

which hides the Prolog clauses and makes the environment user friendly will be added. This interface will also be written in Prolog, as far as it is possible, and the remainder will probably be written in Pascal.

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Aspect and Species – A Comparison Between Polish and Swedish

Ann Lindvall

1. Introduction

This article presents a comparison between the two linguistic categories verbal aspect and nominal species in two languages, Polish and Swedish, and intends to prove a correlation between these categories. This might seem surprising, as both categories on the surface seem totally independent from each other.

Aspect, with its values imperfective/perfective, is a property of the verb, while species, with its values indefiniteness/definiteness, is a property of the noun. Aspect is a basic feature in the Slavic languages, while species is characteristic for the Germanic and Romance languages. However, there are strong reasons to believe that both properties, aspect and species, exist in all languages, albeit sometimes in a form not explicitly recognisable as such. The theoretical point of departure is a functional typological approach.

Aspect as a universal phenomenon has been studied by Givón 1984, who stresses its importance for the sentence as a whole, with its propositional-semantic features. The existence of species in the languages of the world has been described in a large typological study by Krámský 1972. Especially interesting are studies of the whole sentence according to the theme/rheme-principle, as well as studies of the text in general. In all of these studies, the context plays an important role. Comparisons between Czech and English have been done by Mathesius 1961, whilst an extensive analysis of aspect and article in Russian/Polish and English/Swedish has been done by Gawrońska 1993.

It is the hypothesis of this article that there is a deeper relation between verbal aspect and nominal species, especially within the direct object. It is probably not a strong direct correlation, as many other factors also play a

role. In order to examine a possible correlation I have conducted a study of some Polish and Swedish novels and their translation into the other language. By comparing a Polish original text within fiction and its relatively free translation to Swedish and vice versa one finds interesting connections between verbal aspect and nominal species.

2. Verbal aspect

2.1. Verbal aspect in general

Verbal aspect can be regarded as an approach to the verb action according to an axis. The axis has two opposite poles, of which one expresses the durative/continuous/progressive aspect and the other the punctual/compact aspect. Givón 1984 describes the interaction of 'boundedness', where the durative aspect does not express any initial or terminal boundaries, while the punctual aspect does. The axis of aspect can also be described as the degree of change of state. While the durative aspect construes the action per se, the punctual aspect implies some completion.

Some verbs contrast further in initial vs continuous action, while others contrast in continuous vs terminal action. The durative aspect can also be used for habitual actions. The terms used in this paper are *imperfective* and *perfective aspect*. A summary of the two aspect poles is given below:

<i>Imperfective aspect</i>	<i>Perfective aspect</i>
durative action	punctual action
continuous action	complete action
progressive action	initial action
habitual action	terminal action

The point of departure of this article is that verbal aspect is a universal category. The classical place of occurrence is however in Slavic languages, where it is expressed in a systematic morphological way.

2.2. Verbal aspect in Polish

Most Polish verbs have double forms, imperfective and perfective, usually with the perfective forms being derived from the imperfective ones:

- by prefix: *pisać* - *napisać* 'to write'; *robić* - *zrobić* 'to do'
- by change of the stem: *pozwalac* - *pozwolic* 'to allow'
- by suppletive forms: *brać* - *wziac* 'to take'

For most Polish verbs, the aspect changes are formed by morphological alternation. The exceptions, the suppletive forms, are few. Aspect is separate and more or less independent from tense, see the following table for the verb *pisać* 'to write', 3 p s (Schenker 1966:258):

	<i>Past</i>	<i>Present</i>	<i>Future</i>
<i>Perf.</i>	<i>napisal</i>	-	<i>napisze</i>
<i>Imperf.</i>	<i>pisal</i>	<i>pisze</i>	<i>będzie pisal</i>

The choice between imperfective and perfective aspect can thus be made in both past and future. Also, for infinitives there is a choice, as after auxiliaries, e.g. *mogę pisać* - *mogę napisać* 'I can write'. Present tense however, is inherently imperfective.

In this article, the description of verbal aspect as 'change of state' will be used.

3. Nominal species

3.1. Nominal species in general

Nominal species, as well as verbal aspect, can be regarded as points on an axis, this time being an axis of referentiality/definiteness of the noun. The pole of definiteness is used when the identity of the referent is presumed by both speaker and hearer, whereas the pole of indefiniteness is used when the speaker cannot presume this. This is analysed by Givón 1984:402, 405, where he also discusses the speaker's three sources of presumption; 'immediate deictic context', 'permanent file', 'specific discourse', together forming the 'active discourse file'.

It is hard to imagine any binarity of the species axis. One can rather assume a scale with several points, which are expressed by demonstratives, anaphoric pronouns, etc. In addition, nouns in generic sense must be considered, as well as different degrees of referentiality. There are cases where the identity of the referent is known by the speaker but not to the hearer. This distinction is expressed in some languages, e.g. Turkish, but only vaguely in Germanic languages and will not be dealt with here. This paper will only deal with the two end points; *indefiniteness* and *definiteness species*.

<i>Indefinite species</i>	<i>Definite species</i>
referent unknown to hearer	given referent
unexpected referent	expected referent
not identifiable referent	identifiable referent

The category nominal species is assumed here to be universal, albeit expressed in different ways. In some languages, it is more common for the object to be marked with species than the subject, due to the inherent tendency of the subject to definite, as described by Croft 1990.

3.2. Noun species in Swedish

In Swedish, species is expressed morphologically. The indefinite form is accompanied by a preposed, independent article, while the definite form has a postposed clitic. Nouns with genitive dependents are generally inherently definite, as are pronouns and proper names. Nouns can also stay articleless in Swedish, as with mass nouns, in generic sense, etc.

4. Relationship on a deeper level

As mentioned above, aspect is a characteristic verbal category of Slavic languages. Each verb is given an aspect marking, but in contrast the noun is not given any species marking. For species, the facts are reversed. It is a nominal category characteristic of Germanic and Romance languages. In these languages, the verb is not given any aspect marking, but each noun is given species marking. The description is more complex here and not as clear cut, as a noun also can remain without any article, or the definiteness can be expressed by means other than by an article.

However, there are reasons to seek a relationship. Regarding Slavic and Germanic languages, the complementarity in itself, where one phenomenon occurs while the other is missing, is interesting. A unique position is held by Bulgarian, which has both aspect and species as grammatical categories, studied by Kabakčiev 1984. Another modern Indo-European language with both categories is Greek.

The next section is a description of an empirical study, where I have tried to test the following hypothesis: The imperfective verbal aspect has a positive correlation with indefiniteness of the direct object, while the perfect has a positive correlation with definiteness.

5. Empirical study

5.1. Method

The corpus used consisted of Polish and Swedish fiction and its translation to the other language. There are two reasons for my choice of fiction. The first is a functional one: the importance of contextual coherence and total impression in this field. The translator is free to seek all modes of

expression corresponding to the context. For this sake, prose is chosen and not poetry, as the metre and demands of conciseness would bind the translator. The purpose was to find texts as close to informal, narrative spoken language as possible. The second reason is a practical one: it is easy to find translations within this genre. Even though the language of for instance scientific articles and newspapers would be interesting, they are not translated to as great an extent.

From the corpus of three Polish novels and their translations into Swedish, and three Swedish novels and their translations into Polish (altogether twelve novels) I have registered transitive clauses on every tenth page. I have noted whether the Polish verb is imperfective or perfective, and whether the corresponding Swedish object is indefinite or definite. Only verbs in past, future, and infinitive have been counted, as only these tenses contain the choice of aspect, but not present tense (see 2.2.). Sentences with the verb *mieć* 'to have' are not counted, as this verb has no perfective counterpart. For the notation of Swedish indefiniteness I have counted nouns with indefinite article or without article. For definiteness I have registered nouns with definite article or with genitive dependent.

The Polish novels are:

- Tadeusz Konwicki, *Wniebowstąpienie*. Translated to *Himmelsfärden* by Stellan Ottosson
- Stanisław Lem, *Katar*. Translated to *Snuvan* by Johan Malm
- Czesław Miłosz, *Dolina Issy*. Translated to *Issadalen* by Kjell Rehnström

The Swedish novels are:

- Per Wahlöö, *Lastbilen*. Translated to *Cieżarówka* by Maria Olszańska
- Selma Lagerlöf, *Kejsarn av Portugallien*. Translated to *Tętniące serce* by F. Mirandoli
- Astrid Lindgren, *Ronja rövardotter*. Translated to *Ronja córka zbójnika* by Anna Węgleńska

5.2. Result

5.2.1. *Original texts*. It is important to keep in mind that each literary genre has its own distribution among the categories concerned. The Polish authors, or rather their works and/or genre, differ to a large extent. Tadeusz Konwicki's *Wniebowstąpienie* is a more or less surrealist depiction of the underworld of Warsaw with underlying political satire. It contains many direct dialogues, which makes present time over-represented. Stanisław Lem's *Katar* belongs to the genre of science fiction and is a

thriller. Both of these contain a lot of 'action', that is many punctual events, which results in a high percentage of perfective aspect. The objects are both indefinite and definite. The examples are from Lem.

Wtedy wyjął (perf.) granat. (p. 35)
Då tog han fram *granaten* (def.). (p. 58)
'Then he *took out the grenade*.'

...odkryła (perf.) na ścianę napis czerwonym tuszem "Zostałem tu zabity". (p. 65)
...upptäckte hon på väggen i hans rum *en* med röd tusch skriven *inskriftion* (indef.), "Här blev jag mördad". (p. 107)
'...she *discovered* on the wall of his room *an inscription* written with red ink "Here I was killed".'

Dolina Issy by the Nobel prizewinner Czesław Miłosz belongs to quite another genre. It is a dreamy depiction of a boy's childhood on a estate at the beginning of the 20th century. The story covers several years, and life changes little. This results in a high percentage of habitual, imperfective aspect.

...Stasiek...pięknie grał na organkach, *śpiewał* (imperf.) miejskie piosenki... (p. 27)
...Stasiek...spelaše munspel så bra, *sjöng visor* (indef.) från staden... (p. 50)
'...Stasiek played the harmonica beautifully, *sang songs* from town...'

...siostrzeniec Szatybełki, który *pilnował* (imperf.) kotła. (p. 67)
...systemson till Szatybełko, som skötte *ångpannan* (def.). (p. 142)
'...nephew of Szatybełko, who *looked after the steam engine*.'

Table 1 shows the proportion of the two aspect forms for each author (and/or genre) in original, without the translation.

Table 1. Distribution of Polish aspect forms depending on author.

	Imperfective aspect		Perfective aspect		N
Konwicki	35	34%	69	66%	104
Lem	19	25%	56	75%	75
Miłosz	63	57%	47	43%	110
Total	117	40%	172	60%	289

Furthermore, the Swedish authors differ in the distribution of species. *Kejsarn av Portugallien* by the Nobel prizewinner Selma Lagerlöf depicts a family drama in a peasant milieu around the turn of the century. The proportion of indefinite objects is higher than average. The character of the work, with numerous dialectal and colloquial expressions, makes it extremely difficult to translate.

Det var inte utan, att det frestade på att bära *ved* (indef.) och vatten åt Kattrina... (p. 155)
Čzęsto na wielkie wystawiony był przykrości i pokusy, zwłaszcza gdy *nosił* (imperf.) dla niej drzewo z lasu, albo czerpał wodę... (p. 169)
'It must be said that it was sometimes a hard job to *carry wood* and water for Kattrina.'

Hon hade velat skicka honom *ett budskap* (indef.). (p. 195)
Przysłała (perf.) mi wieści przez przekupnia... (p. 212)
'She had wanted to *send him a message*.'

The other extreme is represented by Per Wahlöö and his *Lastbilen*, which is a crime story. It has a large proportion of definite objects, largely because of a less complicated intrigue, with predictable objects.

Med jämna mellanrum drog de andra in *sina metrevar* (def.)... (p. 95)
A tamci w równych odstępach czasu *wyciągali* (imperf.) linki... (p. 112)
'In even intervals the others *pulled in their fishing-lines*.'

Han hämtade *piassavakvasten* (def.) i köket och sopade av *golven* (def.). (p. 145)
Przynióst (perf.) z kuchni miotłę z piawy i *zamiótł* (perf.) podłogę. (p. 168)
'He *fetches the besom* from the kitchen and *swept the floor*.'

Table 2 shows the proportion for the authors (and/or genre), without translation.

Table 2. Distribution between Swedish species forms depending on author.

	Indefinite object		Definite object		N
Lagerlöf	37	49%	39	51%	76
Lindgren	32	40%	48	60%	80
Wahlöö	74	31%	163	69%	237
Total	143	36%	250	64%	393

5.2.2. *Translations.* In the translations from Polish to Swedish, a clear correlation between aspect and species was found. Imperfective aspect appeared more often than expected with an indefinite object, and perfective aspect appeared more often than expected with a definite object. This has to be compared with the relative occurrence of the two aspect forms. This varies considerably, as we have seen, between authors, texts, genres, etc. The percentage is shown with italics and the positive correlations achieved with bold style (Table 3).

Table 3. Correlation between Polish transitive clauses with verbal aspect and their translations into Swedish with nominal species.

Swedish Polish	Indefinite object	Definite object	N
Imperf. aspect	61 <i>52%</i>	56 <i>48%</i>	117
Perf. aspect	70 <i>41%</i>	102 59%	172
Total	131 <i>45%</i>	158 <i>55%</i>	289

In the translations from Swedish to Polish there was a corresponding clear correlation between species and aspect. An indefinite object appeared more often than expected with a verb in imperfective aspect, and a definite objective appeared more often than expected with a verb in perfective aspect. This, too, is compared with the relative occurrence of the two species forms, which differ among the authors. The percentage is shown with italics and the achieved positive correlations with bold style (Table 4).

Table 4. Correlation between Swedish transitive clauses with nominal species and their translations into Polish with verbal aspect.

Polish Swedish	Imperfective aspect	Perfective aspect	N
Indefinite object	54 <i>38%</i>	89 <i>62%</i>	143
Definite objekt	53 <i>21%</i>	197 79%	250
Total	107 <i>27%</i>	286 <i>73%</i>	393

Finally, we will look at the fusion of all six originals with their translations. Table 5 shows how the two aspect forms correspond to the two species forms. Field one contains the number of clauses with perfective aspect which has been translated to clauses with indefinite objects, and vice versa. The percentage is also shown, where the four fields together total 100 per cent. The observed percentage is contrasted with the expected one,

determined by the marginal frequencies. The percentage is shown by italics and the achieved positive correlations by bold style.

Table 5. Correlation between Polish transitive clauses with verbal aspect and Swedish transitive clauses with nominal species. Observed values related to expected values.

Observed value	Indefinite object	Definite object	Total
Imperf. aspect	115 <i>17%</i>	109 <i>16%</i>	224
Perfective aspect	159 <i>23%</i>	299 44%	458
Total	274	408	682 <i>100%</i>
Expected value	Indefinite object	Definite object	Total
Imperf. aspect	90 <i>13%</i>	134 <i>20%</i>	224
Perfective aspect	184 <i>27%</i>	274 40%	458
Total	274	408	682 <i>100%</i>

The results were tested using a χ^2 -test which gave a value of 17.29 and a p-value < 0.001, indicating a significant correlation.

6. Discussion of results

The previous section demonstrated that there is a weak, but statistically significant, relationship between verbal aspect in Polish and nominal species of the object in Swedish. The result is of course only valid for the corpus concerned, but one can assume similar results for all kinds of informal, narrative texts. At the present stage, these results only show a statistical correlation. It is not possible to claim a direct, causal relationship, even though intuition indicates this.

The idea that 'one can express anything in any language' can be raised, albeit in divergent ways that might seem not to have any relation on the surface. With this point of departure, one can try to distinguish if a explicitly speciesless language like Polish can express indefiniteness, and whether an explicitly aspectless language like Swedish can express imperfectivity. For a discussion, let us first consider a model of the two categories concerned (Figure 1) with the four possible combinations taken from the corpus.

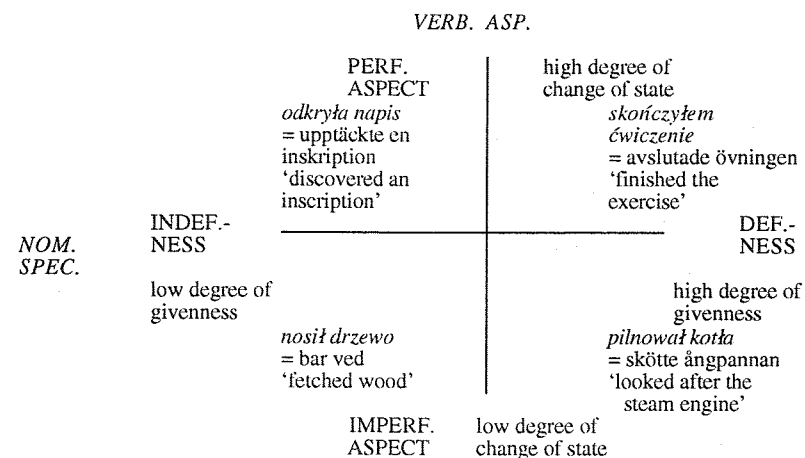


Figure 1. Relationship between verbal aspect and nominal species

In general, it is important to regard the sentence as a whole, which in its turn depends on the discourse and the context. In the sentence, the subject is often definite, while the indirect object can be either indefinite or definite. The direct object is the argument most closely connected to the verb. It is a reasonable assumption that a verbal phrase consisting of a transitive verb and its object show some correspondence, an idea explored by Hopper & Thompson 1980.

A verb in imperfective aspect implies to some extent a diffuse, indefinite object. The imperfective aspect can be used both for durative action without beginning or end, or for habitual, iterative actions. In case of *durative* action (a), the object is probably more often than not an indefinite modification of the verb, which in its translation is given indefinite article or remains articleless. In the case of (a) it is also possible to incorporate the object directly into the verb, especially in nominalizations. In case of *habitual* aspect (b), both definite and indefinite objects are common in the translations. Examples in Polish and Swedish are given below, taken from the corpus.

	<i>Polish</i>	<i>Swedish</i>	
(a)	<i>nosił drzewo</i>	<i>bar ved</i>	'was carrying wood'
		(noun: <i>vedbärning</i>)	(nom. 'wood-carrying')
(b)	<i>pilnował kotła</i>	<i>skötte ångpannan</i>	'looked after the steam engine'

Conversely, one can assume that a verb in perfective aspect implies to some extent a well-known, definite object. As we saw (see 2.1), perfective aspect is used to describe a beginning of an action (c), an end of an action (d), or a punctual event, an action from beginning to end (e). In (c) the *initial* and (d) the *final* case, the action is already presupposed (as we begin or finish it). And as the direct object is the argument most closely connected to the verb, knowing the verb therefore implies to some extent knowing the object, and the object is given definite article in the translations. In (e), where the verb is seen as a *punctual* event, there is no strong implication that the object is known, and the noun gets either indefinite or definite in the translations. Also, the first two cases (c) and (d) have numerous exceptions which together with the third case (e) make the assumption weak.

	<i>Polish</i>	<i>Swedish</i>	
(c)	<i>zapaliłam światło</i>	<i>tände ljuset</i>	'turned on the light' (= 'lamp', not the Sw. polysem 'candle')
(d)	<i>skończyłem ćwiczenie</i>	<i>avslutade övningen</i>	'finished the exercise'
(e)	<i>przyniósł miotłę</i>	<i>hämtade kvasten</i> or <i>hämtade en kvast</i>	'fetched the besom' or 'fetched a besom'

These possible correspondences are shown below:

Tendency			Tendency
Indef. obj.	← (a) durative	(c) initial →	Def. obj.
		(d) final →	Def. obj.
Both def. and indef.	← (b) habitual	(e) punctual →	Both def. and indef.

I do not deny that it is possible to find counter-examples to all of these examples. The aim of this study is not to prove that only one certain connection exists, but that it exists *more often* than others. Neither do I claim any one-to-one correspondence. In no way would each event of imperfective aspect correspond to an indefinite object. The correlation is probably not strong, but it should be stronger than chance. A rough comparison like this cannot but be tentative, as so many other components are involved.

A further step would thus be to divide the axes concerned into smaller variables. The axis of verbal perfective aspect could be divided into initial,

terminal, and punctual, and imperfect aspect into durative and habitual, etc.. Similarly, the axis of nominal indefinite species could be divided into generic, non-referential and referential, and the definite into unique, deictic, contextual.... Thus, comparing field by field would be most interesting.

7. Conclusion

This paper describes a study of a possible relationship between verbal aspects in Polish and nominal species in Swedish. The comparison described how transitive clauses are translated from one language into the other. The method has been to compare fiction in its original language with its translation – altogether twelve novels.

The results demonstrate a weak, but statistically significant, positive correlation between imperfective aspect of the verb and indefiniteness of the object, as well as perfective aspect of the verb and definiteness of the object. The correlation is reciprocal.

The result thus achieved says little about possible causal relationships. It is however interesting per se, as it might give suggestions for future research. One could then further divide both the category 'verbal aspect' and the category 'nominal species' into partial components. Also the possible relationship of aspect and case marking (accusative/partitive), word order and theme/rheme-structure, can be further explored. Added to a functional typological approach this kind of research could be most fruitful.

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Appendix: The novels of the corpus

Polish – Swedish

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