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The Analysis of Gender Markers in Animals

Abstract
This paper aims to be a contribution to the study of the linguistic concept of gender. Out of many potential challenges in this area, it will focus on the problem of assigning gender to animal nouns. This problem is topical in view of the fact that in present-day English, gender is a marginal grammatical category and therefore recedes into the background in descriptions of today’s English. Grammatical gender is a rare topic of research and scientific discussions or papers.
A detailed analysis of gender assignment to animal names is based on two sub-corpora (the English edition of National Geographic and the English edition of Journal of Zoology). To make the picture as complete as possible, a contrastive analysis of gender markers is offered.

Key words
Gender markers; animal nouns; gender distinctions; comparative analysis; sub-corpora

1. Introduction
“Gender is the most puzzling of the grammatical categories. It is a topic which interests non-linguists as well as linguists and it becomes more fascinating the more it is investigated.”
(Corbett 1991: 1)

To mention just a few works dealing with gender assignment in Modern English, modern views on the existence of the category of gender can be found in Vachek (1964), whose criteria for assigning gender are in agreement with the factors that are identified as crucial in my own analysis. He notes that “the shift of gender” is motivated by affect or emotion (Vachek 1964: 190). A special case is constituted
by pronominal reference to nouns denoting small children and animals. When
the sex of the individual concerned is either unknown or irrelevant (e.g. fly, cat,
etc.), neuter reference is commonly used. On the other hand, feminine or mas-
culine reference signals “some interest of the speaker in the individual referred
to” (Erades 1956: 7, cited in Vachek), but the gender chosen need not necessarily
tally with the actual sex of the individual: “there may be, again, some interfer-
ence of emotional factors” (Vachek 1964: 191). The author also mentions “some
interference of emotive factors” and personifications which may often be effected
on traditional, conventional lines. “These conventions can be squared with the
tendencies governing pronominal reference to nouns denoting inanimate things:
bigger and stronger animals rank most frequently as masculines, while smaller,
gentler animals (especially singing birds) prevalently rank as feminines” (Vachek
1964: 191).

Crystal (1995: 209) solves the problem of personification and the reasons for
the prevalence of the feminine pronouns in “neuter” contexts. As he notes “Many
nouns are given variable gender, depending on whether they are thought of in an
intimate way. Pets are often he or she.”

Brinton (2000, cited in Wagner 2003: 48) notes that “gender is generally a
covert category” in nouns, while “a related category of animacy” is expressed
in personal, interrogative and relative pronouns. Very interesting is the animacy
grouping. She distinguishes two main groups – humans and higher animals in one
group and lower animals and inanimates in the second. Animals thus emerge on
both sides of the scale, as can be seen in the following scheme:

Figure 1. Gender categories in Brinton (cited in Wagner 2003: 48)

According to this scale it is clear that gender assignment depends on a wide vari-
ety of influential factors.

Mackay and Konishi (1980, cited in Wagner 2003: 121) investigated the use
of “human” pronouns to refer to non-human antecedents in children’s literature.
One class contained animals (including real, imaginary, and toy animals). The
major result from the counts was highly unexpected – 82% of pronominal refer-
ences concerning animals were masculine (62%), and feminine (20%), respec-
tively (Wagner 2003: 122).

The gender of animals in modern Canadian English is investigated by Morris
in her doctoral thesis (Morris 1991, cited in Wagner 2003). In her data, based on
evidence and observations, “animals are much more frequently he than she” (Wag-
ner 2003: 140). The following scheme shows the hierarchical system of assigning
gender to animals based on her research (Morris 1991 cited in Wagner 2003: 141):

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In Marcoux (1973) the students’ use of personal pronouns in tag questions was investigated. He found a surprisingly high occurrence of “human” pronouns used to refer to animals of unknown sex. The masculine pronouns prevailed (Marcoux 1973: 104).

A similar research is described in Prčíková’s doctoral thesis (Prčíková 1999). The corpus for her analysis includes children’s stories published in Britain and the U.S. Seventy nine per cent of observed pronominal pronouns referring to animals were masculine, 10% feminine (Prčíková 1999: 51).

Although the respective authors base their studies on a variety of different corpora, such as children’s literature, web pages devoted to animal keeping and breeding and students’ use of personal pronouns in tag questions, the major results of my research are rather unexpected. As all of the authors found a surprisingly high number of “human” pronouns used to refer to animals, they claim that masculine is the prevailing gender. The findings offered by authors can be summarized as follows:

- The choice of pronouns referring to animals is affected by a number of emotive factors and by the degree of personal involvement.
- The cut-off point within the class of animals differs from speaker (or author) to speaker depending on their professions, environment, etc.
- When referring to animal nouns, neuter pronouns are the least frequently occurring forms, while the masculine dominates.
2. The comparison of gender markers in animals included in the corpora of *National Geographic* and *Journal of Zoology*

The aim of this analysis is to ascertain the differences in gender assignment in animals in two different sources – the non-fiction literature as represented by *National Geographic*, and the research zoological papers included in *Journal of Zoology*.

The analysis has compared animal species with masculine and feminine pronouns taken from *National Geographic* corpus and the same animal species taken from the *Journal of Zoology*.

Only 16 identical species of animals have been found within the two corpora under study. Their masculine and feminine gender references retrieved from both corpora have been analysed and compared. The following is the list of identical species under study:

- mantis, cricket, spider, crab, turtle, lizard, snake, bat, albatross, seal, wild dog, wolf, fox, lynx, bear and horse.

The analysed animals have been arranged according to the biological classification, starting with the lowest insect and finishing with big mammals.

### 2.1. Final charts and material analysis

Sixteen species taken from *Journal of Zoology* were referred to by 413 pronouns as follows:

<table>
<thead>
<tr>
<th>Gender</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masculine</td>
<td>57</td>
<td>13.8%</td>
</tr>
<tr>
<td>Feminine</td>
<td>168</td>
<td>40.7%</td>
</tr>
<tr>
<td>Neuter</td>
<td>188</td>
<td>45.5%</td>
</tr>
<tr>
<td>Total</td>
<td>413</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Table 1. Pronoun reference in Journal of Zoology*

Sixteen species taken from *National Geographic* were referred to by 752 pronouns as follows:

<table>
<thead>
<tr>
<th>Gender</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masculine</td>
<td>176</td>
<td>23.4%</td>
</tr>
<tr>
<td>Feminine</td>
<td>287</td>
<td>38.2%</td>
</tr>
<tr>
<td>Neuter</td>
<td>289</td>
<td>38.4%</td>
</tr>
<tr>
<td>Total</td>
<td>752</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Table 2. Pronoun reference in National Geographic*
The above comparative analysis includes a wide variety of animal species. All of them contain a surprisingly high number of different gender markers. Although the number of pronouns is higher in *National Geographic* articles, the percentage of occurrence of all masculine, feminine and neuter gender markers in both sources is, surprisingly, nearly in balance. The most illustrative example is the comparison of the “lowest” animals of this comparative analysis – the insect species, especially the praying mantis. The charts show the same proportions of masculine pronouns and a very similar gender occurrence of feminine and neuter markers. The occurrence of all gender markers was nearly the same in both sources. The main themes of all articles concerning insects were courtship and mating processes. Above all, the reproductive process of the praying mantis is so specific that all the excerpted articles had nearly the same structure and gender references:

(1) As mating proceeds, the female clutches the male around the neck and begins to feed on his head. Though now decapitated, the male has a nervous system that enables him to continue mating. Some scientists have suggested that the male thus benefits his offspring by providing protein for the female during egg production. (*National Geographic* vol. 165, 1984: 274)

(2) If the male faced the front of the female, he would dart quickly around the tree trunk and move into position behind her... Once the male’s head was within c. 5-10mm of the female’s abdomen, he would leap onto the female’s back, gripping her thorax or midlegs with his forelegs...


Different proportions of gender assignment have been found in another researched species of insects – cricket. Although the number of species in both sources was the same, the occurrence of gender markers was noticeably higher in research papers.

Parental care was mostly mentioned in reference to spiders:
(3) **She** eats **her** booty one egg at a time, putting each into **her** mouth with **her** palps. . . . . .Portia dropped on **her** own silk line alongside the web. Then Portia began to swing toward **her** victim... until **she** made a kill. 
*(National Geographic* vol. 190, 1996: 114)

(4) This form of **maternal** ‘care’, otherwise referred to as ‘tolerant’ behaviour, comprises passive care behaviours. For example, **a mother** may protect **her** young from predators as a passive consequence of **her** presence, and food items in the form of discarded carcasses that **she** has previously fed upon may be available for **her** offspring to pick over... 

**The crab species** were referred to as feminine in the majority of examples. Thematically, the articles dealt with reproduction, maternity care, egg laying and nest building. The following examples describe mating in crabs, therefore the animals are viewed as **he** and **she**, respectively:

(5) In summer and early fall the female, a “**she crab**” to watermen, prepares to molt for the very last time. **She** rocks from side to side, waving **her** claws. The male, a “**jimmy**”, then cradles **her** with **his** walking legs and takes **her** with **him** in search of a secluded place out of harm’s way. The female backs out of **her** shell and is ready—for the only time in **her** life—to mate. 
*(National Geographic* July 1992: 114)

(6) ...they may still be controlled by **her** as the gametes are kept within **her** shell. When male finds a female, **he** drags **her** by grasping **her** shell using **his** left minor cheliped. The process, which is that male behaviour intends to exhaust the female, weakening **her** and thus facilitating **her** exit from the shell...
*(Journal of Zoology* vol. 270: 596)

The **turtle species** was a typical example of an animal in a long-term research study which is always assigned to gender. The prevalence of feminine pronouns in *Journal of Zoology* corpus was caused by the long-term study of the analysed female.

The **reptiles** also show balanced gender assignment in both sources. It could be explained by the same themes under study, concerning mating and motherhood. 

**Bat species** belong to the most frequently occurring animals in both sources. I have discovered 20 species of this animal in the research papers, nine of them with gender references mostly related to parental care. The majority of the pronouns in both corpora were neuter.

**Albatross species** with gender assignment taken from National Geographic corpus showed the dominant role of neuter pronouns. The rest of pronouns were feminine, referring to behaviour. Gender assignment was quite different in research papers. The authors referred to males and females as **he** and **she** in the descriptions of behaviour, egg laying and nesting:
(7) In the Falklands a female black-browed albatross yields her throat to her mate’s nibbles, and offers a graceful beak-stroke of her own. 
(National Geographic December 2007: 101)

(8) Females would climb onto the nest and sit if she was not already in this position. The male would then mount her and orient himself so that he was facing the same direction before lowering his body to rest against her back. The male would then lower his head and repeatedly tap his bill against the female’s bill, while at the same time extending his tail out behind him and swinging it rapidly from side to side. 
(Journal of Zoology vol. 270: 630–631)

Seals belonged to frequently occurring species in both sources. The majority of examples referred to maternal care.

The next group under study was carnivorous mammals. I have found gender distinctions in four species – wild dog, wolf, fox and lynx. The high occurrence of masculine and feminine pronouns could be explained by their life in packs with a specific social structure and hierarchy. The researchers have even named the animals. Thus life in the “family” influences gender markings in all the examples analysed:

(9) We find Blackcomb before the other dogs do, with his nose in the warm belly of an impala. He has made this kill by himself. Blackcomb leaves to bring in his pack mates. He suddenly stops and rears up on his hind legs. His brother Tremblant joins him. (National Geographic May 1999: 53, 54)

(10) It appeared that Hans did not accept his subordinate position, as he regularly refused to show submission to George. (Journal of Zoology vol. 270: 506)

In the analyses of solitary mammals such as lynx and bear, the majority of examples referred to the relationship between the female and her young. Consequently the feminine gender prevailed.

The horse was the “highest” animal included into this comparative analysis. I have retrieved only five articles concerning horse species. The gender assignment in horses has been connected with description of breeds and behaviour. The majority of them have names. Stallions have prevailed.

3. Conclusion

To conclude, all the species yielded a high number of masculine and feminine gender markers in both subcorpora.

The main contexts and situations where observing strict gender distinctions proved important were similar in both sources:
• The description of mating and courtship processes.
• The description of motherhood and parental care.
• The close relationship between the researchers and the animal in long-term studies.
• The animals analysed are identified through markings.

Although the biological sex plays the dominant role in assigning gender to animals, the sociological aspect in both study materials is also important.

References


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