiki/Digital_object_identifier):[10.1016/j.brainres.2010.10.070](https://doi.org/10.1016%2Fj.brainres.2010.10.070). [PMID](https://en.wikipedia.org/wiki/PubMed_Identifier) [21029726](https://www.ncbi.nlm.nih.gov/pubmed/21029726).

Timberlake, Alan (2004). *A Reference Grammar of Russian*. Cambridge: Cambridge University Press.

Townsend, Charles E. and Laura A. Janda (1996). *Common and comparative Slavic: Phonology and inflection, with special attention to Russian, Polish, Czech, Serbo-Croatian, and Bulgarian*. Columbus, Ohio: Slavica

Yamamoto, Mutsumi (2006). *Agency and impersonality: Their linguistic and cultural manifestations.* Amsterdam: John Benjamins.